

Service Manual



TSP-16

ORDER NO.
QRT1001

PROFESSIONAL SAMPLER

TSP-16

THIS MANUAL IS APPLICABLE TO THE FOLLOWING MODEL(S) AND TYPE(S).

Model	Type	Power Requirement	Remarks
TSP-16	SYXJ	AC 100 V to 240 V	
TSP-16	UXJCB	AC 100 V to 240 V	
TSP-16	AXJ	AC 100 V to 240 V	

THIS SERVICE MANUAL SHOULD BE USED TOGETHER WITH THE FOLLOWING MANUAL(S).

Model	Order No.	Remarks
TSP-16	QRT1002	SCHEMATIC DIAGRAM, PCB CONNECTION DIAGRAM, PCB PARTS LIST



A



This service manual is intended for qualified service technicians; it is not meant for the casual do-it-yourselfer. Qualified technicians have the necessary test equipment and tools, and have been trained to properly and safely repair complex products such as those covered by this manual.

Improperly performed repairs can adversely affect the safety and reliability of the product and may void the warranty. If you are not qualified to perform the repair of this product properly and safely, you should not risk trying to do so and refer the repair to a qualified service technician.

B

WARNING

This product may contain a chemical known to the State of California to cause cancer, or birth defects or other reproductive harm.

Health & Safety Code Section 25249.6 - Proposition 65

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1. SERVICE PRECAUTIONS

1.1 NOTES ON SOLDERING

- For environmental protection, lead-free solder is used on the printed circuit boards mounted in this unit.
- Be sure to use lead-free solder and a soldering iron that can meet specifications for use with lead-free solders for repairs accompanied by reworking of soldering.
- Do NOT use a soldering iron whose tip temperature cannot be controlled.

1.2 NOTES ON REPLACING

The part listed below is difficult to replace as a discrete component part.
If the failure of suspected that are listed in the table, replace whole ASSY.

ASSY Name	Parts that is Difficult to Replace			
	Ref No.	Part No.	Function	Remarks
MAIN ASSY	IC201	MM3543BH	DC/DC CONVERTER	IC with heat-pad
	IC202	MM3543BH	DC/DC CONVERTER	IC with heat-pad
	IC501	NJW4155GM1-A	DC/DC CONVERTER	IC with heat-pad
	IC502	MM3543BH	DC/DC CONVERTER	IC with heat-pad
	IC502	TPS2557DRB	USB POWER SW	IC with heat-pad
	IC800	MMPF0100F0AEP	POWER MANAGEMENT IC	IC with heat-pad
	IC2000	MCIMX6Q5EYM10AD	MAIN uCOM	BGA
	IC2300	K4B4G1646D-BCMA	DDR3-RAM	BGA
	IC2301	K4B4G1646D-BCMA	DDR3-RAM	BGA
	IC3800	THGBMHG6C1LBAWL	eMMC	BGA
	S200	ASG1102	POWER SW	Terminal part with through-hole
	JA2600	AKN7115	LAN TERMINAL (RJ-45)	Terminal part with through-hole
	JA3200	DKN1188	MIDI IN TERMINAL (DIN)	Terminal part with through-hole
	JA3201	DKN1188	MIDI OUT/THRU TERMINAL (DIN)	Terminal part with through-hole
	JA4100	DKN1237	USB-B TERMINAL	Terminal part with through-hole
IO ASSY	IC5400	AK4458VN	MULTI-OUT DAC	IC with heat-pad
	IC6000	AK4452VN	SEND DAC	IC with heat-pad
	IC6600	AK4452VN	HEADPHONE DAC	IC with heat-pad
	VR5200	DCS1133	INPUT LEVEL VOLUME	Terminal part with through-hole
MVR ASSY	VR6800	DCS1134	MAIN OUT VOLUME	Terminal part with through-hole
USBA ASSY	JA7600	JA7600	USB-A TERMINAL	Terminal part with through-hole
LCD ASSY	IC7100	R1290K103A	DC/DC CONVERTER	IC with heat-pad
	IC7101	BD81A04EFV-M	DC/DC CONVERTER	IC with heat-pad
	S9321	DSX1080	ROTARY SELECTOR (ENCODER)	Terminal part with through-hole
CDC ASSY	IC7700	AD7147ACPZ500RL7	CDC (CAPACITANCE SENSORS IC)	IC with heat-pad

1.3 SERVICE NOTICE

Calibration of performance pad

- Performance pad was calibrated when the product is produced. If a relevant part is replaced with a new one, be sure to carry out the calibration.
- For the method of calibration, refer to "PAD CALIBRATION MODE" in "6.1 TEST MODE".
- If you forget to carry out the calibration, power for tapping the performance pad and degree of sound volume when the sampler velocity mode is turned ON vary depending on the pad.
- Calibration execution data is memorized in the MAIN ASSY. Be sure to carry out the calibration when the MAIN ASSY is replaced new one.

About PADB ASSY of sensors (Pressure sensitive)

- Don't touch the black parts of the PADB ASSY (side-A) and black mat parts of the Sensor (16 pieces each, which are pressure sensitive) with your bare hands.
- Clear the dust between the PADB ASSY, Sheet, Sensor and Button (DEB2037) by air blast when you assemble the sensor.

About SEQ1 ASSY, SEQ2 ASSY and BAR ASSY

- Clear the dust between inside of the Cap, Buttons and PCBs by air blast to remove the foreign particles when you assemble SEQ1 ASSY, SEQ2 ASSY or BAR ASSY.

About the NAND:Flash ROM IC(IC2601) in the MAIN ASSY

- Replacement of the NAND (IC2601) in the MAIN ASSY is not possible during service, because writing of the MAC address on the production line is required. Therefore, the NAND (IC2601) are not supplied as a service part. If the NAND is defective, replace the whole MAIN ASSY.

Caution: Control Panel and Chassis unit in the state that has wire does not open 180 degrees.

2. SPECIFICATIONS

2.1 ACCESORIES

• AC adapter	(DRW1553)	A
• Power cord	(SYXJ : ADG1154) (UXJCB : XDG3052) (AXJ : ADG7079)	
• USB cable	(DDE1128)	
• LAN cable	(DDE1141)	■
• Operating instructions (Quick start guide)	(SYXJ : DRH1360) (UXJCB : DRH1359) (AXJ : DRH1361)	
• Software license notice	(SYXJ : DRH1390, DRH1391) (UXJCB : DRH1390, DRH1391) (AXJ : DRH1403)	B
• Warranty card	(SYXJ : DRY1270)	

2.2 SPECIFICATIONS

AC adapter Power.....AC 100 V to 240 V, 50 Hz/60 Hz Rated current 0.9 A Rated output DC 12V, 3A Power consumption (standby) 0.5 W	
General – Main Unit Power consumption DC 12 V, 2A Main unit weight 3.2 kg (7.1 lb) Max. dimensions 436.5 mm (W) × 74.3 mm (H) × 261.2 mm (D) (17.2 in. (W) × 10.3 in. (H) × 16.2 in. (D)) Tolerable operating temperature..... +5 °C to +35 °C (+41 °F to +95 °F) Tolerable operating humidity 5% to 85% (no condensation)	
Audio Section Sampling rate..... 44.1 kHz A/D converter..... 24-bit D/A converter..... 32-bit Frequency response..... 20 Hz to 20 kHz S/N ratio (rated output) ¹ 112 dB Total harmonic distortion ¹ 0.002 %	
INPUT Max. input level +16 dBu Input impedance 33k Ω	
OUT1-2/MASTER/ASSIGNABLE OUT Rated output level / Load impedance +16 dBu/10k Ω Output impedance 680 Ω	
OUT3-8/ASSIGNABLE OUT Rated output level / Load impedance +16 dBu/10k Ω Output impedance 680 Ω	
PHONES Rated output level / Load impedance 100 mW+100 mW/32Ω	
Input / Output terminals INPUT terminals 1/4" TS jack x2 OUT1-2/MASTER/ASSIGNABLE OUT terminals 1/4" TS jack x2 OUT3-8/ASSIGNABLE OUT terminals 1/4" TS jack x6 PHONES terminals 1/4" stereo phone jack x1 USB terminals A type..... x1 Power supply ... 5 V/500 mA or less B type..... x1 LINK terminal LAN terminal (100 Base-TX) x1 MIDI IN terminal 5-pin DIN x1 MIDI OUT/THRU terminals 5-pin DIN x1	C
1 When TRACK TYPE is SAMPLE • The specifications and design of this product are subject to change without notice.	D

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3. BASIC ITEMS FOR SERVICE

3.1 CHECK POINTS AFTER SERVICING

To keep the product quality after servicing, confirm recommended check points shown below.

No.	Procedure	Check points
1	Check the firmware version in Test mode.	The version of the firmware must be latest. Update firmware to the latest one, if it is not the latest.
2	Confirm whether the customer complain has been solved.If the problem pointed out by the customer occurs with a specific source or operation, input that specific source then perform that specific operation for checking.	The customer complain must not be reappeared. Audio and operations must be normal.
3	Check the analog audio input.	Audio and operations must be normal.
4	Check the analog audio output.	Audio and operations must be normal.
5	Check the each operation. (SW, VR and PAD etc.)	Make sure that all operations function properly in Test mode.
6	Check the FL display and LEDs.	Check that all LEDs light in Test mode.
7	Check the connection of each interface USB A USB B LAN MIDI	Connect the USB memory and check the file by browsing. Connect the PC and make sure you can access internal memory in Mass storage mode. Connect the PC and check the communication with Ping command.*1 IN-OUT loop connected with MIDI cables, operation check in Test mode.
8	Check the LCD display.	Check that there is no dirt or dust trapped inside the LCD display.
9	Check the touch panel.	Check whether a product can be opeated properly in an all-back screen.
10	Check the appearance of the product.	No scratches or dirt on its appearance after receiving it for service.

*1 : IP address of this product “6.1 TEST MODE PAGE 8 : DEVICE TEST ” can be confirmed .

See the table below for the items to be checked regarding audio.

Item to be checked regarding audio	
Distortion	Volume too high
Noise	Volume fluctuating
Volume too low	Sound interrupted

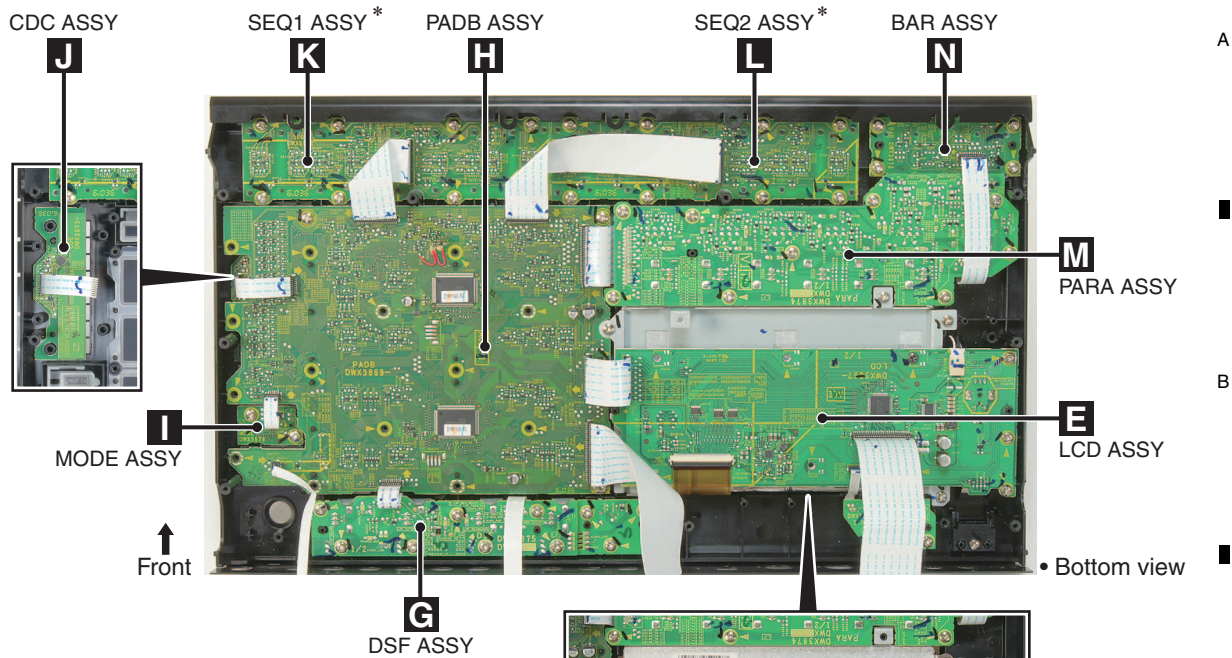
3.2 JIGS LIST

Jigs List

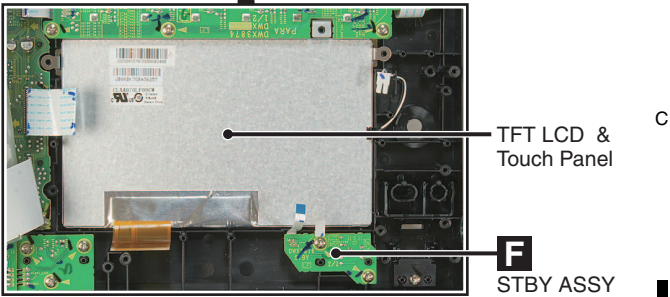
Jig Name	Part No.	Purpose of use / Remarks
USB cable	GGP1193	For PC connection
PAD calibration weighting jig	GGF1685	Used for weighting at PAD calibration <Conditions of jig for weighting> Weight: 150g ± 5g Diameter of bottom surface: ø10 and plain surface (If consistent in the above-mentioned conditions, available)

3.3 PCB LOCATIONS

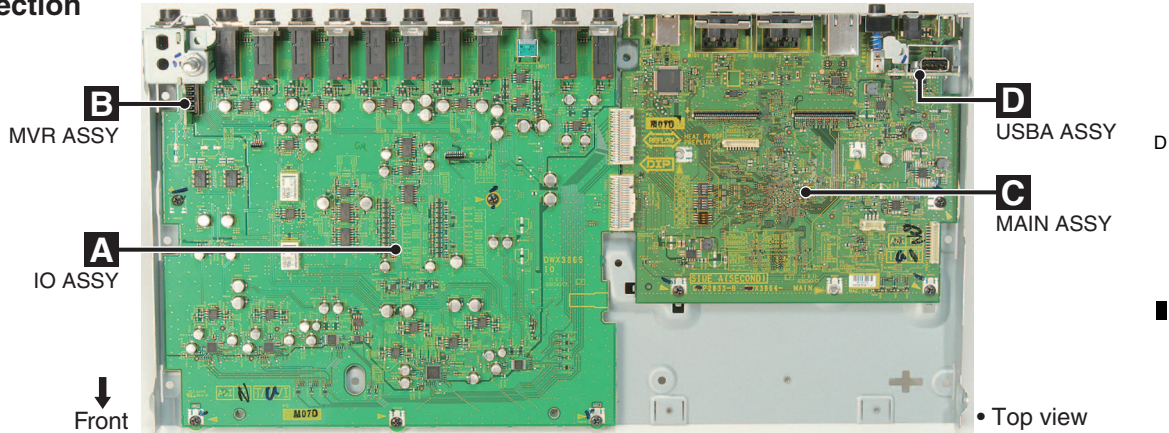
• Control Panel Section



*** Note :**
The 1 and 2 ASSYs of SYQ* ASSYs have the same circuitry, parts, and board shapes.
Only printed information is different, because their part numbers and wiring numbers are different.
They are handled similarly in their production management.
Therefore, either 1 or 2 ASSY of the respective ASSYs is assembled in the respective place.



• Chassis Section

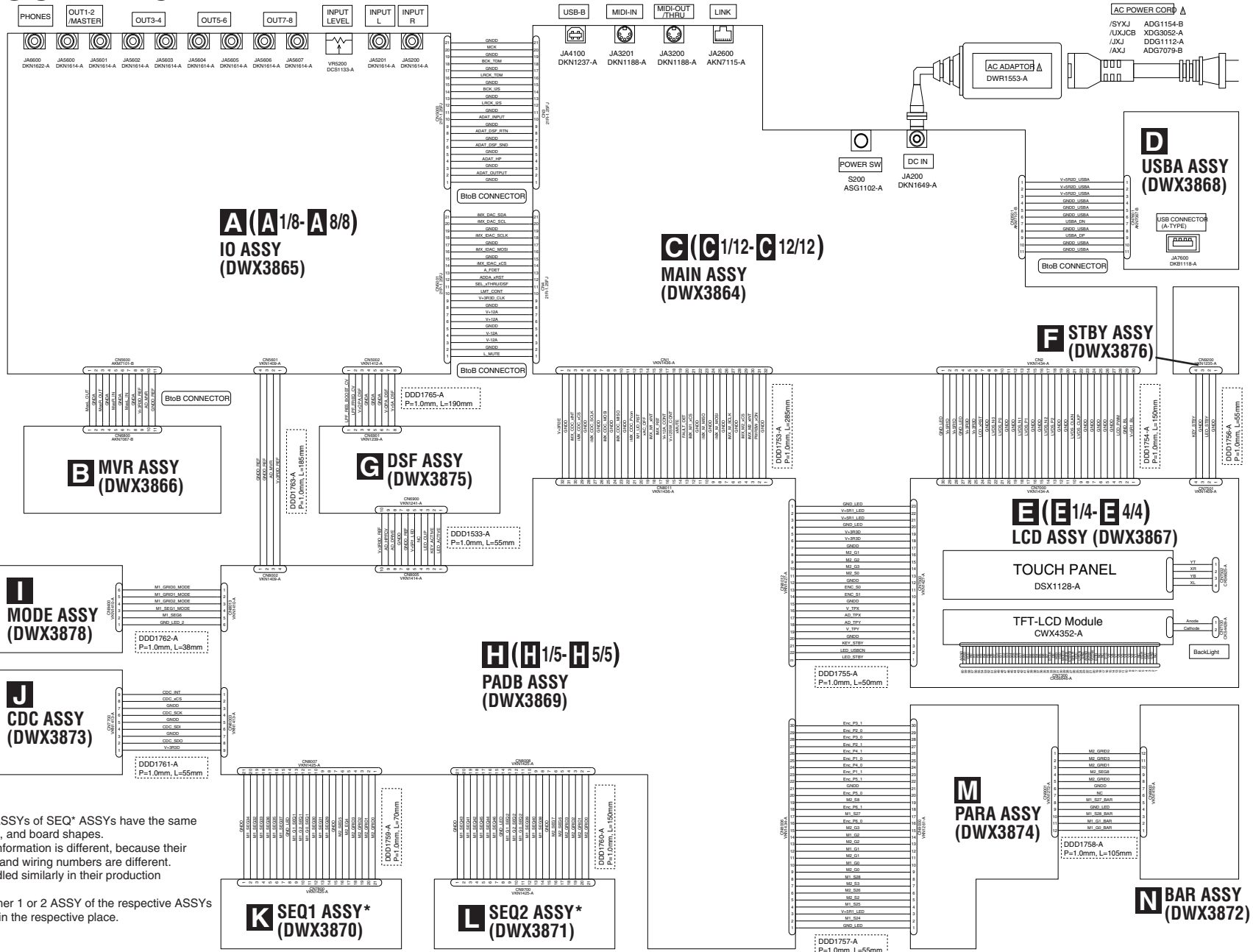


NOTES: ● Parts marked by “NSP” are generally unavailable because they are not in our Master Spare Parts List.
● The ⚠ mark found on some component parts indicates the importance of the safety factor of the part.
Therefore, when replacing, be sure to use parts of identical designation.

Mark	No.	Description	Part No.	Mark	No.	Description	Part No.
LIST OF ASSEMBLIES							
	1..	MAIN ASSY	DWX3864	NSP	1..	PAD ASSY	DWM2618
					2..	PADB ASSY	DWX3869
					2..	SEQ1 ASSY	DWX3870
					2..	SEQ2 ASSY	DWX3871
NSP	1..	AUDIO ASSY	DWM2616		2..	BAR ASSY	DWX3872
	2..	IO ASSY	DWX3865		2..	CDC ASSY	DWX3873
	2..	MVR ASSY	DWX3866		2..	MODE ASSY	DWX3878
	2..	USBA ASSY	DWX3868				
	1..	LCD ASSY	DWX3867	NSP	1..	SUB ASSY	DWM2619
					2..	PARA ASSY	DWX3874
					2..	DSF ASSY	DWX3875
					2..	STBY ASSY	DWX3876

4. BLOCK DIAGRAM

4.1 OVERALL WIRING DIAGRAM



Note:
The 1 and 2 ASSYs of SEQ* ASSYs have the same circuitry, parts, and board shapes.
Only printed information is different, because their part numbers and wiring numbers are different.
They are handled similarly in their production management.
Therefore, either 1 or 2 ASSY of the respective ASSYs is assembled in the respective place.

1 ■ 2 ■ 3 ■ 4 ■



4.4 MATRIX TABLE

LED Assignment



• LED matrix by Sub microcomputer1 (IC8005) control

	M1_GRID0	M1_GRID1	M1_GRID2
M1_SEG0	PAD13 RED	PAD14 RED	HOLD
M1_SEG1	PAD13 GREEN	PAD14 GREEN	USER2
M1_SEG2	PAD13 BLUE	PAD14 BLUE	
M1_SEG3	PAD9 RED	PAD10 RED	PAD5 RED
M1_SEG4	PAD9 GREEN	PAD10 GREEN	PAD5 GREEN
M1_SEG5	PAD9 BLUE	PAD10 BLUE	PAD5 BLUE
M1_SEG6	PITCH	REPEAT	USER1
M1_SEG7	Ribbon0	Ribbon2	Ribbon4
M1_SEG8	Ribbon1	Ribbon3	Ribbon5
M1_SEG9	PAD1 RED	PAD2 RED	PAD6 RED
M1_SEG10	PAD1 GREEN	PAD2 GREEN	PAD6 GREEN
M1_SEG11	PAD1 BLUE	PAD2 BLUE	PAD6 1BLUE
M1_SEG12	PAD15 RED	PAD16 RED	
M1_SEG13	PAD15 GREEN	PAD16 GREEN	
M1_SEG14	PAD15 1BLUE	PAD16 1BLUE	
M1_SEG15	PAD11 RED	PAD12 RED	
M1_SEG16	PAD11 GREEN	PAD12 GREEN	
M1_SEG17	PAD11 1BLUE	PAD12 2BLUE	
M1_SEG18	PAD7 RED	PAD8 RED	
M1_SEG19	PAD7 GREEN	PAD8 GREEN	
M1_SEG20	PAD7 1BLUE	PAD8 1BLUE	
M1_SEG21	PAD3 RED	PAD4 RED	
M1_SEG22	PAD3 GREEN	PAD4 GREEN	
M1_SEG23	PAD3 1BLUE	PAD4 2BLUE	
M1_SEG24	STOP	REC	
M1_SEG25	PLAY	SCENE	PATTERN
M1_SEG26	Bar Location1	Bar Location2	Bar Location3
M1_SEG27	Bar Selector1	Bar Selector2	Bar Location4
M1_SEG28	Bar Selector3	Bar Selector4	
M1_SEG29	STEP1/9 RED	STEP2/10 RED	STEP3/11 RED
M1_SEG30	STEP1/9 GREEN	STEP2/10 GREEN	STEP3/11 GREEN
M1_SEG31	STEP1/9 BLUE	STEP2/10 BLUE	STEP3/11 BLUE
M1_SEG32	STEP4/12 RED	STEP5/13 RED	STEP6/14 RED
M1_SEG33	STEP4/12 GREEN	STEP5/13 GREEN	STEP6/14 GREEN
M1_SEG34	STEP4/12 BLUE	STEP5/13 BLUE	STEP6/14 BLUE
M1_SEG35	STEP7/15 RED	STEP8/16 RED	Ribbon6
M1_SEG36	STEP7/15 GREEN	STEP8/16 GREEN	Ribbon7
M1_SEG37	STEP7/15 BLUE	STEP8/16 BLUE	TRACK
M1_SEG38	STEP1/9 RED	STEP2/10 RED	STEP3/11 RED
M1_SEG39	STEP1/9 GREEN	STEP2/10 GREEN	STEP3/11 GREEN
M1_SEG40	STEP1/9 BLUE	STEP2/10 BLUE	STEP3/11 BLUE
M1_SEG41	STEP4/12 RED	STEP5/13 RED	STEP6/14 RED
M1_SEG42	STEP4/12 GREEN	STEP5/13 GREEN	STEP6/14 GREEN

	M1_GRID0	M1_GRID1	M1_GRID2
M1_SEG43	STEP4/12 BLUE	STEP5/13 BLUE	STEP6/14 BLUE
M1_SEG44	STEP7/15 RED	STEP8/16 RED	SCALE
M1_SEG45	STEP7/15 GREEN	STEP8/16 GREEN	SLICE
M1_SEG46	STEP4/12 BLUE	STEP5/13 BLUE	MUTE

• LED to control directly in the Sub microcomputer1 (IC8005)

ACTIVE	STBY	OVER	USB CONNECT
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KEY Assignment

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• KEY matrix by Sub microcomputer2 (IC8008) control

	M2_GRID0	M2_GRID1	M2_GRID2	M2_GRID3
M2_SEG0		Selector	BACK	HOME
M2_SEG1	TRACK	MUTE	SLICE	SCALE
M2_SEG2	SHIFT	REC	STOP	PLAY
M2_SEG3	HOLD	MODE	SCENE	PATTERN
M2_SEG4	STEP1	STEP2	STEP3	STEP4
M2_SEG5	STEP5	STEP6	STEP7	STEP8
M2_SEG6	STEP9	STEP10	STEP11	STEP12
M2_SEG7	STEP13	STEP14	STEP15	STEP16
M2_SEG8	Bar Select1	Bar Select2	Bar Select3	Bar Select4

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• Tact switch to control directly in the Sub microcomputer1 (IC8005)

Power SW	ACTIVE	USB STOP (WAKE UP)
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F

AD Port Assignment



• AD to control by Sub microcomputer2 (IC8008)control

User Interface	Signal Name	Route	Microcomputer Pin No.
PAD1	AD_PAD1	*1	85pin
PAD2	AD_PAD2	*1	97pin
PAD3	AD_PAD3	*1	87pin
PAD4	AD_PAD4	*1	90pin
PAD5	AD_PAD5	*1	81pin
PAD6	AD_PAD6	*1	95pin
PAD7	AD_PAD7	*1	86pin
PAD8	AD_PAD8	*1	89pin
PAD9	AD_PAD9	*1	82pin
PAD10	AD_PAD10	*1	94pin
PAD11	AD_PAD11	*1	92pin
PAD12	AD_PAD12	*1	91pin
PAD13	AD_PAD13	*1	83pin
PAD14	AD_PAD14	*1	93pin
PAD15	AD_PAD15	*1	84pin
PAD16	AD_PAD16	*1	88pin
DRIVE	AD_DRIVE	*1	65pin
MAIN OUT	AD_MVR	*1	69pin
HIGH PASS CUTOFF	AD_HPFCV	*1	67pin
Touch panel X	AD_TPX_S	Transistor via	71pin
Touch panel Y	AD_TPY_S	Transistor via	72pin

*1: Directly in the microcomputer

• Microcomputer uncontrolled (Analog volume)

INPUT LEVEL	MAIN OUT (OUT1-2/MASTER Route)	LOW PASS CUTOFF, RESONANCE
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Encoder Assignment

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• Encoder control by IC8008(microcomputer) control

User Interface	Signal Name	Route	Microcomputer Pin No.
Parameter1	Enc_P1_0	*1	27pin
	Enc_P1_1	*1	26pin
Parameter2	Enc_P2_0	*1	22pin
	Enc_P2_1	*1	23pin
Parameter3	Enc_P3_0	*1	41pin
	Enc_P3_1	*1	42pin
Parameter4	Enc_P4_0	*1	45pin
	Enc_P4_1	*1	46pin
Parameter5	Enc_P5_0	*1	48pin
	Enc_P5_1	*1	47pin
Parameter6	Enc_P6_0	*1	50pin
	Enc_P6_1	*1	49pin
Selector	Enc_Sel_0	*1	22pin
	Enc_Sel_1	*1	21pin

*1: Directly in the microcomputer

E

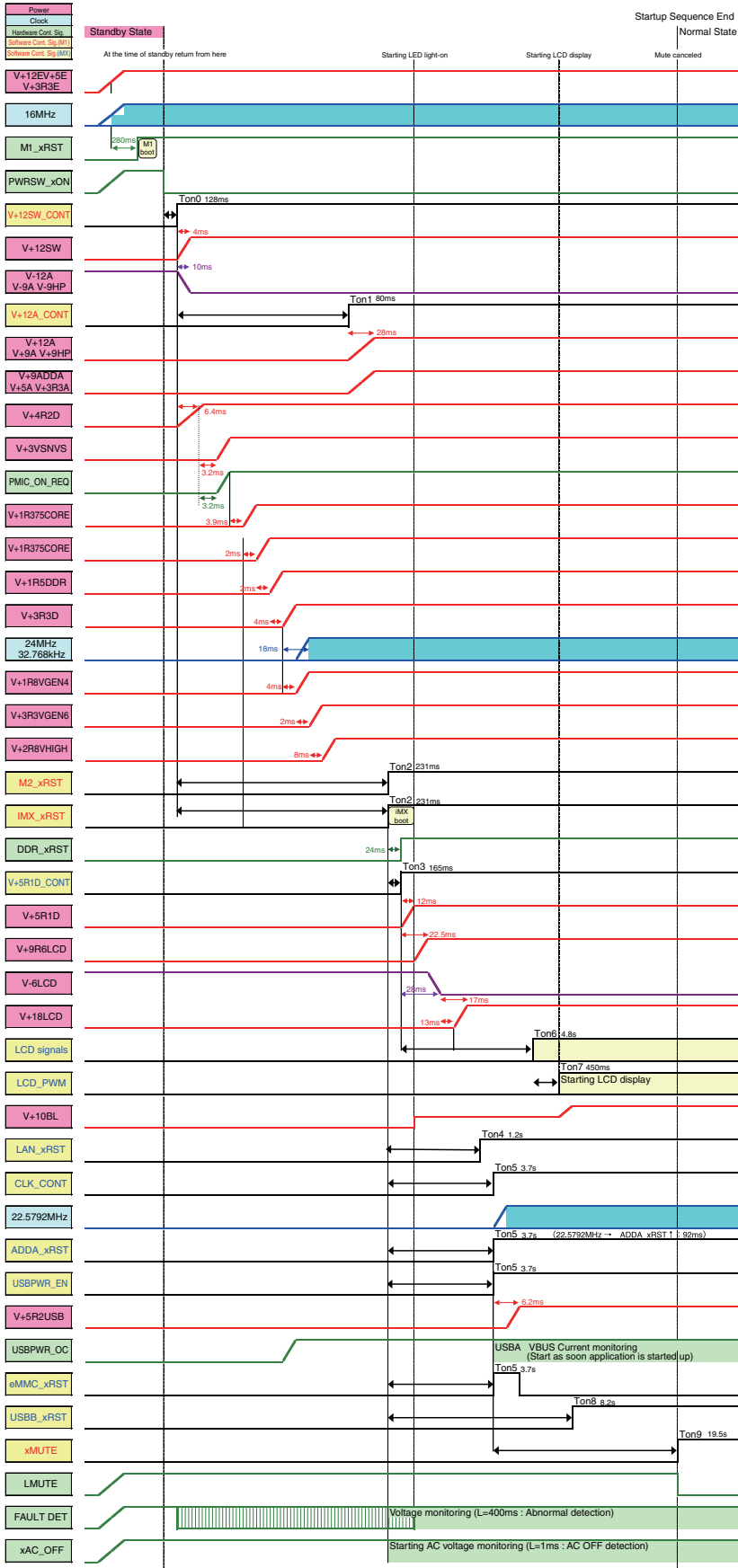
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5. DIAGNOSIS

5.1 STARTUP SEQUENCE

Timing chart of Power-on,Reset and Muting

Startup Sequence
Power-on/Standby Return



5.2 TROUBLESHOOTING

About [Observation point ○** etc.]

