

CAPSULE UNIT

**CU-F780**

**CU-G780**

**CU-E700**

**CU-E672**

**CU-F117**

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**SERVICE MANUAL**

1st Edition

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## **⚠ 警告**

このマニュアルは、サービス専用です。  
お客様が、このマニュアルに記載された設置や保守、点検、修理などを行うと感電や火災、人身事故につながる可能性があります。  
危険をさけるため、サービストレーニングを受けた技術者のみご使用ください。

## **⚠ WARNING**

This manual is intended for qualified service personnel only.  
To reduce the risk of electric shock, fire or injury, do not perform any servicing other than that contained in the operating instructions unless you are qualified to do so. Refer all servicing to qualified service personnel.

## **⚠ WARNUNG**

Die Anleitung ist nur für qualifiziertes Fachpersonal bestimmt.  
Alle Wartungsarbeiten dürfen nur von qualifiziertem Fachpersonal ausgeführt werden. Um die Gefahr eines elektrischen Schlages, Feuergefahr und Verletzungen zu vermeiden, sind bei Wartungsarbeiten strikt die Angaben in der Anleitung zu befolgen. Andere als die angegebenen Wartungsarbeiten dürfen nur von Personen ausgeführt werden, die eine spezielle Befähigung dazu besitzen.

## **⚠ AVERTISSEMENT**

Ce manuel est destiné uniquement aux personnes compétentes en charge de l'entretien. Afin de réduire les risques de décharge électrique, d'incendie ou de blessure n'effectuer que les réparations indiquées dans le mode d'emploi à moins d'être qualifié pour en effectuer d'autres. Pour toute réparation faire appel à une personne compétente uniquement.

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# Section 1

## Operating Instructions

Reprinted from the  
operating instructions

SONY

3-205-156-02 (1)

### Capsule Unit

Operating Instructions

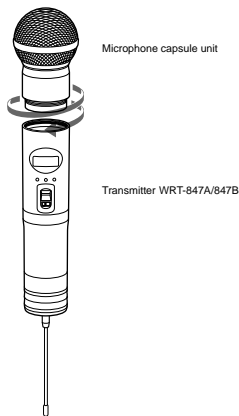
CE

CU-F780  
CU-G780  
CU-E700  
CU-E672  
CU-F117

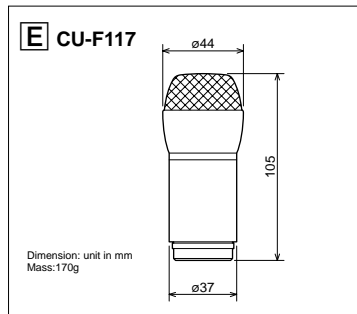
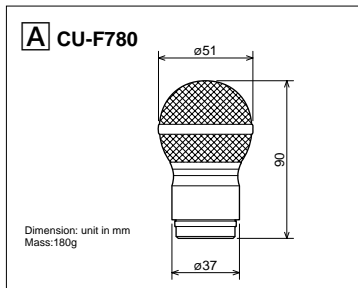
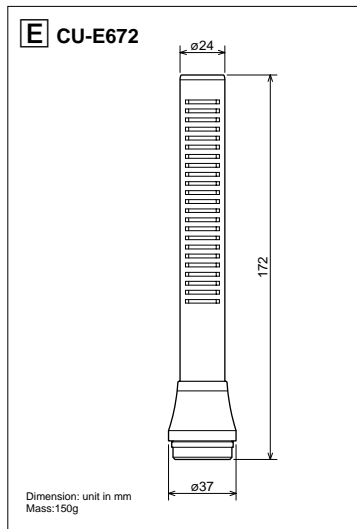
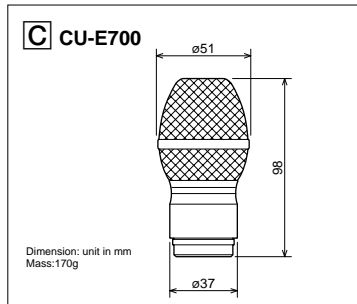
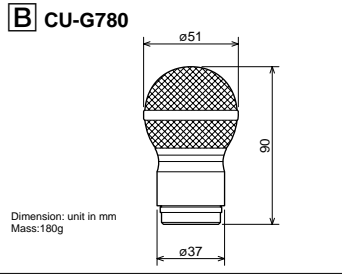
Sony Corporation © 2000 Printed in Japan

#### Mounting on the transmitter

Turn the capsule unit in the direction of the arrow as shown below.  
Be sure to securely mount the capsule unit on the transmitter.



In the figure, the CU-F780 capsule unit is mounted on the WRT-847A/847B transmitter (optional) as an example.



#### English

The CU-F780/ CU-G780/ CU-E700/ CU-E672/ CU-F117 are the Microphone Capsule Units designed for the WRT-847A/WRT-847B Sony UHF synthesized transmitter unit to be used in a Sony UHF synthesized wireless microphone system.

#### Specifications

Type	CU-F780 / CU-G780 / CU-F117 Dynamic microphone capsule CU-E700 / CU-E672 Electret condenser microphone capsule
Frequency response	CU-F780 : 50 Hz to 18,000 Hz CU-G780 : 50 Hz to 20,000 Hz CU-E700 : 50 Hz to 18,000 Hz CU-E672 : 50 Hz to 16,000 Hz CU-F117 : 50 Hz to 15,000 Hz <i>See frequency response curves on the other side of the sheet.</i>
Directivity	CU-F780 / CU-G780 / CU-E700 : Uni-directional (Super cardioid) CU-E672 : Uni-directional (Hyper cardioid) CU-F117 : Omni-directional <i>See directivity curves on the other side of the sheet.</i>
Sensitivity	CU-F780 : -55 dB (1.78 mV) CU-G780 : -55 dB (1.78 mV) CU-E700 : -55 dB (1.78 mV) CU-E672 : -45 dB (5.62 mV) CU-F117 : -52 dB (2.51 mV) (0 dB = 1V/Pa, 1kHz)

#### General

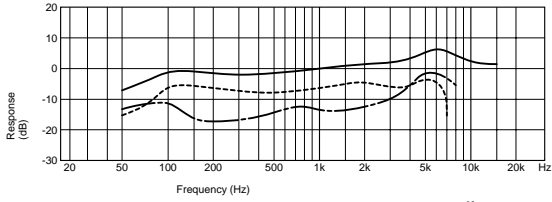
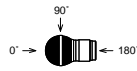
Dimensions and mass See figures [A] to [E].  
Operating temperature 0 °C to +50 °C (+32 °F to +122 °F)  
Storage temperature -20 °C to +60 °C (-4 °F to +140 °F)

#### Supplied accessories

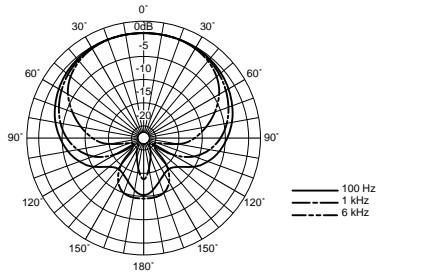
Operating Instructions (1)  
Wind screen (supplied only for CU-E672 / CU-F117) (1)

Design and specifications are subject to change without notice.

