

AlphaTheta

Service Manual



DJM-V5

ORDER NO.
DRT2039

DJ MIXER

DJM-V5/UXJ



AlphaTheta Corporation

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SAFETY INFORMATION



This service manual is intended to support DIY enthusiasts and AlphaTheta Corporation is not responsible for repairs to or replacement of your product if damage occurs during a self-repair. You understand and agree that any self-repairs on your product are done solely at your own risk and that AlphaTheta Corporation shall have no liability for any damage occurring as a result of a self-repair.

It is strongly advised that a trained and qualified individual performs the repairs properly and safely. If you are not qualified to perform repairs on this product in a proper and safe manner, you should not attempt to do so and instead refer the repair to a qualified service technician.

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1. SPECIFICATIONS

General

Power requirements.....	AC 110 V – 240 V, 50 Hz/60 Hz
Power consumption	47 W
Power consumption (off).....	0.3 W
Main unit weight.....	8.0 kg/17.6 lbs.
Max. external dimensions.....	(W × D × H) 302.0 × 437.5 × 107.9 mm / 11.89" × 17.22" × 4.25"
Tolerable operating temperature.....	+5 °C – +35 °C (+41 °F – +95 °F)
Tolerable operating humidity.....	5 % – 85 % (no condensation)

Audio section

Sampling rate	96 kHz
MASTER, BOOTH, REC, SEND D/A converter	32bit
CH, RETURN input A/D converter.....	32bit
Other A/D and D/A converters.....	24bit
Frequency response	
LINE.....	20 Hz – 40 kHz
S / N ratio (rated output, A-WEIGHTED)	
USB.....	110 dB
PHONO.....	88 dB
LINE.....	105 dB
MIC.....	79 dB
Total harmonic distortion (LINE —MASTER, 20 Hz – 40 kHzBW)	0.005 %
Standard input level / Input impedance	
PHONO.....	-52 dBu/47 kΩ
LINE.....	-12 dBu/47 kΩ
MIC.....	-57 dBu/3.5 kΩ
RETURN.....	-12 dBu/47 kΩ
Max. input level	
PHONO.....	-17.8 dBu
LINE.....	+15 dBu
MIC.....	+2 dBu
RETURN.....	+12 dBu
Standard output level / Load impedance / Output impedance	
MASTER.....	+6 dBu/10 kΩ /360 Ω
REC OUT.....	-8 dBu/10 kΩ /700 Ω
BOOTH.....	+6 dBu/10 kΩ /360 Ω
SEND.....	-12 dBu/10 kΩ /700 Ω
PHONES.....	+8 dBu/32 Ω/1 Ω or lower
Rated output level / Load impedance	
MASTER.....	+25 dBu/10 kΩ
BOOTH.....	+25 dBu/10 kΩ
Crosstalk	
LINE.....	82 dB
Channel equalizer characteristic	
HI.....	-∞ dB – +6 dB (3 kHz)
HI MID.....	-26 dB – +6 dB (1.2 kHz)
LOW MID.....	-26 dB – +6 dB (400 Hz)
LOW.....	-∞ dB – +6 dB (200 Hz)
Microphone equalizer characteristic	
HI.....	-12 dB – +12 dB (10 kHz)
LOW.....	-12 dB – +12 dB (100 Hz)
BOOTH MONITOR equalizer feature	
HI.....	-12 dB – +6 dB (3 kHz)
LOW.....	-12 dB – +6 dB (300 Hz)

Input / Output terminals

PHONO input terminal	
RCA pin jacks	3 sets
LINE input terminal	
RCA pin jacks	3 sets
MIC input terminal (XLR / TRS)	
XLR connector & 1/4 TRS jack	1 set
RETURN input terminals (TS)	
1/4 TS jack.....	1 set
MASTER output terminal	
XLR connector.....	1 set
BOOTH output terminal (TRS)	
1/4 TRS jack	1 set
REC OUT output terminal	
RCA pin jacks	1 set
SEND output terminal (TS)	
1/4 TS jack.....	1 set
PHONES output terminal	
1/4 stereo jack	1 set
3.5 mm stereo mini-jack	1 set
USB terminal	
USB Type-C (MULTI I/O)	1 set
Power supply	5 V/3 A or less
USB Type-C (PC/Mac).....	1 set
LINK terminal	
LAN terminal (100BASETX)	1 set

SonicLink section

Maximum transmission distance	Approximately 5 m* in unobstructed circumstances
Frequency band used	2.4 GHz
* Transmission distances are a guideline. Transmission distance may change depending on the surrounding environment.	