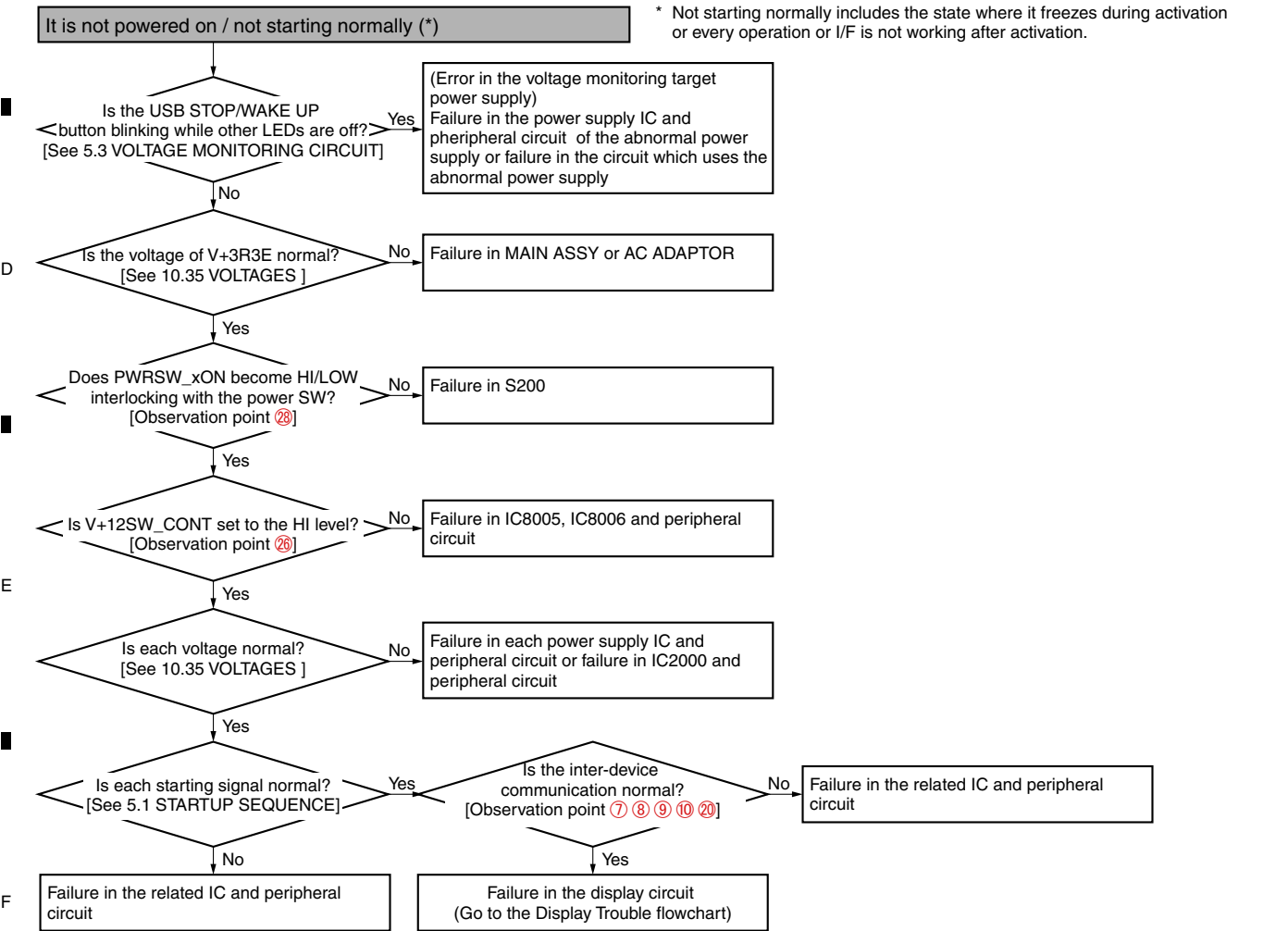
- A
- It should be noted that the representative point is shown for the observation point which has the same function (circuit), for example, OUTPUT3-8. Replace the number according to the actual defective part.

Table of Contents in Troubleshooting

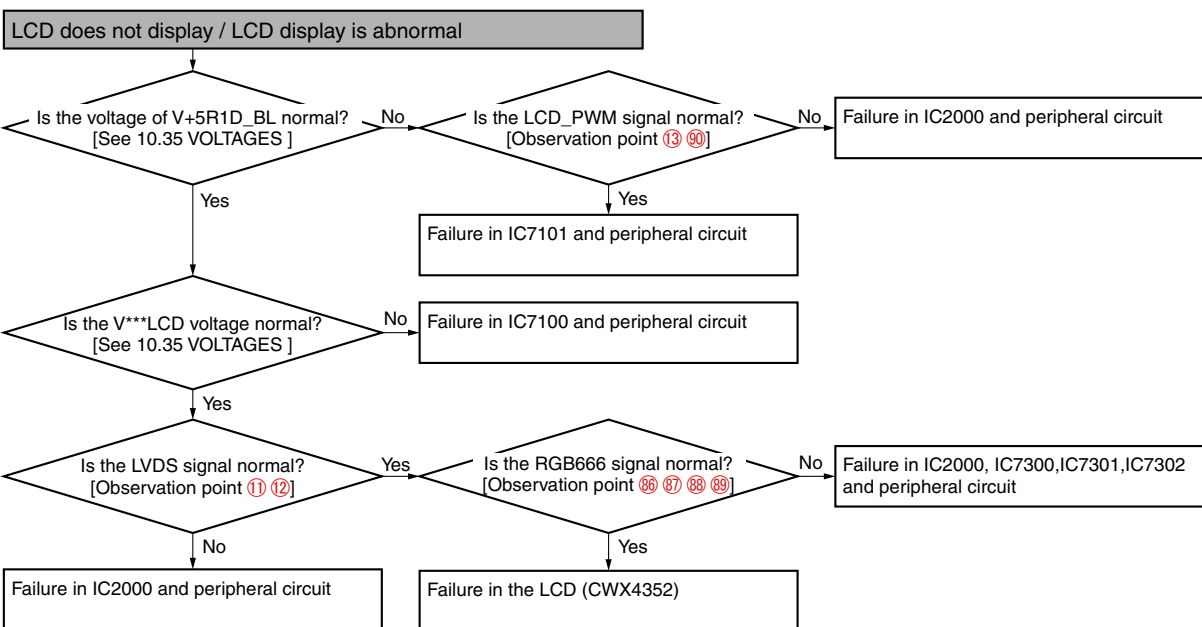
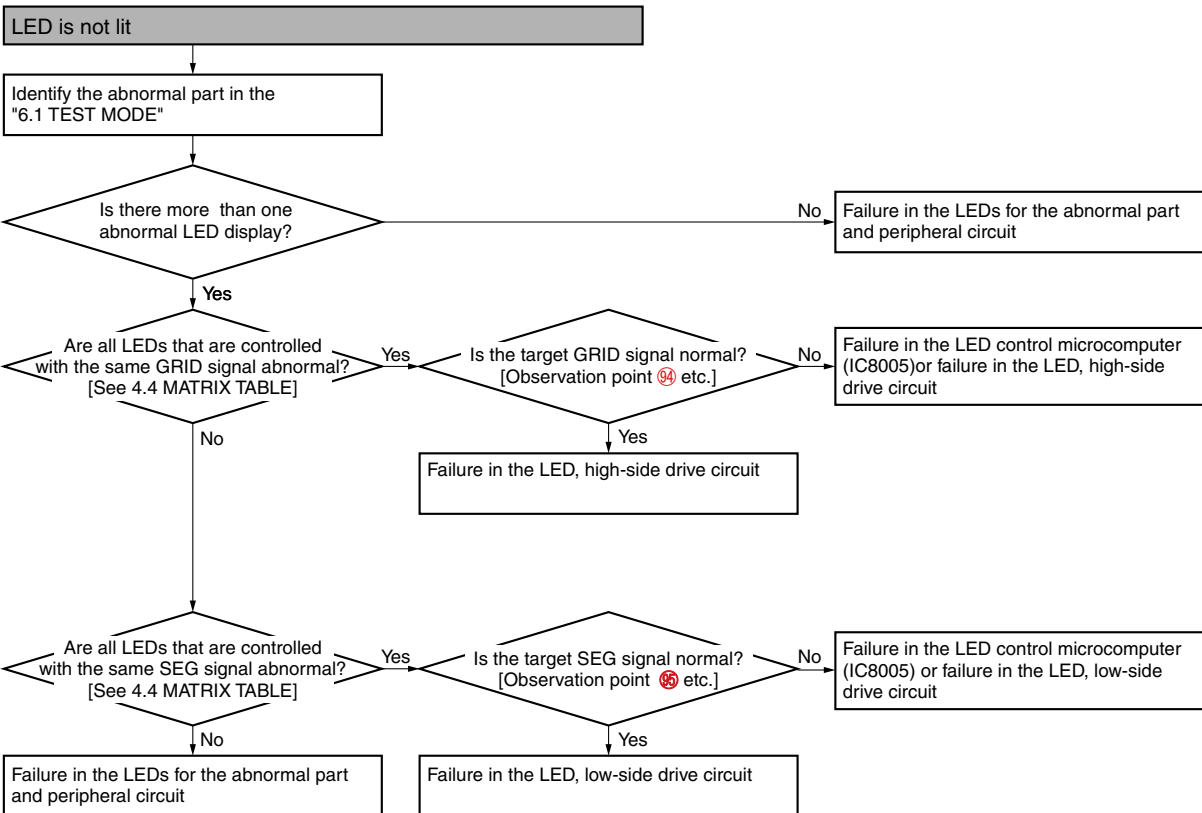
Prior Confirmation	• Check that the cables for connection of the external equipment and internal cables are properly connected and that there is no breakage in those cables.
Starting Trouble	• It is not powered on / not starting normally
Display Trouble	• LED is not lit • LCD does not display / LCD display is abnormal
Operation Trouble	• Button does not work • Rotary VR / performance PAD does not work • Rotary selector / parameter adjustment knob does not work • Touch strip does not work • Touch panel does not work / misalignment occurs
Audio Trouble	• No sound comes out when an input is supplied to the INPUT terminal • No sound comes out from the OUT1-2 / MASTER terminal and OUT3-8 terminal • No sound comes out from the PHONES terminal • No sound comes out from the OUT1-2 / MASTER terminal and PHONES terminal when ACTIVE ON • No sound is input / output from all input / output terminal
Interface-related Trouble	• PC connection is not available (USB-B) • LINK terminal does not work • MIDI connection is not available • USB memory is not recognized (USB-A)
Other Trouble	• Internal memory cannot be accessed • Firmware cannot be updated

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Starting Trouble



Display Trouble



Operation Trouble

Button does not work

Identify the abnormal part in the "6.1 TEST MODE"

Is there more than one abnormal operation?

No

Failure in the operation parts of the abnormal part and peripheral circuit

Yes

Are all the operation parts that are controlled with the same GRID signal or SEG signal abnormal?
[See 4.4 MATRIX TABLE]

No

Failure in the operation parts of the abnormal part and peripheral circuit

Yes

Failure in the operation processing microcomputer (IC8008, IC8005: PWR SW, WAKE UP, and ACTIVE only) and failure in peripheral circuit

Rotary VR / performance PAD does not work

Identify the abnormal part in the "6.1 TEST MODE"

Is there more than one abnormal operation?

No

Failure in the operation parts of the abnormal part and peripheral circuit

Yes

Failure in the AD processing microcomputer (IC8008) or failure in the AD reference voltage

Rotary selector / parameter adjustment knob does not work

Does it not work for the rotary operation?

No

If it does not work for the push operation, go to "Button does not work" flowchart.

Yes

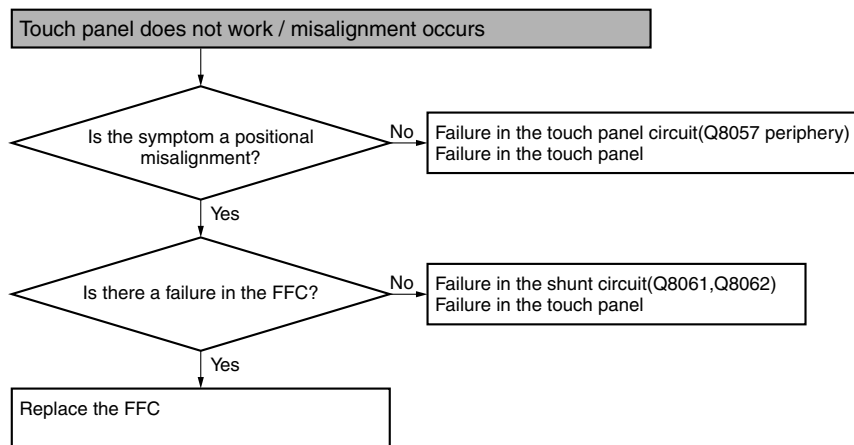
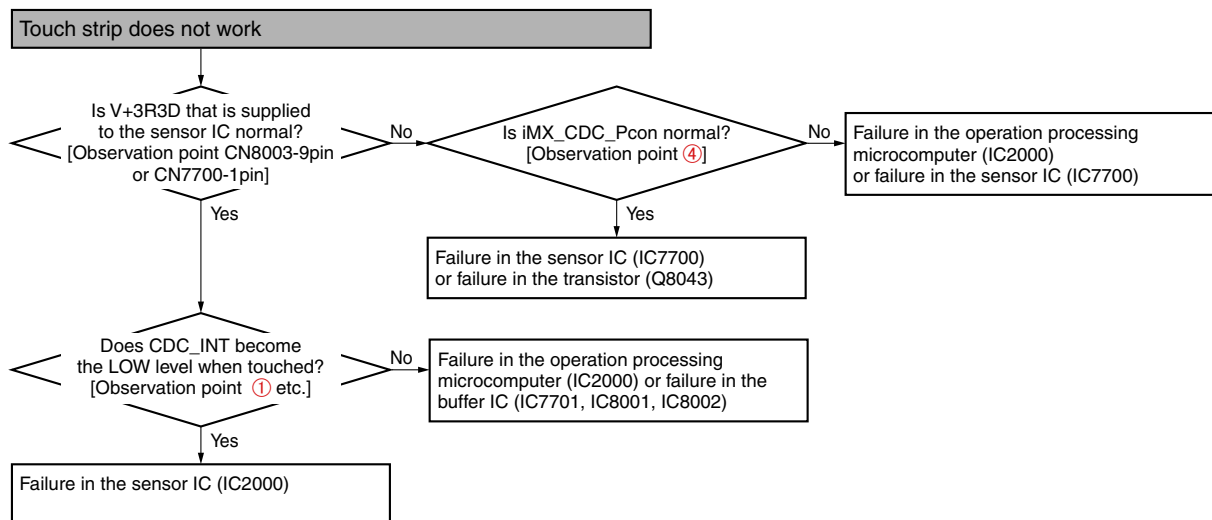
Is the rotation signal * normal?
[Observation point 67 69 70 72]

No

Failure in the processing microcomputer (failure in IC8008), or failure in the rotary selector/ parameter failure

Yes

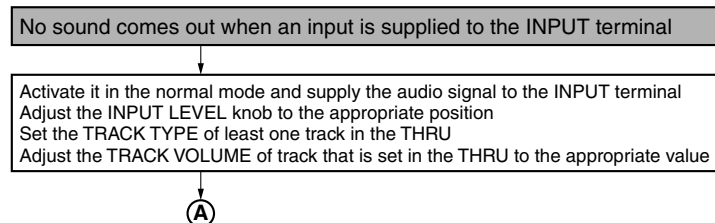
Failure in the operation processing microcomputer (Failure in IC8008)

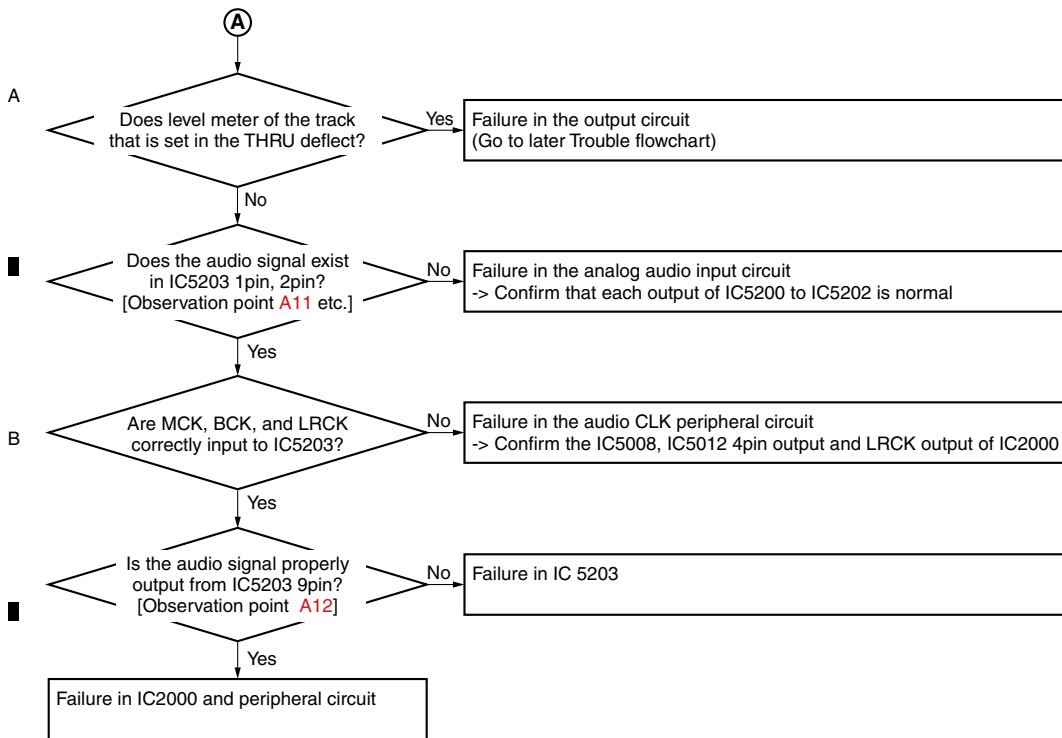


Audio Trouble

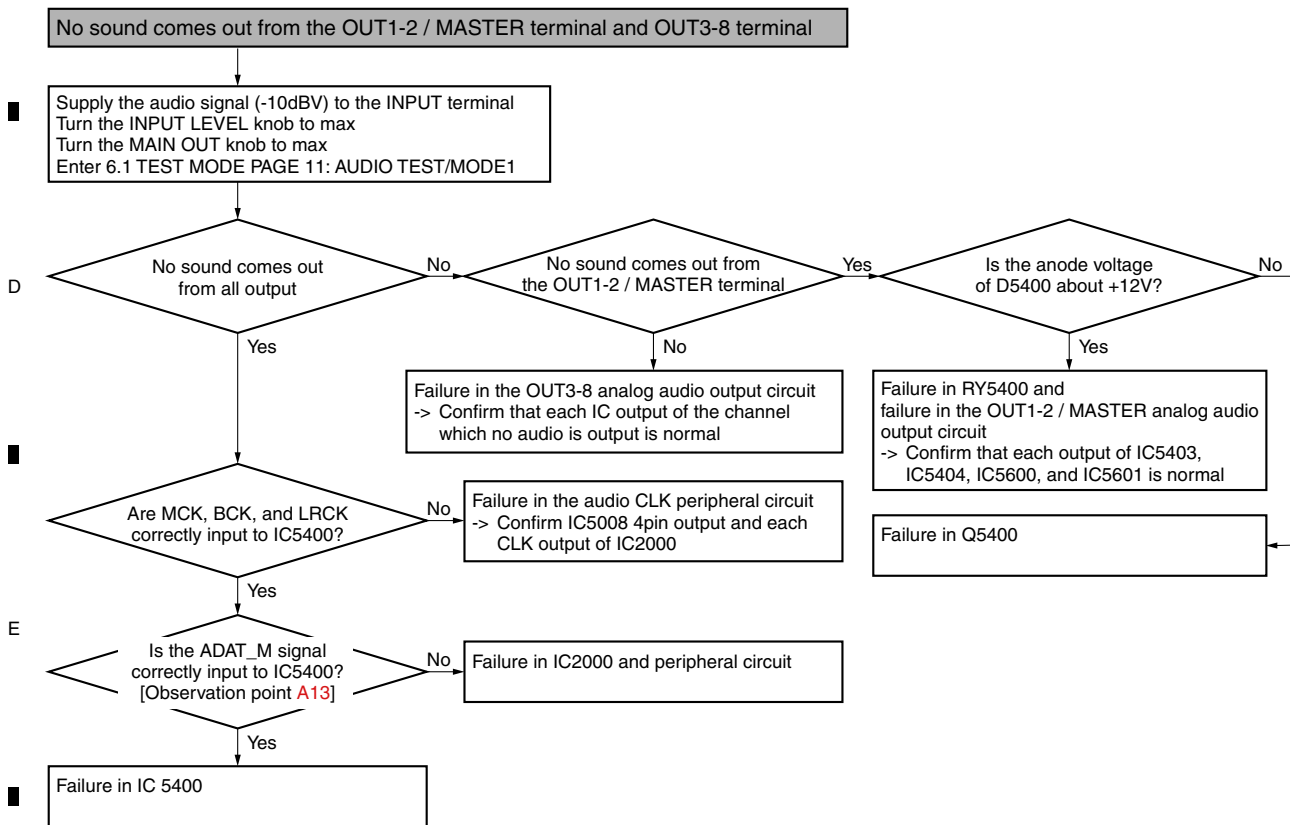
[Prior Confirmation]

- (1) Confirmation of the internal wiring materials
Confirm that the wiring materials of the relevant parts are inserted properly. Also, confirm that there is no disconnection in the wiring materials. Inset the wiring materials properly if they are not. Or, replace the wiring materials if they are disconnected. (See overall wiring diagram)
- (2) Confirmation of the power supply
Confirm that the voltage of the power supply that is used in the part to be diagnosed is not abnormal.
If it is abnormal, identify the power generation source based on the power supply map and make the necessary repairs.
- (3) Confirmation of the reset signal
Confirm that the reset signal of the IC that is used in the part to be diagnosed is Hi (+3.3V/Reset Released).
If it is abnormal, identify the reset signal generation source based on the circuit diagram and make the necessary repairs.
- (4) Confirm that there is no problem in the display/ operation systems
Confirm that there is no problem in the displays/ operations in the test mode.
If a problem is found, make the necessary repairs on the target part. (See Display Trouble and Operation Trouble flow charts)





C



F

No sound comes out from the PHONES terminal

Supply the audio signal (-10dBV) to the INPUT terminal
Turn the INPUT LEVEL knob to max
Turn the MAIN OUT knob to max
Enter 6.1 TEST MODE PAGE 11: AUDIO TEST/MODE1

Are MCK, BCK, and LRCK correctly input to IC6600?

No
Failure in the audio CLK peripheral circuit
-> Confirm IC5009, IC5016 4pin output and LRCK output of IC2000

Yes

Is the ADAT_HP signal correctly input to IC6600?
[Observation point A40]

No
Failure in IC2000 and peripheral circuit

Yes

Is the IC6600 output normal?
[Observation point A41 etc.]

No
Failure in IC6600

Yes

Failure in the PHONES analog audio output circuit
-> Confirm that each output of IC6601 to IC6603 is normal

No sound comes out from the OUT1-2 / MASTER terminal and PHONES terminal when ACTIVE ON

• Supply the audio signal (-10dBV) to the INPUT terminal
• Enter 6.1 TEST MODE PAGE 11: AUDIO TEST/MODE3
• Turn the HIGH PASS CUTOFF knob to min

• Turn the INPUT LEVEL knob to max
• Turn the LOW PASS CUTOFF knob to max

• Turn the MAIN OUT knob to max
• Turn the LOW PASS RESONANCE knob to min

Is the audio signal output to IC6203 1pin, 7pin?
[Observation point A37 etc.]

No
Is the voltage range of the LPF_FREQ_CV signal about +4.1V to +4.8V?
[Observation point A34]

No
Failure in IC6900 and peripheral circuit

Yes

Yes
Failure in the LPF circuit and peripheral circuit (with the wiring number in 6200's)

Is the voltage of IC6401 1pin about 0V?
[Observation point A38]

No
Failure in IC6400 and IC6401 or their peripheral circuit

Yes

Is the audio signal output to IC6402 1pin, 7pin?
[Observation point A39 etc.]

No
Failure in the HPF circuit (IC6402 to IC6404 and their periphery)

Yes

Does the audio signal exist in IC6001 1pin, 2pin?
[Observation point A31 etc.]

No
Pattern disconnection between IC6402 and IC6001 and improper mounting of the parts

Yes

Are MCK, BCK, and LRCK correctly input to IC6001?

Yes
Is the audio signal correctly output from IC6001 9pin?
[Observation point A32]

No
Failure in IC6001

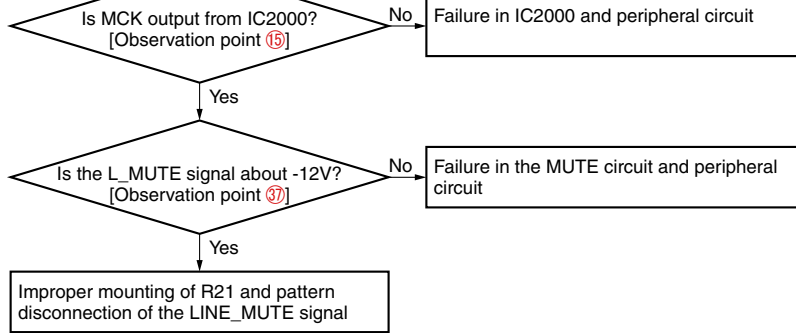
No

Failure in the audio CLK peripheral circuit
-> Confirm IC5009, IC5016 4pin output and LRCK output of IC2000

Yes
Failure in IC2000 and peripheral circuit

No sound is input / output from all input / output terminal

A

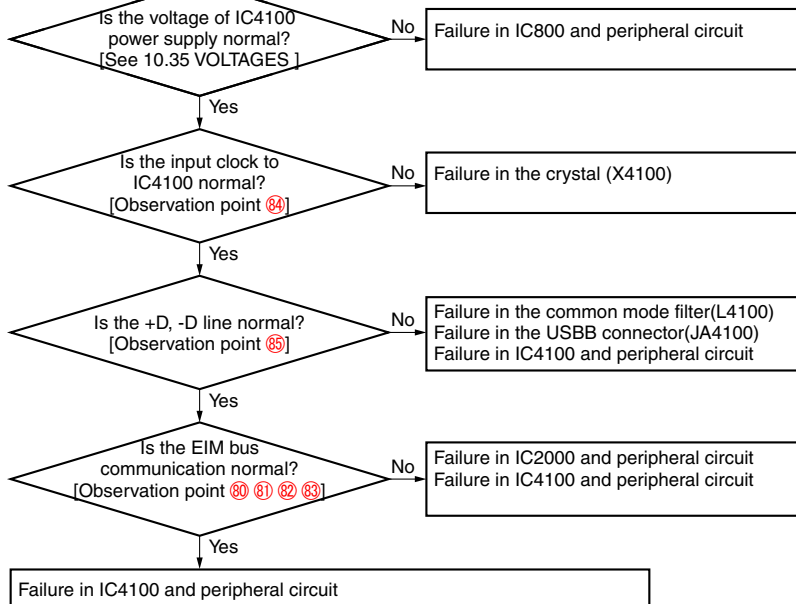


B

Interface Trouble

PC connection is not available (USB-B)

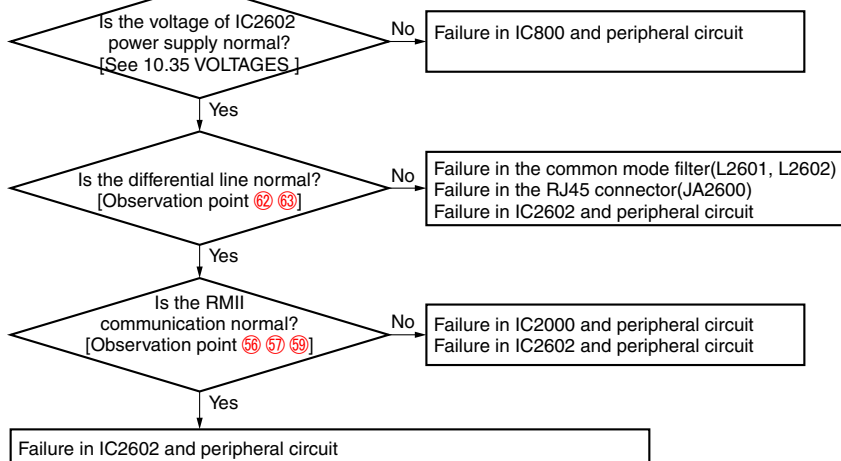
C



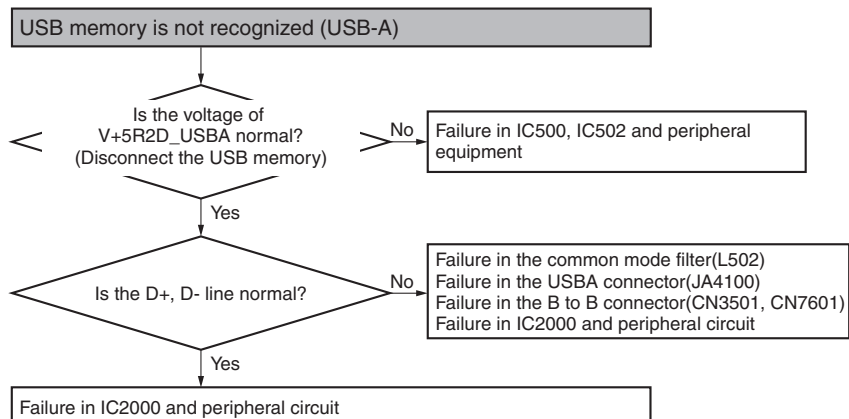
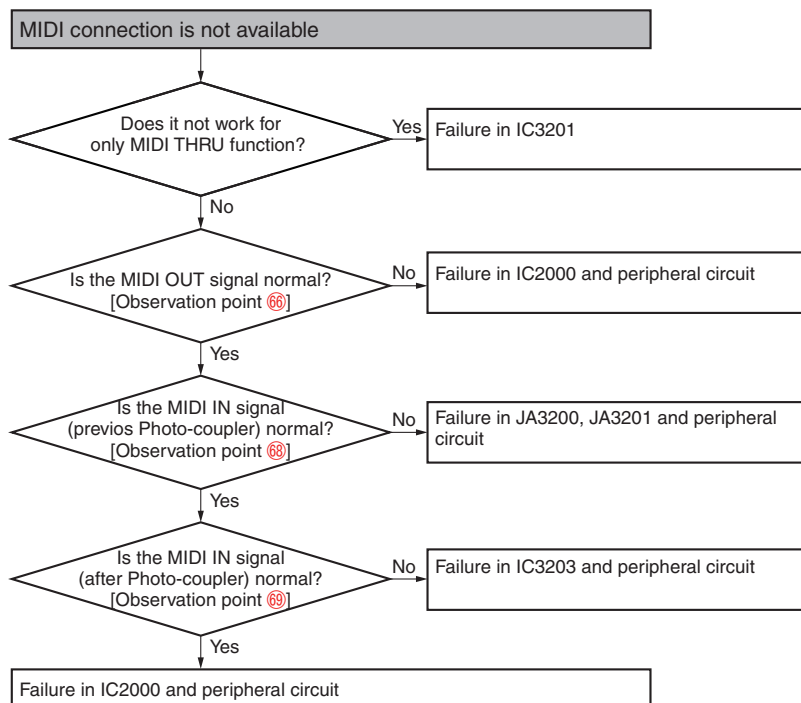
D

LINK terminal does not work

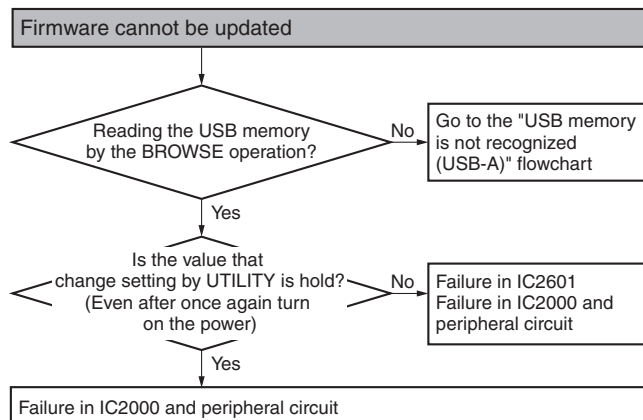
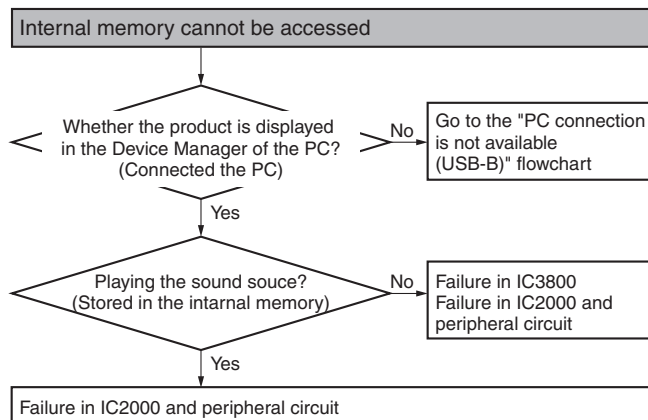
E



F



Other Trouble



5.3 VOLTAGE MONITORING CIRCUIT

Voltage monitoring

With this product, voltage of main power supply is monitored by FAULT_DET signal.

