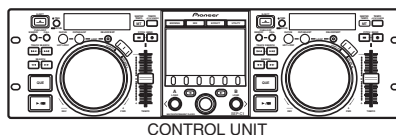


## Service Manual



ORDER NO.  
**RRV3752**

### SOFTWARE ENTERTAINMENT CONTROLLER

# SEP-C1

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


Model	Type	Power Requirement	Remarks
SEP-C1	UCYSXJ/WL5	USB POWER (DC 5 V)	

This service manual should be used together with the following manual(s):

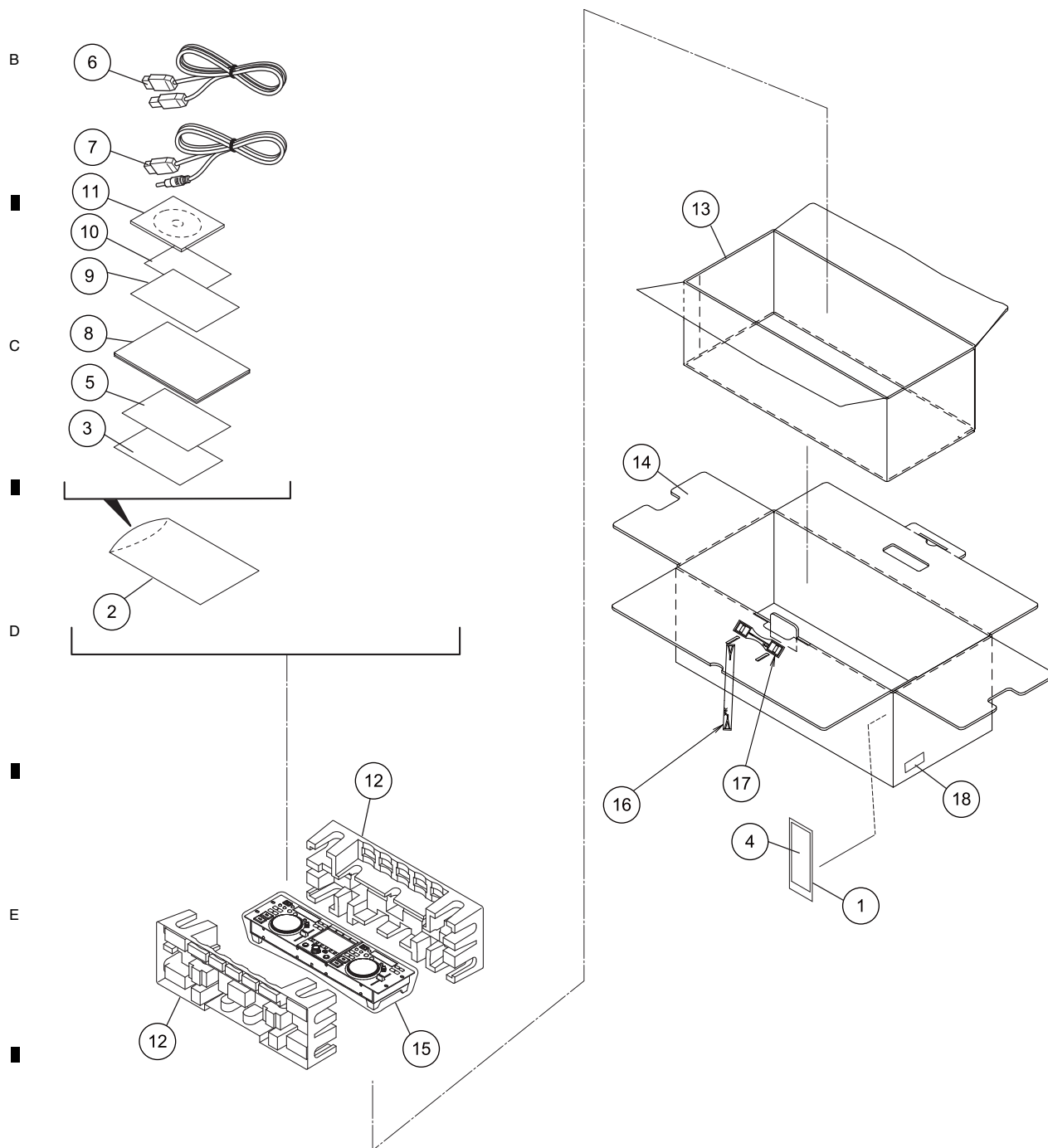
Model No.	Order No.	Remarks
MEP-7000/KUCXJ	RRV3719	EXPLODED VIEWS, BLOCK DIAGRAM, PCB PARTS LIST, SCH&PCB DIAGRAM,etc.