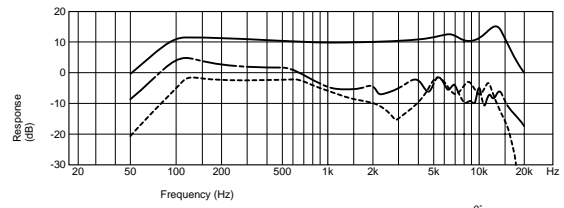
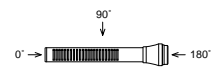
**CU-F780**



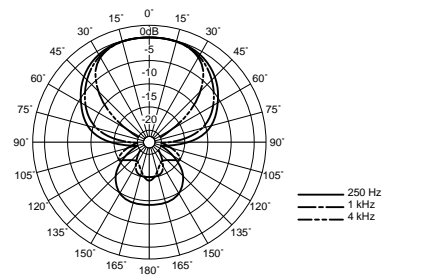
Uni-directional



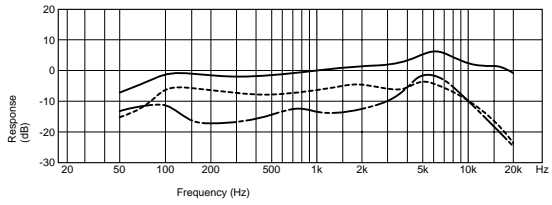
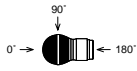
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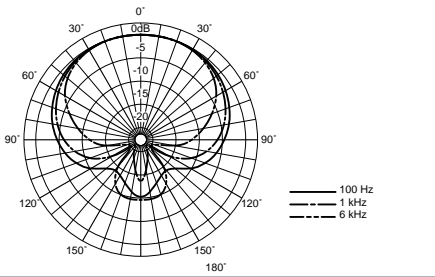
Uni-directional



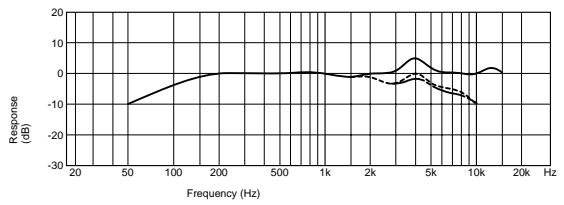
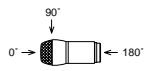
**CU-G780**



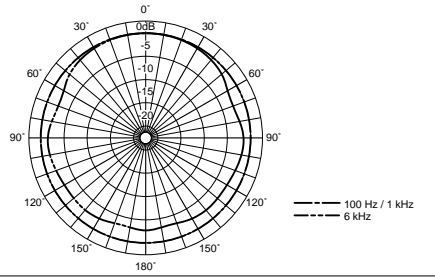
Uni-directional



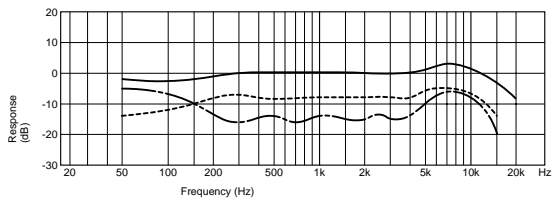
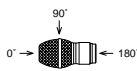
**CU-F117**



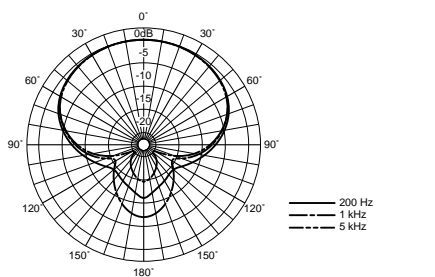
Omni-directional



**CU-E700**



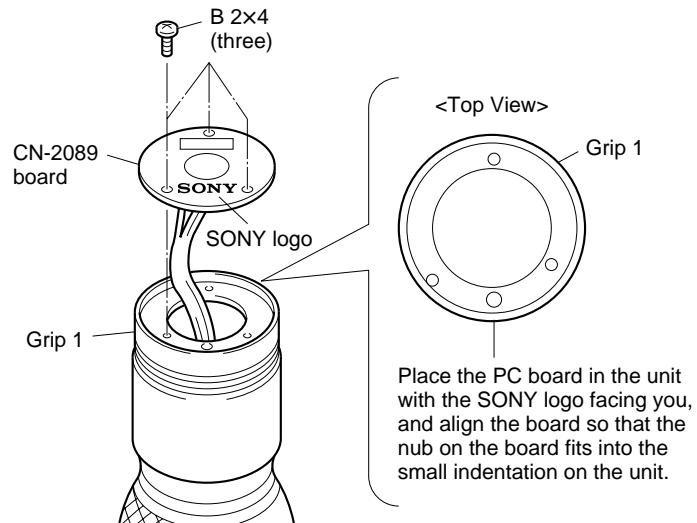
Uni-directional



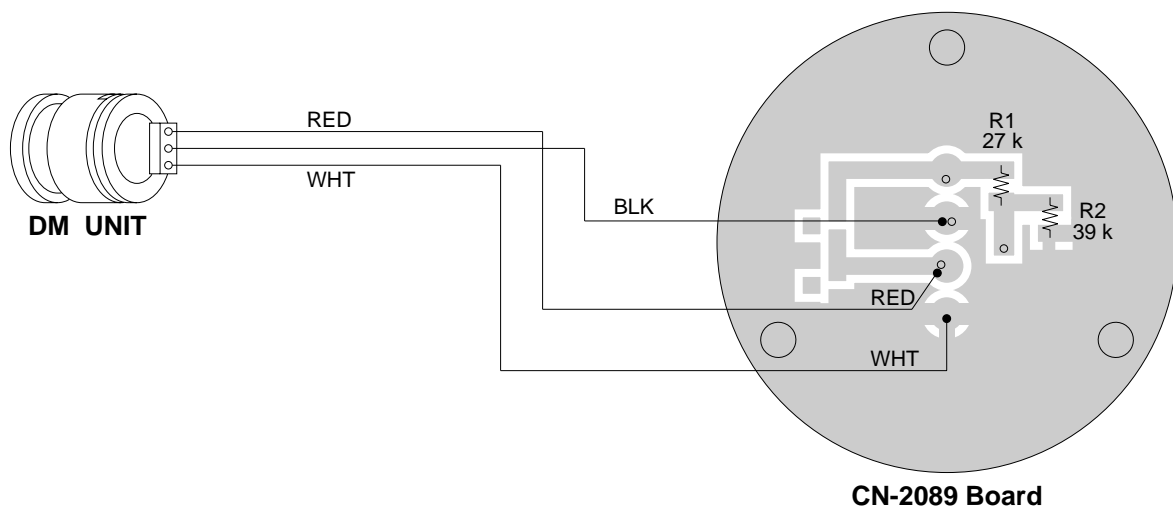
## 2. CU-F780/CU-G780

### 2-1. Service Overview

#### 2-1-1. Notes on Attaching the CN-2089 Board



### 2-2. Board Layout



2-3. Schematic Diagrams

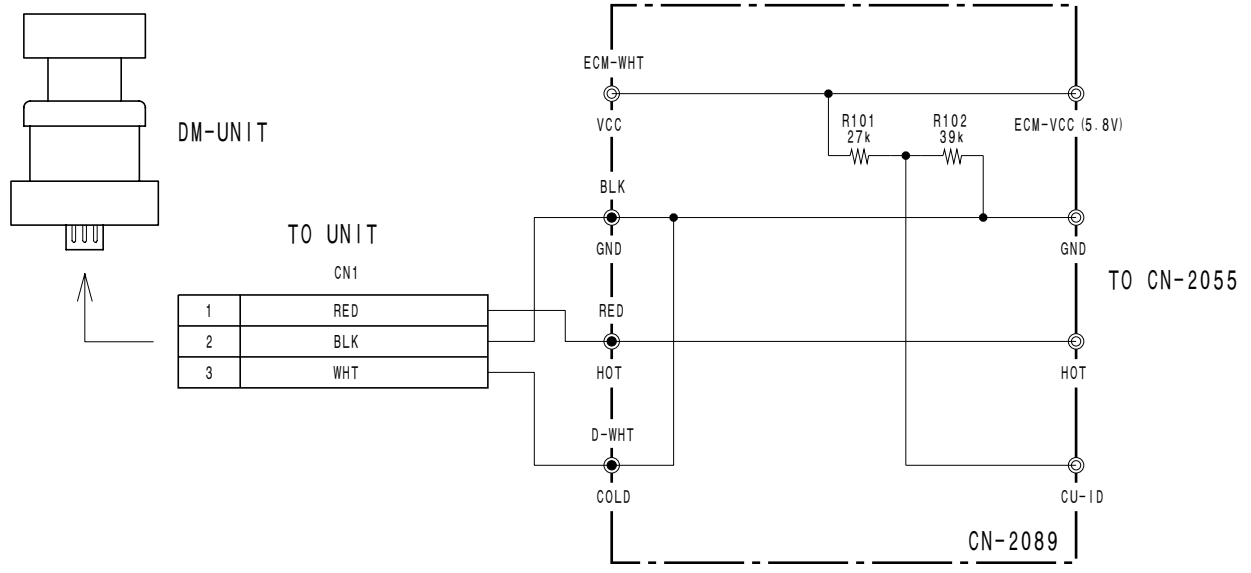
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CN-2089



## 2-4. Spare Parts

### 2-4-1. Notes on Repair Parts

#### 1. Safety Related Components Warning

##### **WARNING**

Components marked  $\triangle$  are critical to safe operation. Therefore, specified parts should be used in the case of replacement.