In the normal status, FAULT_DET signal is Hi level (+3.3V), however, in the abnormal status, it is at Low level (0V) and it is detected by M1 UCOM (IC8005).

Symptom of product in abnormal status

If power supply failure is detected by FAULT_DET signal, M1 UCOM sets V+12SW_CONT signal to Low to stop V+12SW power supply output that is supplied from AC adapter (DWR1553) via FET (Q209).

Moreover, M1 UCOM displays that power supply abnormal is occurring by blinking MAKE UP button by LED_STBY signal.

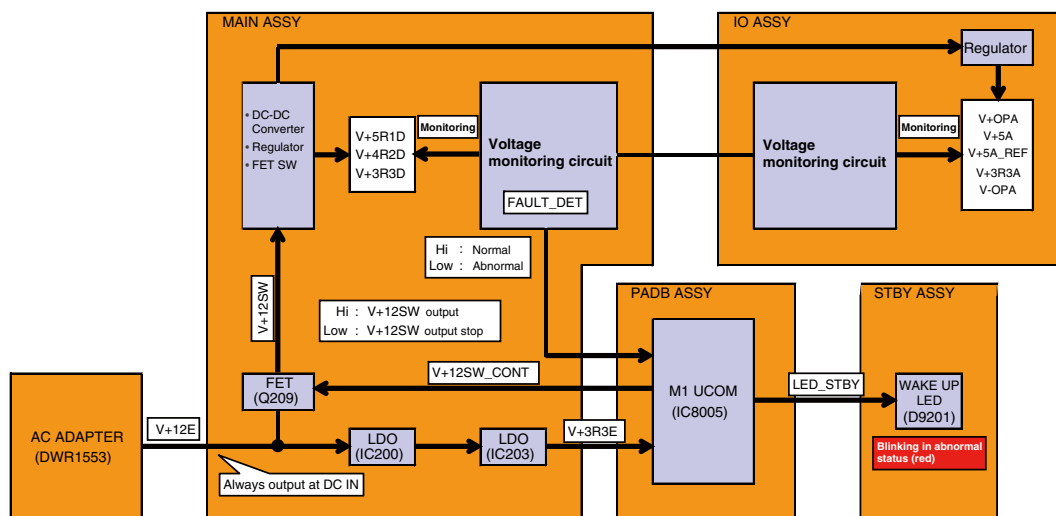
To stop V+12SW power supply output, all indications other than WAKE UP are turned OFF and all of SW and VR become unresponsive.

Diagnosis method

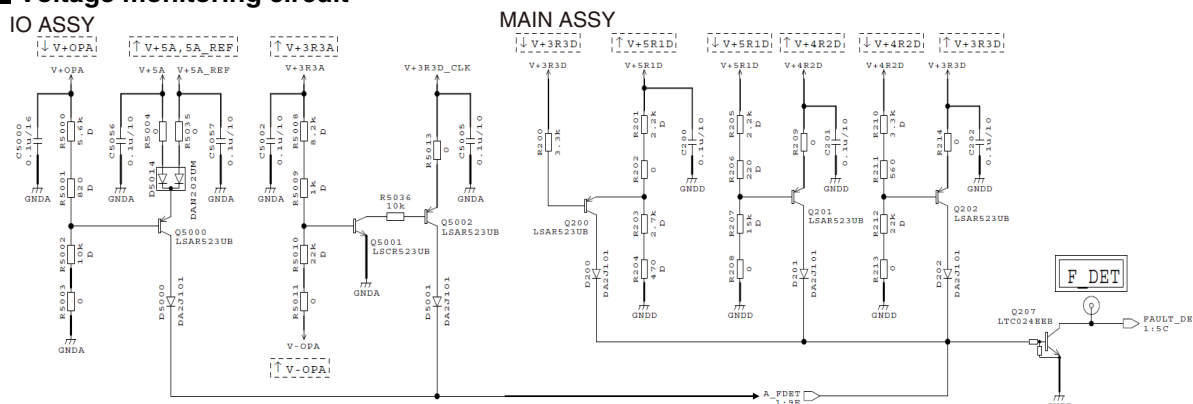
If the voltage is abnormal, an error is detected when the voltage monitoring program starts operating after usual startup to stop V+12SW power supply output that is supplied from AC adapter (DWR1553) via FET (Q209).

Thus, power supply is turned ON for approximately one second at the startup. While monitoring each voltage using an oscilloscope, turn OFF and ON the power supply and check which voltage is abnormal for the voltages immediately before power supply is stopped.

* Be sure to check the part between each power supply and GND does not cause short-circuit before turning ON the power supply again.



Voltage monitoring circuit



5.4 PIN ASSIGNMENT LIST

M1 uCOM PIN ASSIGNMENT LIST

Part No. : DYW1939 (R5F364AENFA-U0)

Mounting Position : DWX3869 IC8005

Pin No.	Pin Name	LS Select Function	LS Signal Name	LS Description	IN/OUT		PU/PD	
					Reset Cancel	During Reset	Internal	External
1	P9_6/ANEX1/SOUT4	P9_6	M1_SEG8	PAD LED MATRIX SEG SIGNAL	O	O		
2	P9_5/ANEX0/CLK4	P9_5	M1_SEG36	PAD LED MATRIX SEG SIGNAL	O	O		
3	P9_4/DA1/TB4IN/PWM1	P9_4	M1_SEG7	PAD LED MATRIX SEG SIGNAL	O	O		
4	P9_3/DA0/TB3IN/PWM0	P9_3	M1_GRID_P1	No USE	O			
5	P9_2/TB2IN/PMC0/SOUT3	P9_2	M1_SEG1	PAD LED MATRIX SEG SIGNAL	O	O		
6	P9_1/TB1IN/PMC1/SIN3	P9_1	M1_SEG0	PAD LED MATRIX SEG SIGNAL	O	O		
7	P9_0/TB0IN/CLK3	P9_0	M1_SEG2	PAD LED MATRIX SEG SIGNAL	O	O		
8	BYTE	NC (BYTE)	No USE (GND)	No USE (GND)	I	GND		
9	CNVSS	CNVSS	CNVSS	DEBUG	I	I		PD150k
10	P8_7/XCIN	P8_7	Model Distinction 0	IDENTIFICATION TERMINAL for COLOR VARIATION	I	I		PD4.7k
11	P8_6/XCOUT	P8_6	Model Distinction 1	IDENTIFICATION TERMINAL for COLOR VARIATION	I	I		PD4.7k
12	xRESET	xRESET	M1_xRESET	RESET	I	I		
13	XOUT	XOUT	No CONNECT					
14	VSS	VSS	GNDD	GND	GND	GND		
15	XIN	XIN	16M_M1	EXTERNAL CLK INPUT (16MHz)	I	I		
16	VCC1	VCC1	V+3R3E	POWER SUPPLY	PWR	PWR		
17	P8_5/xNMI/xSD/CEC	xNMI	No USE (Pull UP)	No USE (HI HOLD)	I	I		PU22k
18	P8_4/xINT2/ZP	P8_4	xAC_OFF	AC CORD MISSING DETECTION (Pop sound measures standby)	I	I		
19	P8_3/xINT1	P8_3	M1_M2_xINT	No USE	I	O		
20	P8_2/xINT0	P8_2	iMX_M1_xINT	iMX SERIAL COMMUNICATION (Slave)	O	O		
21	P8_1/TA4IN/xU/xCTS5/xRTS5	P8_1	IMX_RST	i.MX6 RESET CONTROL (L: Reset release ,H: Reset)	O	I		
22	P8_0/TA4OUT/U/RXD5/SCL5	P8_0	V+12A_CONT	OUTPUT POWER CONTROL SIGNAL (L : Power Off H : Power On)	O	O		
23	P7_7/TA3IN/CLK5	P7_7	V+12SW_CONT	OUTPUT POWER CONTROL SIGNAL (L : Power Off H : Power On)	O	O		
24	P7_6/TA3OUT/TXD5/SDA5	P7_6	M2_xRST	M2 RESET CONTROL	O	O		
25	P7_5/TA2IN/xW	P7_5	xMUTE	MUTE RELEASE SIGNAL (L : Mute H : Mute Release)	O	O		
26	P7_4/TA2OUT/W	P7_4	FAULT_DET	ABNORMAL VOLTAGE MONITORING (L : Abnormal H : Normal)	I	I		PU10k
27	P7_3/xCTS2/xRTS2/TA1IN/xV	P7_3	M1_M2_xCS	M2 SERIAL COMMUNICATION (Master)	I	O		
28	P7_2/CLK2/TA1OUT/V	P7_2	iMX_M1_xCS	No USE (Without using CS signal M1 side)	I	O		
29 OD	P7_1/RXD2/SCL2/SCLMM/TA0IN/	P7_1	ucom Distinction	FOR FIRMWARE CONFIRMATION (L:M1, H:M2)	I	I		PD4.7k
30 OD	P7_0/TXD2/SDA2/SDAMM/TA0OUT	P7_0	GND	TEMPERED GND	I	GND		
31	P6_7/TXD1/SDA1	TXD1	M1_M2_MOSI	M2 SERIAL COMMUNICATION (Master)	O (L)	O		
32	P6_6/RXD1/SCL1	RXD1	M1_M2_MISO	M2 SERIAL COMMUNICATION (Master)	I	O		
33	P6_5/CLK1	CLK1	M1_M2_SCK	M2 SERIAL COMMUNICATION (Master)	O (L)	O		
34	P6_4/xCTS1/xRTS1/xCTS0/CLKS1	P6_4	GND	TEMPERED GND	I	GND		
35	P6_3/TXD0/SDA0	TXD0	iMX_M1_MISO	iMX SERIAL COMMUNICATION (Slave)	O (L)	I	PU	
36	P6_2/RXD0/SCL0	RXD0	iMX_M1_MOSI	iMX SERIAL COMMUNICATION (Slave)	I	I	PU	
37	P6_1/CLK0	CLK0	iMX_M1_SCLK	iMX SERIAL COMMUNICATION (Slave)	I	I	PU	
38	P6_0/RTCOU/xCTS0/xRTS0	P6_0	GND	TEMPERED GND	I	GND	PU	
39	P5_7/xRDY/CLKOUT	P5_7	BLANK		O			
40	P5_6/ALE	P5_6	BLANK		O			
41	P5_5/xHOLD	P5_5	RESERVE (Check needle)	LED MATRIX SEG SIGNAL	O	O		
42	P5_4/xHLDA	P5_4	M1_SEG14	PAD LED MATRIX SEG SIGNAL	O	O		
43	P5_3/BCLK	P5_3	M1_SEG13	PAD LED MATRIX SEG SIGNAL	O	O		
44	P5_2/xRD	P5_2	M1_SEG12	PAD LED MATRIX SEG SIGNAL	O	O		
45	P5_1/xWRH/xBHE	P5_1	M1_SEG17	PAD LED MATRIX SEG SIGNAL	O	O		
46	P5_0/xWRL/xWR	P5_0	M1_SEG16	PAD LED MATRIX SEG SIGNAL	O	O		
47	P4_7/PWM1/TXD7/SDA7/xCS3	P4_7	M1_SEG15	PAD LED MATRIX SEG SIGNAL	O	O		
48	P4_6/PWM0/RXD7/SCL7/xCS2	P4_6	LED_STBY	STANDBY LED CONTROL	O(L)	O(L)		
49	P4_5/CLK7/xCS1	P4_5	LED_USBCN	LED DIRECT CONTROL	O	O		
50	P4_4/xCTS7/xRTS7/xCS0	P4_4	GND	TEMPERED GND	I	GND		
51	P4_3/A19	P4_3	M1_SEG18	PAD LED MATRIX SEG SIGNAL	O	O		
52	P4_2/A18	P4_2	M1_SEG19	PAD LED MATRIX SEG SIGNAL	O	O		
53	P4_1/A17	P4_1	M1_SEG20	PAD LED MATRIX SEG SIGNAL	O	O		
54	P4_0/A16	P4_0	M1_SEG23	PAD LED MATRIX SEG SIGNAL	O	O		
55	P3_7/A15	P3_7	M1_SEG22	PAD LED MATRIX SEG SIGNAL	O	O		
56	P3_6/A14	P3_6	M1_SEG21	PAD LED MATRIX SEG SIGNAL	O	O		
57	P3_5/A13	P3_5	M1_SEG10	PAD LED MATRIX SEG SIGNAL	O	O		
58	P3_4/A12	P3_4	M1_SEG9	PAD LED MATRIX SEG SIGNAL	O	O		
59	P3_3/A11	P3_3	M1_SEG11	PAD LED MATRIX SEG SIGNAL	O	O		
60	P3_2/A10	P3_2	M1_GRID2	PAD LED MATRIX GRID SIGNAL	O	O		
61	P3_1/A9	P3_1	M1_GRID1	PAD LED MATRIX GRID SIGNAL	O	O		
62	VCC2	VCC2	V+3R3E	POWER SUPPLY	PWR	PWR		
63	P3_0/A8	P3_0	GND	TEMPERED GND	I	GND		
64	VSS	VSS2	GNDD	GND	GND	GND		
65	P2_7/AN2_7/A7	P2_7	M1_GRID0	PAD LED MATRIX GRID SIGNAL	O	O		

Pin No.	Pin Name	LS Select Function	LS Signal Name	LS Description	IN/OUT		PU/PD	
					Reset Cancel	During Reset	Internal	External
66	P2_6/AN2_6/A6	P2_6	M1_SEG29	PAD LED MATRIX SEG SIGNAL	O	O		
67	P2_5/xINT7/AN2_5/A5	P2_5	M1_SEG31	PAD LED MATRIX SEG SIGNAL	O	O		
68	P2_4/xINT6/AN2_4/A4	P2_4	M1_SEG30	PAD LED MATRIX SEG SIGNAL	O	O		
69	P2_3/AN2_3/A3	P2_3	M1_SEG35	PAD LED MATRIX SEG SIGNAL	O	O		
70	P2_2/AN2_2/A2	P2_2	M1_SEG33	PAD LED MATRIX SEG SIGNAL	O	O		
71	P2_1/AN2_1/A1	P2_1	M1_SEG32	PAD LED MATRIX SEG SIGNAL	O	O		
72	P2_0/AN2_0/A0	P2_0	M1_SEG34	PAD LED MATRIX SEG SIGNAL	O	O		
73	P1_7/xINT5/IDU/D15	P1_7	PWRSW_xON	POWER SW INPUT	I	I		PU4.7k
74	P1_6/xINT4/IDW/D14	P1_6	KEY_WAKE UP	WAKE UP BUTTON INPUT	I	I		PU4.7k
75	P1_5/xINT3/IDV/D13	P1_5	KEY_ACTIVE	ACTIVE BUTTON INPUT	I	I		PU4.7k
76	P1_4/D12	P1_4	M1_SEG27	PAD LED MATRIX SEG SIGNAL	O	O		
77	P1_3/TXD6/SDA6/D11	P1_3	M1_SEG38	PAD LED MATRIX SEG SIGNAL	O	O		
78	P1_2/RXD6/SCL6/D10	P1_2	M1_SEG40	PAD LED MATRIX SEG SIGNAL	O	O		
79	P1_1/CLK6/D9	P1_1	M1_SEG39	PAD LED MATRIX SEG SIGNAL	O	O		
80	P1_0/CTS6/RTS6/D8	P1_0	LED_ACTIVE	ACTIVE LED CONTROL SIGNAL	O	O		
81	P0_7/AN0_7/D7	P0_7	LED_CLIP	OVER LED CONTROL SIGNAL	O	O		
82	P0_6/AN0_6/D6	P0_6	M1_SEG4	PAD LED MATRIX SEG SIGNAL	O	O		
83	P0_5/AN0_5/D5	P0_5	M1_SEG3	PAD LED MATRIX SEG SIGNAL	O	O		
84	P0_4/AN0_4/D4	P0_4	M1_SEG5	PAD LED MATRIX SEG SIGNAL	O	O		
85	P0_3/AN0_3/D3	P0_3	M1_SEG43	PAD LED MATRIX SEG SIGNAL	O	O		
86	P0_2/AN0_2/D2	P0_2	M1_SEG41	PAD LED MATRIX SEG SIGNAL	O	O		
87	P0_1/AN0_1/D1	P0_1	M1_SEG42	PAD LED MATRIX SEG SIGNAL	O	O		
88	P0_0/AN0_0/D0	P0_0	M1_SEG45	PAD LED MATRIX SEG SIGNAL	O	O		
89	P10_7/AN7/xKI3	P10_7	M1_SEG44	PAD LED MATRIX SEG SIGNAL	O	O		
90	P10_6/AN6/xKI2	P10_6	M1_SEG46	PAD LED MATRIX SEG SIGNAL	O	O		
91	P10_5/AN5/xKI1	P10_5	M1_SEG28	PAD LED MATRIX SEG SIGNAL	O	O		
92	P10_4/AN4/xKI0	P10_4	M1_SEG26	PAD LED MATRIX SEG SIGNAL	O	O		
93	P10_3/AN3	P10_3	M1_SEG25	PAD LED MATRIX SEG SIGNAL	O	O		
94	P10_2/AN2	P10_2	M1_SEG24	PAD LED MATRIX SEG SIGNAL	O	O		
95	P10_1/AN1	P10_1	M1_SEG37	PAD LED MATRIX SEG SIGNAL	O	O		
96	AVSS	AVSS	GNDD	ANALOG GND	GND	GND		
97	P10_0/AN0	P10_0	M1_SEG6	PAD LED MATRIX SEG SIGNAL	O	O		
98	VREF	VREF	V+3R3E	ANALOG POWER SUPPLY	PWR	PWR		
99	AVCC	AVCC	V+3R3E	ANALOG POWER SUPPLY	PWR	PWR		
100	P9_7/xADTRG/SIN4	P9_7	GND	TEMPERED GND	I	GND		

M2 uCOM PIN ASSIGNMENT LIST

Part No. : DYW1940 (R5F364AENFA-U0)

Mounting Position : DWX3869 IC8008

Pin No.	Pin Name	LS Select Function	LS Signal Name	LS Description	IN/OUT		PU/PD	
					Reset Cancel	During Reset	Internal	External
1	P9_6/ANEX1/SOUT4	P9_6	GND	TEMPERED GND	I	I	PU	
2	P9_5/ANEX0/CLK4	P9_5	BLANK		I	I	PU	
3	P9_4/DA1/TB4IN/PWM1	P9_4	Debug2-1	PORT FOR DEBUGGING*1	I	I	PU	
4	P9_3/DA0/TB3IN/PWM0	P9_3	Debug2-2	PORT FOR DEBUGGING	I	I		
5	P9_2/TB2IN/PMC0/SOUT3	P9_2	BLANK		I	I		
6	P9_1/TB1IN/PMC1/SIN3	P9_1	BLANK		I	I		
7	P9_0/TB0IN/CLK3	P9_0	BLANK		I	I		
8	BYTE	NC (BYTE)	No USE (GND)	No USE (GND)	GND	GND		
9	CNVSS	CNVSS	CNVSS	DEBUG	I	I		PD150k
10	P8_7/XCIN	P8_7	BLANK		I	I		
11	P8_6/XCOUT	P8_6	BLANK		I	I		
12	xRESET	xRESET	M2_xRESET	RESET	I	I		PU47k
13	XOUT	XOUT	No CONNECT					
14	VSS	VSS	GNDD	GND	GND	GND		
15	XIN	XIN	16M_M2	External CLK INPUT (16MHz)	I	I		
16	VCC1	VCC1	V+3R3E	POWER SUPPLY	PWR	PWR		
17 OD	P8_5/xNMI/xSD/CEC	xNMI	No USE (Pull UP)	No USE (HI HOLD)	I	I		PU22k
18	P8_4/xINT2/ZP	P8_4	BLANK		I	I		
19	P8_3/xINT1	P8_3	M1_M2_xINT	No USE	O	I	PU	
20	P8_2/xINT0	P8_2	iMX_M2_xINT	iMX SERIAL COMMUNICATION (Slave)	O	I	PU	
21	P8_1/TA4IN/xU/xCTS5/xRTS5	TA4IN	Enc_Sel_1	Encoder Selector	I	I	PU	
22	P8_0/TA4OUT/U/RXD5/SCL5	TA4OUT	Enc_Sel_0	Encoder Selector	I	I	PU	
23	P7_7/TA3IN/CLK5	TA3IN	Enc_P2_1	Encoder Parameter	I	I	PU	
24	P7_6/TA3OUT/TXD5/SDA5	TA3OUT	Enc_P2_0	Encoder Parameter	I	I	PU	
25	P7_5/TA2IN/xW	TA2IN	Enc_P1_1	Encoder Parameter	I	I	PU	
26	P7_4/TA2OUT/xW	TA2OUT	Enc_P1_0	Encoder Parameter	I	I	PU	
27	P7_3/xCTS2/xRTS2/TA1IN/xV	P7_3	M1_M2_xCS	M1 SERIAL COMMUNICATION (Slave)	O	I		
28	P7_2/CLK2/TA1OUT/V	P7_2	iMX_M2_xCS	No USE (Without using CS signal M2 side)	I	I		
29	P7_1/RXD2/SCL2/SCLMM/TA0IN/	P7_1	ucom Distinction	For Firmware confirmation (L : M1, H : M2)	I	I		PU4.7k
30 OD	P7_0/TXD2/SDA2/ SDAMM/TA0OUT	P7_0	GND	TEMPERED GND	GND	GND		
31	P6_7/TXD1/SDA1	TXD1	M1_M2_MISO	M1 SERIAL COMMUNICATION (Slave)	O (L)	I		
32	P6_6/RXD1/SCL1	RXD1	M1_M2_MOSI	M1 SERIAL COMMUNICATION (Slave)	I	I		
33	P6_5/CLK1	CLK1	M1_M2_SCK	M1 SERIAL COMMUNICATION (Slave)	I	I		
34	P6_4/xCTS1/xRTS1/xCTS0/CLKS1	P6_4	GND	TEMPERED GND	GND	GND		
35	P6_3/TXD0/SDA0	TXD0	iMX_M2_MISO	iMX SERIAL COMMUNICATION (Slave)	O (L)	I		
36	P6_2/RXD0/SCL0	RXD0	iMX_M2_MOSI	iMX SERIAL COMMUNICATION (Slave)	I	I		
37	P6_1/CLK0	CLK0	iMX_M2_SCLK	iMX SERIAL COMMUNICATION (Slave)	I	I		
38	P6_0/RTCOUT/xCTS0/xRTS0	P6_0	GND	TEMPERED GND	GND	GND		
39	P5_7/xRDY/CLKOUT	P5_7	BLANK		I	I	PU	PU4.7k
40	P5_6/ALE	P5_6	BLANK		I	I	PU	
41	P5_5/xHOLD	P5_5	Enc_P3_1	Encoder Parameter	I	I	PU	
42	P5_4/xHLDA	P5_4	Enc_P3_0	Encoder Parameter	I	I	PU	
43	P5_3/BCLK	P5_3	BLANK		I	I	PU	
44	P5_2/xRD	P5_2	BLANK		I	I	PU	
45	P5_1/xWRH/xBHE	P5_1	Enc_P4_1	Encoder Parameter	I	I	PU	
46	P5_0/xWRL/xWR	P5_0	Enc_P4_0	Encoder Parameter	I	I	PU	
47	P4_7/P WM1/TXD7/SDA7/xCS3	P4_7	Enc_P5_1	Encoder Parameter	I	I	PU	
48	P4_6/PWM0/RXD7/SCL7/xCS2	P4_6	Enc_P5_0	Encoder Parameter	I	I	PU	
49	P4_5/CLK7/xCS1	P4_5	Enc_P6_1	Encoder Parameter	I	I	PU	
50	P4_4/xCTS7/xRTS7/xCS0	P4_4	Enc_P6_0	Encoder Parameter	I	I	PU	
51	P4_3/A19	P4_3	M2_SEG8	KEY MATRIX SEG SIGNAL	I	I		
52	P4_2/A18	P4_2	M2_SEG3	KEY MATRIX SEG SIGNAL	I	I		
53	P4_1/A17	P4_1	M2_SEG2	KEY MATRIX SEG SIGNAL	I	I		
54	P4_0/A16	P4_0	M2_SEG7	KEY MATRIX SEG SIGNAL	I	I		
55	P3_7/A15	P3_7	M2_SEG6	KEY MATRIX SEG SIGNAL	I	I		
56	P3_6/A14	P3_6	M2_GRID3	KEY MATRIX GRID SIGNAL	O	I		
57	P3_5/A13	P3_5	M2_GRID2	KEY MATRIX GRID SIGNAL	O	I		
58	P3_4/A12	P3_4	M2_GRID1	KEY MATRIX GRID SIGNAL	O	I		
59	P3_3/A11	P3_3	M2_GRID0	KEY MATRIX GRID SIGNAL	O	I		
60	P3_2/A10	P3_2	M2_SEG1	KEY MATRIX SEG SIGNAL	I	I		
61	P3_1/A9	P3_1	BLANK		I	I		
62	VCC2	VCC2	V+3R3E	POWER SUPPLY	PWR	PWR		
63	P3_0/A8	P3_0	GND	TEMPERED GND	GND	GND		
64	VSS	VSS2	GNDD	GND	GND	GND		
65	P2_7/AN2_7/A7	AN2_7	AD_DRIVE	DRIVE VR AD READING	I	I		
66	P2_6/AN2_6/A6	P2_6	GND	TEMPERED GND	GND	GND		
67	P2_5/xINT7/AN2_5/A5	AN2_5	AD_HPFCV	HPFCV VR AD READING	I	I		
68	P2_4/xINT6/AN2_4/A4	P2_4	GND	TEMPERED GND	GND	GND		
69	P2_3/AN2_3/A3	AN2_3	AD_MVR	MVR ADVALUE	I	I		
70	P2_2/AN2_2/A2	P2_2	GND	TEMPERED GND	GND	GND		

*1 : When the prototype, Ground connection for the rework judgment.

A

Pin No.	Pin Name	LS Select Function	LS Signal Name	LS Description	IN/OUT		PU/PD	
					Reset Cancel	During Reset	Internal	External
71	P2_1/AN2_1/A1	AN2_1	AD_TPY_S	TOUCH PANEL AD READING(Y axis)	I	I		
72	P2_0/AN2_0/A0	AN2_0	AD_TPX_S	TOUCH PANEL AD READING(X axis)	I	I		
73	P1_7/xINT5/IDU/D15	P1_7	M2_SEG0	KEY MATRIX SEG SIGNAL	I	I		
74	P1_6/xINT4/IDW/D14	P1_6	M2_SEG5	KEY MATRIX SEG SIGNAL	I	I		
75	P1_5/xINT3/IDV/D13	P1_5	M2_SEG4	KEY MATRIX SEG SIGNAL	I	I		
76	P1_4/D12	P1_4	SEL_V_TPY	TOUCH PANEL VOLTAGE APPLIED CONTROL(X axis)	O	I		
77	P1_3/TXD6/SDA6/D11	P1_3	SEL_V_TPX	TOUCH PANEL VOLTAGE APPLIED CONTROL(Y axis)	O	I		
78	P1_2/RXD6/SCL6/D10	P1_2	Shunt	SHUNT CONTROL SIGNAL	O	I		
79	P1_1/CLK6/D9	P1_1	DebugM2_4	DEBUGGING NEEDLE	I	I		
80	P1_0/CTS6/RTS6/D8	P1_0	GND	TEMPERED GND	GND	GND		
81	P0_7/AN0_7/D7	AN0_7	AD_PAD5	PAD(FSR) AD READING	I	I		
82	P0_6/AN0_6/D6	AN0_6	AD_PAD9	PAD(FSR) AD READING	I	I		
83	P0_5/AN0_5/D5	AN0_5	AD_PAD13	PAD(FSR) AD READING	I	I		
84	P0_4/AN0_4/D4	AN0_4	AD_PAD15	PAD(FSR) AD READING	I	I		
85	P0_3/AN0_3/D3	AN0_3	AD_PAD1	PAD(FSR) AD READING	I	I		
86	P0_2/AN0_2/D2	AN0_2	AD_PAD7	PAD(FSR) AD READING	I	I		
87	P0_1/AN0_1/D1	AN0_1	AD_PAD3	PAD(FSR) AD READING	I	I		
88	P0_0/AN0_0/D0	AN0_0	AD_PAD16	PAD(FSR) AD READING	I	I		
89	P10_7/AN7/xKI3	AN7	AD_PAD8	PAD(FSR) AD READING	I	I		
90	P10_6/AN6/xKI2	AN6	AD_PAD4	PAD(FSR) AD READING	I	I		
91	P10_5/AN5/xKI1	AN5	AD_PAD12	PAD(FSR) AD READING	I	I		
92	P10_4/AN4/xKI0	AN4	AD_PAD11	PAD(FSR) AD READING	I	I		
93	P10_3/AN3	AN3	AD_PAD14	PAD(FSR) AD READING	I	I		
94	P10_2/AN2	AN2	AD_PAD10	PAD(FSR) AD READING	I	I		
95	P10_1/AN1	AN1	AD_PAD6	PAD(FSR) AD READING	I	I		
96	AVSS	AVSS	GNDD	GND	GND	GND		
97	P10_0/AN0	AN0	AD_PAD2	PAD(FSR) AD READING	I	I		
98	VREF	VREF	V+3R3D_REF	ANALOG POWER SUPPLY	PWR	PWR		
99	AVCC	AVCC	V+3R3D	ANALOG POWER SUPPLY	PWR	PWR		
100	P9_7/xADTRG/SIN4	P9_7	GND	TEMPERED GND	GND	GND	PU	