: This product is equivalent to the control unit part(CU-V170) of MEP-7000/KUXJ.

# 1. 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.
  - Screws adjacent to ▼ 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.)
  - Nos. indicate the pages and Nos. in the service manual for the base model.

## 1.1 PACKING SECTION



## PACKING SECTION PARTS LIST

Mark No.	Description	Part No.
NSP 1	Vinyl. Bag	AHG7031
NSP 2	Polyethylene Bag (0.06x230x340)	AHG7117
NSP 3	Service Network	ARY1127
NSP 4	Warranty Card (J)	ARY7043
NSP 5	Warranty Card (WY)	ARY7107
6	USB Cable	DDE1128
7	USB Power Cable	DDE1129
8	Operating Instructions (English, French, German, Italian, Dutch Spanish, Russian, Simp-Chinese, Japanese)	DRB1465
NSP 9	DJS Installation Key Sticker	DRM1300
NSP 10	Warranty Card	DRY1235
11	DJS CD-ROM Assy	DXX2585
12	Pad (CNT)	DHA1766
13	Round Pad Sep (Paper)	DNA1769
14	Packing Case	DHG2757
15	Packing Sheet	RHC1023
16	Plastic Handle (PE)	VEC2292
17	Spacer (PE)	VEC2293
NSP 18	Label	VRW1629

## 1.2 EXTERIOR SECTION

**MEP-7000/KUCXJ(CONTROL UNIT SECTION) and SEP-C1/UCYSXJ/WL5 are constructed the same except for the following:**

Mark	No.	Symbol and Description	Part No.		Remarks
			MEP-7000 /KUCXJ (CONTROL UNIT SECTION CU-V170)	SEP-C1 /UCYSXJ/WL5	
	P143-17	Center Panel	DNK5244	DNK5247	
	P143-37	Rear Panel	DNC1825	DNC1901	

# 2. ACCESSORIES and SPECIFICATIONS

## 2.1 ACCESSORIES

1

A

USB cable  
(DDE1128)

Warranty card

2

USB auxiliary power cable  
(DDE1129)

3

DJS CD-ROM Assy  
(DXX2585)