Headphones touch area

Supported standards	ISO/IEC 15693 (reader)
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The specifications and design of this product are subject to change without notice.

Accessories

- Power cord × 1
(DDG1108)
- Warranty (for some regions)* × 1
- Precautions for Use × 1
(DRH1838)
- Quick Start Guide × 1
(DRH1840)

* Only products in Europe and North America.
Products in Japan include warranty information in the Precautions for Use.

2. BASIC ITEMS FOR SERVICE

2.1 CHECK POINTS

A Items to be checked

To maintain product quality, confirm the recommended check points shown below.

No.	Procedure	Check points
1	Confirm the firmware version.	The firmware must be the latest version. If not the most current version, update the firmware must be latest.
2	Check the analog audio input (each channel, MIC, RETURN). (Make the analog connections with CDJ player, analog player and MIC.)	Audio and operations must be normal.
3	Check the analog audio output (MASTER, REC OUT, BOOTH, SEND). (Make the analog connections with CDJ player.)	Audio and operations must be normal.
4	Check the headphones output. (1/4" stereo phone plugs and 3.5 mm stereo mini plugs)	There must be no errors, such as noise, in the audio output.
5	Check playback, using the fader function.	Audio and operations must be normal.
6	Check the buttons and controls.	Make sure that all buttons and controls on the Main unit function properly.
7	Check the connection of each interface.	
	USB port (PC/Mac connection, USB Type-C terminal)	The device must be properly recognized by the PC.
	MULTI I/O port (USB Type-C terminal)	Insert a USB memory and check if the USB connection indicator lights up.
	LINK terminal	The LAN is connected successfully.
	SonicLink	Pair with SonicLink headphones. Audio output must be normal.
	NFC	Make sure touch-pairing-enabled SonicLink headphones is paired by holding them over the Headphones touch area.

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. DIAGNOS

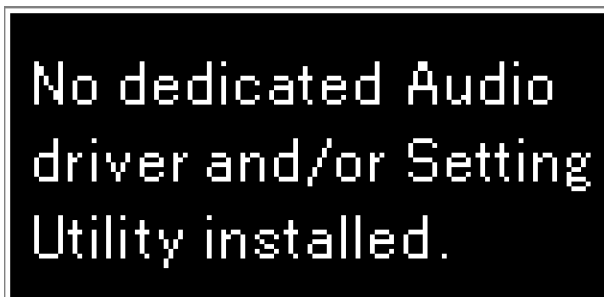
3.1 CONNECTION CHECK WITH EACH INTERFACE

Rear panel PC (Type-C) port (for PC/Mac connection)

You can check on the PC that the USB communication between the PCs connected to the Rear panel PC (Type-C) port is normal.
※ The driver software must be installed beforehand.

- **For checking, use the [Screen] of the unit.**

If the driver is not recognized after connecting to the PC, the following caution message will be displayed.
If the driver is recognized, no warning will be displayed.



- **Use Device Manager for checking.**

If the PC and unit are properly connected, the components of unit are added in Device Manager (under Hardware) as devices.
If all components are properly displayed, the PC and unit are communicating via the USB C port.