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F

IMX uCOM PIN ASSIGNMENT LIST

Part No. : MCIMX6Q5EYM10AD

Mounting Position : DWX3864 IC2000

Pin No.	Select Function	Signal Name	Description	IN/OUT		Pull-up Setting		
				Normal Operation	During Reset	Internal		External
A1	NC	NC	NC	-				
D12	ONOFF	NC (ONNOFF)	UNUSED (ONOFF)/Check needle	I	Input	PU	(100K)	
C11	POR_B	IMX_xRST	RESET INPUT	I	Input	PU	(100K)	PD10k (Digi Tr)
C12	BOOT_MODE0	BOOT_MODE0	BOOT MODE SETTING PIN	I	Input	PD	(100K)	
F12	BOOT_MODE1	BOOT_MODE1	BOOT MODE SETTING PIN	I	Input	PD	(100K)	PU10k
E12	TEST_MODE	NC(TEST_MODE)	UNUSED (TEST_MODE)	I	Input	PD	(100K)	
E11	TAMPER	NC (TAMPER)	UNUSED (TAMPER)/Check needle	I	Input	PD	(100K)	PU10k
D11	PMIC_ON_REQ	PMIC_ON_REQ	PMIC CONTROL	O	Output	Open Drain with PU	(100K)	PU10k
F11	PMIC_STBY_REQ	PMIC_STBY_REQ	PMIC CONTROL	O	Output	0		
A7	XTALI	XTALI	24MHz INPUT	I	—	—		PD2.2M
B7	XTALO	XTALO	24MHz INPUT	O	—	—		
D9	RTC_XTALI	RTC_XTALI	32.768kHz INPUT	I	—	—		
C9	RTC_XTALO	RTC_XTALO	32.768kHz INPUT	O	—	—		
C7	CLK1_N	NC	UNUSED	I	—	—		PU/PD10k
D7	CLK1_P	CLK_22.5792M_IMX	AUDIO CLK INPUT	I	—	—		
C5	CLK2_N	NC	UNUSED	O	—	—		
D5	CLK2_P	NC (CLK_24M_S2R)	UNUSED (CLK Standby for S2R)	O	—	—		
H6	JTAG_MOD	JTAG_MOD	JTAG CONNECTOR CONNECTION	I	Input	PU	(100K)	PD4.7k
H5	JTAG_TCK	JTAG_TCK	JTAG CONNECTOR CONNECTION	I	Input	PU	(47K)	
G5	JTAG_TDI	JTAG_TDI	JTAG CONNECTOR CONNECTION	I	Input	PU	(47K)	
G6	JTAG_TDO	JTAG_TDO	JTAG CONNECTOR CONNECTION	O	Output	Keeper		
C3	JTAG_TMS	JTAG_TMS	JTAG CONNECTOR CONNECTION	I	Input	PU	(47K)	
C2	JTAG_TRSTB	JTAG_TRSTB	JTAG CONNECTOR CONNECTION	I	Input	PU	(47K)	
A12	SATA_PHY_TX_P	NC (SATA)	UNUSED (SATA port)		—	—		
A14	SATA_PHY_RX_N	NC (SATA)	UNUSED (SATA port)		—	—		
B12	SATA_PHY_TX_N	NC (SATA)	UNUSED (SATA port)		—	—		
B14	SATA_PHY_RX_P	NC (SATA)	UNUSED (SATA port)		—	—		
E1	CSI_DATA2_N	NC (CSI)	UNUSED (CSI port)		—	—		
E2	CSI_DATA2_P	NC (CSI)	UNUSED (CSI port)		—	—		
F1	CSI_DATA3_P	NC (CSI)	UNUSED (CSI port)		—	—		
F2	CSI_DATA3_N	NC (CSI)	UNUSED (CSI port)		—	—		
P4	gpio5.GPIO5_IO19	NC	UNUSED	O(L)	Input	PU	(100K)	
P1	gpio5.GPIO5_IO18	V+5R1D_CONT	V+5R1D OUTPUT CONTROL L : OFF H : ON	O	Input	PU	(100K)	PD4.7k
N2	gpio5.GPIO5_IO21	NC	UNUSED	O(L)	Input	PU	(100K)	
P3	gpio5.GPIO5_IO20	NC	UNUSED	O(L)	Input	PU	(100K)	
N1	ecspi1.ECSP11_SCLK	iMX_M_SCLK	M16C CONTROL	O	Input	PU	(100K)	
P2	ecspi1.ECSP11_MOSI	iMX_M_MOSI	M16C CONTROL	O	Input	PU	(100K)	
N4	ecspi1.ECSP11_MISO	iMX_M_MISO	M16C CONTROL	I	Input	PU	(100K)	
N3	ecspi1.ECSP11_SS0	iMX_M1_xCS	M16C CONTROL	O	Input	PU	(100K)	
N6	i2c1.I2C1_SDA	iMX_DAC_SDA	DAC CONTROL	IO	Input	PU	(100K)	PU4.7k
N5	i2c1.I2C1_SCL	iMX_DAC_SCL	DAC CONTROL	O	Input	PU	(100K)	PU4.7k
M1	uart1.UART1_TX_DATA	UART1_TXD	DEBUG CONNECTOR	O(L)	Input	PU	(100K)	
M3	uart1.UART1_RX_DATA	UART1_RXD	DEBUG CONNECTOR	O(L)	Input	PU	(100K)	
M2	gpio5.GPIO5_IO30	iMX_M1_xINT	M16C CONTROL	I	Input	PU	(100K)	
L1	gpio5.GPIO5_IO31	iMX_M2_xINT	M16C CONTROL	I	Input	PU	(100K)	
M4	gpio6.GPIO6_IO00	debug 6_0	DEBUGGING LED/Check needle	O(L)	Input	PU	(100K)	
M5	gpio6.GPIO6_IO01	debug 6_1	DEBUGGING LED/Check needle	O(L)	Input	PU	(100K)	
L4	gpio6.GPIO6_IO02	NC	UNUSED	O(L)	Input	PU	(100K)	
L3	gpio6.GPIO6_IO03	M1_UD_RST	UPDATE FOR M1RESET L : Normal H : Reset	O	Input	PU	(100K)	PD10k (Digi Tr)
M6	gpio6.GPIO6_IO04	NC	UNUSED	O(L)	Input	PU	(100K)	
L6	gpio6.GPIO6_IO05	NC	UNUSED	O(L)	Input	PU	(100K)	
F4	CSI_CLK0_N	NC (CSI)	UNUSED (CSI port)		—	—		
F3	CSI_CLK0_P	NC (CSI)	UNUSED (CSI port)		—	—		
E4	CSI_DATA0_N	NC (CSI)	UNUSED (CSI port)		—	—		
E3	CSI_DATA0_P	NC (CSI)	UNUSED (CSI port)		—	—		
D1	CSI_DATA1_N	NC (CSI)	UNUSED (CSI port)		—	—		
D2	CSI_DATA1_P	NC (CSI)	UNUSED (CSI port)		—	—		
N19	gpio4.GPIO4_IO16	USB_xRST	USB IC CONTROL	O	Input	PU	(100K)	PD4.7k
N25	audmux.AUD6_TXD	ADAT_DSF_SND	AUDIO DATA (DSF_SEND)	O	Input	PU	(100K)	
N20	gpio4.GPIO4_IO19	NC (LRCK_I2S)	AUDIO PORT (RESERVE) (AUD6 LRCK INPUT)	I	Input	PU	(100K)	
P25	audmux.AUD6_RXD	ADAT_DSF_RTN	AUDIO DATA (DSF_RETURN)	I	Input	PU	(100K)	

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Pin No.	Select Function	Signal Name	Description	IN/OUT		Pull-up Setting		
				Normal Operation	During Reset	Internal		External
N21	gpio4.GPIO4_IO17	NC (BCK_I2S)	AUDIO PORT (RESERVE)/Check needle (AUD6 BCK INPUT)	I	Input	PU	(100K)	
P24	ecspi3.ECSPi3_SCLK	iMX_CDC_SCLK	CDC CONTROL	O	Input	PU	(100K)	
P22	ecspi3.ECSPi3_MOSI	iMX_CDC_MOSI	CDC CONTROL	O	Input	PU	(100K)	
P23	ecspi3.ECSPi3_MISO	iMX_CDC_MISO	CDC CONTROL	I	Input	PU	(100K)	
P21	ecspi3.ECSPi3_SS0	iMX_CDC_xCS	CDC CONTROL	O	Input	PU	(100K)	
P20	gpio4.GPIO4_IO25	iMX_CDC_Pcon	CDC POWER SUPPLY CONTROL L : Normal H : Reset	O	Input	PU	(100K)	
R25	gpio4.GPIO4_IO26	NC (LRCK_I2S)	AUDIO PORT (RESERVE)/Check needle (AUD6 LRCK INPUT)	I	Input	PU	(100K)	
R23	gpio4.GPIO4_IO27	NC (BCK_I2S)	AUDIO PORT (RESERVE)/Check needle (AUD6 BCK INPUT)	I	Input	PU	(100K)	
R24	gpio4.GPIO4_IO28	iMX_CDC_xINT	CDC CONTROL	I	Input	PU	(100K)	
R22	gpio4.GPIO4_IO29	EIM_xINT	USB IC CONTROL	I	Input	PU	(100K)	
T25	gpio4.GPIO4_IO30	ADDA_xRST	ADC/DAC CONTROL	O	Input	PU	(100K)	PD4.7k
R21	gpio4.GPIO4_IO31	EIM_xDREQ	USB IC CONTROL	I	Input	PU	(100K)	PU4.7k
T23	gpio5.GPIO5_IO05	SEL_x THRU/DSF	ANALOG FILTER CIRCUIT INPUT SELECT L : SEND(Master thru) H : Master	O	Input	PU	(100K)	
T24	gpio5.GPIO5_IO06	LMT_x OFF/ON	INPUT LIMITER CONTROL L : OFF H : ON	O	Input	PU	(100K)	PU22k (Digi Tr)
R20	gpio5.GPIO5_IO07	NC (AUD)	AUDIO PORT (RESERVE)/Check needle (AUD5 LRCK INPUT)	I	Input	PU	(100K)	
U25	gpio5.GPIO5_IO08	NC (AUD)	AUDIO PORT (RESERVE)/Check needle (AUD5 BCK INPUT)	I	Input	PU	(100K)	
T22	ecspi1.ECSPi1_SS1	iMX_M2_xCS	M16C CONTROL	O	Input	PU	(100K)	
T21	audmux.AUD5_TXC	BCK_I2S	I2S BCK OUTPUT	O	Input	PU	(100K)	
U24	audmux.AUD5_TXD	ADAT_HP	AUDIO DATA (PHONES)	O	Input	PU	(100K)	
V25	audmux.AUD5_TXFS	LRCK_I2S	I2S LRCK OUTPUT	O	Input	PU	(100K)	
U23	audmux.AUD5_RXD	ADAT_INPUT	AUDIO DATA (INPUT)	I	Input	PU	(100K)	
U22	audmux.AUD4_TXC	BCK_TDM	TDM BCK OUTPUT	O	Input	PU	(100K)	
T20	audmux.AUD4_TXD	ADAT_OUTPUT	AUDIO DATA (OUTPUT) 8 SLOT TDM	O	Input	PU	(100K)	
V24	audmux.AUD4_TXFS	LRCK_TDM	TDM LRCK OUTPUT	O	Input	PU	(100K)	
W24	gpio5.GPIO5_IO17	NC (AUD)	UNUSED/Check needle	O (L)	Input	PU	(100K)	
H3	DSI_CLK0_N	NC (DSI)	UNUSED (DSI port)		—	—		
H4	DSI_CLK0_P	NC (DSI)	UNUSED (DSI port)		—	—		
G2	DSI_DATA0_N	NC (DSI)	UNUSED (DSI port)		—	—		
G1	DSI_DATA0_P	NC (DSI)	UNUSED (DSI port)		—	—		
H2	DSI_DATA1_N	NC (DSI)	UNUSED (DSI port)		—	—		
H1	DSI_DATA1_P	NC (DSI)	UNUSED (DSI port)		—	—		
K22	src.SRC_BOOT_CFG26	BT_CFG4[2]	BOOT MODE SETTING PIN	I	Output	1		PD15k
J24	eim.EIM_OE	EIM_xOE	USB IC CONTROL	O	Output	1		
K20	eim.EIM_RW	EIM_xRW BT_CFG4[5]	USB IC CONTROL BOOT MODE SETTING PIN	O	Output	1		PD15k
H24	eim.EIM_CS0	EIM_xCS0	USB IC CONTROL	O	Output	1		
J23	gpio2.GPIO2_IO24	NC	UNUSED	O(L)	Output	1		
H25	src.SRC_BOOT_CFG16	BT_CFG3[0]	BOOT MODE SETTING PIN	I	Output	0		PD15k
G24	src.SRC_BOOT_CFG17	BT_CFG3[1]	BOOT MODE SETTING PIN	I	Output	0		PD15k
J22	src.SRC_BOOT_CFG18	BT_CFG3[2]	BOOT MODE SETTING PIN	I	Output	0		PD15k
G25	src.SRC_BOOT_CFG19	BT_CFG3[3]	BOOT MODE SETTING PIN	I	Output	0		PD15k
H22	src.SRC_BOOT_CFG20	BT_CFG3[4]	BOOT MODE SETTING PIN	I	Output	0		PD15k
H23	src.SRC_BOOT_CFG21	BT_CFG3[5]	BOOT MODE SETTING PIN	I	Output	0		PD15k
F24	src.SRC_BOOT_CFG22	BT_CFG3[6]	BOOT MODE SETTING PIN	I	Output	0		PD15k
J21	src.SRC_BOOT_CFG23	BT_CFG3[7]	BOOT MODE SETTING PIN	I	Output	0		PD15k
F25	src.SRC_BOOT_CFG24	BT_CFG4[0]	BOOT MODE SETTING PIN	I	Output	0		PD15k
H19	gpio5.GPIO5_IO02	NC	UNUSED	O(L)	Output	0		
C25	eim.EIM_DATA16	EIM_D0	USB IC CONTROL	IO	Input	PU	(100K)	
F21	eim.EIM_DATA17	EIM_D1	USB IC CONTROL	IO	Input	PU	(100K)	
D24	eim.EIM_DATA18	EIM_D2	USB IC CONTROL	IO	Input	PU	(100K)	
G21	eim.EIM_DATA19	EIM_D3	USB IC CONTROL	IO	Input	PU	(100K)	
G20	eim.EIM_DATA20	EIM_D4	USB IC CONTROL	IO	Input	PU	(100K)	
H20	eim.EIM_DATA21	EIM_D5	USB IC CONTROL	IO	Input	PU	(100K)	
E23	eim.EIM_DATA22	EIM_D6	USB IC CONTROL	IO	Input	PD	(100K)	
D25	eim.EIM_DATA23	EIM_D7	USB IC CONTROL	IO	Input	PU	(100K)	
F22	eim.EIM_DATA24	EIM_D8	USB IC CONTROL	IO	Input	PU	(100K)	
G22	eim.EIM_DATA25	EIM_D9	USB IC CONTROL	IO	Input	PU	(100K)	
E24	eim.EIM_DATA26	EIM_D10	USB IC CONTROL	IO	Input	PU	(100K)	
E25	eim.EIM_DATA27	EIM_D11	USB IC CONTROL	IO	Input	PU	(100K)	
G23	eim.EIM_DATA28	EIM_D12	USB IC CONTROL	IO	Input	PU	(100K)	

Pin No.	Select Function	Signal Name	Description	IN/OUT		Pull-up Setting		
				Normal Operation	During Reset	Internal		External
J19	eim.EIM_DATA29	EIM_D13	USB IC CONTROL	IO	Input	PU	(100K)	
J20	eim.EIM_DATA30	EIM_D14	USB IC CONTROL	IO	Input	PU	(100K)	
H21	eim.EIM_DATA31	EIM_D15	USB IC CONTROL	IO	Input	PD	(100K)	
E22	eim.EIM_EB2	EIM_XBEH BT_CFG4[6]	USB IC CONTROL BOOT MODE SETTING PIN	O	Input	PU	(100K)	PD15k
F23	eim.EIM_EB3	EIM_xBEL BT_CFG4[7]	USB IC CONTROL BOOT MODE SETTING PIN	O	Input	PU	(100K)	PD15k
N22	gpio6.GPIO6_IO31	NC	UNUSED	O(L)	Output	0		
M25	eim.EIM_DTACK_B	EIM_xDACK BT_CFG4[1]	USB IC CONTROL BOOT MODE SETTING PIN	O	Input	PU	(100K)	PD15k
K21	src.SRC_BOOT_CFG27	BT_CFG4[3]	BOOT MODE SETTING PIN	I	Output	1		PD15k
K23	src.SRC_BOOT_CFG28	BT_CFG4[4]	BOOT MODE SETTING PIN	I	Output	1		PD15k
L20	src.SRC_BOOT_CFG00	BT_CFG1[0]	BOOT MODE SETTING PIN	I	Input	PU	(100K)	PU4.7k
J25	eim.EIM_AD01	EIM_A1 BT_CFG1[1]	USB IC CONTROL BOOT MODE SETTING PIN	O	Input	PU	(100K)	PU4.7k
L21	eim.EIM_AD02	EIM_A2 BT_CFG1[2]	USB IC CONTROL BOOT MODE SETTING PIN	O	Input	PU	(100K)	PD14.7k
K24	eim.EIM_AD03	EIM_A3 BT_CFG1[3]	USB IC CONTROL BOOT MODE SETTING PIN	O	Input	PU	(100K)	PD14.7k
L22	eim.EIM_AD04	EIM_A4 BT_CFG1[4]	USB IC CONTROL BOOT MODE SETTING PIN	O	Input	PU	(100K)	PD14.7k
L23	eim.EIM_AD05	EIM_A5 BT_CFG1[5]	USB IC CONTROL BOOT MODE SETTING PIN	O	Input	PU	(100K)	PD14.7k
K25	eim.EIM_AD06	EIM_A6 BT_CFG1[6]	USB IC CONTROL BOOT MODE SETTING PIN	O	Input	PU	(100K)	PU4.7k
L25	eim.EIM_AD07	EIM_A7 BT_CFG1[7]	USB IC CONTROL BOOT MODE SETTING PIN	O	Input	PU	(100K)	PU4.7k
L24	eim.EIM_AD08	EIM_A8 BT_CFG2[0]	USB IC CONTROL BOOT MODE SETTING PIN	O	Input	PU	(100K)	PD14.7k
M21	src.SRC_BOOT_CFG09	BT_CFG2[1]	BOOT MODE SETTING PIN	I	Input	PU	(100K)	PU4.7k
M22	src.SRC_BOOT_CFG10	BT_CFG2[2]	BOOT MODE SETTING PIN	I	Input	PU	(100K)	PD14.7k
M20	src.SRC_BOOT_CFG11	BT_CFG2[3]	BOOT MODE SETTING PIN	I	Input	PU	(100K)	PU4.7k
M24	src.SRC_BOOT_CFG12	BT_CFG2[4]	BOOT MODE SETTING PIN	I	Input	PU	(100K)	PD14.7k
M23	src.SRC_BOOT_CFG13	BT_CFG2[5]	BOOT MODE SETTING PIN	I	Input	PU	(100K)	PD14.7k
N23	src.SRC_BOOT_CFG14	BT_CFG2[6]	BOOT MODE SETTING PIN	I	Input	PU	(100K)	PD14.7k
N24	src.SRC_BOOT_CFG15	BT_CFG2[7]	BOOT MODE SETTING PIN	I	Input	PU	(100K)	PD14.7k
V20	enet.ENET_MDC	ENET_MDC	LAN CONTROL	O	Input	PU	(100K)	
V23	enet.ENET_MDIO	ENET_MDIO	LAN CONTROL	IO	Input	PU	(100K)	PU1.5k
U21	enet.ENET_RX_EN	ENET_CRS_DV	LAN CONTROL	I	Input	PU	(100K)	
V22	gpio1.GPIO1_IO23	NC	UNUSED	O(L)	Input	PU	(100K)	
W23	enet.ENET_RX_ER	ENET_RX_ER	LAN CONTROL	I	Input	PU	(100K)	PU10k
V21	enet.ENET_TX_EN	ENET_TX_EN	LAN CONTROL	O	Input	PU	(100K)	
W21	enet.ENET_RX_DATA0	ENET_RXD0	LAN CONTROL	I	Input	PU	(100K)	
W22	enet.ENET_RX_DATA1	ENET_RXD1	LAN CONTROL	I	Input	PU	(100K)	
U20	enet.ENET_TX_DATA0	ENET_TXD0	LAN CONTROL	O	Input	PU	(100K)	
W20	enet.ENET_TX_DATA1	ENET_TXD1	LAN CONTROL	O	Input	PU	(100K)	
T5	gpio1.GPIO1_IO00	NC (USBPWR_EN)	UNUSED (USB_H1 port)	O	Input	PD	(100K)	
T4	usb.USB_OTG_ID	USB_OTG_ID	USB_OTG_ID INPUT L : Host control H : Device control	I	Input	PU	(100K)	PD4.7k
T1	usdhc2.SD2_WP	SD_WP	SD CARD CONNECTION FOR DEBUGGING (Normal mode : L output fixed)	O(L)	Input	PU	(47K)	
R7	gpio1.GPIO1_IO03	NC (USBPWR_OC)	UNUSED (USB_H1 port)	I	Input	PU	(100K)	
R6	usdhc2.SD2_CD_B	SD_DET	SD CARD CONNECTION FOR DEBUGGING (Normal mode : L output fixed)	O(L)	Input	PU	(47K)	
R4	gpio1.GPIO1_IO05	MIDI_PASS	MIDI THROUGH SELECT L : OFF H : ON	O	Input	PU	(100K)	
T3	gpio1.GPIO1_IO06	SEL_USB_OTG_ID	USB_OTG CONTROL PORT SELECT L : Host control H : Device control	O	Input	PU	(100K)	PD4.7k
R3	uart2.UART2_TX_DATA	MIDI_OUT	MIDI OUT SIGNAL	O	Input	PU	(100K)	PD22k (Digi Tr)
R5	uart2.UART2_RX_DATA	MIDI_IN	MIDI IN SIGNAL	I	Input	PU	(100K)	PU270
T2	gpio1.GPIO1_IO09	NC (wdog1)	UNUSED (wdog1/Check needle)	O(L)	Input	PU	(100K)	
R2	enet.ENET_REF_CLK	ENET_REF_CLK	LAN CONTROL	O	Input	PU	(100K)	
R1	gpio7.GPIO7_IO12	CLK_CONT	AUDIO CLK POWER SUPPLY V+3R3D_CLK CONTROL L : POWER OFF H : POWER ON	O(L)	Input	PU	(100K)	PD4.7k
P6	gpio7.GPIO7_IO13	PMIC_xINT	PMIC CONTROL	I	Input	PU	(100K)	PU68k
P5	gpio4.GPIO4_IO05	NC (AUTH_xRST)	UNUSED (Authentication IC Control)	O	Input	PU	(100K)	PD10k
W5	gpio4.GPIO4_IO06	NC	UNUSED/Check needle	O (L)	Input	PU	(100K)	
V6	gpio4.GPIO4_IO07	NC	UNUSED	O (L)	Input	PU	(100K)	
U7	gpio4.GPIO4_IO08	NC (AUD)	UNUSED/Check needle	O (L)	Input	PU	(100K)	
U6	gpio4.GPIO4_IO09	NC (AUD)	UNUSED/Check needle	O (L)	Input	PU	(100K)	
W6	gpio4.GPIO4_IO10	NC (USB)	UNUSED (USB_H1 port)	O (L)	Input	PU	(100K)	

A

Pin No.	Select Function	Signal Name	Description	IN/OUT		Pull-up Setting		
				Normal Operation	During Reset	Internal		External
W4	gpio4.GPIO4_IO11	NC	UNUSED	O (L)	Input	PU	(100K)	
U5	i2c2.I2C2_SCL	IMX_PMIC/AUTH_SCL	PMIC CONTROL (Authentication IC Control : UNUSED)	O	Input	PU	(100K)	PU4.7k
T7	i2c2.I2C2_SDA	IMX_PMIC/AUTH_SDA	PMIC CONTROL (Authentication IC Control : UNUSED)	IO	Input	PU	(100K)	PU4.7k
T6	gpio4.GPIO4_IO14	USBPWR_OC	USB-A POWER SUPPLY CURRENT MONITORING L : Overcurrent H : Normal	I	Input	PU	(100K)	
V5	usb.USB_OTG_PWR	USBPWR_EN	USB-A POWER SUPPLY CONTROL L : OFF H : ON	O	Input	PD	(100K)	
B11	MLB_CLK_P	NC (MLB)	UNUSED (MLB port)		—	—		
A11	MLB_CLK_N	NC (MLB)	UNUSED (MLB port)		—	—		
B9	MLB_SIG_P	NC (MLB)	UNUSED (MLB port)		—	—		
A9	MLB_SIG_N	NC (MLB)	UNUSED (MLB port)		—	—		
A10	MLB_DATA_P	NC (MLB)	UNUSED (MLB port)		—	—		
B10	MLB_DATA_N	NC (MLB)	UNUSED (MLB port)		—	—		
B	F15	gpmi.NAND_CE0_B	NANDF_CS0	O	Input	PU	(100K)	
C16	gpio6.GPIO6_IO14	NC	UNUSED	O(L)	Input	PU	(47K)	
A17	gpio6.GPIO6_IO15	NC	UNUSED	O(L)	Input	PU	(100K)	
D16	gpio6.GPIO6_IO16	NC	UNUSED	O(L)	Input	PU	(100K)	
A16	gpmi.NAND_ALE	NANDF_ALE	NAND FLASH CONTROL	O	Input	PU	(100K)	
C15	gpmi.NAND_CLE	NANDF_CLE	NAND FLASH CONTROL	O	Input	PU	(100K)	
E15	gpmi.NAND_WP_B	NANDF_WP_B	NAND FLASH CONTROL	O	Input	PU	(100K)	
B16	gpmi.NAND_READY	NANDF_RB0	NAND FLASH CONTROL	O	Input	PU	(100K)	PU3k
A18	gpmi.NAND_DATA00	NANDF_D0	NAND FLASH CONTROL	IO	Input	PU	(100K)	
C17	gpmi.NAND_DATA01	NANDF_D1	NAND FLASH CONTROL	IO	Input	PU	(100K)	
F16	gpmi.NAND_DATA02	NANDF_D2	NAND FLASH CONTROL	IO	Input	PU	(100K)	
D17	gpmi.NAND_DATA03	NANDF_D3	NAND FLASH CONTROL	IO	Input	PU	(100K)	
A19	gpmi.NAND_DATA04	NANDF_D4	NAND FLASH CONTROL	IO	Input	PU	(100K)	
C	B18	gpmi.NAND_DATA05	NANDF_D5	IO	Input	PU	(100K)	
E17	gpmi.NAND_DATA06	NANDF_D6	NAND FLASH CONTROL	IO	Input	PU	(100K)	
C18	gpmi.NAND_DATA07	NANDF_D7	NAND FLASH CONTROL	IO	Input	PU	(100K)	
B1	PCIE_RX_N	NC (PCIE)	UNUSED (PCIE port)		—	—		
B2	PCIE_RX_P	NC (PCIE)	UNUSED (PCIE port)		—	—		
A3	PCIE_TX_N	NC (PCIE)	UNUSED (PCIE port)		—	—		
B3	PCIE_TX_P	NC (PCIE)	UNUSED (PCIE port)		—	—		
D21	gpio6.GPIO6_IO19	NC (RGMII) *1.5V	UNUSED (RGMII port) VOLTAGE CAUTION (GPIO 1.5V)		Input	PD	(100K)	
C22	gpio6.GPIO6_IO20	NC (RGMII) *1.5V	UNUSED (RGMII port) VOLTAGE CAUTION (GPIO 1.5V)		Input	PU	(100K)	
F20	gpio6.GPIO6_IO21	NC (RGMII) *1.5V	UNUSED (RGMII port) VOLTAGE CAUTION (GPIO 1.5V)		Input	PU	(100K)	
D	E21	gpio6.GPIO6_IO22	NC (RGMII) *1.5V		Input	PU	(100K)	
A24	gpio6.GPIO6_IO23	NC (RGMII) *1.5V	UNUSED (RGMII port) VOLTAGE CAUTION (GPIO 1.5V)		Input	PU	(100K)	
C23	gpio6.GPIO6_IO26	NC (RGMII) *1.5V	UNUSED (RGMII port) VOLTAGE CAUTION (GPIO 1.5V)		Input	PD	(100K)	
B25	gpio6.GPIO6_IO30	NC (RGMII) *1.5V	UNUSED (RGMII port) VOLTAGE CAUTION (GPIO 1.5V)		Input	PD	(100K)	
C24	gpio6.GPIO6_IO25	NC (RGMII) *1.5V	UNUSED (RGMII port) VOLTAGE CAUTION (GPIO 1.5V)		Input	PU	(100K)	
B23	gpio6.GPIO6_IO27	NC (RGMII) *1.5V	UNUSED (RGMII port) VOLTAGE CAUTION (GPIO 1.5V)		Input	PU	(100K)	
B24	gpio6.GPIO6_IO28	NC (RGMII) *1.5V	UNUSED (RGMII port) VOLTAGE CAUTION (GPIO 1.5V)		Input	PU	(100K)	
D23	gpio6.GPIO6_IO29	NC (RGMII) *1.5V	UNUSED (RGMII port) VOLTAGE CAUTION (GPIO 1.5V)		Input	PU	(100K)	
E	D22	gpio6.GPIO6_IO24	NC (RGMII) *1.5V		Input	PD	(100K)	
K1	HDMI_TX_HPD	NC (HDMI)	UNUSED (HDMI port)		—	—		
J5	HDMI_TX_CLK_N	NC (HDMI)	UNUSED (HDMI port)		—	—		
J6	HDMI_TX_CLK_P	NC (HDMI)	UNUSED (HDMI port)		—	—		
K5	HDMI_TX_DATA0_N	NC (HDMI)	UNUSED (HDMI port)		—	—		
K6	HDMI_TX_DATA0_P	NC (HDMI)	UNUSED (HDMI port)		—	—		
J3	HDMI_TX_DATA1_N	NC (HDMI)	UNUSED (HDMI port)		—	—		
J4	HDMI_TX_DATA1_P	NC (HDMI)	UNUSED (HDMI port)		—	—		
K3	HDMI_TX_DATA2_N	NC (HDMI)	UNUSED (HDMI port)		—	—		
K4	HDMI_TX_DATA2_P	NC (HDMI)	UNUSED (HDMI port)		—	—		
U2	LVDS0_DATA0_N	LVDS0_TX0_N	LCD CONTROL(LVDS)	O	—	—		
U1	LVDS0_DATA0_P	LVDS0_TX0_P	LCD CONTROL(LVDS)	O	Input	Keeper		
F	U4	LVDS0_DATA1_N	LVDS0_TX1_N	O	—	—		

Pin No.	Select Function	Signal Name	Description	IN/OUT		Pull-up Setting		
				Normal Operation	During Reset	Internal		External
U3	LVDS0_DATA1_P	LVDS0_TX1_P	LCD CONTROL(LVDS)	O	Input	Keeper		
V2	LVDS0_DATA2_N	LVDS0_TX2_N	LCD CONTROL(LVDS)	O	—	—		
V1	LVDS0_DATA2_P	LVDS0_TX2_P	LCD CONTROL(LVDS)	O	Input	Keeper		
V4	LVDS0_CLK_N	LVDS0_CLK_N	LCD CONTROL(LVDS)	O	—	—		
V3	LVDS0_CLK_P	LVDS0_CLK_P	LCD CONTROL(LVDS)	O	Input	Keeper		
W2	LVDS0_DATA3_N	NC (LVDS0_TX3_N)	UNUSED (LVDS0_TX3 port)		—	—		
W1	LVDS0_DATA3_P	NC (LVDS0_TX3_P)	UNUSED (LVDS0_TX3 port)		Input	Keeper		
Y1	LVDS1_DATA0_N	NC (LVDS1)	UNUSED (LVDS1 port)		—	—		
Y2	LVDS1_DATA0_P	NC (LVDS1)	UNUSED (LVDS1 port)		Input	Keeper		
AA2	LVDS1_DATA1_N	NC (LVDS1)	UNUSED (LVDS1 port)		—	—		
AA1	LVDS1_DATA1_P	NC (LVDS1)	UNUSED (LVDS1 port)		Input	Keeper		
AB1	LVDS1_DATA2_N	NC (LVDS1)	UNUSED (LVDS1 port)		—	—		
AB2	LVDS1_DATA2_P	NC (LVDS1)	UNUSED (LVDS1 port)		Input	Keeper		
Y3	LVDS1_CLK_N	NC (LVDS1)	UNUSED (LVDS1 port)		—	—		
Y4	LVDS1_CLK_P	NC (LVDS1)	UNUSED (LVDS1 port)		Input	Keeper		
AA3	LVDS1_DATA3_N	NC (LVDS1)	UNUSED (LVDS1 port)		—	—		
AA4	LVDS1_DATA3_P	NC (LVDS1)	UNUSED (LVDS1 port)		Input	Keeper		
B21	ecspi5.ECSPi5_MOSI	IMX_IDAC_MOSI	IDAC CONTROL	O(L)	Input	PU	(100K)	
D20	ecspi5.ECSPi5_SCLK	IMX_IDAC_SCLK	IDAC CONTROL	O(L)	Input	PU	(100K)	
A21	gpio1.GPIO1_IO16	NC	ECSPi5 STANDBY/Check needle	O(L)	Input	PU	(100K)	
C20	ecspi5.ECSPi5_SS0	IMX_IDAC_xCS	IDAC CONTROL	O(L)	Input	PU	(100K)	
E19	pwm2.PWM2_OUT	LCD_PWM	LCD BACKLIGHT LUMINANCE CONTROL	O	Input	PU	(100K)	PD4.7k
F18	gpio1.GPIO1_IO21	NC	ECSPi5 STANDBY/Check needle	O(L)	Input	PU	(100K)	
F19	usdhc2.SD2_CMD	SD_CMD	SD CARD CONNECTION FOR DEBUGGING (Normal mode : L output fixed)	O(L)	Input	PU	(47K)	
C21	usdhc2.SD2_CLK	SD_CLK	SD CARD CONNECTION FOR DEBUGGING (Normal mode : L output fixed)	O(L)	Input	PU	(47K)	
A22	usdhc2.SD2_DATA0	SD_DATA0	SD CARD CONNECTION FOR DEBUGGING (Normal mode : L output fixed)	IO	Input	PU	(47K)	
E20	usdhc2.SD2_DATA1	SD_DATA1	SD CARD CONNECTION FOR DEBUGGING (Normal mode : L output fixed)	IO	Input	PU	(47K)	
A23	usdhc2.SD2_DATA2	SD_DATA2	SD CARD CONNECTION FOR DEBUGGING (Normal mode : L output fixed)	IO	Input	PU	(47K)	
B22	usdhc2.SD2_DATA3	SD_DATA3	SD CARD CONNECTION FOR DEBUGGING (Normal mode : L output fixed)	IO	Input	PU	(47K)	
B13	usdhc3.SD3_CMD	eMMC_CMD	eMMC CONTROL	O	Input	PU	(47K)	PU4.7k
D14	usdhc3.SD3_CLK	eMMC_CLK	eMMC CONTROL	O	Input	PU	(47K)	
E14	usdhc3.SD3_DATA0	eMMC_DATA0	eMMC CONTROL	IO	Input	PU	(47K)	PU47k
F14	usdhc3.SD3_DATA1	eMMC_DATA1	eMMC CONTROL	IO	Input	PU	(47K)	PU47k
A15	usdhc3.SD3_DATA2	eMMC_DATA2	eMMC CONTROL	IO	Input	PU	(47K)	PU47k
B15	usdhc3.SD3_DATA3	eMMC_DATA3	eMMC CONTROL	IO	Input	PU	(47K)	PU47k
D13	usdhc3.SD3_DATA4	eMMC_DATA4	eMMC CONTROL	IO	Input	PU	(47K)	PU47k
C13	usdhc3.SD3_DATA5	eMMC_DATA5	eMMC CONTROL	IO	Input	PU	(47K)	PU47k
E13	usdhc3.SD3_DATA6	eMMC_DATA6	eMMC CONTROL	IO	Input	PU	(47K)	PU47k
F13	usdhc3.SD3_DATA7	eMMC_DATA7	eMMC CONTROL	IO	Input	PU	(47K)	PU47k
D15	usdhc3.SD3_RESET	eMMC_xRST	eMMC CONTROL	O	Input	PU	(47K)	PD4.7k PU47k
E16	gpmi.NAND_WE_B	NANDF_WE_B	NAND FLASH CONTROL	O	Input	PU	(100K)	
B17	gpmi.NAND_RE_B	NANDF_RE_B	NAND FLASH CONTROL	O	Input	PU	(100K)	
D18	gpio2.GPIO2_IO08	NC	UNUSED	O(L)	Input	PU	(100K)	
B19	gpio2.GPIO2_IO09	NC	UNUSED	O(L)	Input	PU	(100K)	
F17	gpio2.GPIO2_IO10	NC	UNUSED	O(L)	Input	PU	(100K)	
A20	gpio2.GPIO2_IO11	NC	UNUSED	O(L)	Input	PU	(100K)	
E18	gpio2.GPIO2_IO12	NC	UNUSED	O(L)	Input	PU	(100K)	
C19	gpio2.GPIO2_IO13	ENET_ETHER_INT	LAN CONTROL	I	Input	PU	(100K)	PU10k
B20	gpio2.GPIO2_IO14	ENET_xRST	LAN CONTROL	O	Input	PU	(100K)	PD10k
D19	gpio2.GPIO2_IO15	NC	UNUSED	O(L)	Input	PU	(100K)	
B8	USB_OTG_CHD_B	USB_OTG_CHD_B (TP)	UNUSED/Check needle		—	—		
B6	USB_OTG_DN	USB_OTG_DN	USB SIGNAL (OTG)	IO	—	—		
A6	USB_OTG_DP	USB_OTG_DP	USB SIGNAL (OTG)	IO	—	—		
E10	USB_H1_DP	USB_H1_DP	UNUSED (USB_H1port)/Check needle	IO	—	—		
F10	USB_H1_DN	USB_H1_DN	UNUSED (USB_H1port)/Check needle	IO	—	—		
H14	VDD_ARM_IN	V+1R375CORE	IMX POWER SUPPLY (ARM_IN)					
J14	VDDARM_IN	V+1R375CORE	IMX POWER SUPPLY (ARM_IN)					
K9	VDD_ARM23_IN	V+1R375CORE	IMX POWER SUPPLY (ARM_IN)					
K14	VDDARM_IN	V+1R375CORE	IMX POWER SUPPLY (ARM_IN)					
L9	VDD_ARM23_IN	V+1R375CORE	IMX POWER SUPPLY (ARM_IN)					
L14	VDDARM_IN	V+1R375CORE	IMX POWER SUPPLY (ARM_IN)					
M9	VDD_ARM23_IN	V+1R375CORE	IMX POWER SUPPLY (ARM_IN)					