CD-ROM

4

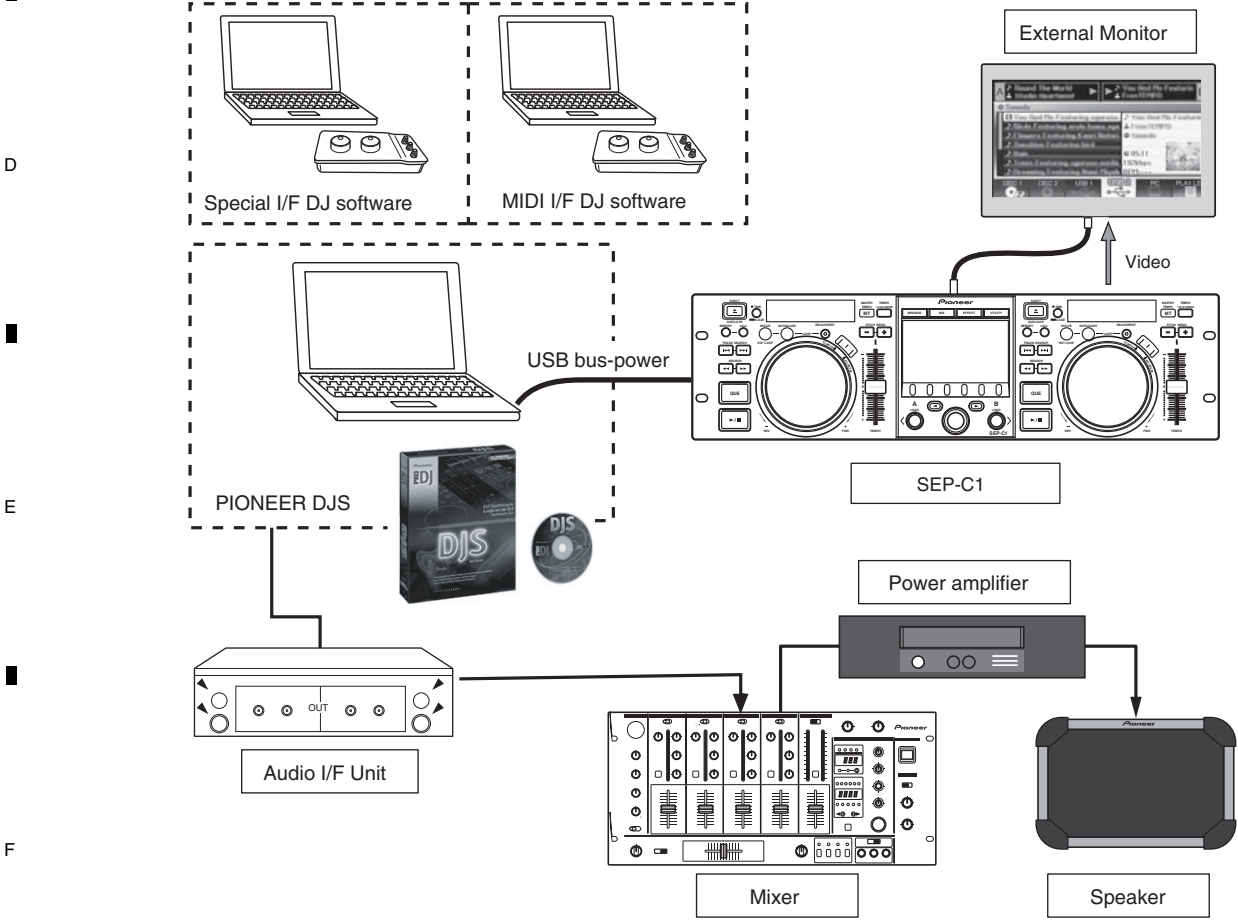
DJS installation key sticker

Operating Instructions  
(DRB1465)

## 2.2 SPECIFICATIONS

1	General		4	Center Display Section	
	Model	SEP-C1		Type	TFT LCD active matrix display
	Name	Software entertainment controller		Size	4.3" (WIDE)
	Power voltage	DC 5 V (USB bus-power)		Supported languages	9 languages including English, Japanese, and Chinese (simplified Mandarin)
	Current consumption	600 mA	5	Controller Display A/B Section	
	Power consumption	3 W		Type	OEL (Organic EL) Full segment
	Operating temperature	+5 °C to +35 °C (+41 °F to +95 °F)	6	Other Connectors	
	Operating humidity	5 % to 85 % RH (without condensation)		5 V connector	DC jack
	Mass (Weight)	1.7 kg (3.75 lb.)	<i>Specifications and appearance are subject to change without notice.</i>		
	Maximum external dimensions	482.6 mm (W) x 133.0 mm (H) x 83.5 mm (D) 19.0 in (W) x 5.24 in (H) x 3.29 in (D)			
2	USB Upstream Section				
	Connector	USB B-type port (PC connector)			
3	Video Output Section				
	Output connector	RCA jack			
	Composite output level	1 Vp-p (75 Ω)			

## 2.3 FEATURES



### 3. BASIC ITEMS FOR SERVICE

#### 3.1 CHECK POINS AFTER SERVICING

To ensure the quality of the product after repair, check the recommended items shown below:

No.	Procedures	Item to be checked
1	Check the version of the firmware in Test mode.	Check that it is the latest version. If it is not, update the firmware.
2	Check that all the symptoms pointed out by the customer have been addressed.	The symptoms in question must not be reproduced. There must be no abnormal operation observed.
3	Check operations when the PC is connected.	There must be no abnormal operation observed.
4	Check video signals.	In checking analog video output signals, there must be no abnormality observed in video signals or operations.
5	Check output signals while the JOG dial or TEMPO slider is being operated.	There must be no abnormal operation observed.
6	Check the exterior section.	Check for any scratches or dirt that have been made or attached on the exterior section after receiving the product for repair.