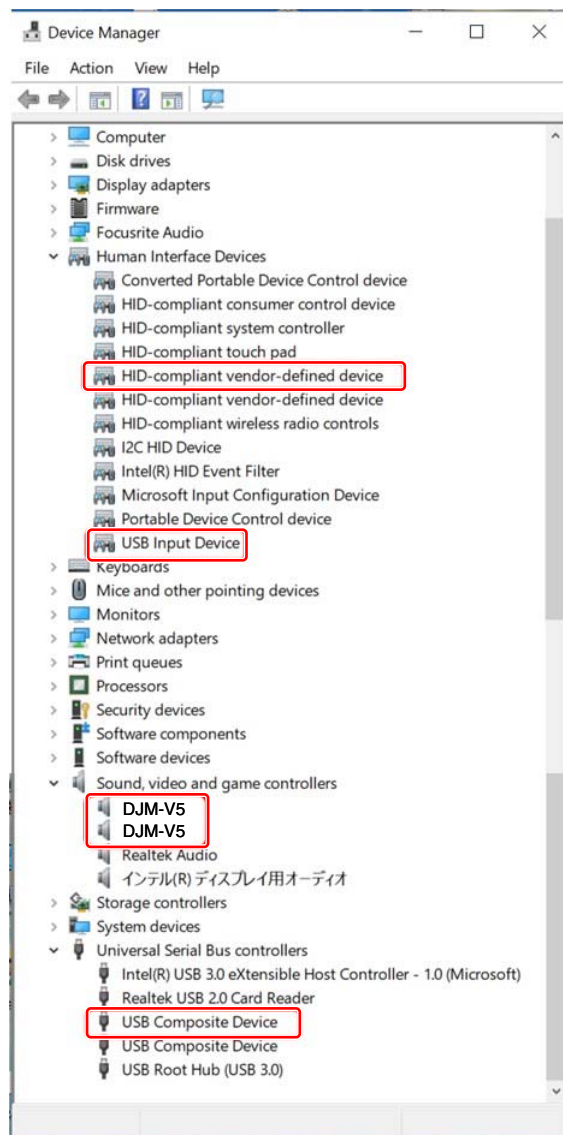
In the case of Windows 10:

Input with "Device Manager" in the search box of the task bar.

Devices to be added:

- Universal Serial Bus controllers
USB Composite Device
- Under "Sound, video and game controllers"
DJM-V5
DJM-V5
- Human Interface Device
HID-compliant vendor-defined device
USB Input Device

A communication check may be easily performed if connection is made with Device Manager displayed on the PC screen.



Control panel Multi I/O (Type-C) port

Check that communication between this unit and the external device connected via the Control panel Multi I/O (Type-C) port is properly performed.

Note: A USB memory is required for checking.

- **For checking, use the USB connection indicator of the unit.**

Light on : The USB memory was properly recognized.

Flashing : The unit is in the process of recognizing the connected USB memory.
(Flashing intervals: 500 ms [light on: 250 ms, light off: 250 ms])

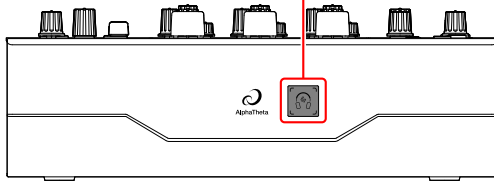
Light off : No USB memory is plugged in.

NFC connection check

To check the NFC connection, use SonicLink headphones that support touch pairing and make sure they pair properly.

- ① Set [SONICLINK] to [ON] in the Utility settings.
- ② Hold the SonicLink headphones over the headphones touch area on the front panel of the unit for a while.
- ③ The SonicLink headphones indicator blinks quickly during pairing, and the light turns solid when the headphones are paired with the unit.

Headphones touch area



SonicLink connection check

Make sure you can monitor the sound using the paired SonicLink headphones.

■ Pairing check

- ① Set [SONICLINK] to [ON] in the Utility settings.
 - ② Turn on SonicLink headphones and put them into Pairing mode.
 - ③ Press and hold the [PAIRING] button, the SonicLink headphones indicator blinks quickly during pairing, and the light turns solid when the headphones are paired with the unit.
- ※ If you have SonicLink headphones that support touch pairing, check the pairing by "NFC connection check".

■ Monitoring check

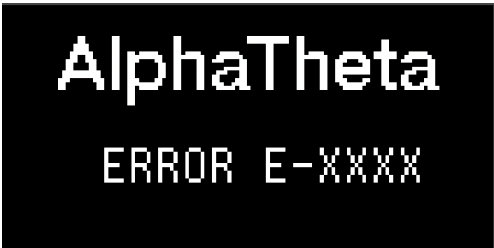
- ① Press the [CUE] button or turn the [LINK CUE] knob to select the sound you want to monitor.
- ② Press the [MONO SPLIT] button to set the sound output method (MONO SPLIT/stereo).
- ③ Turn the [MIX] knob to adjust the volume balance between the channel with the [CUE] button pressed and the master sound.
- ④ Turn the [LEVEL] knob to adjust the volume for the channel with the [CUE] button pressed.