A

B

C

D

E

F

Pin No.	Select Function	Signal Name	Description	IN/OUT		Pull-up Setting		
				Normal Operation	During Reset	Internal		External
M14	VDDARM_IN	V+1R375CORE	IMX POWER SUPPLY (ARM_IN)					
N9	VDD_ARM23_IN	V+1R375CORE	IMX POWER SUPPLY (ARM_IN)					
N14	VDDARM_IN	V+1R375CORE	IMX POWER SUPPLY (ARM_IN)					
P9	VDD_ARM23_IN	V+1R375CORE	IMX POWER SUPPLY (ARM_IN)					
P14	VDDARM_IN	V+1R375CORE	IMX POWER SUPPLY (ARM_IN)					
R9	VDD_ARM23_IN	V+1R375CORE	IMX POWER SUPPLY (ARM_IN)					
R14	VDDARM_IN	V+1R375CORE	IMX POWER SUPPLY (ARM_IN)					
T9	VDD_ARM23_IN	V+1R375CORE	IMX POWER SUPPLY (ARM_IN)					
U9	VDD_ARM23_IN	V+1R375CORE	IMX POWER SUPPLY (ARM_IN)					
H16	VDDSOC_IN	V+1R375SOC	IMX POWER SUPPLY (SOC_IN)					
J16	VDDSOC_IN	V+1R375SOC	IMX POWER SUPPLY (SOC_IN)					
K16	VDDSOC_IN	V+1R375SOC	IMX POWER SUPPLY (SOC_IN)					
L16	VDDSOC_IN	V+1R375SOC	IMX POWER SUPPLY (SOC_IN)					
M16	VDDSOC_IN	V+1R375SOC	IMX POWER SUPPLY (SOC_IN)					
N16	VDDSOC_IN	V+1R375SOC	IMX POWER SUPPLY (SOC_IN)					
P16	VDDSOC_IN	V+1R375SOC	IMX POWER SUPPLY (SOC_IN)					
R16	VDDSOC_IN	V+1R375SOC	IMX POWER SUPPLY (SOC_IN)					
T16	VDDSOC_IN	V+1R375SOC	IMX POWER SUPPLY (SOC_IN)					
U16	VDDSOC_IN	V+1R375SOC	IMX POWER SUPPLY (SOC_IN)					
H9	VDD_HIGH_IN	V+2R8VHIGH	IMX POWER SUPPLY (HIGH_IN)					
J9	VDDHIGH_IN	V+2R8VHIGH	IMX POWER SUPPLY (HIGH_IN)					
G11	VDD_SNV5_IN	V+3R0VSNVS	IMX POWER SUPPLY (SNVS_IN)					
AC2	DRAM_VREF	MVREF	DDR3 CONTROL					
AE17	DRAM_ZQPAD	MZQ	DDR3 CONTROL					PD240 Ω
R18	NVCC_DRAM	V+1R5DDR	POWER SUPPLY FOR DRAM MODULE					
T18	NVCC_DRAM	V+1R5DDR	POWER SUPPLY FOR DRAM MODULE					
U18	NVCC_DRAM	V+1R5DDR	POWER SUPPLY FOR DRAM MODULE					
V9	NVCC_DRAM	V+1R5DDR	POWER SUPPLY FOR DRAM MODULE					
V10	NVCC_DRAM	V+1R5DDR	POWER SUPPLY FOR DRAM MODULE					
V11	NVCC_DRAM	V+1R5DDR	POWER SUPPLY FOR DRAM MODULE					
V12	NVCC_DRAM	V+1R5DDR	POWER SUPPLY FOR DRAM MODULE					
V13	NVCC_DRAM	V+1R5DDR	POWER SUPPLY FOR DRAM MODULE					
V14	NVCC_DRAM	V+1R5DDR	POWER SUPPLY FOR DRAM MODULE					
V15	NVCC_DRAM	V+1R5DDR	POWER SUPPLY FOR DRAM MODULE					
V16	NVCC_DRAM	V+1R5DDR	POWER SUPPLY FOR DRAM MODULE					
V17	NVCC_DRAM	V+1R5DDR	POWER SUPPLY FOR DRAM MODULE					
V18	NVCC_DRAM	V+1R5DDR	POWER SUPPLY FOR DRAM MODULE					
D4	CSI_REXT	NC (CSI)	UNUSED (CSI port)					
G4	DSI_REXT	NC (DSI)	UNUSED (DSI port)					
J1	HDMI_REF	NC (HDMI)	UNUSED (HDMI port)					
L7	HDMI_VP	GND (HDMI)	UNUSED (HDMI port)					
M7	HDMI_VPH	GND (HDMI)	UNUSED (HDMI port)					
K2	HDMI_TX_DDC_CEC	NC (HDMI)	UNUSED (HDMI port)					
K19	NVCC_EIM0	V+3R3D	POWER SUPPLY FOR EIM MODULE	PWR				
L19	NVCC_EIM1	V+3R3D	POWER SUPPLY FOR EIM MODULE	PWR				
M19	NVCC_EIM2	V+3R3D	POWER SUPPLY FOR EIM MODULE	PWR				
N7	NVCC_CSI	V+3R3D	POWER SUPPLY FOR CSI MODULE					
R19	NVCC_ENET	V+3R3D	POWER SUPPLY FOR ENET MODULE					
P7	NVCC_GPIO	V+3R3D	POWER SUPPLY FOR GPIO	PWR				
J7	NVCC_JTAG	V+3R3D	POWER SUPPLY FOR JTAG MODULE					
P19	NVCC_LCD	V+3R3D	POWER SUPPLY FOR LCD MODULE					
V7	NVCC_LVDS_2P5	V+2R5VPH	POWER SUPPLY FOR LVDS MODULE					
K7	NVCC_MIPI	V+2R5VPH	POWER SUPPLY FOR MIPI MODULE					
G15	NVCC_NAND	V+3R3D	POWER SUPPLY FOR NAND MODULE	PWR				
E8	NVCC_PLL	V+1R1PLLOUT	IMX POWER SUPPLY (PLLOUT)					
G18	NVCC_RGMII	V+1R5DDR	POWER SUPPLY FOR RGMII MODULE					
G16	NVCC_SD1	V+3R3D	POWER SUPPLY FOR SD1 MODULE	PWR				
G17	NVCC_SD2	V+3R3D	POWER SUPPLY FOR SD2 MODULE	PWR				
G14	NVCC_SD3	V+3R3D	POWER SUPPLY FOR SD3 MODULE	PWR				
A2	PCIE_REXT	NC (PCIE)	UNUSED (PCIE port)					
H7	PCIE_VP	GND (PCIE)	UNUSED (PCIE port)					
G7	PCIE_VPH	GND (PCIE)	UNUSED (PCIE port)					
G8	PCIE_VPTX	GND (PCIE)	UNUSED (PCIE port)					
A5	FA_ANA	GND(FA_ANA)	UNUSED (Free scale Debug terminal)					
C8	GPANAIO	NC(GPANAIO)	UNUSED (Free scale Debug terminal)					
B5	VDD_FA	GND(VDD_FA)	UNUSED(Free scale Debug terminal)					

Pin No.	Select Function	Signal Name	Description	IN/OUT		Pull-up Setting		
				Normal Operation	During Reset	Internal		External
D10	USB_H1_VBUS	NC(USB_H1_VBUS)	UNUSED (USB_H1 port)/Check needle	I				
E9	USB_OTG_VBUS	V+5R1D	USB_OTG_VBUS INPUT	I				
F9	VDD_USB_CAP	V+3R0_VDDUSB	IMX POWER SUPPLY (USB_CAP)	PWR	PWR			
G9	VDD_SNVS_CAP	V+*R*VDD_SNVS_CAP	IMX POWER SUPPLY (SNVS_CAP)	PWR	PWR			
H10	VDD_HIGH_CAP	V+2R5VPH	IMX POWER SUPPLY (HIGH_CAP)	PWR	PWR			
J10	VDDHIGH_CAP	V+2R5VPH	IMX POWER SUPPLY (HIGH_CAP)	PWR	PWR			
H17	VDD_PU_CAP	V+1R2_VDDPU_CAP	IMX POWER SUPPLY (PU_CAP)	PWR	PWR			
J17	VDD_PU_CAP	V+1R2_VDDPU_CAP	IMX POWER SUPPLY (PU_CAP)	PWR	PWR			
K17	VDD_PU_CAP	V+1R2_VDDPU_CAP	IMX POWER SUPPLY (PU_CAP)	PWR	PWR			
L17	VDD_PU_CAP	V+1R2_VDDPU_CAP	IMX POWER SUPPLY (PU_CAP)	PWR	PWR			
M17	VDD_PU_CAP	V+1R2_VDDPU_CAP	IMX POWER SUPPLY (PU_CAP)	PWR	PWR			
N17	VDD_PU_CAP	V+1R2_VDDPU_CAP	IMX POWER SUPPLY (PU_CAP)	PWR	PWR			
P17	VDD_PU_CAP	V+1R2_VDDPU_CAP	IMX POWER SUPPLY (PU_CAP)	PWR	PWR			
R10	VDDSOC_CAP	V+1R1_VDDSOC_CAP	IMX POWER SUPPLY (SOC_CAP)	PWR	PWR			
T10	VDDSOC_CAP	V+1R1_VDDSOC_CAP	IMX POWER SUPPLY (SOC_CAP)	PWR	PWR			
T13	VDDSOC_CAP	V+1R1_VDDSOC_CAP	IMX POWER SUPPLY (SOC_CAP)	PWR	PWR			
T14	VDDSOC_CAP	V+1R1_VDDSOC_CAP	IMX POWER SUPPLY (SOC_CAP)	PWR	PWR			
U10	VDDSOC_CAP	V+1R1_VDDSOC_CAP	IMX POWER SUPPLY (SOC_CAP)	PWR	PWR			
U13	VDDSOC_CAP	V+1R1_VDDSOC_CAP	IMX POWER SUPPLY (SOC_CAP)	PWR	PWR			
U14	VDDSOC_CAP	V+1R1_VDDSOC_CAP	IMX POWER SUPPLY (SOC_CAP)	PWR	PWR			
H11	VDD_ARM23_CAP	V+1R2_VDDARM_CAP	IMX POWER SUPPLY (ARM_CAP)	PWR	PWR			
H13	VDD_ARM_CAP	V+1R2_VDDARM_CAP	IMX POWER SUPPLY (ARM_CAP)	PWR	PWR			
J11	VDD_ARM23_CAP	V+1R2_VDDARM_CAP	IMX POWER SUPPLY (ARM_CAP)	PWR	PWR			
J13	VDDARM_CAP	V+1R2_VDDARM_CAP	IMX POWER SUPPLY (ARM_CAP)	PWR	PWR			
K11	VDD_ARM23_CAP	V+1R2_VDDARM_CAP	IMX POWER SUPPLY (ARM_CAP)	PWR	PWR			
K13	VDDARM_CAP	V+1R2_VDDARM_CAP	IMX POWER SUPPLY (ARM_CAP)	PWR	PWR			
L11	VDD_ARM23_CAP	V+1R2_VDDARM_CAP	IMX POWER SUPPLY (ARM_CAP)	PWR	PWR			
L13	VDDARM_CAP	V+1R2_VDDARM_CAP	IMX POWER SUPPLY (ARM_CAP)	PWR	PWR			
M11	VDD_ARM23_CAP	V+1R2_VDDARM_CAP	IMX POWER SUPPLY (ARM_CAP)	PWR	PWR			
M13	VDDARM_CAP	V+1R2_VDDARM_CAP	IMX POWER SUPPLY (ARM_CAP)	PWR	PWR			
N11	VDD_ARM23_CAP	V+1R2_VDDARM_CAP	IMX POWER SUPPLY (ARM_CAP)	PWR	PWR			
N13	VDDARM_CAP	V+1R2_VDDARM_CAP	IMX POWER SUPPLY (ARM_CAP)	PWR	PWR			
P11	VDD_ARM23_CAP	V+1R2_VDDARM_CAP	IMX POWER SUPPLY (ARM_CAP)	PWR	PWR			
P13	VDDARM_CAP	V+1R2_VDDARM_CAP	IMX POWER SUPPLY (ARM_CAP)	PWR	PWR			
R11	VDD_ARM23_CAP	V+1R2_VDDARM_CAP	IMX POWER SUPPLY (ARM_CAP)	PWR	PWR			
R13	VDDARM_CAP	V+1R2_VDDARM_CAP	IMX POWER SUPPLY (ARM_CAP)	PWR	PWR			
A4	GND	GND	GND	GND	GND			
A8	GND	GND	GND	GND	GND			
A13	GND	GND	GND	GND	GND			
A25	GND	GND	GND	GND	GND			
B4	GND	GND	GND	GND	GND			
C1	GND	GND	GND	GND	GND			
C4	GND	GND	GND	GND	GND			
C6	GND	GND	GND	GND	GND			
C10	GND	GND	GND	GND	GND			
D3	GND	GND	GND	GND	GND			
D6	GND	GND	GND	GND	GND			
D8	GND	GND	GND	GND	GND			
E5	GND	GND	GND	GND	GND			
E6	GND	GND	GND	GND	GND			
E7	GND	GND	GND	GND	GND			
F5	GND	GND	GND	GND	GND			
F6	GND	GND	GND	GND	GND			
F7	GND	GND	GND	GND	GND			
F8	GND	GND	GND	GND	GND			
G3	GND	GND	GND	GND	GND			
G10	GND	GND	GND	GND	GND			
G19	GND	GND	GND	GND	GND			
H8	GND	GND	GND	GND	GND			
H12	GND	GND	GND	GND	GND			
H15	GND	GND	GND	GND	GND			
H18	GND	GND	GND	GND	GND			
J2	GND	GND	GND	GND	GND			
J8	GND	GND	GND	GND	GND			
J12	GND	GND	GND	GND	GND			
J15	GND	GND	GND	GND	GND			

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Pin No.	Select Function	Signal Name	Description	IN/OUT		Pull-up Setting		
				Normal Operation	During Reset	Internal		External
J18	GND	GND	GND	GND	GND			
K8	GND	GND	GND	GND	GND			
K10	GND	GND	GND	GND	GND			
K12	GND	GND	GND	GND	GND			
K15	GND	GND	GND	GND	GND			
K18	GND	GND	GND	GND	GND			
L2	GND	GND	GND	GND	GND			
L5	GND	GND	GND	GND	GND			
L8	GND	GND	GND	GND	GND			
L10	GND	GND	GND	GND	GND			
L12	GND	GND	GND	GND	GND			
L15	GND	GND	GND	GND	GND			
L18	GND	GND	GND	GND	GND			
M8	GND	GND	GND	GND	GND			
M10	GND	GND	GND	GND	GND			
M12	GND	GND	GND	GND	GND			
M15	GND	GND	GND	GND	GND			
M18	GND	GND	GND	GND	GND			
N8	GND	GND	GND	GND	GND			
N10	GND	GND	GND	GND	GND			
N15	GND	GND	GND	GND	GND			
N18	GND	GND	GND	GND	GND			
P8	GND	GND	GND	GND	GND			
P10	GND	GND	GND	GND	GND			
P12	GND	GND	GND	GND	GND			
P15	GND	GND	GND	GND	GND			
P18	GND	GND	GND	GND	GND			
R8	GND	GND	GND	GND	GND			
R12	GND	GND	GND	GND	GND			
R15	GND	GND	GND	GND	GND			
R17	GND	GND	GND	GND	GND			
T8	GND	GND	GND	GND	GND			
T11	GND	GND	GND	GND	GND			
T12	GND	GND	GND	GND	GND			
T15	GND	GND	GND	GND	GND			
T17	GND	GND	GND	GND	GND			
T19	GND	GND	GND	GND	GND			
U8	GND	GND	GND	GND	GND			
U11	GND	GND	GND	GND	GND			
U12	GND	GND	GND	GND	GND			
U15	GND	GND	GND	GND	GND			
U17	GND	GND	GND	GND	GND			
U19	GND	GND	GND	GND	GND			
V8	GND	GND	GND	GND	GND			
V19	GND	GND	GND	GND	GND			
W3	GND	GND	GND	GND	GND			
W7	GND	GND	GND	GND	GND			
W8	GND	GND	GND	GND	GND			
W9	GND	GND	GND	GND	GND			
W10	GND	GND	GND	GND	GND			
W11	GND	GND	GND	GND	GND			
W12	GND	GND	GND	GND	GND			
W13	GND	GND	GND	GND	GND			
W15	GND	GND	GND	GND	GND			
W16	GND	GND	GND	GND	GND			
W17	GND	GND	GND	GND	GND			
W18	GND	GND	GND	GND	GND			
W19	GND	GND	GND	GND	GND			
Y5	GND	GND	GND	GND	GND			
Y24	GND	GND	GND	GND	GND			
AA7	GND	GND	GND	GND	GND			
AA10	GND	GND	GND	GND	GND			
AA13	GND	GND	GND	GND	GND			
AA16	GND	GND	GND	GND	GND			
AA19	GND	GND	GND	GND	GND			
AA22	GND	GND	GND	GND	GND			

Pin No.	Select Function	Signal Name	Description	IN/OUT		Pull-up Setting		
				Normal Operation	During Reset	Internal		External
AB3	GND	GND	GND	GND	GND			
AB24	GND	GND	GND	GND	GND			
AD4	GND	GND	GND	GND	GND			
AD7	GND	GND	GND	GND	GND			
AD10	GND	GND	GND	GND	GND			
AD13	GND	GND	GND	GND	GND			
AD16	GND	GND	GND	GND	GND			
AD19	GND	GND	GND	GND	GND			
AD22	GND	GND	GND	GND	GND			
AE1	GND	GND	GND	GND	GND			
AE25	GND	GND	GND	GND	GND			
C14	SATA_REXT	NC (SATA)	UNUSED (SATA port)					
G12	SATA_VPH	GND (SATA)	UNUSED (SATA port)					
G13	SATA_VP	GND (SATA)	UNUSED (SATA port)					
N12	VDD_CACHE_CAP	V+1R1_VDDSOC_CAP	IMX POWER SUPPLY (SOC_CAP)	PWR	PWR			
AD2	DRAM_DATA00	MDQ0	DDR3 CONTROL	IO	Input	PU	(100K)	
AE2	DRAM_DATA01	MDQ1	DDR3 CONTROL	IO	Input	PU	(100K)	
AC4	DRAM_DATA02	MDQ2	DDR3 CONTROL	IO	Input	PU	(100K)	
AA5	DRAM_DATA03	MDQ3	DDR3 CONTROL	IO	Input	PU	(100K)	
AC1	DRAM_DATA04	MDQ4	DDR3 CONTROL	IO	Input	PU	(100K)	
AD1	DRAM_DATA05	MDQ5	DDR3 CONTROL	IO	Input	PU	(100K)	
AB4	DRAM_DATA06	MDQ6	DDR3 CONTROL	IO	Input	PU	(100K)	
AE4	DRAM_DATA07	MDQ7	DDR3 CONTROL	IO	Input	PU	(100K)	
AE3	DRAM_SDQS0_P	MDQS0	DDR3 CONTROL	O	Input	Hi-Z		
AD3	DRAM_SDQS0_N	MDQS0_N	DDR3 CONTROL	O	—	—		
AC3	DRAM_DQM0	MDQM0	DDR3 CONTROL	O	Output	0		
AD5	DRAM_DATA08	MDQ8	DDR3 CONTROL	IO	Input	PU	(100K)	
AE5	DRAM_DATA09	MDQ9	DDR3 CONTROL	IO	Input	PU	(100K)	
AA6	DRAM_DATA10	MDQ10	DDR3 CONTROL	IO	Input	PU	(100K)	
AE7	DRAM_DATA11	MDQ11	DDR3 CONTROL	IO	Input	PU	(100K)	
AB5	DRAM_DATA12	MDQ12	DDR3 CONTROL	IO	Input	PU	(100K)	
AC5	DRAM_DATA13	MDQ13	DDR3 CONTROL	IO	Input	PU	(100K)	
AB6	DRAM_DATA14	MDQ14	DDR3 CONTROL	IO	Input	PU	(100K)	
AC7	DRAM_DATA15	MDQ15	DDR3 CONTROL	IO	Input	PU	(100K)	
AD6	DRAM_SDQS1_P	MDQS1	DDR3 CONTROL	O	Input	Hi-Z		
AE6	DRAM_SDQS1_N	MDQS1_N	DDR3 CONTROL	O	—	—		
AC6	DRAM_DQM1	MDQM1	DDR3 CONTROL	O	Output	0		
AB7	DRAM_DATA16	MDQ16	DDR3 CONTROL	IO	Input	PU	(100K)	
AA8	DRAM_DATA17	MDQ17	DDR3 CONTROL	IO	Input	PU	(100K)	
AB9	DRAM_DATA18	MDQ18	DDR3 CONTROL	IO	Input	PU	(100K)	
Y9	DRAM_DATA19	MDQ19	DDR3 CONTROL	IO	Input	PU	(100K)	
Y7	DRAM_DATA20	MDQ20	DDR3 CONTROL	IO	Input	PU	(100K)	
Y8	DRAM_DATA21	MDQ21	DDR3 CONTROL	IO	Input	PU	(100K)	
AC8	DRAM_DATA22	MDQ22	DDR3 CONTROL	IO	Input	PU	(100K)	
AA9	DRAM_DATA23	MDQ23	DDR3 CONTROL	IO	Input	PU	(100K)	
AD8	DRAM_SDQS2_P	MDQS2	DDR3 CONTROL	O	Input	Hi-Z		
AE8	DRAM_SDQS2_N	MDQS2_N	DDR3 CONTROL	O	—	—		
AB8	DRAM_DQM2	MDQM2	DDR3 CONTROL	O	Output	0		
AE9	DRAM_DATA24	MDQ24	DDR3 CONTROL	IO	Input	PU	(100K)	
Y10	DRAM_DATA25	MDQ25	DDR3 CONTROL	IO	Input	PU	(100K)	
AE11	DRAM_DATA26	MDQ26	DDR3 CONTROL	IO	Input	PU	(100K)	
AB11	DRAM_DATA27	MDQ27	DDR3 CONTROL	IO	Input	PU	(100K)	
AC9	DRAM_DATA28	MDQ28	DDR3 CONTROL	IO	Input	PU	(100K)	
AD9	DRAM_DATA29	MDQ29	DDR3 CONTROL	IO	Input	PU	(100K)	
AD11	DRAM_DATA30	MDQ30	DDR3 CONTROL	IO	Input	PU	(100K)	
AC11	DRAM_DATA31	MDQ31	DDR3 CONTROL	IO	Input	PU	(100K)	
AC10	DRAM_SDQS3_P	MDQS3	DDR3 CONTROL	O	Input	Hi-Z		
AB10	DRAM_SDQS3_N	MDQS3_N	DDR3 CONTROL	O	—	—		
AE10	DRAM_DQM3	MDQM3	DDR3 CONTROL	O	Output	0		
AA17	DRAM_DATA32	NC (DRAM)	UNUSED (DRAM port)	O(L)	Input	PU	(100K)	
AA18	DRAM_DATA33	NC (DRAM)	UNUSED (DRAM port)	O(L)	Input	PU	(100K)	
AC18	DRAM_DATA34	NC (DRAM)	UNUSED (DRAM port)	O(L)	Input	PU	(100K)	
AE19	DRAM_DATA35	NC (DRAM)	UNUSED (DRAM port)	O(L)	Input	PU	(100K)	
Y17	DRAM_DATA36	NC (DRAM)	UNUSED (DRAM port)	O(L)	Input	PU	(100K)	
Y18	DRAM_DATA37	NC (DRAM)	UNUSED (DRAM port)	O(L)	Input	PU	(100K)	
AB19	DRAM_DATA38	NC (DRAM)	UNUSED (DRAM port)	O(L)	Input	PU	(100K)	

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Pin No.	Select Function	Signal Name	Description	IN/OUT		Pull-up Setting		
				Normal Operation	During Reset	Internal		External
AC19	DRAM_DATA39	NC (DRAM)	UNUSED (DRAM port)	O(L)	Input	PU	(100K)	
AD18	DRAM_SDQS4_P	NC (DRAM)	UNUSED (DRAM port)		Input	Hi-Z		
AE18	DRAM_SDQS4_N	NC (DRAM)	UNUSED (DRAM port)		—	—		
AB18	DRAM_DQM4	NC (DRAM)	UNUSED (DRAM port)	O(L)	Output	0		
Y19	DRAM_DATA40	NC (DRAM)	UNUSED (DRAM port)	O(L)	Input	PU	(100K)	
AB20	DRAM_DATA41	NC (DRAM)	UNUSED (DRAM port)	O(L)	Input	PU	(100K)	
AB21	DRAM_DATA42	NC (DRAM)	UNUSED (DRAM port)	O(L)	Input	PU	(100K)	
AD21	DRAM_DATA43	NC (DRAM)	UNUSED (DRAM port)	O(L)	Input	PU	(100K)	
Y20	DRAM_DATA44	NC (DRAM)	UNUSED (DRAM port)	O(L)	Input	PU	(100K)	
AA20	DRAM_DATA45	NC (DRAM)	UNUSED (DRAM port)	O(L)	Input	PU	(100K)	
AE21	DRAM_DATA46	NC (DRAM)	UNUSED (DRAM port)	O(L)	Input	PU	(100K)	
AC21	DRAM_DATA47	NC (DRAM)	UNUSED (DRAM port)	O(L)	Input	PU	(100K)	
AD20	DRAM_SDQS5_P	NC (DRAM)	UNUSED (DRAM port)		Input	Hi-Z		
AE20	DRAM_SDQS5_N	NC (DRAM)	UNUSED (DRAM port)		—	—		
AC20	DRAM_DQM5	NC (DRAM)	UNUSED (DRAM port)	O(L)	Output	0		
AC22	DRAM_DATA48	NC (DRAM)	UNUSED (DRAM port)	O(L)	Input	PU	(100K)	
AE22	DRAM_DATA49	NC (DRAM)	UNUSED (DRAM port)	O(L)	Input	PU	(100K)	
AE24	DRAM_DATA50	NC (DRAM)	UNUSED (DRAM port)	O(L)	Input	PU	(100K)	
AC24	DRAM_DATA51	NC (DRAM)	UNUSED (DRAM port)	O(L)	Input	PU	(100K)	
AB22	DRAM_DATA52	NC (DRAM)	UNUSED (DRAM port)	O(L)	Input	PU	(100K)	
AC23	DRAM_DATA53	NC (DRAM)	UNUSED (DRAM port)	O(L)	Input	PU	(100K)	
AD25	DRAM_DATA54	NC (DRAM)	UNUSED (DRAM port)	O(L)	Input	PU	(100K)	
AC25	DRAM_DATA55	NC (DRAM)	UNUSED (DRAM port)	O(L)	Input	PU	(100K)	
AD23	DRAM_SDQS6_P	NC (DRAM)	UNUSED (DRAM port)		Input	Hi-Z		
AE23	DRAM_SDQS6_N	NC (DRAM)	UNUSED (DRAM port)		—	—		
AD24	DRAM_DQM6	NC (DRAM)	UNUSED (DRAM port)	O(L)	Output	0		
AB25	DRAM_DATA56	NC (DRAM)	UNUSED (DRAM port)	O(L)	Input	PU	(100K)	
AA21	DRAM_DATA57	NC (DRAM)	UNUSED (DRAM port)	O(L)	Input	PU	(100K)	
Y25	DRAM_DATA58	NC (DRAM)	UNUSED (DRAM port)	O(L)	Input	PU	(100K)	
Y22	DRAM_DATA59	NC (DRAM)	UNUSED (DRAM port)	O(L)	Input	PU	(100K)	
AB23	DRAM_DATA60	NC (DRAM)	UNUSED (DRAM port)	O(L)	Input	PU	(100K)	
AA23	DRAM_DATA61	NC (DRAM)	UNUSED (DRAM port)	O(L)	Input	PU	(100K)	
Y23	DRAM_DATA62	NC (DRAM)	UNUSED (DRAM port)	O(L)	Input	PU	(100K)	
W25	DRAM_DATA63	NC (DRAM)	UNUSED (DRAM port)	O(L)	Input	PU	(100K)	
AA25	DRAM_SDQS7_P	NC (DRAM)	UNUSED (DRAM port)		Input	Hi-Z		
AA24	DRAM_SDQS7_N	NC (DRAM)	UNUSED (DRAM port)		—	—		
Y21	DRAM_DQM7	NC (DRAM)	UNUSED (DRAM port)	O(L)	Output	0		
AC14	DRAM_ADDR00	MA0	DDR3 CONTROL	O	Output	0		
AB14	DRAM_ADDR01	MA1	DDR3 CONTROL	O	Output	0		
AA14	DRAM_ADDR02	MA2	DDR3 CONTROL	O	Output	0		
Y14	DRAM_ADDR03	MA3	DDR3 CONTROL	O	Output	0		
W14	DRAM_ADDR04	MA4	DDR3 CONTROL	O	Output	0		
AE13	DRAM_ADDR05	MA5	DDR3 CONTROL	O	Output	0		
AC13	DRAM_ADDR06	MA6	DDR3 CONTROL	O	Output	0		
Y13	DRAM_ADDR07	MA7	DDR3 CONTROL	O	Output	0		
AB13	DRAM_ADDR08	MA8	DDR3 CONTROL	O	Output	0		
AE12	DRAM_ADDR09	MA9	DDR3 CONTROL	O	Output	0		
AA15	DRAM_ADDR10	MA10	DDR3 CONTROL	O	Output	0		
AC12	DRAM_ADDR11	MA11	DDR3 CONTROL	O	Output	0		
AD12	DRAM_ADDR12	MA12	DDR3 CONTROL	O	Output	0		
AC17	DRAM_ADDR13	MA13	DDR3 CONTROL	O	Output	0		
AA12	DRAM_ADDR14	MA14	DDR3 CONTROL	O	Output	0		
Y12	DRAM_ADDR15	NC (DRAM)	UNUSED (DRAM port)	O(L)	Output	0		
AC15	DRAM_SDBA0	MBA0	DDR3 CONTROL	O	Output	0		
Y15	DRAM_SDBA1	MBA1	DDR3 CONTROL	O	Output	0		
AB12	DRAM_SDBA2	MBA2	DDR3 CONTROL	O	Output	0		
Y16	DRAM_CS0	MCS0	DDR3 CONTROL	O	Output	0		
AD17	DRAM_CS1	NC (DRAM)	UNUSED (DRAM port)	O(L)	Output	0		
AB15	DRAM_RAS	MRAS	DDR3 CONTROL	O	Output	0		
AE16	DRAM_CAS	MCAS	DDR3 CONTROL	O	Output	0		
AB16	DRAM_SDWE	MWE	DDR3 CONTROL	O	Output	0		
Y11	DRAM_SDCKE0	MCKE0	DDR3 CONTROL	O	Output	0		
AA11	DRAM_SDCKE1	NC (DRAM)	UNUSED (DRAM port)	O(L)	Output	0		
AC16	DRAM_ODT0	MODT0	DDR3 CONTROL	O	Output	0		
AB17	DRAM_ODT1	NC (DRAM)	UNUSED (DRAM port)	O	Output	0		
Y6	DRAM_RESET	MRST	DDR3 CONTROL	O	Output	0		PD10k
AD15	DRAM_SDCLK0_P	MCK0	DDR3 CONTROL	O	Input	Hi-Z		
AE15	DRAM_SDCLK0_N	MCK0_N	DDR3 CONTROL	O	—	—		
AD14	DRAM_SDCLK1_P	MCK1	DDR3 CONTROL	O	Input	Hi-Z		
AE14	DRAM_SDCLK1_N	MCK1_N	DDR3 CONTROL	O	—	—		