#### 2. Standardization of Parts

Some repair parts supplied by Sony differ from those used for the unit. These are because of parts commonality and improvement.

Parts list has the present standardized repair parts.

#### 3. Stock of Parts

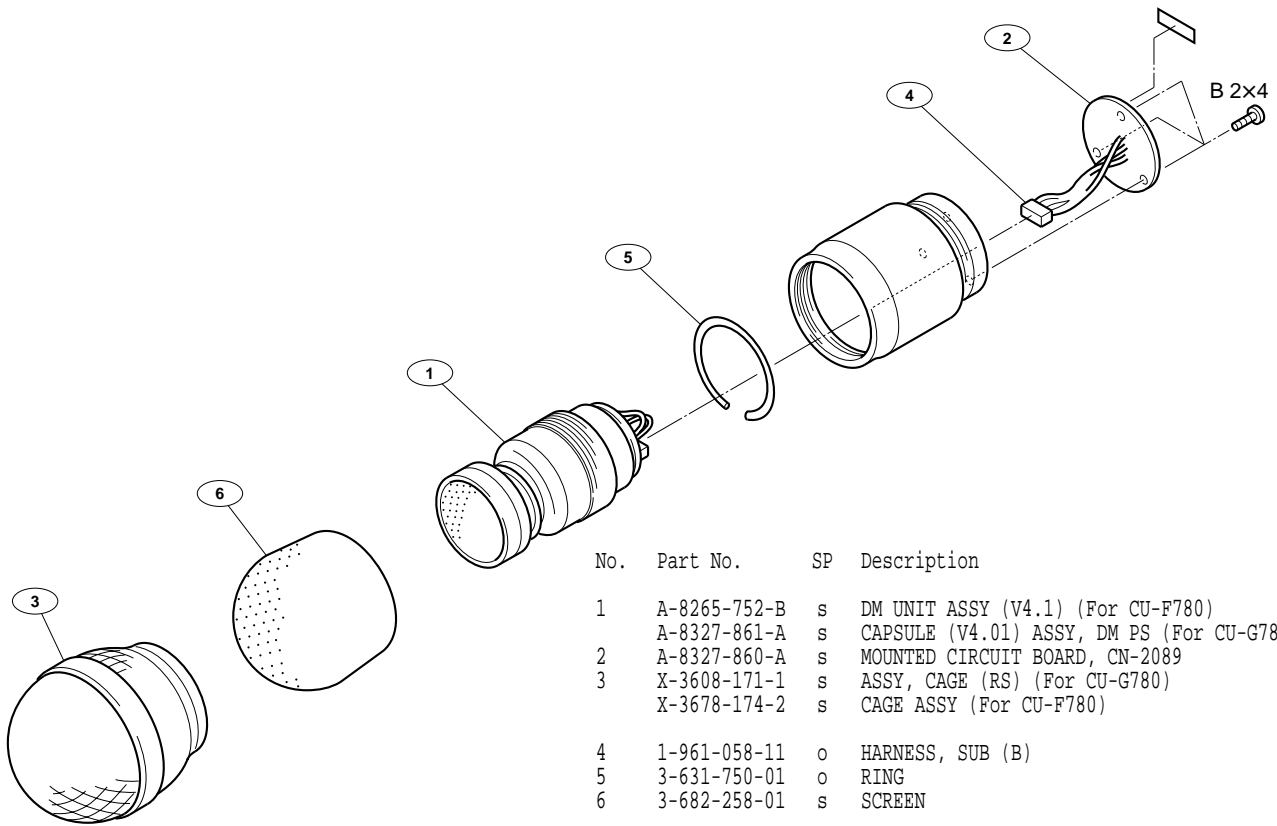
Parts marked with “o” at SP (Supply Code) column of the spare parts list may not be stocked. Therefore, the delivery date will be delayed.

#### 4. Harness

Harnesses with no part number are not registered as spare parts.

In need of repair, get components shown in the list and repair using them.

## 2-4-2. Exploded Views and Parts List



No.	Part No.	SP	Description
1	A-8265-752-B	s	DM UNIT ASSY (V4.1) (For CU-F780)
	A-8327-861-A	s	CAPSULE (V4.01) ASSY, DM PS (For CU-G780)
2	A-8327-860-A	s	MOUNTED CIRCUIT BOARD, CN-2089
3	X-3608-171-1	s	ASSY, CAGE (RS) (For CU-G780)
	X-3678-174-2	s	CAGE ASSY (For CU-F780)
4	1-961-058-11	o	HARNES, SUB (B)
5	3-631-750-01	o	RING
6	3-682-258-01	s	SCREEN

## 2-4-3. Electrical Parts List

### ----- CN-2089 BOARD -----

Ref. No. or Q'ty	Part No.	SP	Description
1pc	A-8327-860-A	s	MOUNTED CIRCUIT BOARD, CN-2089
1pc	1-961-058-11	o	HARNES, SUB (B)
R101	1-216-685-11	s	RESISTOR,CHIP 27K 1/10W(2012)
R102	1-216-689-11	s	RESISTOR,CHIP 39K 1/10W(2012)

### ----- FRAME -----

Ref. No. or Q'ty	Part No.	SP	Description
1pc	1-564-013-11	o	PIN,CONNECTOR 3P

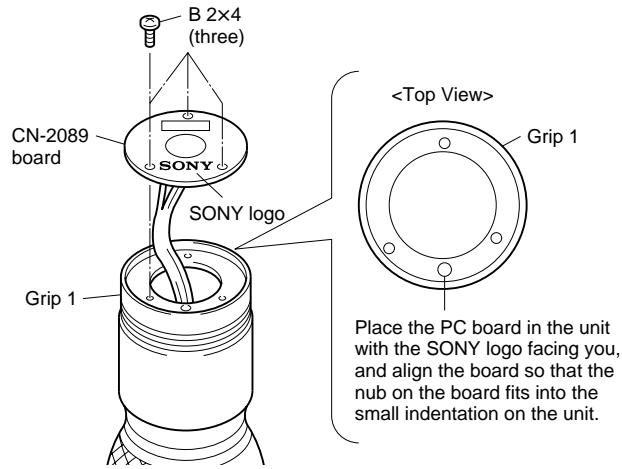
## 2-4-4. Supplied Accessories

Ref. No. or Q'ty	Part No.	SP	Description
1pc	3-205-156-02	s	OPERATING INSTRUCTIONS