3.2 STARTUP ERROR DISPLAY

Startup errors are displayed in the form of "E-XXXX" on the [Screen] of the unit.
These errors are indicative of a hardware fault. Please have repairs performed by a qualified technician. When doing so, please provide the error code or the LED illumination pattern.

■ GUI display

Display	Meaning
E-0001	Communication Error inter-CPU
E-0002	CPU Startup Error
E-0020	Communication error between MAIN CPU NFC
E-1001	DAC setting error
E-1002	ADC setting error
E-1003	Combined errors of DAC/ADC
E-1004	ADC setting error
E-1005	Combined errors of DAC/ADC
E-1006	ADC setting error
E-1007	Combined errors of DAC/ADC
E-4000	Communication error between MAIN CPU SonicLink



■ LED display

The following LEDs flash when a power supply voltage abnormality is detected.
[TALKOVER (WAKE UP)] button LED on the unit flashing.(cycle of 500 ms)



[TALKOVER (WAKE UP)]
button LED

4. 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.

Knobs and Volumes Location

The diagram shows the front panel of a DJM-V5 mixer. Red boxes and letters A through K are used to identify specific controls for disassembly:

- A:** Four channel faders (top row).
- B:** Four channel volume knobs (top row).
- C:** Master volume knob (top right).
- D:** Filter knob (left side).
- E:** CH SELECT knob (right side).
- F:** ON/OFF switch (right side).
- G:** Performance section knobs (middle row).
- H:** Send section knobs (middle row).
- I:** Booth volume knob (right side).
- J:** Master Mix Level slider (bottom left).
- K:** Channel 1, 2, and 3 faders (bottom middle).

A DAA1490 x4
Dark Gray (rubber)
White

B DAA1416 x3
Black (rubber)
Yellow

C DAA1265 x2
Black (rubber)
White

D DAA1471 x2
Black (rubber)
White

E DAA1434 x12
Black (rubber)
White

F DAA1415 x1
Black
White

G DAA1419 + DNG1133 x5
Silver DNG1133
Black (rubber) DAA1419
White

H DAA1435 x8
Black (rubber)
White

I DAA1420 x3
Black (rubber)
White

J DAC3848 x1
White
Silver

K DAC2685 + DAC3539 + DNK5888 x3 + x3 + x3
DAC2685 White
DAC3539 Black
DNK5888 Gray

Disassembly

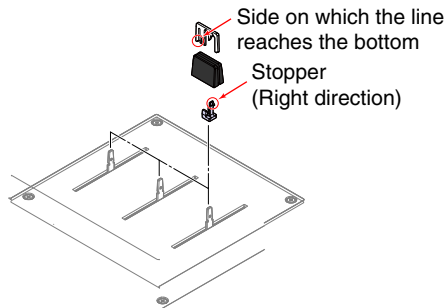
The disassembly process for knob and sliders is described below.

[1] Control panel Section

[1-1] Each knob

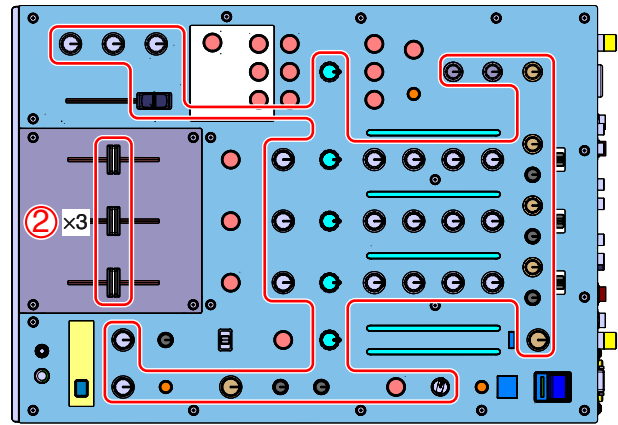
- ① Remove the all knobs.
- ② Remove the 3 Slider Knobs 2, 3 Knobs and 3 Slider Knob Stoppers.
(See below.)