6. SERVICE MODE

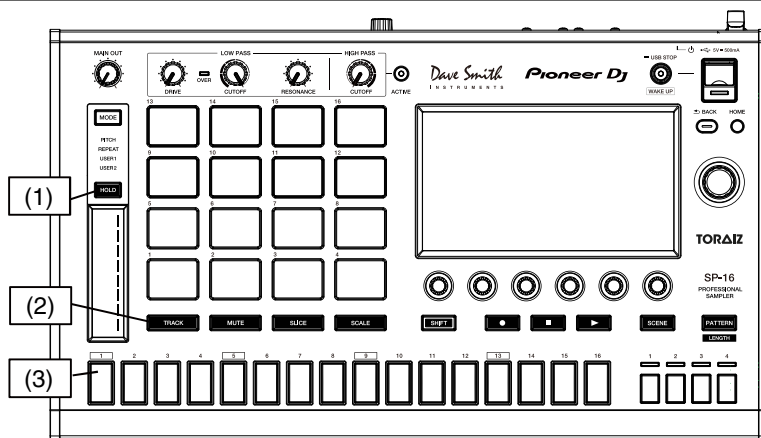
6.1 TEST MODE

Outline of Test Mode

The following modes are provided in Test Mode of this unit:

- | | |
|--|----------------------------------|
| ① Version Display Mode | (PAGE 0 : VERSION) |
| ② Mode for Making All LEDs Light On | (PAGE 1 : LED TEST(1) - ALL ON) |
| ③ Mode for Making All LEDs Light Off | (PAGE 2 : LED TEST(2) - ALL OFF) |
| ④ PAD Calibration Mode | (PAGE 3 : PAD CALIBRATION MODE) |
| ⑤ Mode for Confirmation of the Buttons | (PAGE 4 : BUTTON TEST) |
| ⑥ Mode for Confirmation of the VRs(AD Value) | (PAGE 5 : AD TEST) |
| ⑦ Mode for Confirmation of the Encoders | (PAGE 6 : ENCODER TEST) |
| ⑧ Touch Panel Confirmation Mode | (PAGE 7 : TOUCH PANEL TEST) |
| ⑨ Device Information Display Mode | (PAGE 8 : DEVICE TEST) |
| ⑩ Built-in Memory Quick Format | (PAGE 9 : MASS STORAGE) |
| ⑪ Built-in Memory Write Mode | (PAGE 10 : PRESET SAMPLE COPY) |
| ⑫ Mode for Confirmation of the Audio Route | (PAGE 11 : AUDIO TEST) |
| ⑬ Factory Reset | (PAGE 12 : FACTORY RESET) |

Startup Method in Test Mode

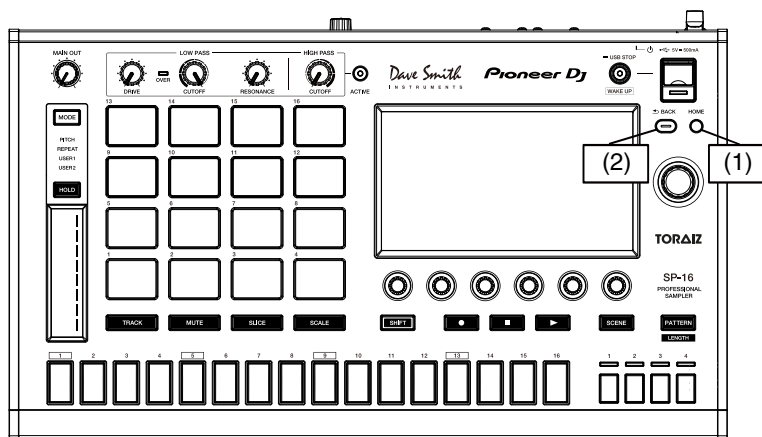


- (1)HOLD button
- (2)TRACK button
- (3)16 STEP 1 button

While pressing the buttons (1) to (3) simultaneously, turn ON the power supply.

Keep pressing the buttons (1) to (3) until the mode for displaying the version will appear on LCD display.

Method for Switching Mode



- (1)HOME button
- (2)BACK button

If you press the button (1), the next mode will be displayed.

If you press the button (2), the previous mode will be displayed.

Method for Quitting the Test Mode

Turn OFF the power supply.

PAGE 0 : VERSION

[PAGE 0] VERSION

SYSTEM : XX.XX
 MAIN APP : XX.XX
 MAIN KERNEL : XX.XX
 SUB1 : XX.XX
 SUB2 : XX.XX

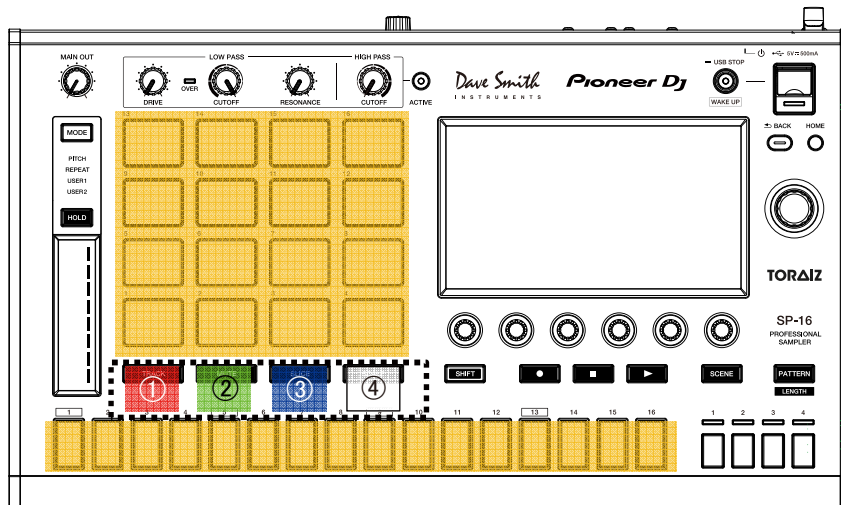
- This is the mode for checking the version of Microcomputer.
- Version of SYSEM is only one.

* If PAD calibration has not been carried out, PAD unexecuted will blink red.

PAGE 1 : LED TEST(1) - ALL ON

[PAGE 1] LED TEST(1) - ALL ON

- Mode for making All LEDs Light On.
- Immediately after the mode are switched, characters will disappear and LCD display will become white.
- If you press the buttons ① to ④ shown below, light of multi-color LED (in the orange area) can be switched to red, green, blue, and white.

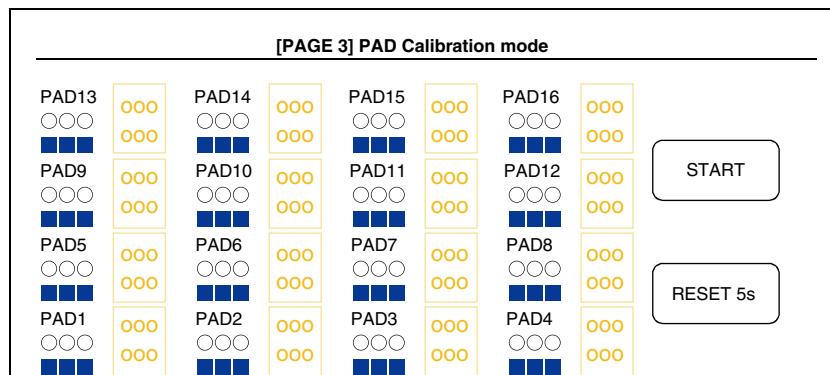


PAGE 2 : LED TEST(2) - ALL OFF

[PAGE 2] LED TEST(2) - ALL OFF

- Mode for making All LEDs Light Off.
- Immediately after the mode are switched, characters will disappear and LCD display will become black.

PAGE 3 : PAD CALIBRATION MODE

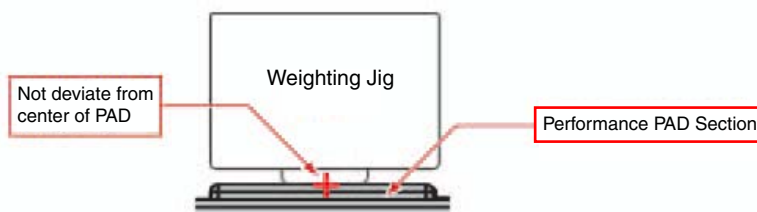


* If PAD calibration has not been carried out, PAD unexecuted will blink red.

[Calibration method for service]

- Mode for calibrating PAD.
- Raw AD value of PAD is displayed at "○○○".
- Calibration value is displayed at "■■■".
If it is not set, "---" is displayed.
- 3 times the value of calibration is displayed at "ooo".
If it is not set, "---" is displayed.
- If you keep touching "RESET" GUI button for five seconds or more, calibration data of 16 PADs can be initialized.
If you carry out the calibration again when this unit is disassembled or parts are replaced with new ones, initialize the data, and then carry out the calibration.
- After the jig is set, press "WAKE UP" hard button in the upper right of the control panel. Then, measurement and recording will be started.
After spare period of three seconds, obtained average value will be saved in the main unit in one second average value acquisition period.
Measurement is carried out three times and average value will be adopted as the calibration value.
- Valid calibration value range is 48 or more to 504 or less.
- Calibration value at "■■■" will be overwritten if the new value is within the effective value range shown above.
Other value will be recognized as invalid value and it is not recorded in the main unit.

Note) If you want to weight to PAD, Weighting Jig convex portion(φ12", ground plane(φ10") is down), it is placed so as not to deviate from the center of PAD.



PAGE 4 : BUTTON TEST

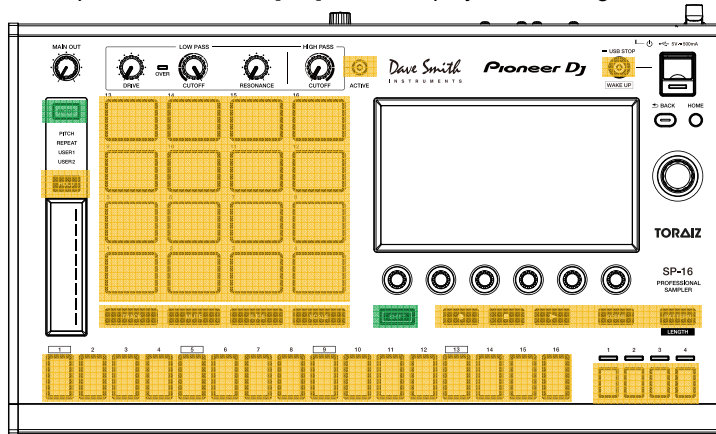
[PAGE 4] BUTTON TEST

***** : [ON, OFF] LED-BUTTON(**/48) : [OK]
 MODE : [OK]
 SHIFT : [OK]
 RESULT(**/50) : [OK]

- Mode for confirmation of the buttons

Self-illuminating buttons are in orange section and other buttons are in green section in the figure shown below.

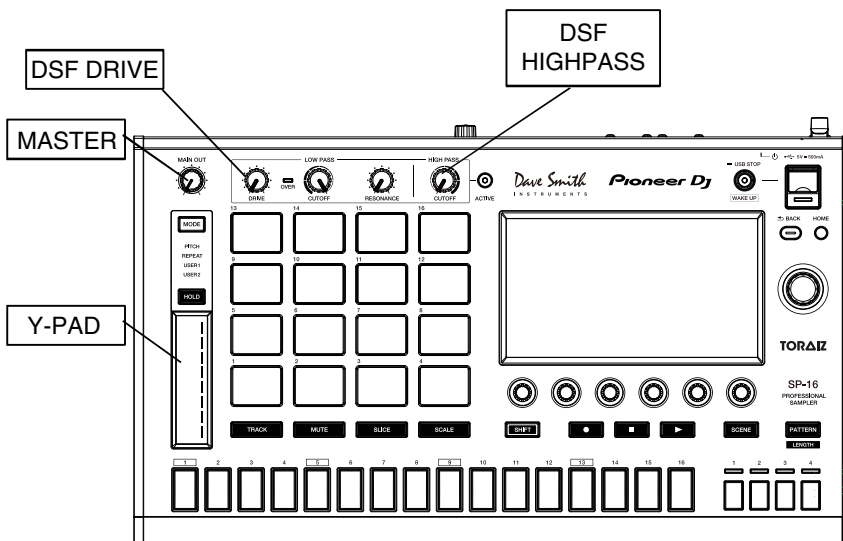
- Self-illuminating buttons are lighting as default value. If it is pressed, it will be turned OFF.
- Pressing multiple buttons is invalid.
- Status of the pressed button is displayed at ***** in the upper left.
- If you press all self-illuminating buttons, characters [OK] will be displayed on the right side of LED-BUTTON display.
- If pressing all buttons is completed, characters [OK] will be displayed on the right side of RESULT display.



PAGE 5 : AD TEST

[PAGE 5] AD TEST

MASTER	: 0-1023	XXX(VALUE)	[OK]
DSF DRIVE	: 0-1023	XXX(VALUE)	[OK]
DSF HIGHPASS	: 0-1023	XXX(VALUE)	[OK]
Y-PAD	: 0-127	XXX(VALUE)	[OK]



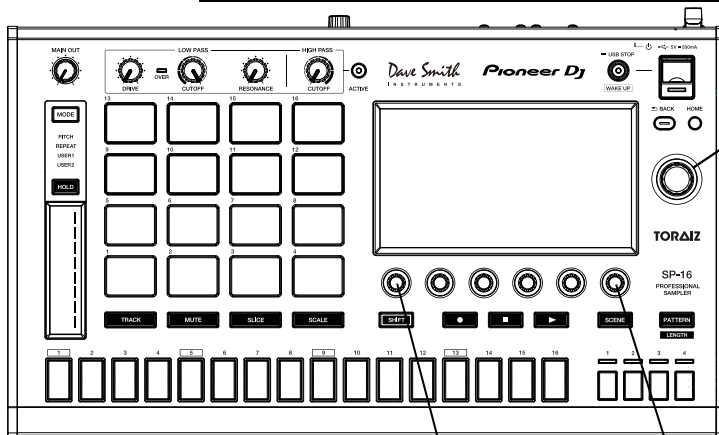
- Mode for confirmation of the VRs(AD Value)
- For each operation, characters [OK] are displayed when the value reaches the predefined voltage value of upper limit and lower limit values.

PAGE 6 : ENCODER TEST

[PAGE 6] ENCODER TEST

PUSH ENCODER :
PUSH ENCODER STATUS : [ON, OFF]

6 ENCODER (1) : 0
6 ENCODER (2) : 0
6 ENCODER (3) : 0
6 ENCODER (4) : 0
6 ENCODER (5) : 0
6 ENCODER (6) : 0



PUSH
ENCODER

- Mode for confirmation of the Encoders
 - PUSH ENCODER also displays the status when it is pushed.
- When it is pushed, "ON" is displayed. When it is not pushed, "OFF" is displayed.

ENCODER(1)

ENCODER(6)

PAGE 7 : TOUCH PANEL TEST

[PAGE 7] TOUCH PANEL TEST

Touch dots

- Check using a touch pen with small tip is recommended
- Mode for checking the accuracy of touch point.
- If you touch squares at four corners shown above, they will become blue.
If you touch all squares, check result will become OK.
- If you press REC button, mode will shift to the calibration mode.
While touching the center of + mark of red square in the upper left, press REC button.
While touching the center of + mark of red square in the upper right, press REC button.
While touching the center of + mark of red square in the lower left, press REC button.
While touching the center of + mark of red square in the lower right, press REC button. Calibration will be completed.
(If the calibration is completed by pressing REC button without touching it, calibration value will be discarded.
Touch motion will be operated without calibration.)

* Calibration of the touch panel, carried out only at the time of check NG.

PAGE 8 : DEVICE TEST

[PAGE 8] DEVICE TEST

MIDI CHECK

 : [OK, NG]

MAC ADDRESS : **.*.*.*.*.*.*.*
 IP ADDRESS : ***.*.*.*.*.*.*.*

- Mode for checking DIN-MIDI route.
- MAC/IP address can be also checked.

Carry out feedback connection for DIN-MIDI out and in of this unit with MIDI cable.
Then, press MIDI-CHECK button. Check result will be returned.

PAGE 9 : MASS STORAGE

[PAGE 9] MASS STORAGE

START

END

- This is the mode for executing FAT quick format to the built-in eMMC memory.
- Touch "START" button long for five or more seconds on this mode and connect USB-B terminal of this unit and PC with USB. Then, this unit will be recognized as a mass storage on the PC. Quick format of this unit from PC with FAT will be enabled.

* Before leaving this mode, execute "Removal of device" from PC and touch "END" button, then remove the device.

PAGE 10 : PRESET SAMPLE COPY

[PAGE 10] PRESET SAMPLE COPY

START COPY

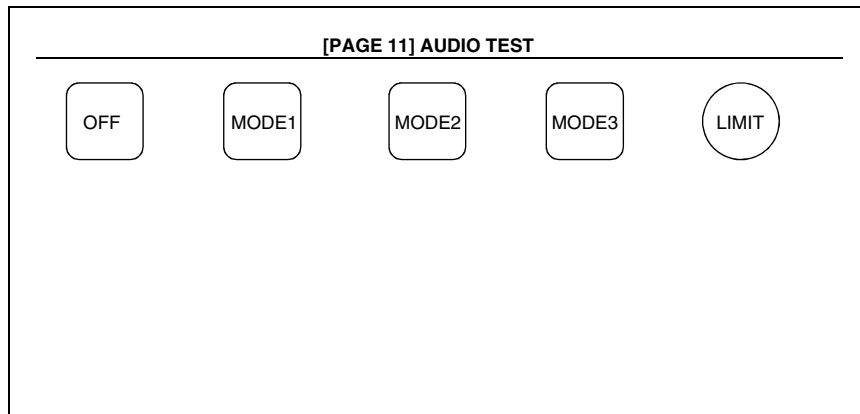
UNCONNECT

0%

- This is the mode for transferring the factory shipment preset sound source to the built-in eMMC memory.
- Connect the USB flash memory to USB-A terminal of this unit on this mode and press "START COPY" GUI button. Then, transfer of preset sound source will start.

* After transfer is completed, touch "UNCONNECT" GUI button and disconnect the USB flash memory.

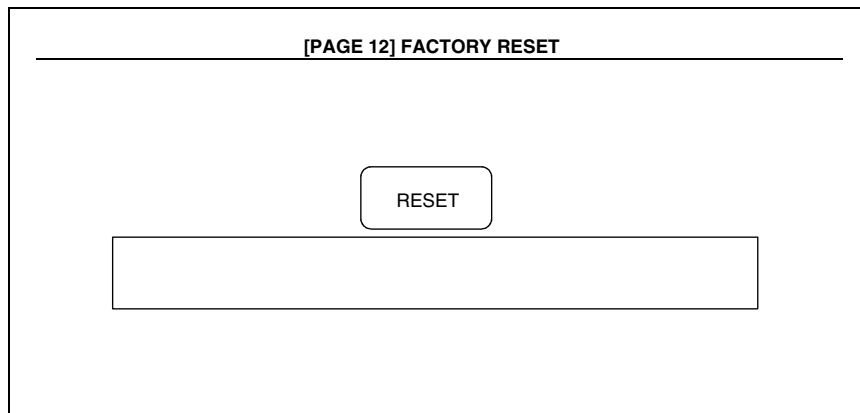
PAGE 11 : AUDIO TEST



- Mode for confirmation of the Audio Route
- In MODE1
INPUT ---> output from OUT1-2/MASTER, OUT3-4, OUT5-6, OUT7-8 and PHONES
- In MODE2
INPUT ---> via SND DAC(IC6000)/RTN ADC(IC6001) ---> output from OUT7-8
- In MODE3
INPUT ---> via Analog Filter ---> output from OUT-1/2 and MASTER
- When LIMIT button is enabled (lit in green), execute a limiter by the hardware circuit to input line.
(In the case of gray will be limiter OFF)

* When the modes are switched, automatic fade-out / fade-in processing of sound volume is not carried out, so the switching noise (popping sound) is output.
Before switching the modes, adjust the sound volume by turning OFF the volume of amplifier at output destination.

PAGE 12 : FACTORY RESET



- This is the mode for Factory Reset
- Resets the setting values of utilities etc. to the factory shipment status excluding a part of setting by pressing RESET button.

* Setting that is not reset to the factory shipment status by factory reset

- PAD calibration

- Touch panel calibration

Setting of touch panel calibration that is set in the Test Mode is not reset to the factory shipment status even if the factory reset is executed.

Setting of touch panel calibration that is set for utilities is reset to the factory shipment status if the factory reset is executed.

- Language setting

6.2 ABOUT THE DEVICE

Device Information List (General-purpose logic IC other than OP-Amp)

PCB Part No.	Reference No.	Device Name	Part No.	Function
DWX3864	IC200	LDO REG	MM1856A50N	LDO Regulator for V+5E
	IC201	DC/DC Converter	MM3543BH	DC/DC Converter for V+5R1D
	IC202	DC/DC Converter	MM3543BH	DC/DC Converter for V+4R2D
	IC203	LDO REG	NJM2872BF33	LDO Regulator for V+3R3E
	IC500	DC/DC Converter	MM3543BH	DC/DC Converter for V+5R2USB
	IC501	DC/DC Converter	NJW4155GM1-A	DC/DC Converter for V-12A
	IC502	USB PWR SW	TPS2557DRB	Supply of bus power to the USB
	IC800	Power Management IC	MMPF0100F0AEP	Generating a multi-voltage from V+4R2D
	IC2000	MAIN UCOM	MCIMX6Q5EYM10AD	MAIN/USBA/MIDI control, AUDIO processing
	IC2300, IC2301	DDR3-RAM	K4B4G1646D-BCMA	Microcomputer operating auxiliary storage element
	IC2601	NAND	MX30LF2G18AC-TI	Save Firmware • Mac address
	IC2602	LAN IC	LAN8720A-CP	LAN control
	IC3500	LDO REG	NJM2831F33	LDO Regulator for V+3R3D_CLK
	IC3502	CLK Generator	CY2302SXI-1	Generation of CLK 22.5792MHz => 45.1584MHz
	IC3800	eMMC	THGBMHG6C1LBAWL	Save preset sound source / file data
	IC4100	USBB IC	S2R72V27	USBB control
DWX3867	IC7100	DC/DC Converter	R1290K103A	DC/DC Converter for V+18, 9.6, -6USB
	IC7101	DC/DC Converter	BD81A04EFV-M	DC/DC Converter for V+10BL
	IC7000	LVDS	BU90R104	LCD CONTROLL
DWX3865	IC5000	REG	NJM78M09DL1A	Regulator for V+9OPA
	IC5001	REG	NJM79M09DL1A	Regulator for V-9OPA
	IC5002	REG	NJM78M09DL1A	Regulator V+9ADDA
	IC5003	REG	NJM78M09DL1A	Regulator for V+9HP
	IC5004	REG	NJM79M09DL1A	Regulator for V-9HP
	IC5005	REG	UA78M051KVURG3	Regulator for V+5A
	IC5006	REG	UA78M331KVUG3	Regulator for V+3R3A
	IC5007	REG	NJM7805DL1A	Regulator for V+5REF
	IC5203	Input ADC	AK5386VT	INPUT AD Converter
	IC5400	Multi DAC	AK4458VN	Multi DA Converter(OUT1 to 8)
	IC6000	SND DAC	AK4452VN	DSF SEND DA Converter
	IC6001	RTN ADC	AK5386VT	DSF RETURN AD Converter
	IC6400	IDAC	DAC7811IDGS	DSF(HPF) DA Converter
	IC6600	HP DAC	AK4452AN	HP DA Converter
DWX3869	IC8005	M1 UCOM	R5F364AENFA-U0	LED, SW (ONLY PWS SW, WAKE UP KEY, ACTIVE KEY)
	IC8006	Reset IC	S-80927CNMC-G8X	Reset IC for UCOM
	IC8008	M2 UCOM	R5F364AENFA-U0	SW, ENCODER, TOUCH PANEL, GAIN VR, PAD
DWX3873	IC7700	CDC (Capacitance Sensors IC)	AD7147ACPZ500RL7	Capacitance Sensor for TOUCH STRIP

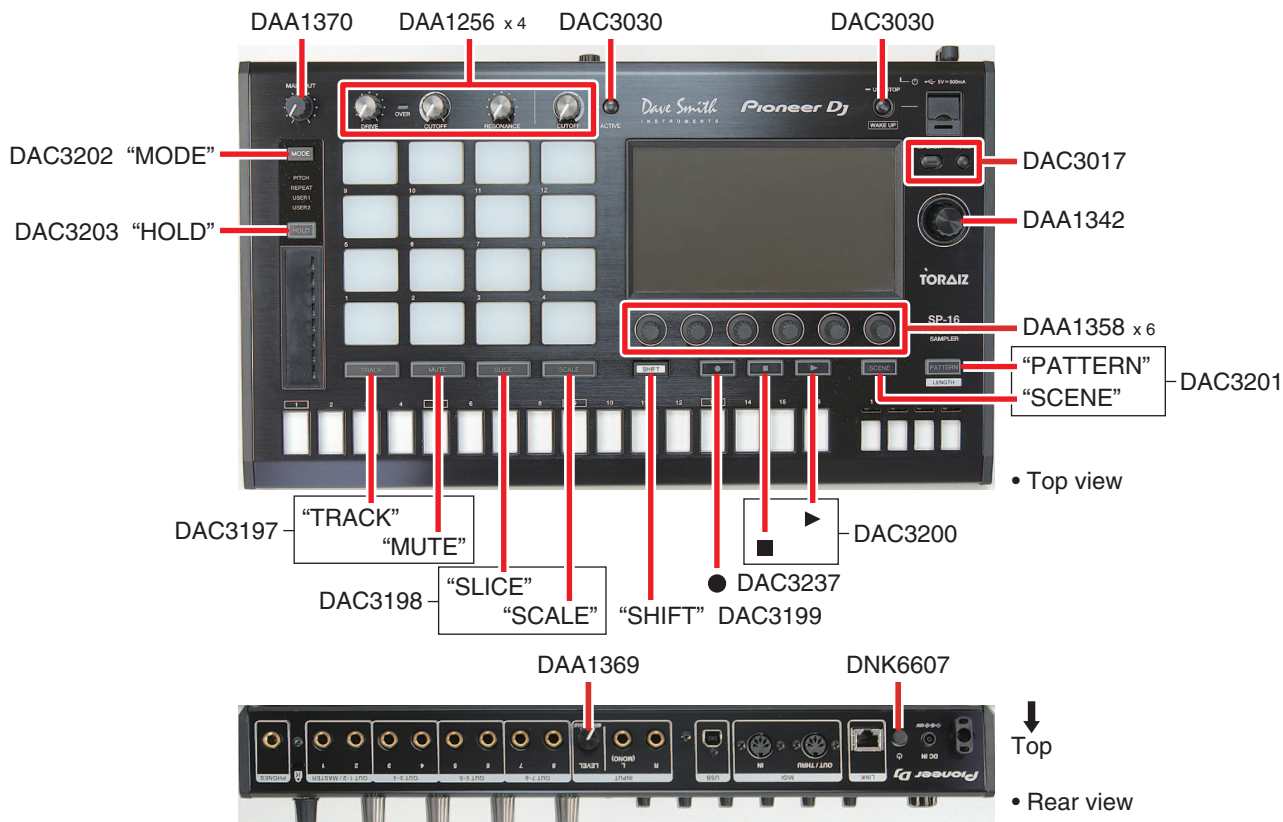
Data can be saved place

Place of save	The type of data to be saved
NAND (IC2601)	Main UCOM, Firmware, Mac Address, PAD Calibration Vale, Project Settings
eMMC (IC3800)	Preset Sound Source, Project Settings
M1 (IC8005)	M1 UCOM Firmware
M2 (IC8008)	M2 UCOM Firmware
USB Memory	Sound samples (Playback from USB Memory)
PC (Via USB A)	Sound samples (Data transfer from PC)

7. DISASSEMBLY

Note: Even if the unit shown in the photos and illustrations in this manual may differ from your product, the procedures described here are common.

[1] Knobs and Buttons Location

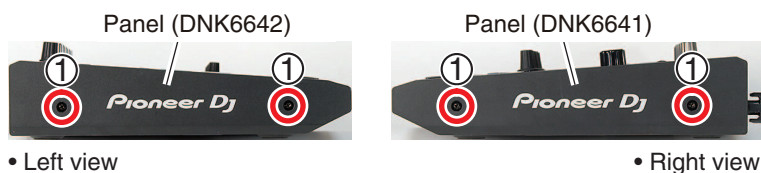


[2] Disassembly

[2-1] Exterior Section

[2-1-1] Panels (DNK6641, DNK6642)

① Remove the four screws. (BBZ30P080FTB)

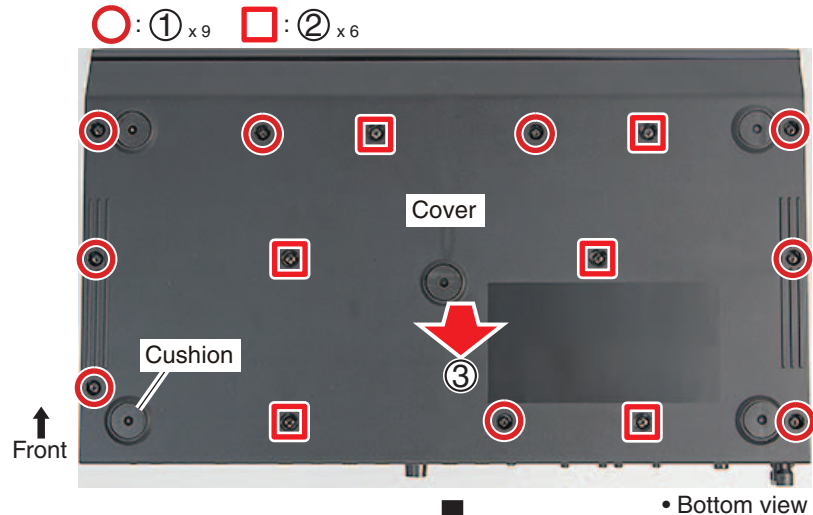


② Remove the two Panels (DNK6641, DNK6642) upward while spreading the bottom side a little outward, because they have hooks on the upside.
Photo shows only the left side. Right side is similar.



A [2-1-2] Cover

- ① Remove the nine screws. (BPZ30P100FTB)
- ② Remove the six screws. (BBZ30P060FTB)
- ③ Remove the Cover (with the five Cushions).