#### 3.2 JIGLIST



##### For Diagnosis / Adjustment

For operating method, please refer to the service manual for MEP -7000.

Name	Intended Use	Operating Method	Remarks
PC	For checking USB communication.	See "5 DIAGNOSIS."	
USB cable	For checking USB communication. Firmware update.	See "5 DIAGNOSIS." See "8 EACH SETTING AND ADJUSTMENT."	Accessory.
Dedicated USB driver software (with utility program for version display)	Simplified check of USB communication.	See "5 DIAGNOSIS."	This program consists of USB driver and utility. The USB driver needs to be installed for connecting SEP-C1 with a personal computer. The utility can be used for checking USB communication.
Firmware update program.	Firmware update.	See "8 EACH SETTING AND ADJUSTMENT."	This program consists of Firmware and execute file. The USB driver needs to be installed before updating the firmware.



##### Lubricants and Glues list

Name	Lubricants and Glues No.	Remark
Dyefree	GEM1036 (ZLX-ME413A)	Refer to "9.6 CONTROL PANEL SECTION"
Grease	GYA1001 (ZLB-PN397B)	Refer to "9.6 CONTROL PANEL SECTION"

# 4. DIAGNOSIS

## 4.1 TROUBLE SHOOTING

### [1] CONTROL UNIT (Manipulator Style)

In this section, only items specific to Manipulator Style are described.

With regard to the problems common to Normal Style, see "[3] CONTROL UNIT (Normal Style)".

#### [1-1] The control unit has not started (no LCD, LEDs, nor OEL, light).

No.	Points to be checked	Waveform	Items for check	Causes and measures
1	-	-	Has the updating of the firmware for the control unit failed?	If updating fails, operation stops, none of the LCD, OEL, nor LEDs light, and the LED for the USB STOP key flashes repeatedly. See [4] in "8.3 UPDATING/RECOVERY OF FIRMWARE."
2	Cables	-	Check that the USB cables and USB auxiliary power cable are securely connected.	Operation may be unstable if either of the cables is not properly connected.
3	NJACK ASSY	-	Check the power (V+BUS5D) to the NJACK Assy.	If V+BUS5D is not supplied, check the voltage of V+DCIN5D and V+USB5D. If both V+DCIN5D and V+USB5D are supplied, check the mounting status and output voltages of IC2204, Q2201, and Q2202. If there is no voltage output even if there is an input voltage, the corresponding part is defective; replace it.

See Diagnosis No. 3 and after for the description of Normal Style mode.

#### [1-2] After startup, operation stops at the point at which the PRO DJ logo is displayed.\*4

No.	Points to be checked	Waveform	Items for check	Causes and measures
If operation stops at the point at which the PRO DJ logo*4 is displayed in Manipulator Style mode, communication between the control unit and the PC via the USB connectors has failed.				
1	-	-	Check if the driver has been installed in the PC.	If it has not, install the driver.
2	-	149	Check the status of the USB controller (IC706) with the auto device diagnosis or the status LEDs.	If the USB controller (IC706) is judged as NG, it has not been correctly started up. See "[8] Auto device diagnosis/Status LEDs" in this section.
3	NMAIN ASSY	113	Check that the clock signal (6 MHz) is input to the USB controller (IC706).	As this clock is for communication, connection disruption cannot be detected by auto device diagnosis. Check the mounting status of the crystal oscillator (X701) and its peripheral devices. If they are properly mounted, they are defective; replace them.
4	NMAIN ASSY	-	Check that V+BUS5D is input to Pin 46 of the USB controller (IC706).	If it is not, the USB controller (IC706) has not started. If the USB controller is not properly soldered, resolder it.
5	NMAIN ASSY/ NJACK ASSY	-	Check the connection of the USB communication line.	If there is poor connection on the USB communication line, resolder chips or coils.
6	NMAIN ASSY	-	If the problem is not resolved even after the above-mentioned measures are taken.	Replace the USB controller (IC706).

\*4



PRO DJ screen

## 5. EACH SETTING AND ADJUSTMENT

### 5.1 CONFIRMATION MODE AND ADJUSTMENT METHOD FOR LOAD ON THE JOG DIAL

In this mode, the rotation load on the JOG dial (light or heavy) can be measured objectively.