■ The reference of the direction



① x41

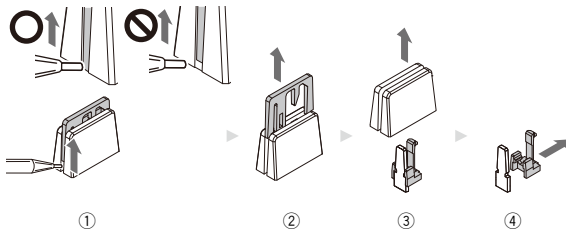
Front



■ Assembly / Reassembly of the Slider Knob 2, Knob and Slider Knob Stopper

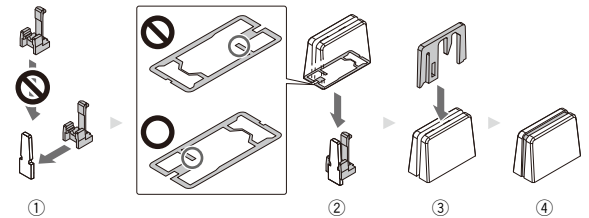
-Disassembly-

- ① Lift the lower end of the Slider knob 2, using a pointed tool.
- ② Pull the Slider knob 2 out upward.
- ③ Pull the Knob out upward.
- ④ Pull the Slider Knob Stopper out horizontally.



-Reassembly-

- ① Insert the Slider Knob Stopper horizontally.
- ② Insert the Knob, paying attention to its orientation.
- ③ Insert the Slider knob 2, paying attention to its orientation.



5. UPDATING AND SETTING

5.1 UPDATING OF THE FIRMWARE

■ Downloading and Unzipping the Updater File

- ① Download the zipped firmware file for the latest firmware. Download Link is below.
<https://support.alphatheta.com/en-US/products/50766108259865?section=25>
- ② Save the downloaded zip file ([DJM-V5_Ver**_Win.zip] or [DJM-V5_Ver**_Mac.zip]) in a directory such as your desktop and

■ Preparation for the update

- ① Connect the product to your computer using a USB cable.



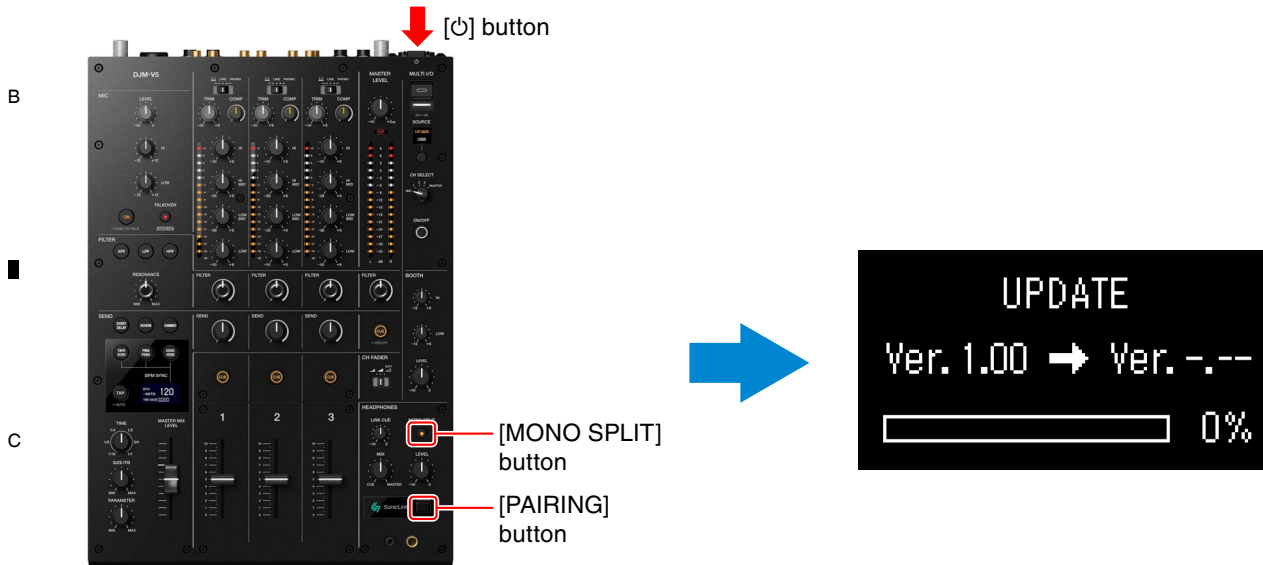
DJM-V5

A ■ How to Update

Note:

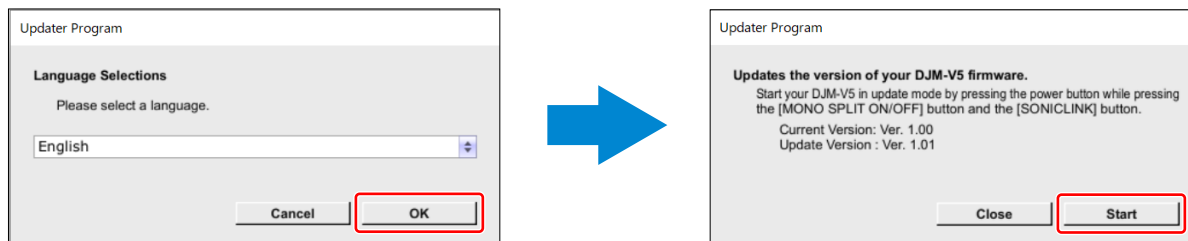
- Do not turn off the power during the update.
- Do not mistake the order of Step.1 and Step.2 in the following procedure.

- ① Turn on the power while holding down the [MONO SPLIT] button and [PAIRING] button.
The mixer enters update mode.
When started, the following will be displayed on the [Screen].

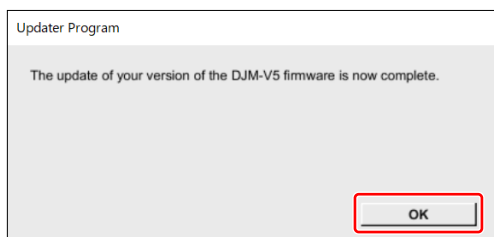


- ② **(Windows)** Double-click "DJMV5Update.exe" in the [DJMV5_Ver**_Win] folder.
(Mac) Double-click "DJMV5Update.app" in the [DJMV5_Ver**_Mac] folder.
(Depending on your Mac's settings, .app may not be displayed.)

- ③ Select "English" and click "OK" in the "language selections" screen, and then click the "Start".
Update starts.



- ④ When the update is complete, click "OK" and turn on the Mixer again.
If "VerX.XX" (Version when downloaded) is displayed on the [Screen] when the Mixer is started, it is OK.



5.2 Procedure for checking, saving, and restoring settings of [MY SETTINGS]

■ Procedure for checking, saving, and restoring settings of [MY SETTINGS]

Procedure of [Check and save settings] and [Restore settings] are as follows.

[Check and save settings]

- ① Connect a storage device to the USB port on the control panel.
- ② Press and hold the [CUE (UTILITY)] button for MASTER while the main screen is showing.
- ③ Press the [CUE] button for CH 1/CH 3, select [SAVE] of [MY SETTINGS], then press the [CUE] button for CH 2.
- ④ Press the [CUE] button for CH 1/CH 3 to select a storage device to save the settings to, then press the [CUE] button for CH 2.
My Settings are saved to the storage device.
- ⑤ Press the [CUE (UTILITY)] button for MASTER.
The [UTILITY] screen closes and returns to the main screen.

[Restore settings]

- ① Connect a storage device to the USB port on the control panel.
- ② Press and hold the [CUE (UTILITY)] button for MASTER while the main screen is showing.
- ③ Press the [CUE] button for CH 1/CH 3, select [LOAD] of [MY SETTINGS], then press the [CUE] button for CH 2.
- ④ Press the [CUE] button for CH 1/CH 3 to select a storage device to load the settings from, then press the [CUE] button for CH 2.
My Settings are called up.
- ⑤ Press the [CUE (UTILITY)] button for MASTER.
The [UTILITY] screen closes and returns to the main screen.