• Bottom view

[2-1-3] Chassis Section

- ① Remove the Knob. (DAA1370)

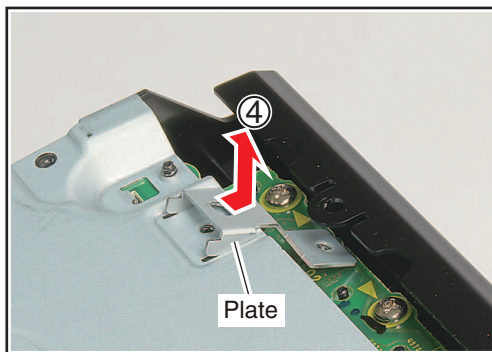
Knob (DAA1370)



- ② Remove the three screw (Fe)s. (DBA1290)
- ③ Remove the four screws. (BBZ30P060FTB)
- ④ Slide the three Plates to the front side and unhook the hooks, and then remove them.

Note on assembling

*1: Attach the Plates on the right places.

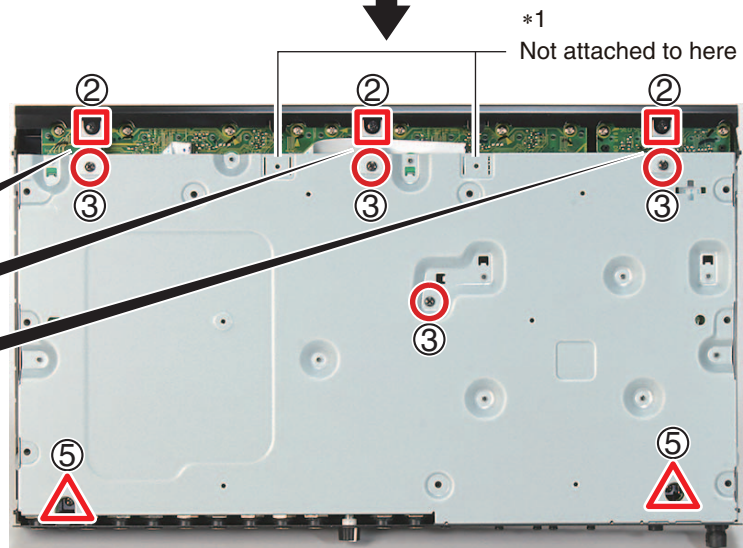


Front

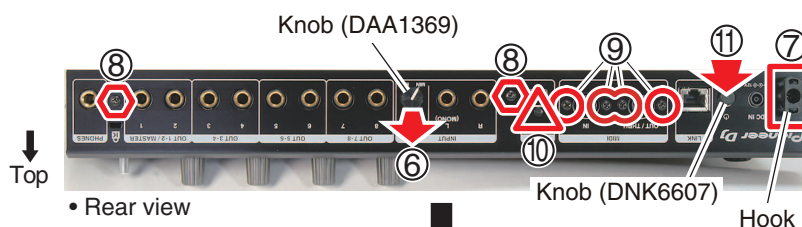
- ⑤ Remove the two screws. (BPZ30P080FNI)

Note: Because the screws are set deep inside, be careful not to drop them.
A pipe-formed jig (Can be substitute paper.) will be helpful.

- ⑥ Remove the Knob. (DAA1369)
- ⑦ Remove the screw (BBZ30P080FTB) and then remove the Hook.
- ⑧ Remove the two screws. (BBZ30P080FTB)
- ⑨ Remove the four screws. (PMH30P100FTB)
- ⑩ Remove the screw. (DBA1340)
- ⑪ Turn on (press down) the Knob. (DNK6607)



• Bottom view



• Rear view

A [2-2-3] Sheet (DEC3702)

- ① Remove the three screws (BBZ30P060FTB) and then remove the Sheet (DEC3702).

B

[2-3] Diagnosis

- ① Connect the three connectors.
- ② Arrange the Panel Section slanted as shown in the photo.

Note: Because length of the FFCs is not enough, it can not be connected, when you open the panel horizontally.

*3: Take care not to let the rear side of the Panel Section (terminal names print side) touch the Chassis, which may cause damage.

- ③ Connect the four connectors.

Diagnosis

D

[2-4] Panel Section

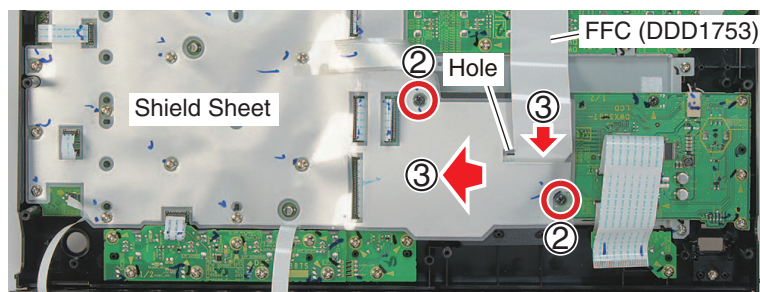
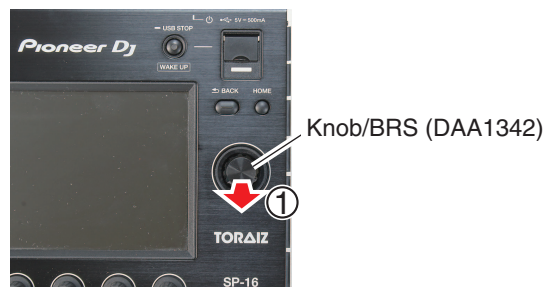
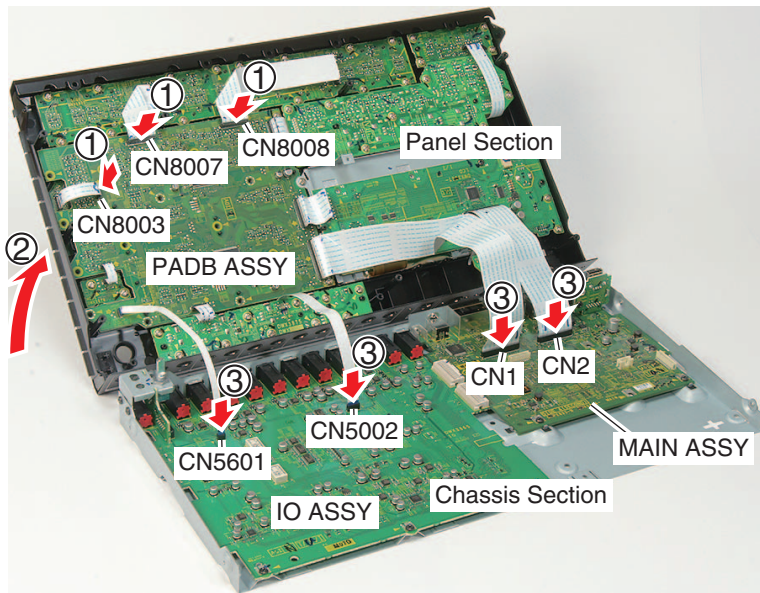
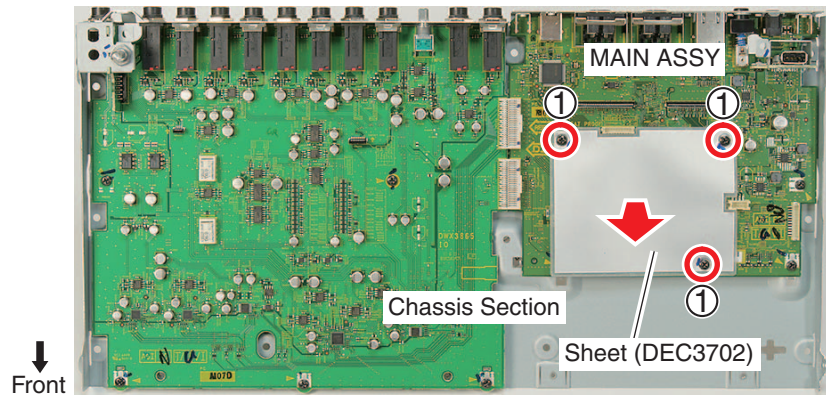
Remove the Exterior Section.
(Refer to the "[2-1] Exterior Section")

[2-4-1] LCD ASSY, TFT LCD, Touch Panel, PARA ASSY

- ① Remove the Knob/BRS. (DAA1342)

- ② Remove the two screws. (BBZ30P060FTB)
- ③ Bend up the right side of the Shield Sheet while pulling it out the FFC (DDD1753) from the hole.

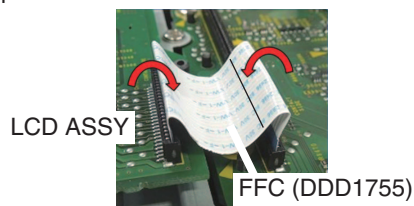
F



- ④ Remove the screw (BBZ30P060FTB) and then remove the Sheet (DEC3720).
- ⑤ Disconnect the two connectors.

Note on assembling:

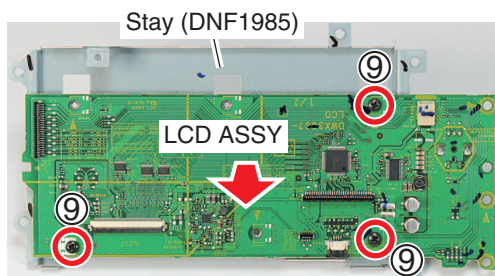
Bend the FFC (DDD1755) as shown in the photo below.



- ⑥ Disconnect the four connectors.

Note: CN7300 and CN7502 connectors have lock mechanisms.

- ⑦ Remove the eight screws. (BPZ30P080FNI)
- ⑧ Remove the LCD ASSY (with the Stay).
- ⑨ Remove the three screws (BBZ30P060FTB) and then remove the LCD ASSY from the Stay (DNF1985).

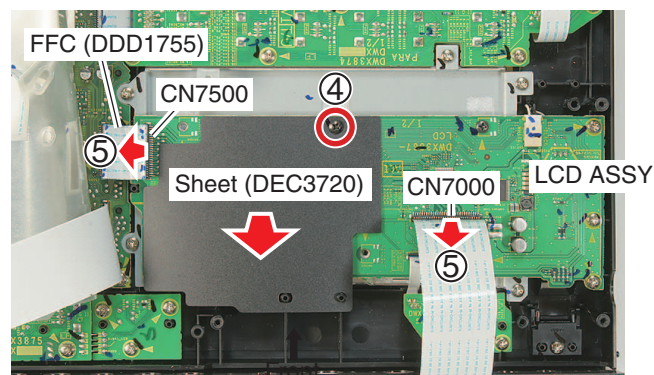
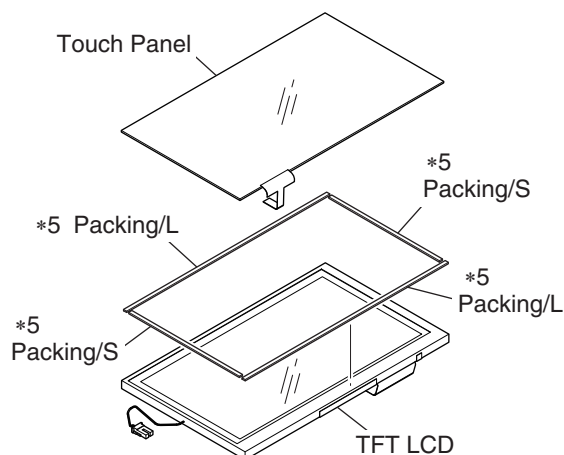


- ⑩ Release the Backlight Cable from the hook of the Stay ASSY (DEA1060).

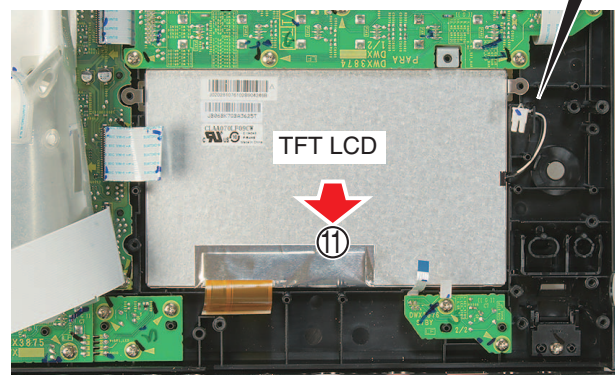
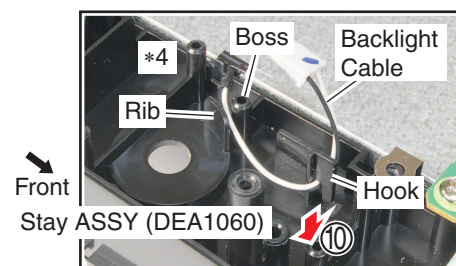
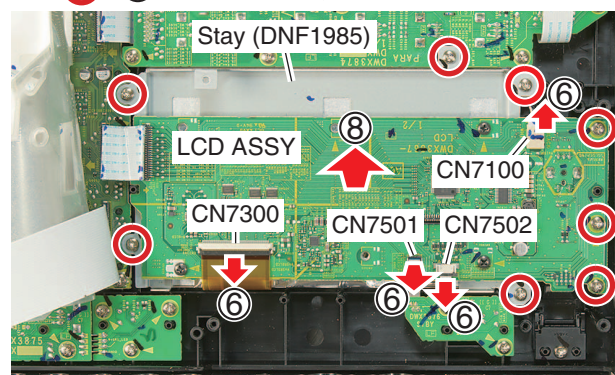
Note on assembling

*4: Place the Backlight Cable between boss and rib of the Stay ASSY (DEA1060).

- ⑪ Push it out from the top side and then remove the TFT LCD and the Touch Panel.



⑦ : ⑦ x 8



Note: Don't touch the display side of the TFT LCD and inside of the Touch Panel barehanded.

Notes on assembling

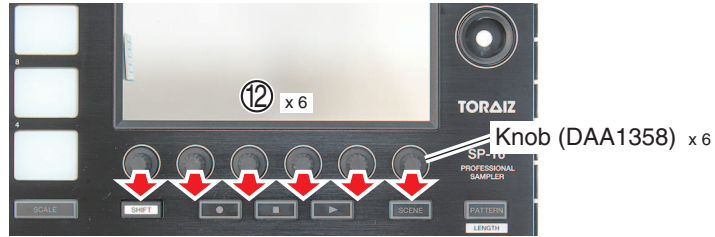
Clear the dust by air blast before assembling.

*5: When replacing the TFT LCD, attach the two new Packing/Ls and two new Packing/Ss.

A Disassembling the PARA ASSY

Removing the TFT LCD is not necessary. (Skip the step ⑨ to ⑪ of this clause.)
 PARA ASSY is removable after removing the LCD ASSY and Stay (DNF1985).

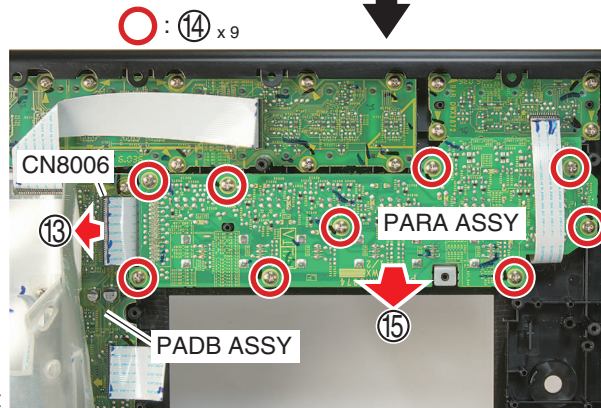
- ⑫ Remove the six Knobs. (DAA1358)



- ⑬ Disconnect the connector.

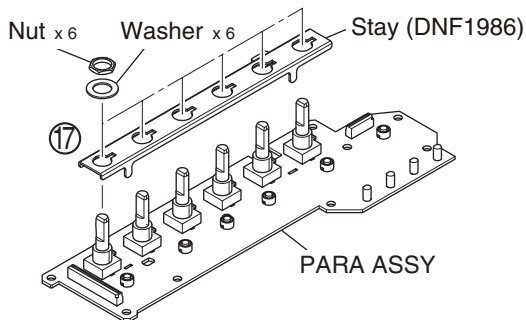
- ⑭ Remove the nine screws. (BPZ30P080FNI)

- ⑮ Reverse the PARA ASSY.

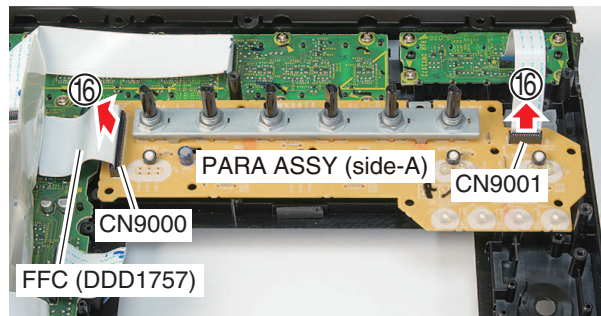


- ⑯ Disconnect the two connectors and then remove the PARA ASSY (with the Stay).

- ⑰ Remove the six nuts and washers (accessories of VR), and then remove the Stay (DNF1986) from the PARA ASSY.



• Bottom view



[2-4-2] PADB ASSY, CDC ASSY, MODE ASSY

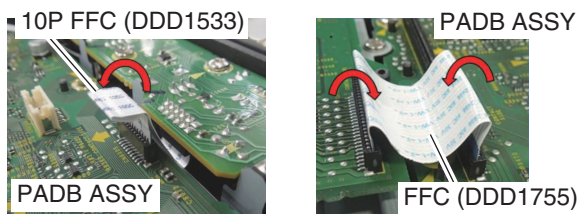
Remove the Shield Sheet.
 (Refer to the "[2-2-1] Shield Sheet")

- ① Disconnect the six connectors.

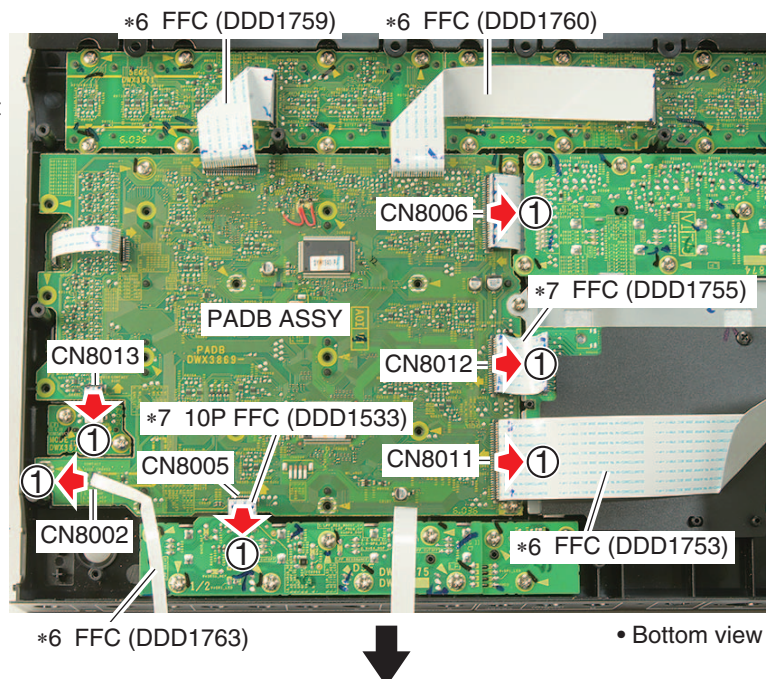
Notes on assembling

*6: When replacing the FFCs (DDD1753, DDD1759, DDD1760, DDD1763), bend them referring to the "[3] Folding and Connecting the FFCs".

*7: Bend the FFCs (DDD1533, DDD1755) as shown in the photo below.



Front

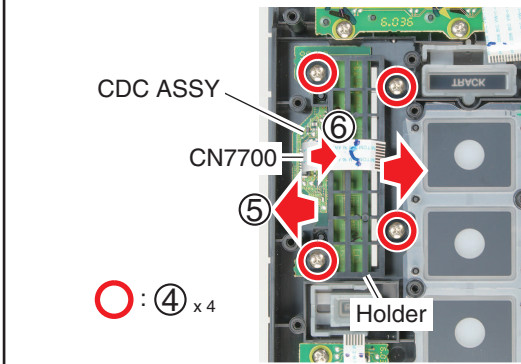


• Bottom view

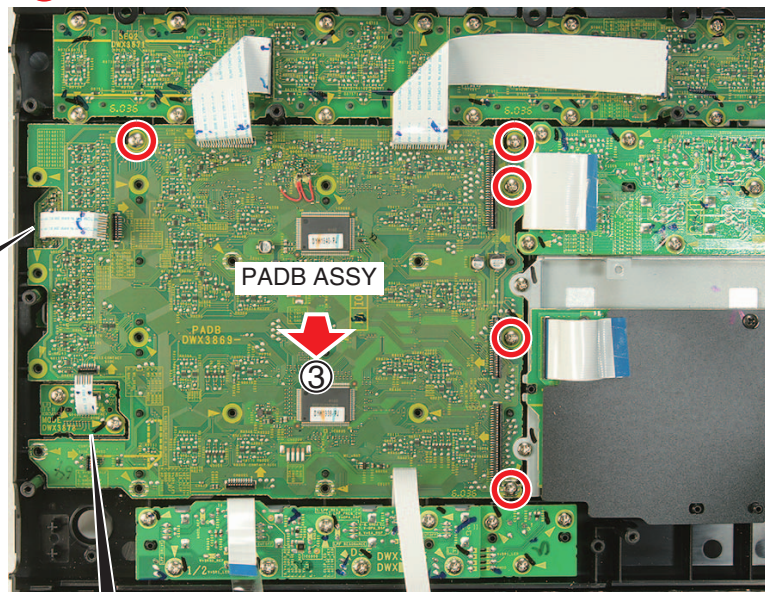
- ② Remove the five screws. (BPZ30P080FNI)
- ③ Remove the PADB ASSY.

Disassembling the CDC ASSY

- ④ Remove the four screws (BPZ30P080FNI) and then remove the Holder.
- ⑤ Remove the CDC ASSY.
- ⑥ Disconnect the connector.



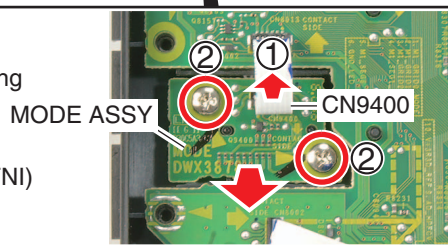
② : ② x 5



Disassembling the MODE ASSY

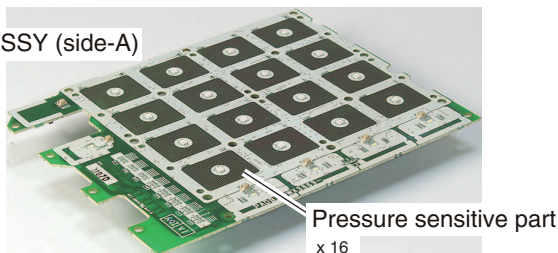
MODE ASSY is removable without removing the PADB ASSY.

- ① Disconnect the connector.
- ② Remove the two screws (BPZ30P080FNI) and then remove the MODE ASSY.



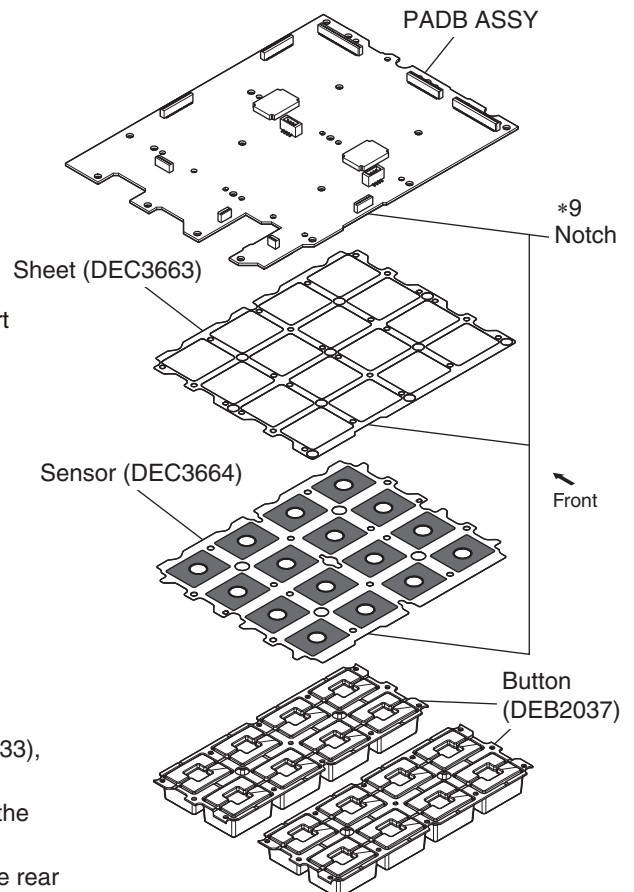
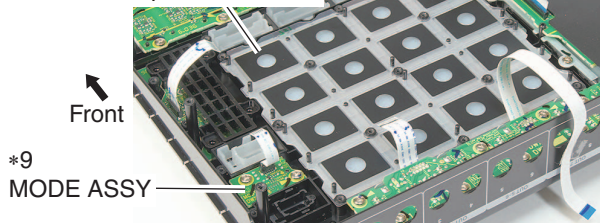
Note: Don't touch the black parts of the PADB ASSY (side-A) and black mat parts of the Sensor (16 pieces each, which are pressure sensitive) barehanded.

PADB ASSY (side-A)



*8 Sensor

(Black mat side, Pressure sensitive part x 16)



Notes on assembling

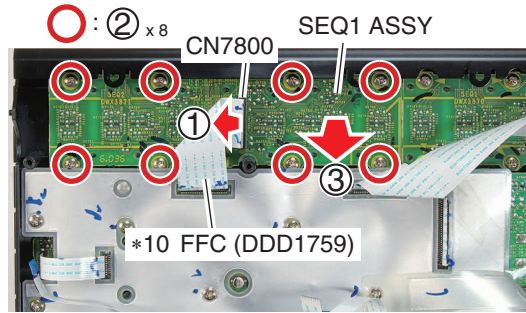
Clear the dust between the PADB ASSY (side-A), Sheet (DEC3663), Sensor (DEC3664) and two Buttons (DEB2037) by air blast.

*8: Set the mat side (printed side) of the Sensor (DEC3664) to face the PADB ASSY (Bottom side).

*9: Arrange the Sensor (DEC3664) and Sheet (DEC3663) to face the rear and right (the MODE ASSY) side, matching the notches.

A [2-4-3] SEQ1 ASSY

- ① Disconnect the connector.
- ② Remove the eight screws. (BPZ30P080FNI)
- ③ Remove the SEQ1 ASSY.



[2-4-4] SEQ2 ASSY

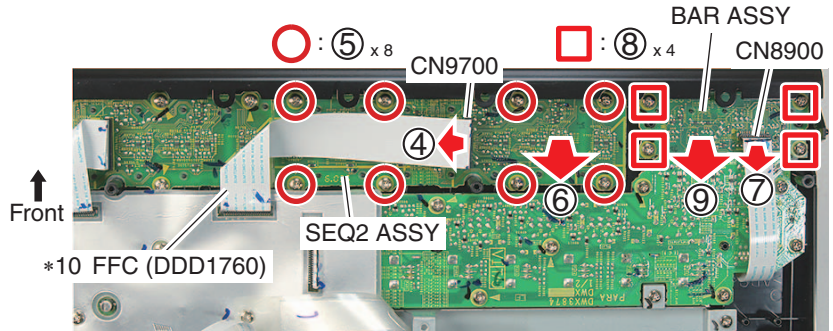
- ④ Disconnect the connector.
- ⑤ Remove the eight screws. (BPZ30P080FNI)
- ⑥ Remove the SEQ2 ASSY.

Front

B

[2-4-5] BAR ASSY

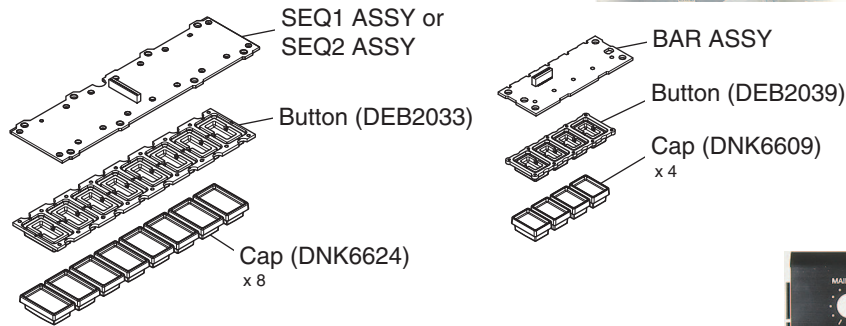
- ⑦ Disconnect the connector.
- ⑧ Remove the four screws. (BPZ30P080FNI)
- ⑨ Remove the BAR ASSY.



Note on assembling

Clear the dust between PCBs, Buttons and inside each Cap by air blast.

C



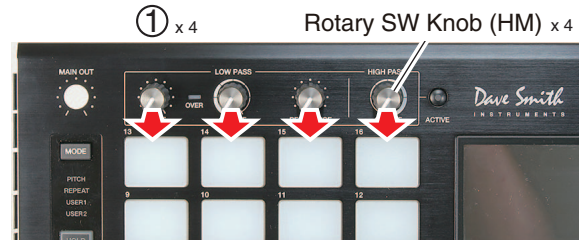
• Bottom view

*10: When replacing the FFCs (DDD1759, DDD1760), bend them referring to the "[3] Folding and Connecting the FFCs".

D

[2-4-6] DSF ASSY

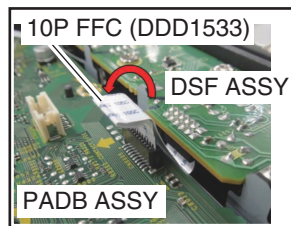
- ① Remove the four Rotary SW Knob (HM)s.
- ② Remove the 10 screws. (BPZ30P080FNI)
- ③ Reverse the DSF ASSY.



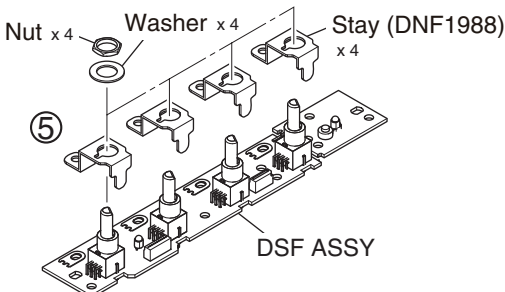
Note on assembling

Bend the 10P FFC (DDD1533) as shown in the photo right.

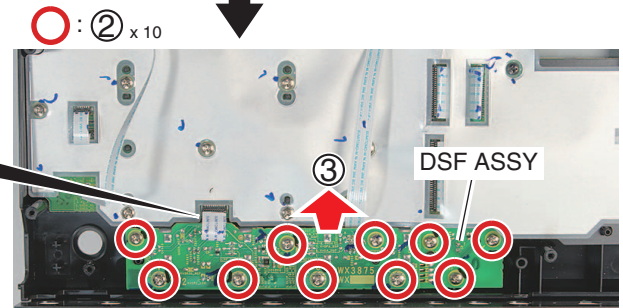
- ④ Disconnect the two connectors and then remove the DSF ASSY (with the Stays).



- ⑤ Remove the four nuts and washers (accessory of VR), and then remove the four Stays (DNF1988) from the DSF ASSY.

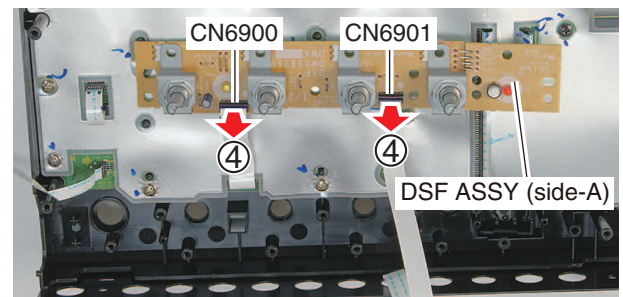


F



Front

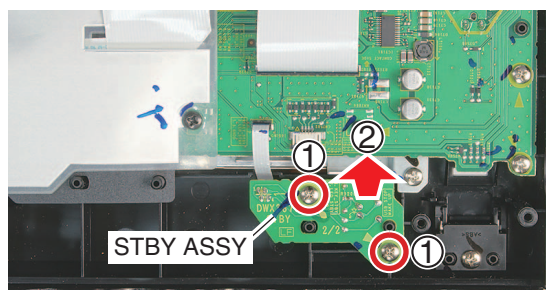
• Bottom view



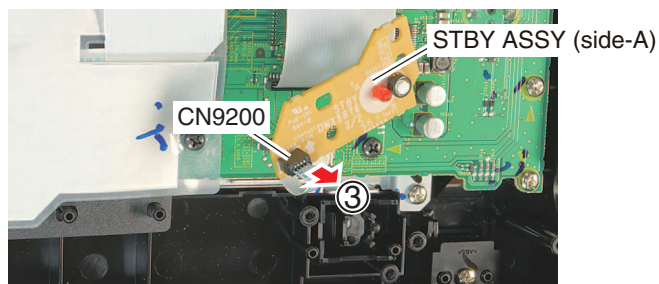
[2-4-7] STBY ASSY

- ① Remove the two screws. (BPZ30P080FNI)
- ② Reverse the STBY ASSY.