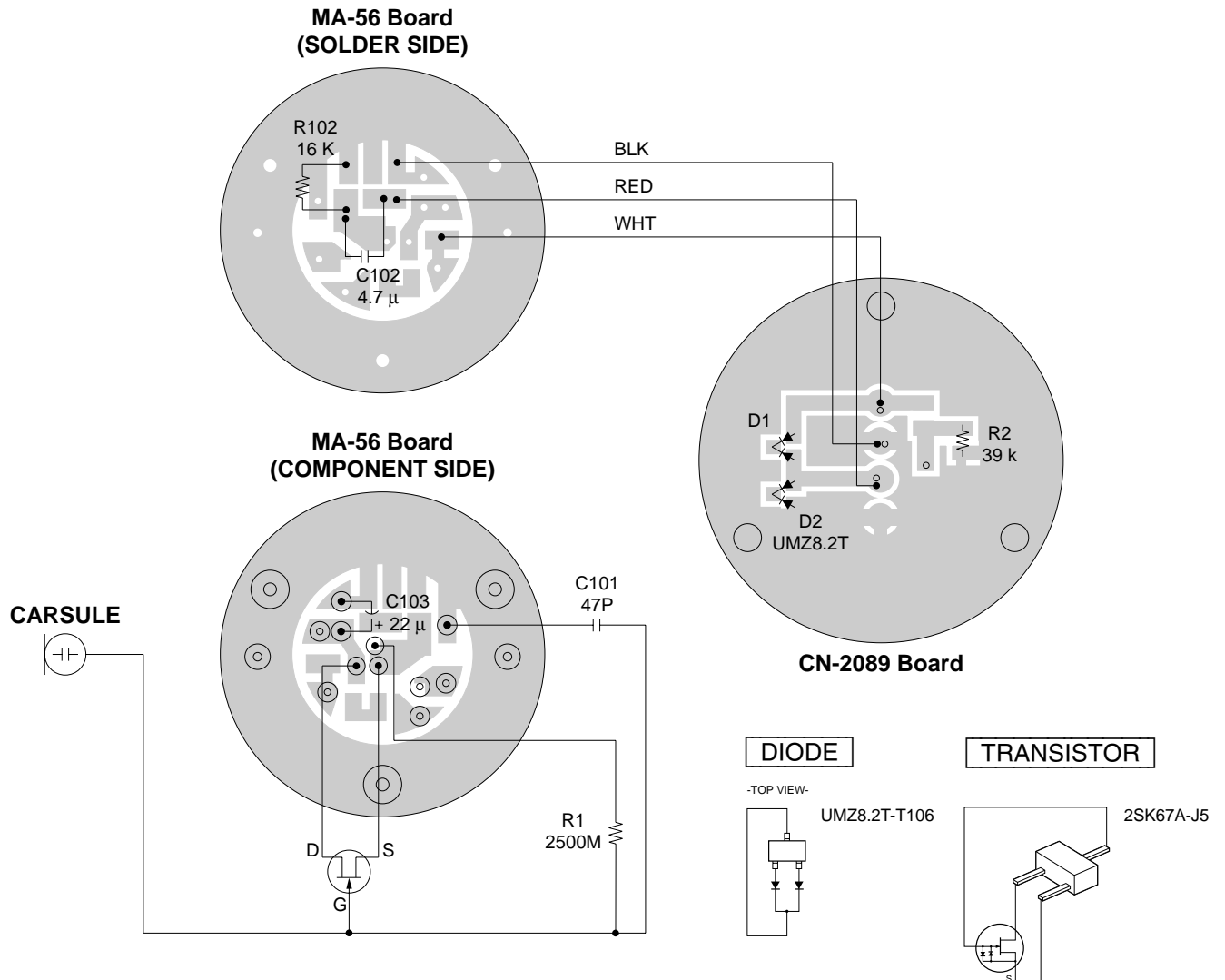
### 3. CU-E700

#### 3-1. Service Overview

##### 3-1-1. Notes on Attaching the CN-2089 Board



#### 3-2. Board Layout



3-3. Schematic Diagrams

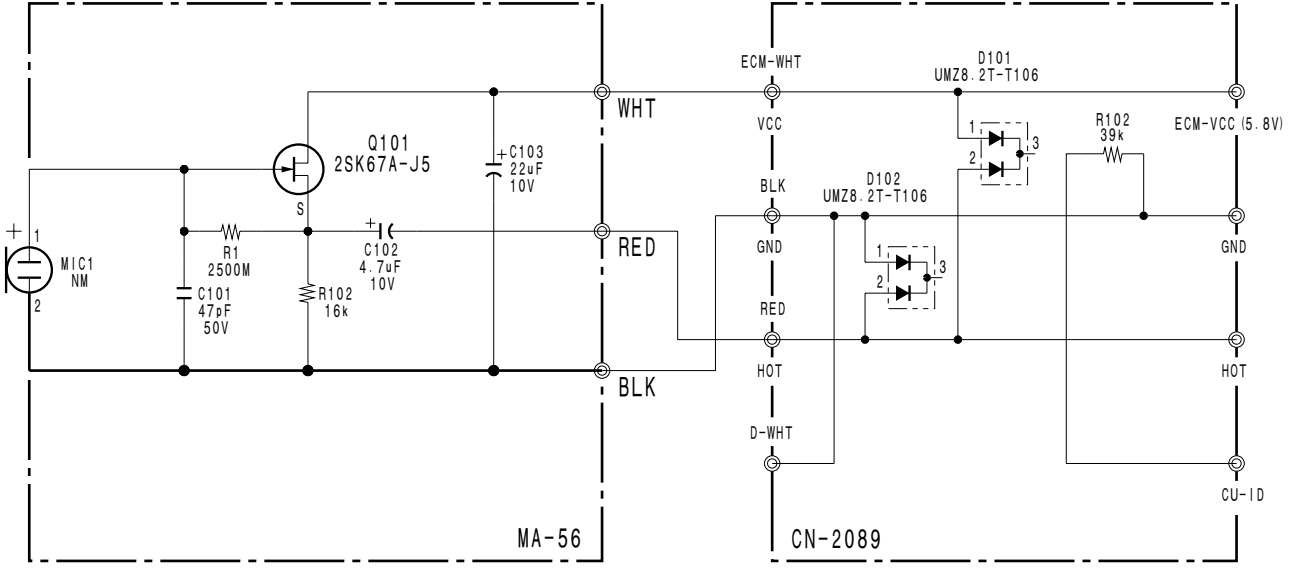
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**CN-2089**  
**MA-56**

## 3-4. Spare Parts

### 3-4-1. Notes on Repair Parts

#### 1. Safety Related Components Warning

##### **WARNING**

Components marked  $\triangle$  are critical to safe operation. Therefore, specified parts should be used in the case of replacement.

#### 2. Standardization of Parts

Some repair parts supplied by Sony differ from those used for the unit. These are because of parts commonality and improvement.

Parts list has the present standardized repair parts.

#### 3. Stock of Parts

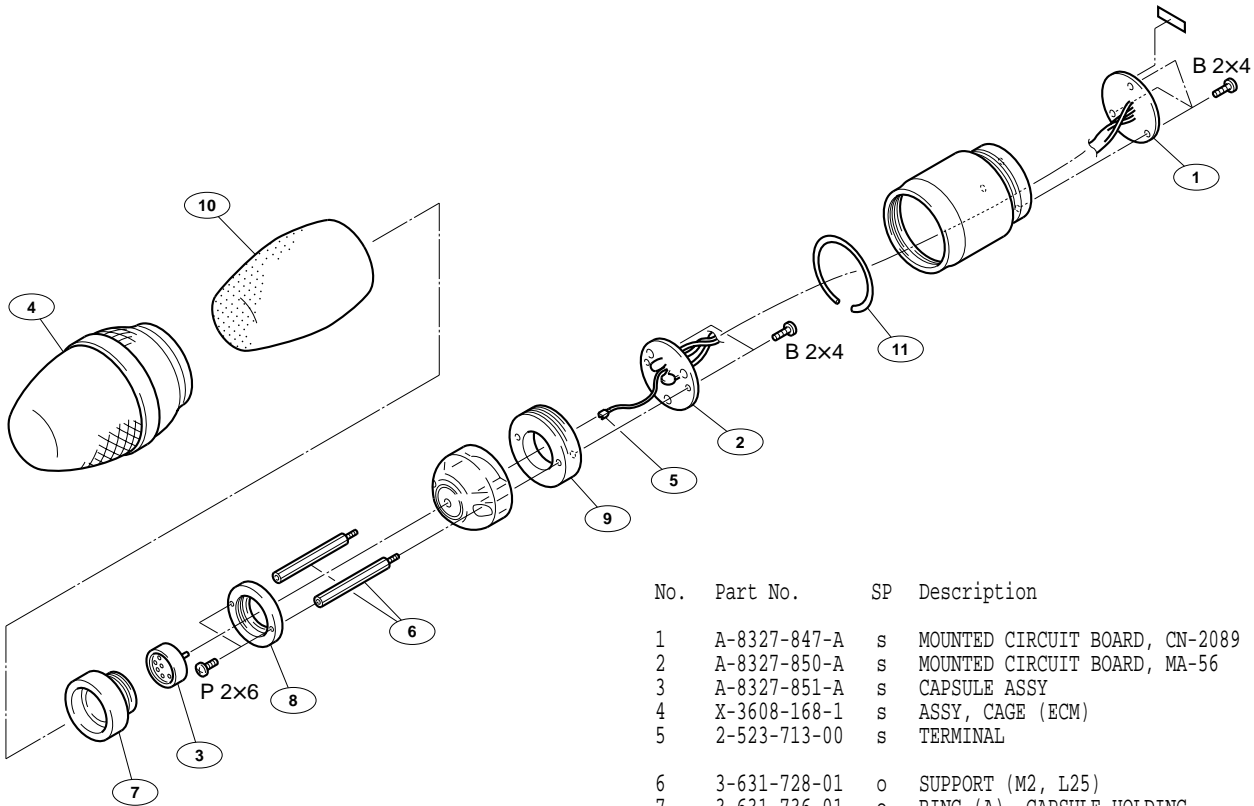
Parts marked with “o” at SP (Supply Code) column of the spare parts list may not be stocked. Therefore, the delivery date will be delayed.