■ [MY SETTINGS] settings items

Item for user's Setting	Setting Value (The factory default settings are indicated in red letters.)
HEADPHONES MONO SPLIT	STEREO , MONO SPLIT
MIC LOW CUT	OFF, ON(for MC)
MIC TALKOVER MODE	ADVANCED , NORMAL
MIC TALKOVER LEVEL	-∞dB, -24dB, -18dB , -12dB, -6dB
MIDI CH	1 to 16
MIDI BUTTON TYPE	TOGGLE , TRIGGER
BRIGHTNESS DISPLAY	1 to 5
BRIGHTNESS INDICATOR	1 to 3

12

1

2

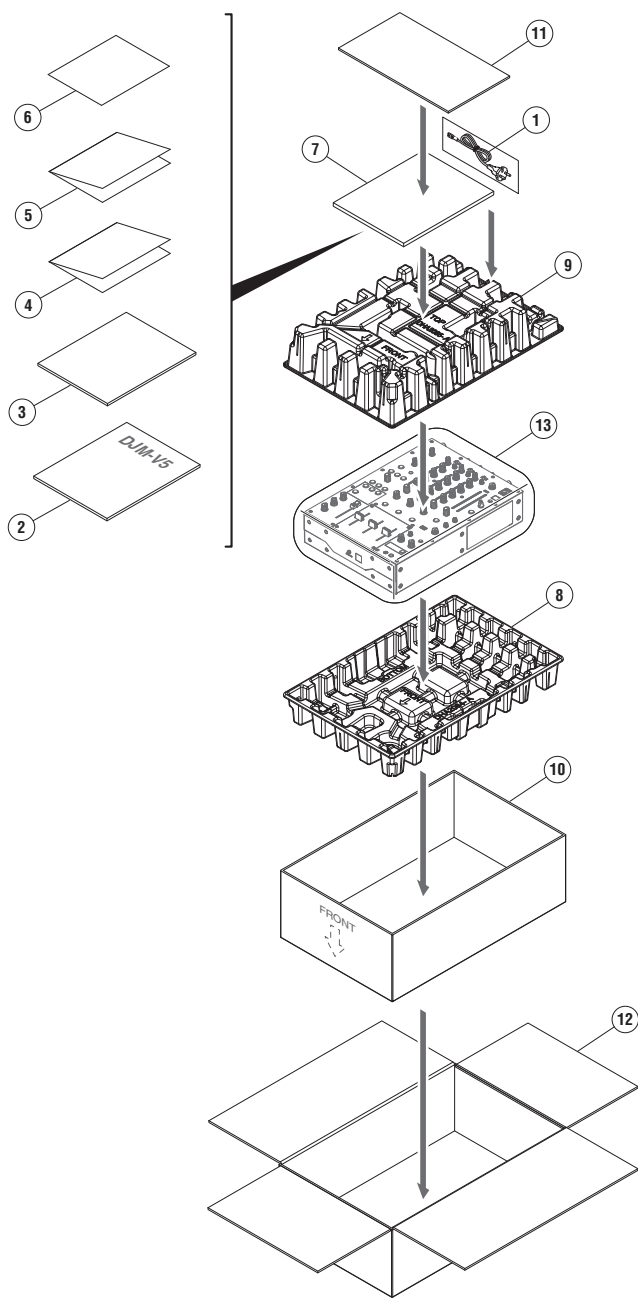
3

4

6. EXPLODED VIEWS AND PARTS LIST

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.

6.1 PACKING SECTION



(1) PACKING SECTION PARTS LIST

<u>Mark No.</u>	<u>Description</u>	<u>Part No.</u>	<u>Mark No.</u>	<u>Description</u>	<u>Part No.</u>
⚠	1 Power cord	DDG1108	NSP 6	Warranty (for some regions)	.....
	2 Quick Start Guide	DRH1840	NSP 7	Envelope	.....
	3 Precautions for Use	DRH1838	NSP 8	Packing Pad	.....
NSP	4 Leaflet	.....	NSP 9	Packing Pad	.....
NSP	5 Leaflet	.....	NSP 10	Packing Cover	.....
			NSP 11	Packing Board	.....
			NSP 12	Packing Case	.....
			NSP 13	Mirror Mat	.....