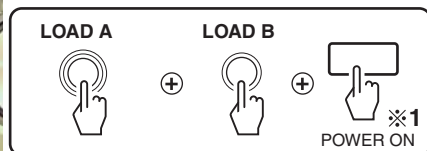
#### Confirmation Mode for Load on the JOG Dial: ON

※1

While holding the LOAD A and LOAD B keys pressed, Press the power key to turn the unit on. Continue holding the LOAD A and LOAD B keys pressed until the indication shown in Fig. 1 appears.



Fig. 1



The indication on the OEL display when Panel Diagnosis mode is entered (See [1] of "6.3 SERVICE MODE FOR THE CONTROL UNIT.")



Fig. 2

The indication on the LCD when Panel Diagnosis mode is entered (See [1] of "6.3 SERVICE MODE FOR THE CONTROL UNIT.")



Fig. 3

Set the TEMPO adjustment slider to the far + (lowest) position.

#### Confirmation Mode for Load on the JOG Dial

OEL indication in Confirmation Mode for Load on the JOG Dial



Fig. 4

Maximum speed (\*\*times speed) Time required for decelerating from 3-times to 1.5-times speed (msec)

#### [How to Measure]

After entering this mode, rotate the JOG dial clockwise rapidly and wait until the dial stops by itself. If the maximum rotation speed exceeds 7.0-times speed, the result of measurement is displayed on the OEL display. For example, if "0860:0115" is displayed, it signifies that the JOG dial was rotated at 8.6-times speed at maximum (one rotation per second is defined as normal speed) and that the time required for decelerating from 3-times to 1.5-times speed was 115 ms.

Check that the deceleration time is within the specified range after the JOG dial was rotated 5 times successively. If it is outside the specified range, adjust the load on the dial, following the procedures in [How to Adjust].

Specified range: 130 +50-30 msec

- Measurement of the deceleration time is invalid with 7-times speed or lower.
- To minimize the variations in measurement of deceleration time, if measurements are performed twice or more, the progressive average (calculated by dividing the results of the all measurements by the number of measurements) is displayed from the 2nd measurement or after.

#### [How to Adjust]

1. Enter this mode.
2. Set the adjustment value of the adjustor plate to "0."
3. Set the TEMPO adjustment slider to the far + (lowest) position.
4. Rotate the JOG dial clockwise rapidly and wait until the dial stops by itself.
5. Measure the deceleration time, following the descriptions in [How to Measure].

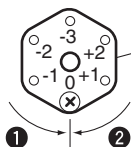
If the result is outside the specified range, adjustment of the adjustor plate is required.

① If the deceleration time is less than 90 ms: Set the adjustment value of the adjustor plate to "-1."

② If the deceleration time is more than 200 ms: Set the adjustment value of the adjustor plate to "+1."

After the above adjustment, check if the adjusted value is within the range shown below, following the description in [How to Measure]. If it is outside the specified range, further setting of the adjustor plate is required.

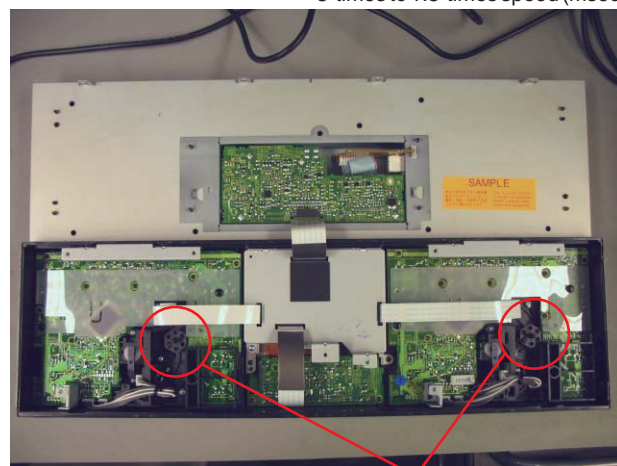
Range of adjustment value: 130 ± 15 ms



Adjust plate  
(See "JOG Dial" of "7. DISASSEMBLY.")

#### How to Reset the Measured Value

To reset the progressive average value of measured deceleration time, set the TEMPO adjustment slider to its center position.



Location of the adjustor plates

Adjust plate