#### 4. Harness

Harnesses with no part number are not registered as spare parts.

In need of repair, get components shown in the list and repair using them.

### 3-4-2. Exploded Views and Parts List



No.	Part No.	SP	Description
1	A-8327-847-A	s	MOUNTED CIRCUIT BOARD, CN-2089 (ECM)
2	A-8327-850-A	s	MOUNTED CIRCUIT BOARD, MA-56
3	A-8327-851-A	s	CAPSULE ASSY
4	X-3608-168-1	s	ASSY, CAGE (ECM)
5	2-523-713-00	s	TERMINAL
6	3-631-728-01	o	SUPPORT (M2, L25)
7	3-631-736-01	o	RING (A), CAPSULE HOLDING
8	3-631-737-01	o	RING (B), CAPSULE HOLDING
9	3-631-739-01	o	SPACER (ECM)
10	3-631-740-01	s	SCREEN (ECN)
11	3-631-750-01	o	RING

### 3-4-3. Electrical Parts List

#### ----- CN-2089 BOARD -----

Ref. No. or Q'ty	Part No.	SP	Description
1pc	A-8327-847-A	s	MOUNTED CIRCUIT BOARD, CN-2089
D101	8-719-039-99	s	DIODE UMZ8.2T
D102	8-719-039-99	s	DIODE UMZ8.2T
R102	1-216-689-11	s	RESISTOR,CHIP 39K 1/10W(2012)

#### ----- MA-56 BOARD -----

Ref. No. or Q'ty	Part No.	SP	Description
1pc	A-8327-850-A	s	MOUNTED CIRCUIT BOARD, MA-56
C101	1-102-852-91	s	CAPACITOR,CERAMIC 47PF/50V(CH)
C102	1-131-375-00	s	CAPACITOR,TANTALUME 4.7MF/10V
C103	1-131-379-00	s	CAPACITOR,TANTALUME 22MF/10V
Q101	8-729-107-27	s	TRANSISTOR 2SK67A-J5
R1	1-208-264-11	s	RESISTOR,MICRO
R102	1-215-450-00	s	RESISTOR,METAL FILM 16K 1/4W

### 3-4-4. Supplied Accessories

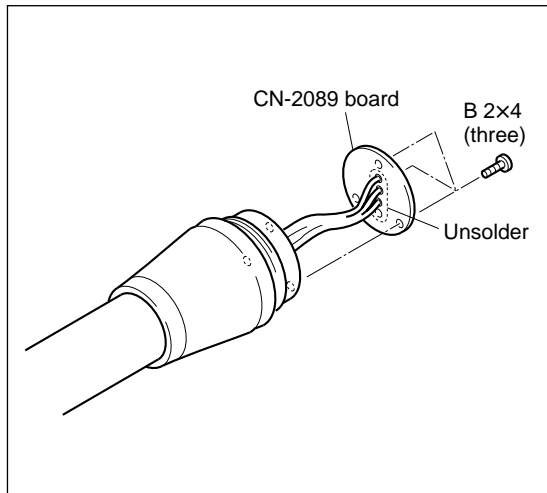
Ref. No. or Q'ty	Part No.	SP	Description
1pc	3-205-156-02	s	OPERATING INSTRUCTIONS