Front



- ③ Disconnect the connector and then remove the STBY ASSY.



[2-5] Chassis Section

Remove the Exterior Section.

(Refer to the "[2-1] Exterior Section")

[2-5-1] MVR ASSY, IO ASSY

- ① Remove the two screws. (BBZ30P060FTB)

Note on assembling

*11: These two screws must be attached after snap-fitting the Chassis Section to the Panel Section.

- ② Disconnect the connector and then remove the MVR ASSY (with the Stay).

- ③ Remove the nut and washer (accessory of VR), and then remove the Stay (DNF1989) from the MVR ASSY.

- ④ Disconnect the two connectors.

- ⑤ Remove the five screws. (BBZ30P060FTB)

Note on assembling

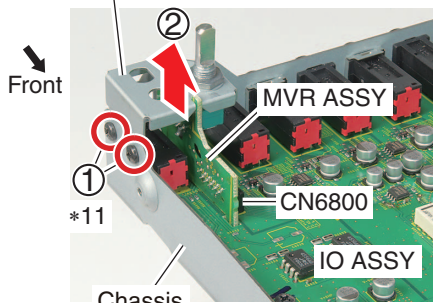
*12: Screws must be attached so as to leave a gap of about 0.5 mm between the IO ASSY and MAIN ASSY.

- ⑥ Remove the 11 nuts. (NKX2FNI)

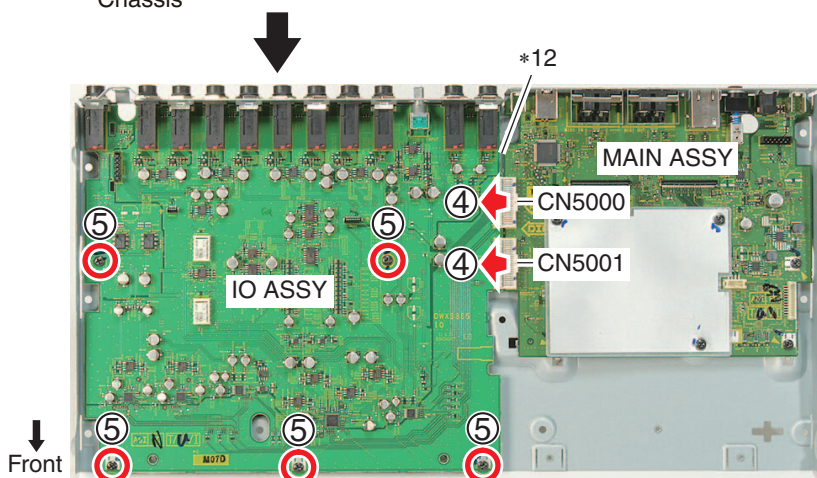
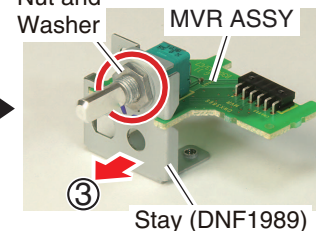
Note: Take care not to damage the screw thread of the Jack.

- ⑦ Remove the IO ASSY.

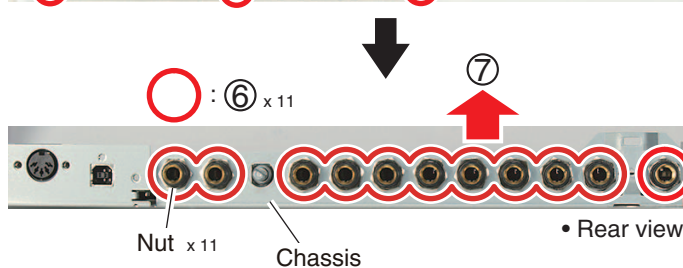
Stay (DNF1989)



Nut and Washer

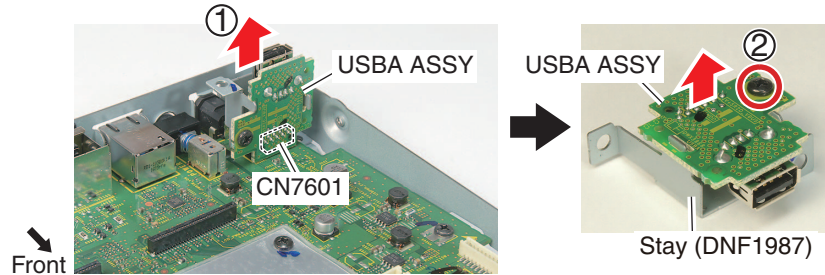


Front



A [2-5-2] USBA ASSY, MAIN ASSY

- ① Disconnect the connector and then remove the USBA ASSY (with the Stay).
- ② Remove the screw (BBZ30P060FTB) and then remove the USBA ASSY from the Stay (DNF1987).



- ## B
- ③ Remove the three screws (BBZ30P060FTB) and then remove the Sheet (DEC3702). (Refer to the "[2-2-3] Sheet (DEC3702)")

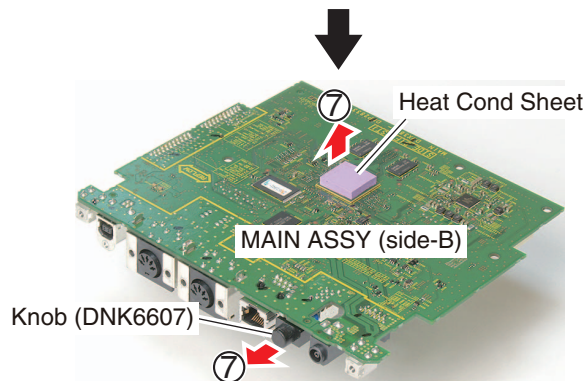
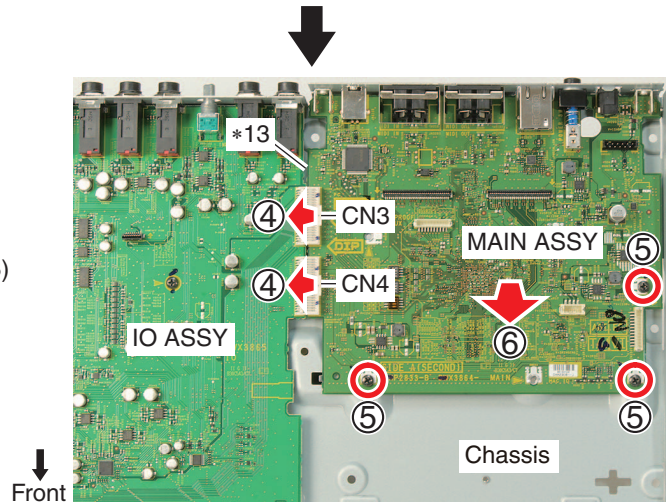
- ④ Disconnect the two connectors.
- ⑤ Remove the three screws. (BBZ30P060FTB)

Note on assembling

*13: Screws must be attached so as to leave a gap of about 0.5 mm between the MAIN ASSY and IO ASSY.

- ⑥ Remove the MAIN ASSY.

Note: MAIN ASSY is affixed to the Chassis with the Heat Cond Sheet.

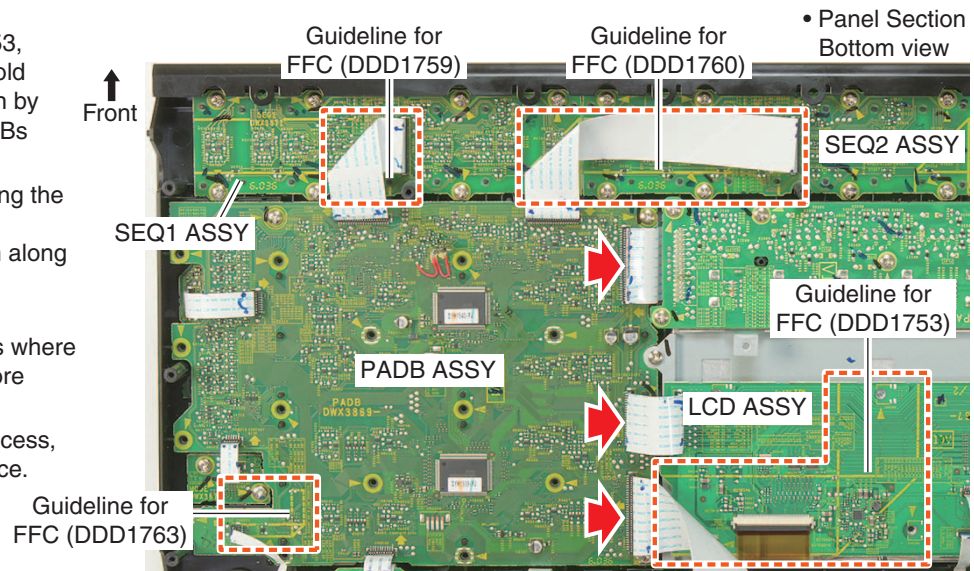


[3] Folding and Connecting the FFCs

When replacing the FFCs (DDD1753, DDD1759, DDD1760, DDD1763), fold them to make right angles as shown by the guide lines on the silk of the PCBs (side-B).

Lay the FFCs the contact sides facing the bottom along the broken lines and non-contact sides facing the bottom along the solid lines.

- ➡ Three marks indicate the places where FFCs should be connected before attachment the Shield Sheet. Take care not to reverse the process, which may affect the performance.



8. EACH SETTING AND ADJUSTMENT

8.1 NECESSARY ITEMS TO BE NOTED

It is recommended to make a backup of user data written in this unit before repair work.
If the product to be repaired can be started up, start it up in usual mode or test mode and change the mode to MASS STORAGE mode, and then connect it to PC and copy all content of TSP-16 that is recognized as removable disk to the PC (make a backup). As the disk size of TSP-16 to be recognized is 8GByte, ensure sufficient free space of PC to which the data is copied.

Before carrying out the repair, be sure to check the version of firmware. If the version is not the latest, update it to the latest version.

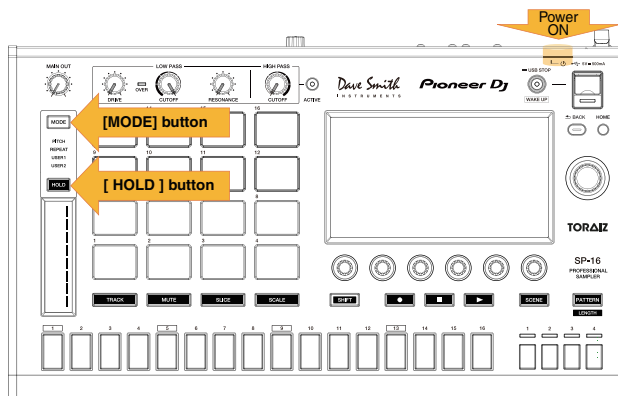
If the following parts are replaced with new ones, carry out each item.

- | | | |
|---|---|---|
| • MAIN ASSY | ➡ | <ul style="list-style-type: none">• Check the version of firmware• Update to the latest firmware• PAD calibration• Restore the user data (if you can make a backup)• Copy the preset sample * (if you cannot make a backup of user data) <p>* Preset sample sound source is available for download from PDJ support site.
(Refer to 6.1 TEST MODE PAGE 10:PRESET SAMPLE COPY)</p> |
| • MI UCOM (IC8005), M2 UCOM (IC8008) and PADB ASSY | ➡ | <ul style="list-style-type: none">• Check the version of firmware• Update to the latest firmware• PAD calibration |
| • Performance pad part
PADB ASSY(sensor, PAD, sheet)
If you removed without having to replace PAD ASSY adjustment required. | ➡ | <ul style="list-style-type: none">• PAD calibration |
| • Touch panel | ➡ | <ul style="list-style-type: none">• Touch panel test * <p>* If the test result is NG, carry out the touch panel calibration.
(Refer to 6.1 TEST MODE PAGE 7:TOUCH PANEL TEST)</p> |

8.2 UPDATING OF THE FIRMWARE

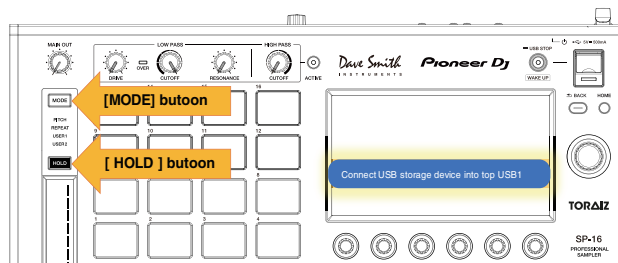
Power ON (In Firmware Update Mode)

- ① While pressing the [MODE] button and [HOLD] button simultaneously, turn ON the power supply.
(To begin start-up at the firmware update mode.)



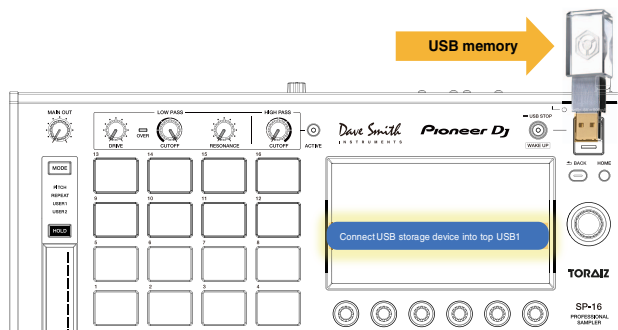
Press and hold the button

- ① Keep pressing the [MODE] button and [HOLD] button until the page for displaying [Connect USB storage device into top USB1] will appear on LCD display.



Insert a USB Memory

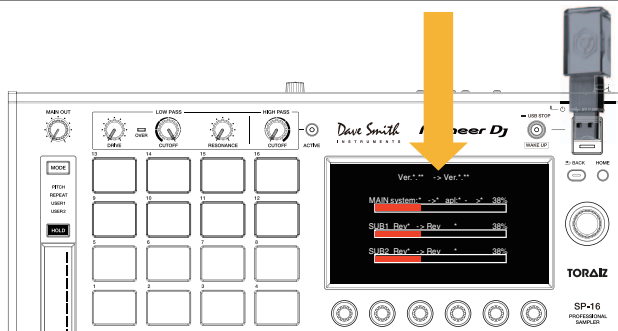
- ① Insert a USB memory (saved UPD file) to the USB terminal.
(Once inserted, please wait about 10 seconds.)



Firmware Update

- ① Progress bar will appear on LCD display to start the update.
Until the updates in complete, it takes about two minutes.

* Update is complete, please disconnect the USB memory after you turn OFF the power.



NOTES:

- Parts marked by “NSP” are generally unavailable because they are not in our Master Spare Parts List.
- The $\triangle$ mark found on some component parts indicates the importance of the safety factor of the part. Therefore, when replacing, be sure to use parts of identical designation.
- Screws adjacent to $\blacktriangledown$ mark on product are used for disassembly.
- For the applying amount of lubricants or glue, follow the instructions in this manual.
(In the case of no amount instructions, apply as you think it appropriate.)

(1) PACKING SECTION PARTS LIST

Mark	No.	Description	Part No.
A	1	AC Adapter	DWR1553
	2	Power Cord	See Contrast table (2)
	3	USB Cable	DDE1128
	4	LAN Cable	DDE1141
	5	Operating Instructions (Quick Start Guide)	See Contrast table (2)
NSP	6	Software License Notice	See Contrast table (2)
	7	Polyethylene Bag	AHG7117
	8	Packing Pad	DHA1945
	9	Packing Pad	DHA1946
B	10	Packing Pad	DHA1947
	11	Packing Pad	DHA1948
	12	Packing Board	DHC1088
	13	Packing Board	DHC1089
	14	Packing Case	See Contrast table (2)
NSP	15	Sheet	RHX1006
	16	Name Label	See Contrast table (2)
	17	Warranty	See Contrast table (2)
	18	Software License Notice (Fr)	See Contrast table (2)
	19	Master Carton	See Contrast table (2)

(2) CONTRAST TABLE

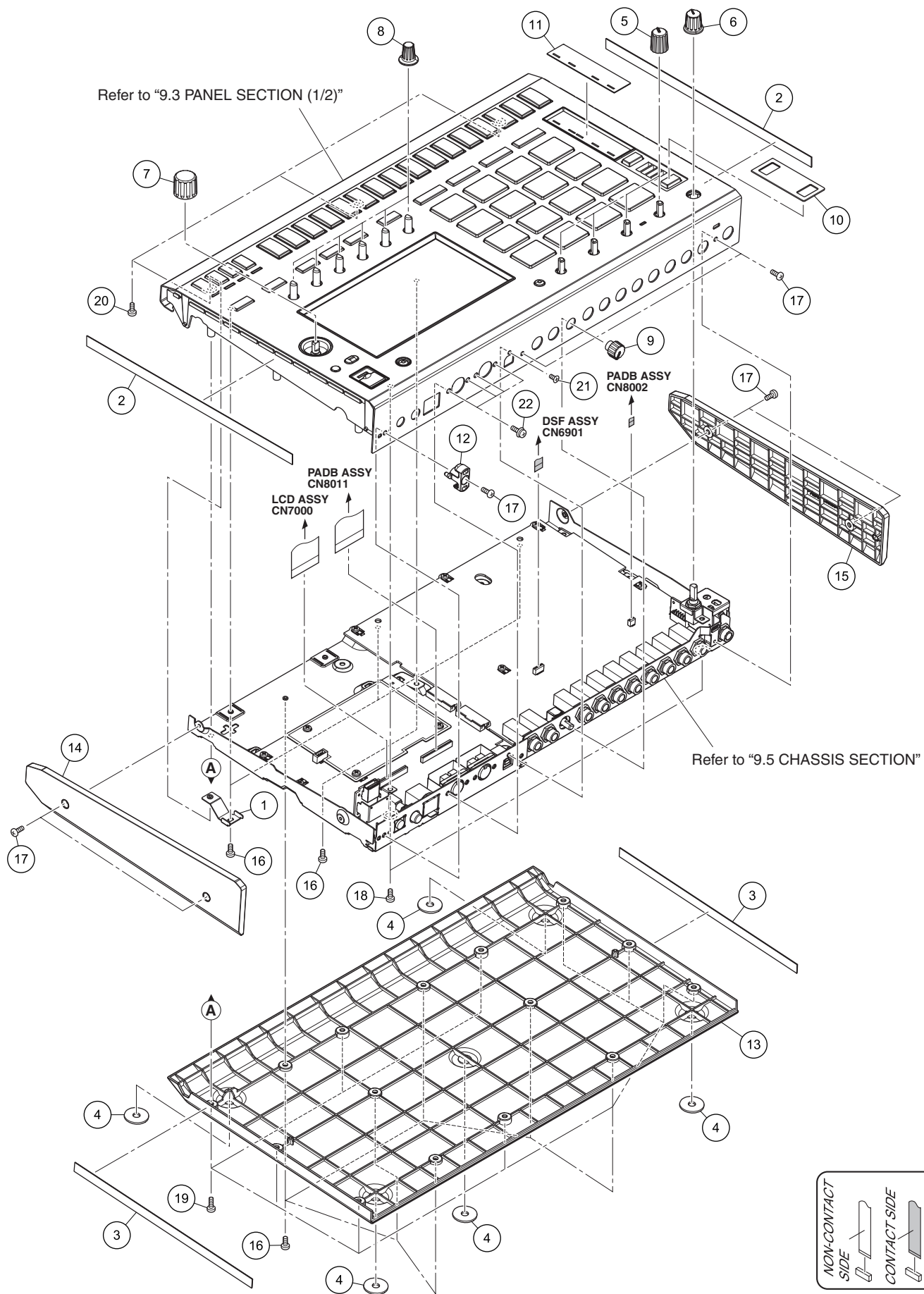
SYXJ, UXJCB and AXJ are constructed the same except for the following:

Mark	No.	Symbol and Description	SYXJ	UXJCB	AXJ
D	2	Power Cord	ADG1154	XDG3052	ADG7079
	5	Operating Instructions (Quick Start Guide)	DRH1360	DRH1359	DRH1361
	6	Software License Notice	DRH1390	DRH1390	DRH1403
	14	Packing Case	DHG3448	DHG3490	DHG3492
	16	Name Label	Not used	Not used	DAL1348
NSP	17	Warranty	DRY1270	Not used	Not used
	18	Software License Notice (Fr)	DRH1391	DRH1391	Not used
	19	Master Carton	DHG3452	DHG3493	DHG3495

E

F

9.2 EXTERIOR SECTION



EXTERIOR SECTION PARTS LIST

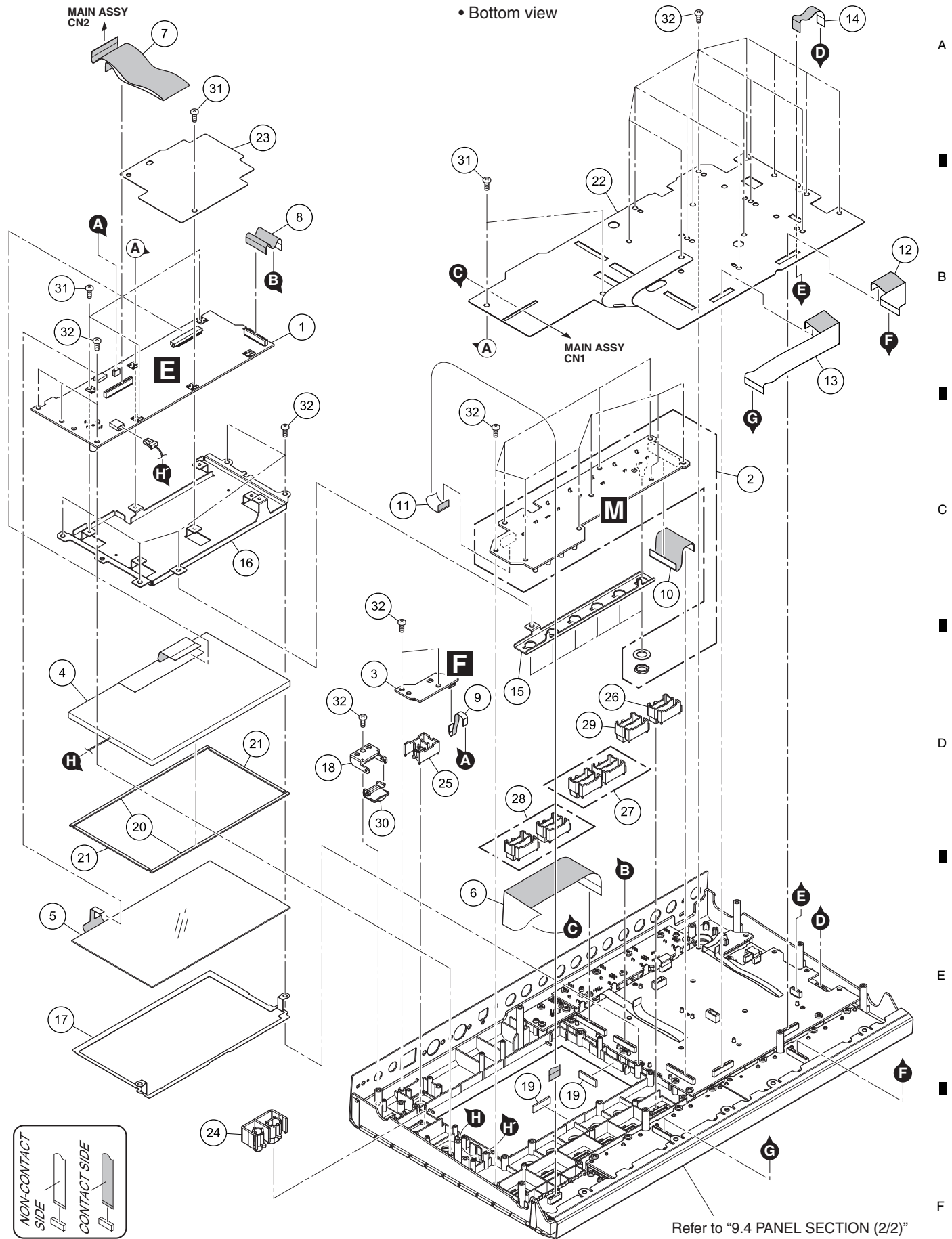
<u>Mark No.</u>	<u>Description</u>	<u>Part No.</u>
A	1 Plate	DNF1993
	2 Cushion	DEC3724
	3 Cushion	DEC3725
	4 Cushion	DEC3177
	5 Rotary SW Knob (HM)	DAA1256
	6 Knob	DAA1370
	7 Knob/BRS	DAA1342
	8 Knob	DAA1358
	9 Knob	DAA1369
	10 Panel	DAH3090
B	11 Sheet	DEC3662
	12 Hook	DNK6664
	13 Cover	DAH3095
	14 Panel	DNK6641
	15 Panel	DNK6642
	16 Screw	BBZ30P060FTB
	17 Screw	BBZ30P080FTB
	18 Screw	BPZ30P080FNI
	19 Screw	BPZ30P100FTB
	20 Screw (Fe)	DBA1290
C	21 Screw (M3x5)	DBA1340
	22 Screw	PMH30P100FTB

D

E

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9.3 PANEL SECTION (1/2)



PANEL SECTION (1/2) SECTION PARTS LIST

<u>Mark No.</u>	<u>Description</u>	<u>Part No.</u>
A	1 LCD ASSY	DWX3867
	2 PARA ASSY	DWX3874
	3 STBY ASSY	DWX3876
	4 TFT LCD	CWX4352
	5 Touch Panel	DSX1128
	6 FFC	DDD1753
	7 FFC	DDD1754
	8 FFC	DDD1755
	9 FFC	DDD1756
	10 FFC	DDD1757
B	11 FFC	DDD1758
	12 FFC	DDD1759
	13 FFC	DDD1760
	14 FFC	DDD1761
	15 Stay	DNF1986
	16 Stay	DNF1985
	17 Plate/GND	DNH3173
	18 Panel	DNK6623
	19 Packing/LCD	DEC3565
	20 Packing/L	DEC3568
C	21 Packing/S	DEC3569
	22 Shield Sheet	DEC3665
	23 Sheet	DEC3720
	24 Button/BAK	DAC3017
	25 Button/REL	DAC3030
	26 Button	DAC3199
	27 Button	DAC3200
	28 Button	DAC3201
	29 Button	DAC3237
	30 Door	DNK6497
D	31 Screw	BBZ30P060FTB
	32 Screw	BPZ30P080FNI

■ 5 ■ 6 ■ 7 ■ 8

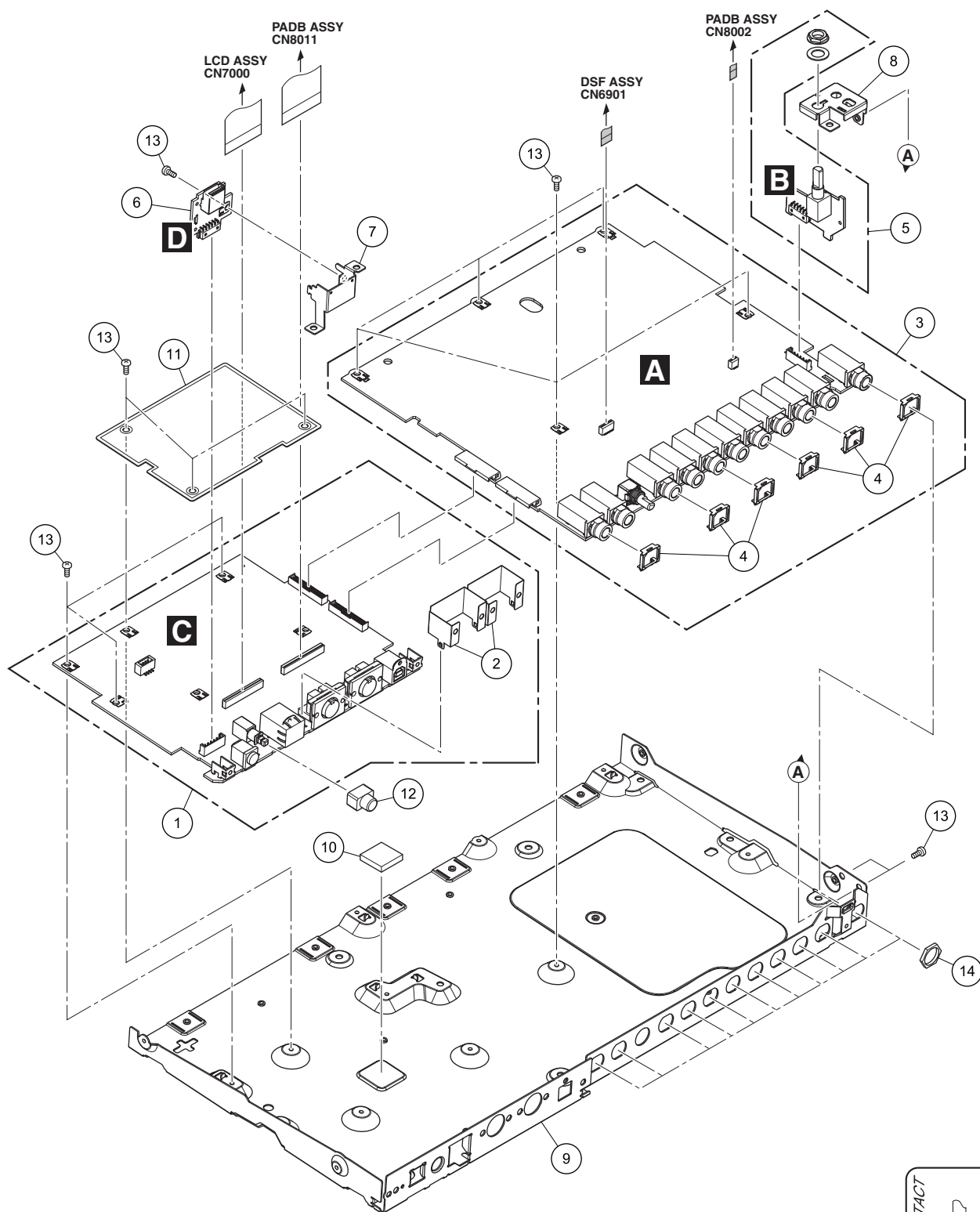


PANEL SECTION (2/2) SECTION PARTS LIST

<u>Mark No.</u>	<u>Description</u>	<u>Part No.</u>
A	1 PADB ASSY	DWX3869
	2 SEQ1 ASSY	DWX3870
	3 SEQ2 ASSY	DWX3871
	4 BAR ASSY	DWX3872
	5 CDC ASSY	DWX3873
	6 MODE ASSY	DWX3878
	7 DSF ASSY	DWX3875
	8 FFC	DDD1762
	9 FFC	DDD1763
	10 FFC	DDD1765
B	11 10P FFC	DDD1533
	12 Stay	DNF1988
	13 Stay ASSY	DEA1060
	14 Holder	DNK6608
	15 Sheet	DEC3663
	16 Sensor	DEC3664
	17 DS Tape	DEH1084
	18 Button/REL	DAC3030
	19 Button	DAC3197
	20 Button	DAC3198
C	21 Button	DAC3202
	22 Button	DAC3203
	23 Button	DEB2033
	24 Button	DEB2037
	25 Button	DEB2039
	26 Lens/MIC	DNK6308
	27 Cap	DNK6609
	28 •••••	
	29 Cap	DNK6624
	30 Control Panel	DAH3089
D	31 Screw	BPZ30P080FNI

5 6 7 8

9.5 CHASSIS SECTION



CHASSIS SECTION PARTS LIST

Mark	No.	Description	Part No.
A	1	MAIN ASSY	DWX3864
	2	Shield Case (MIDI)	DNH2736
	3	IO ASSY	DWX3865
	4	Phone Shield	DNF1875
	5	MVR ASSY	DWX3866
	6	USBA ASSY	DWX3868
	7	Stay	DNF1987
	8	Stay	DNF1989
	9	Chassis	DNA1461
	10	Heat Cond Sheet	DEB2040
B	11	Sheet	DEC3702
	12	Knob	DNK6607
	13	Screw	BBZ30P060FTB
	14	Nut (M12)	NKX2FNI

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