A

B

C

D

E

F

6.2 EXTERIOR SECTION

A

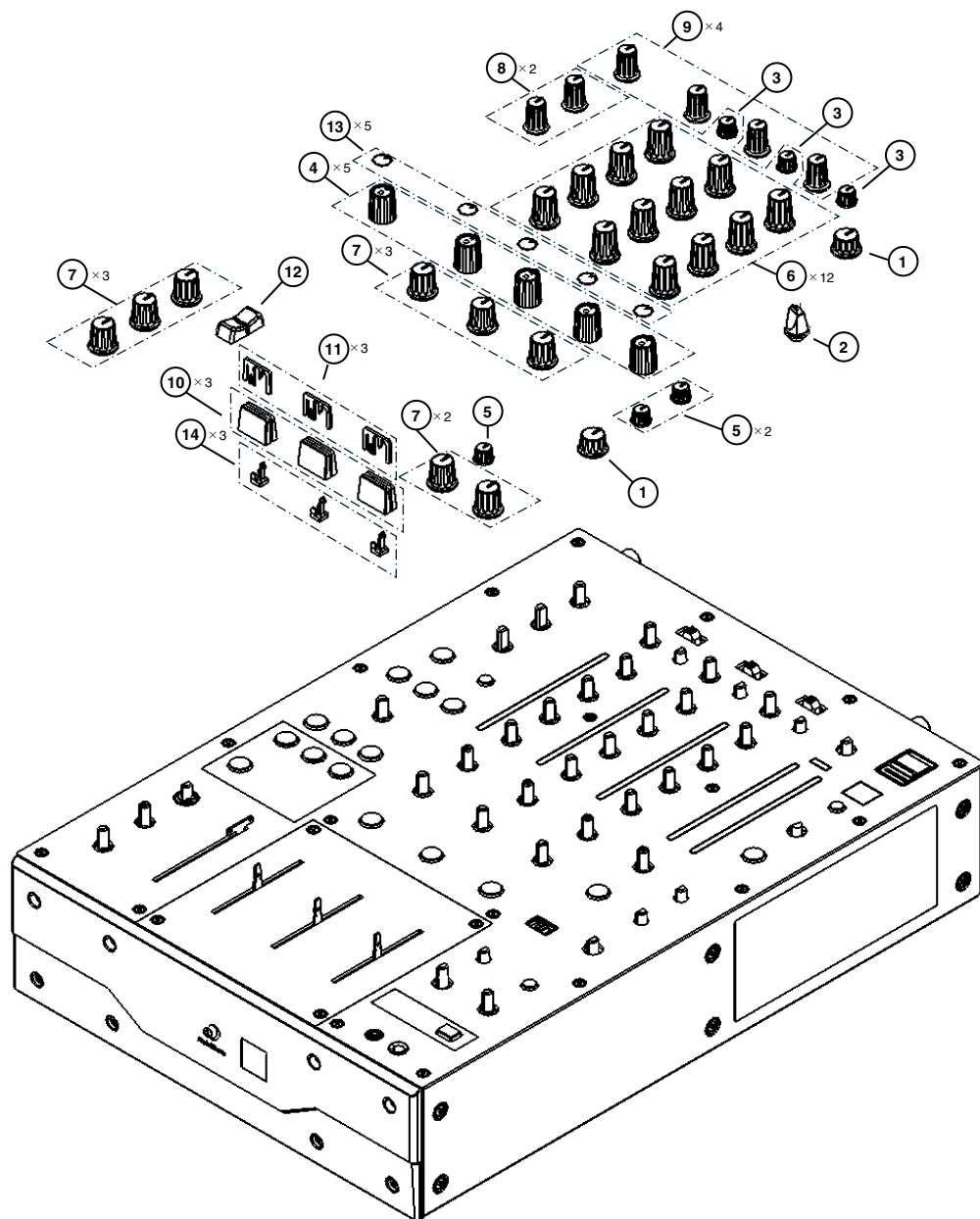
B

C

D

E

F



(1) EXTERIOR SECTION PARTS LIST

<u>Mark No.</u>	<u>Description</u>	<u>Part No.</u>	<u>Mark No.</u>	<u>Description</u>	<u>Part No.</u>
1	Rotary Knob Low (BN)	DAA1265	11	Slider Knob 2	DAC2685
2	Knob	DAA1415	12	Knob	DAC3848
3	Knob	DAA1416	13	Plate	DNG1133
4	Knob	DAA1419	14	Slider Knob Stopper	DNK5888
5	Knob	DAA1420			
6	Knob	DAA1434			
7	Knob	DAA1435			
8	Knob	DAA1471			
9	Knob	DAA1490			
10	Knob	DAC3539			

A

B

C

D

E

F