## 4. CU-E672

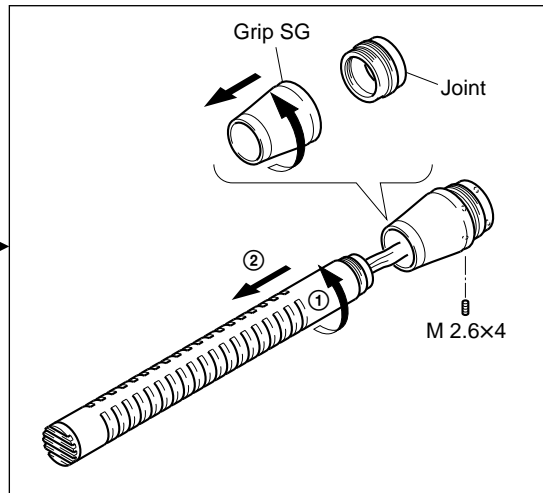
### 4-1. Service Overview

#### 4-1-1. Disassembly

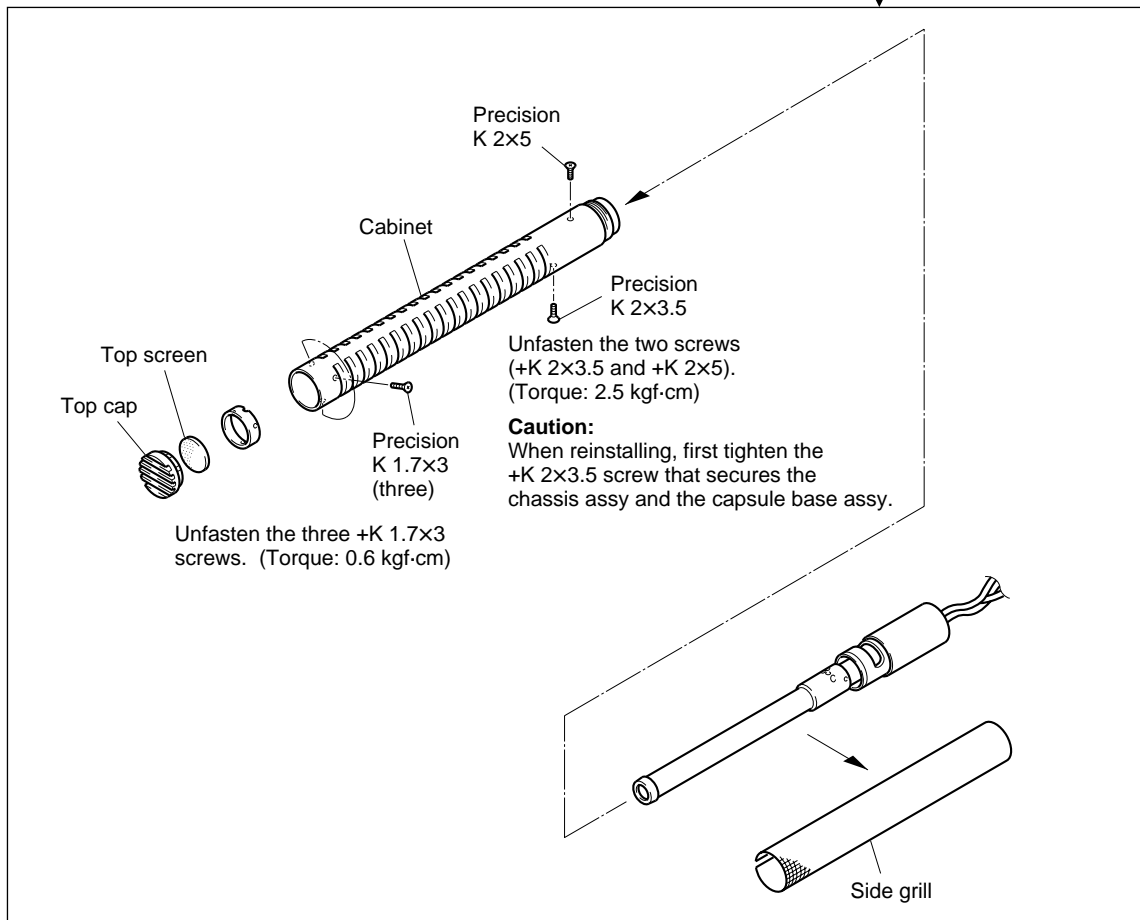
##### CN-2089 Board



##### Grip SG, Joint

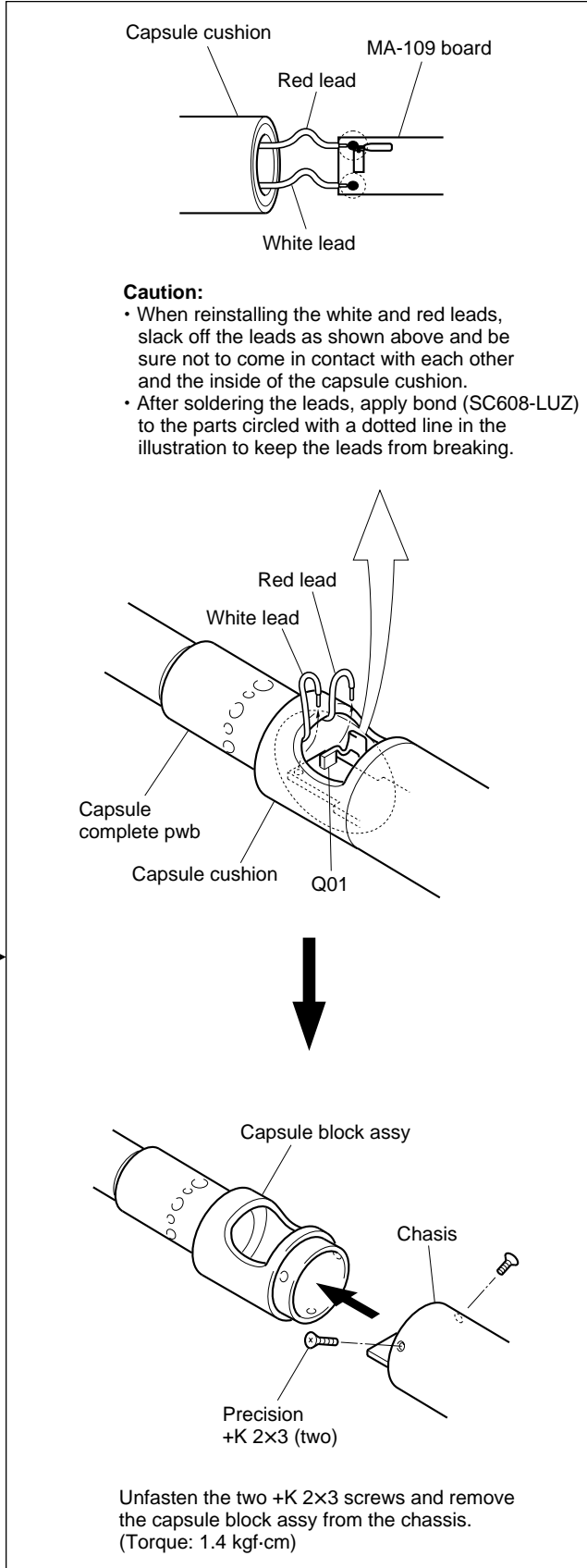


##### Cabinet

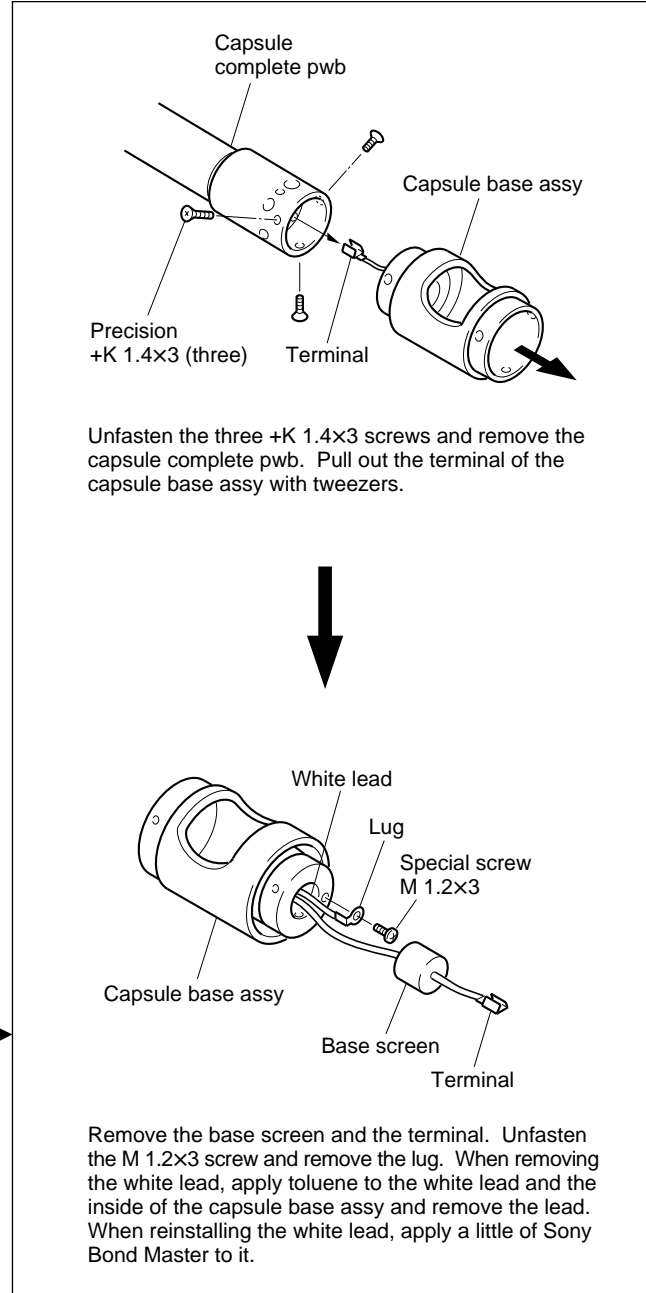


to page 4-2

## Capsule Black Assy

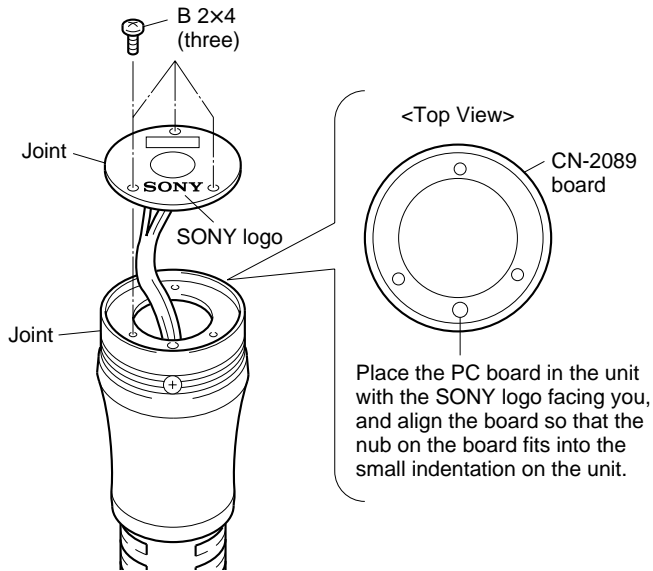


## Capsule Comple Pwb, Capsule Base Assy

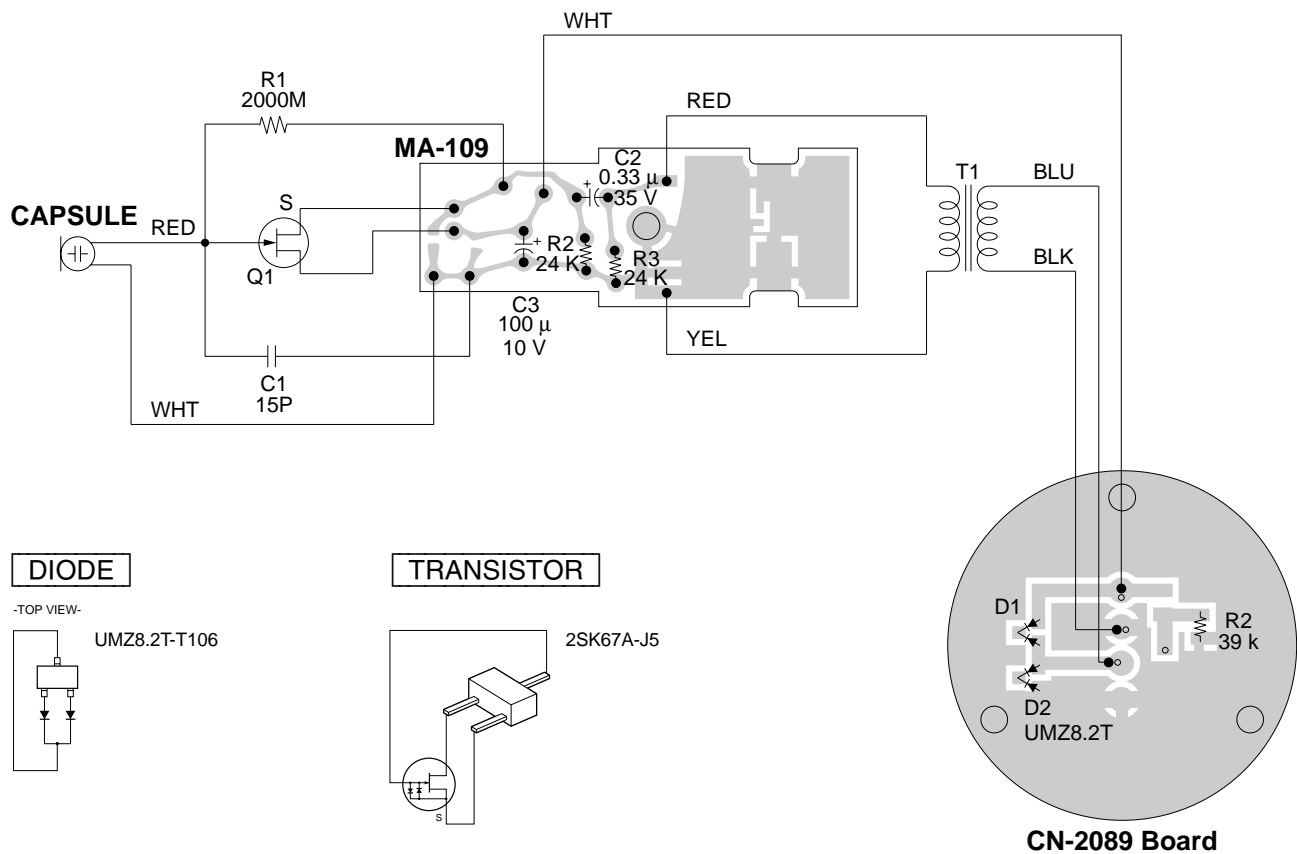




## 4-1-2. Notes on Attaching the CN-2089 Board



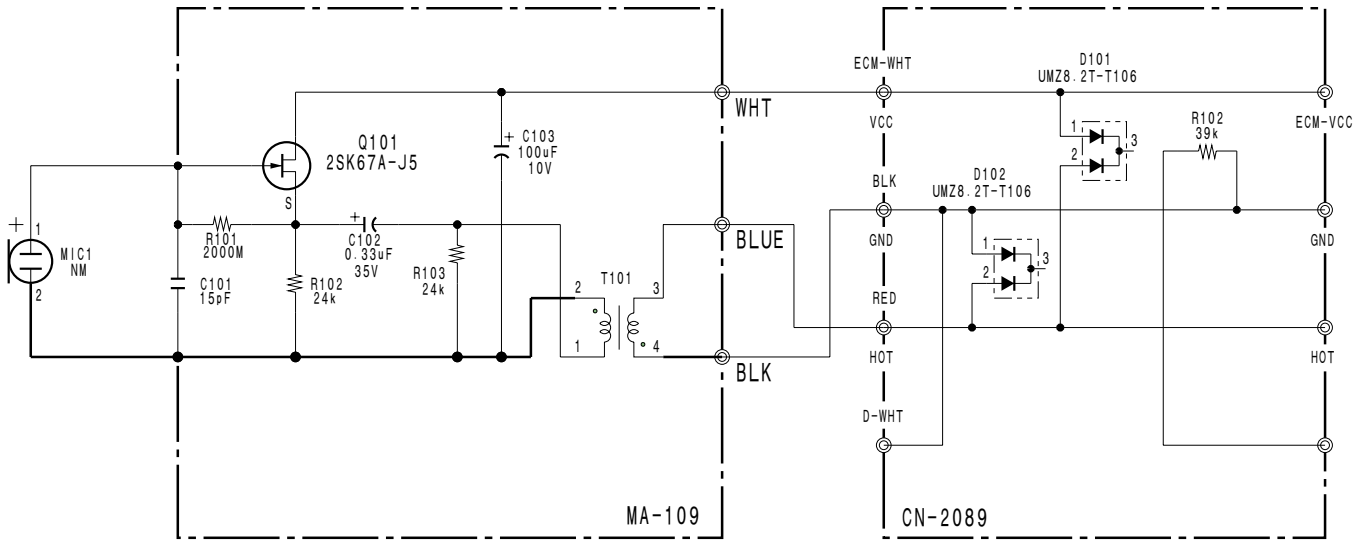
## 4-2. Board Layout



4-3. Schematic Diagrams

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**CN-2089  
MA-109**

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## 4-4. Spare Parts

### 4-4-1. Notes on Repair Parts

#### 1. Safety Related Components Warning

##### **WARNING**

Components marked  $\triangle$  are critical to safe operation. Therefore, specified parts should be used in the case of replacement.

#### 2. Standardization of Parts

Some repair parts supplied by Sony differ from those used for the unit. These are because of parts commonality and improvement.

Parts list has the present standardized repair parts.

#### 3. Stock of Parts

Parts marked with “o” at SP (Supply Code) column of the spare parts list may not be stocked. Therefore, the delivery date will be delayed.

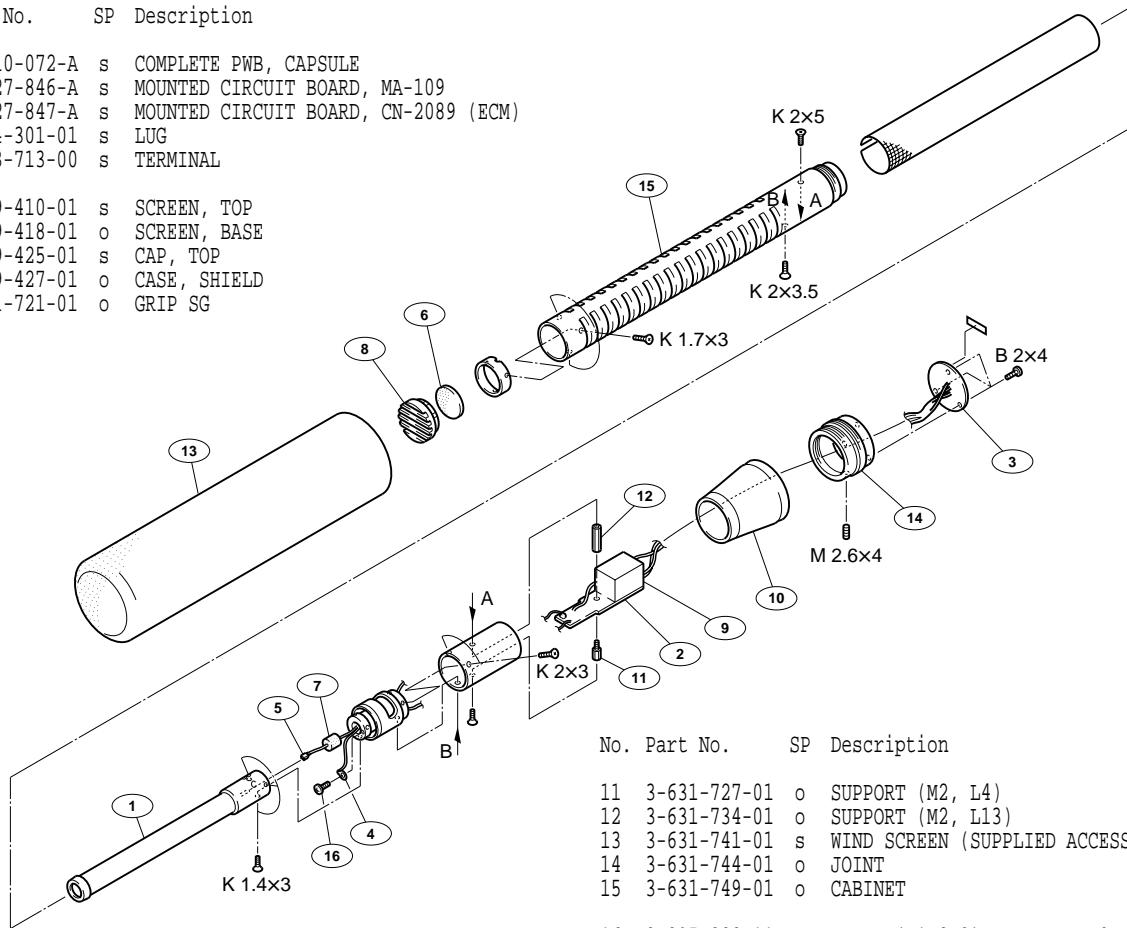
#### 4. Harness

Harnesses with no part number are not registered as spare parts.

In need of repair, get components shown in the list and repair using them.

## 4-4-2. Exploded Views and Parts List

No.	Part No.	SP	Description
1	A-4510-072-A	s	COMPLETE PWB, CAPSULE
2	A-8327-846-A	s	MOUNTED CIRCUIT BOARD, MA-109
3	A-8327-847-A	s	MOUNTED CIRCUIT BOARD, CN-2089 (ECM)
4	2-044-301-01	s	LUG
5	2-523-713-00	s	TERMINAL
6	2-539-410-01	s	SCREEN, TOP
7	2-539-418-01	o	SCREEN, BASE
8	2-539-425-01	s	CAP, TOP
9	2-539-427-01	o	CASE, SHIELD
10	3-631-721-01	o	GRIP SG



No.	Part No.	SP	Description
11	3-631-727-01	o	SUPPORT (M2, L4)
12	3-631-734-01	o	SUPPORT (M2, L13)
13	3-631-741-01	s	WIND SCREEN (SUPPLIED ACCESSORY)
14	3-631-744-01	o	JOINT
15	3-631-749-01	o	CABINET
16	3-895-822-11	s	SCREW (H1.2X3), SPECIAL, 0

## 4-4-3. Electrical Parts List

### ----- CN-2089 BOARD -----

Ref. No. or Q'ty	Part No.	SP	Description
1pc	A-8327-847-A	s	MOUNTED CIRCUIT BOARD, CN-2089
D101	8-719-039-99	s	DIODE UMZ8.2T
D102	8-719-039-99	s	DIODE UMZ8.2T
R102	1-216-689-11	s	RESISTOR,CHIP 39K 1/10W(2012)

### ----- MA-109 BOARD -----

Ref. No. or Q'ty	Part No.	SP	Description
1pc	A-8327-846-A	s	MOUNTED CIRCUIT BOARD, MA-109
1pc	2-539-427-01	o	CASE,SHIELD
C101	1-102-951-00	s	CAPACITOR,CERAMIC;50V/15PF
C102	1-131-344-00	s	CAPACITOR,TANTALUME 0.33MF 35V
C103	1-124-584-00	s	CAPACITOR,ELECT 100MF/10V
Q101	8-729-107-27	s	TRANSISTOR 2SK67A-J5
R101	1-215-065-00	s	RESISTOR,METAL FILM 2000M 1/8W

### (MA-109 BOARD)

Ref. No. or Q'ty	Part No.	SP	Description
R102	1-247-864-11	s	RESISTOR,CARBON 24K 1/4W
R103	1-247-864-11	s	RESISTOR,CARBON 24K 1/4W
T101	1-427-580-11	s	TRANSFORMER,OUTPUT0.5KVA UNDER

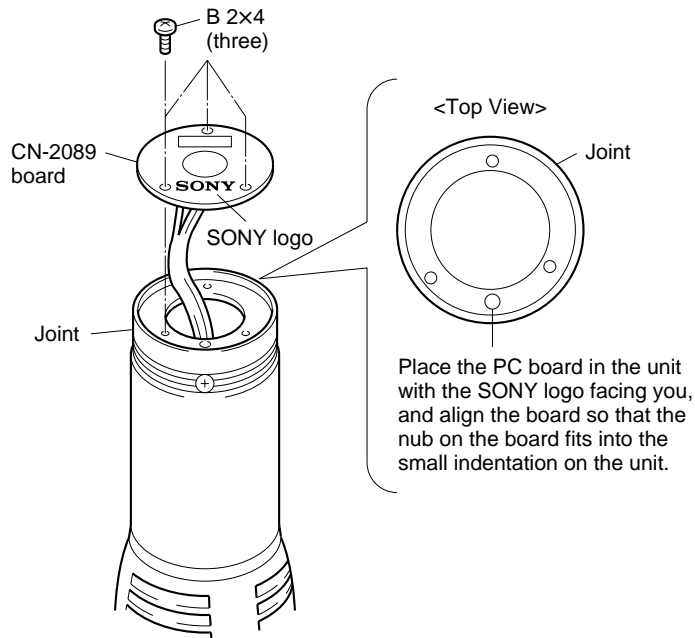
## 4-4-4. Supplied Accessories

Ref. No. or Q'ty	Part No.	SP	Description
1pc	3-205-156-02	s	OPERATING INSTRUCTIONS
1pc	3-631-741-02	s	W.SCREEN

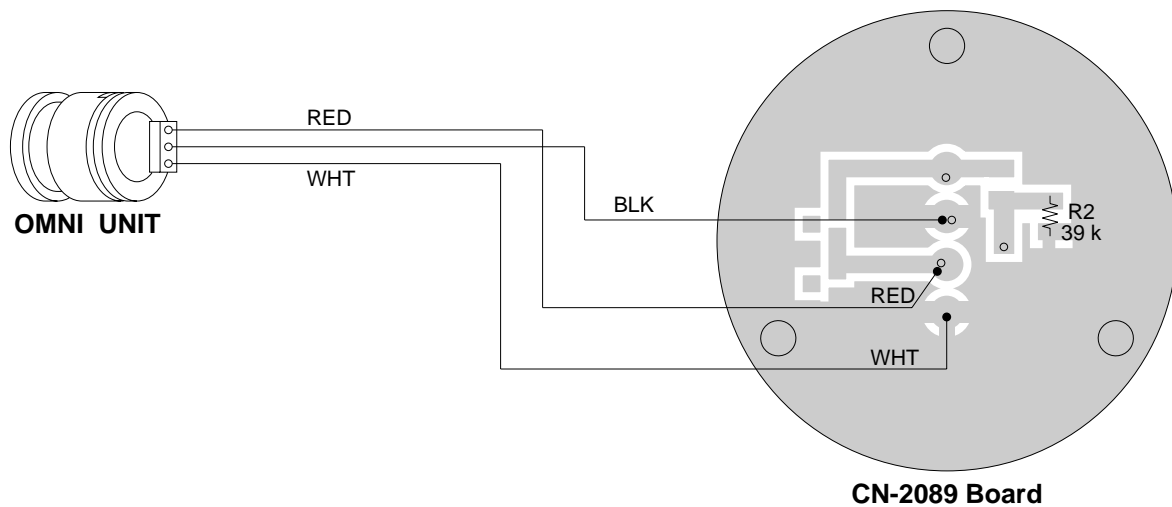
## 5. CU-F117

### 5-1. Service Overview

#### 5-1-1. Notes on Attaching the CN-2089 Board



### 5-2. Board Layout



5-3. Schematic Diagrams

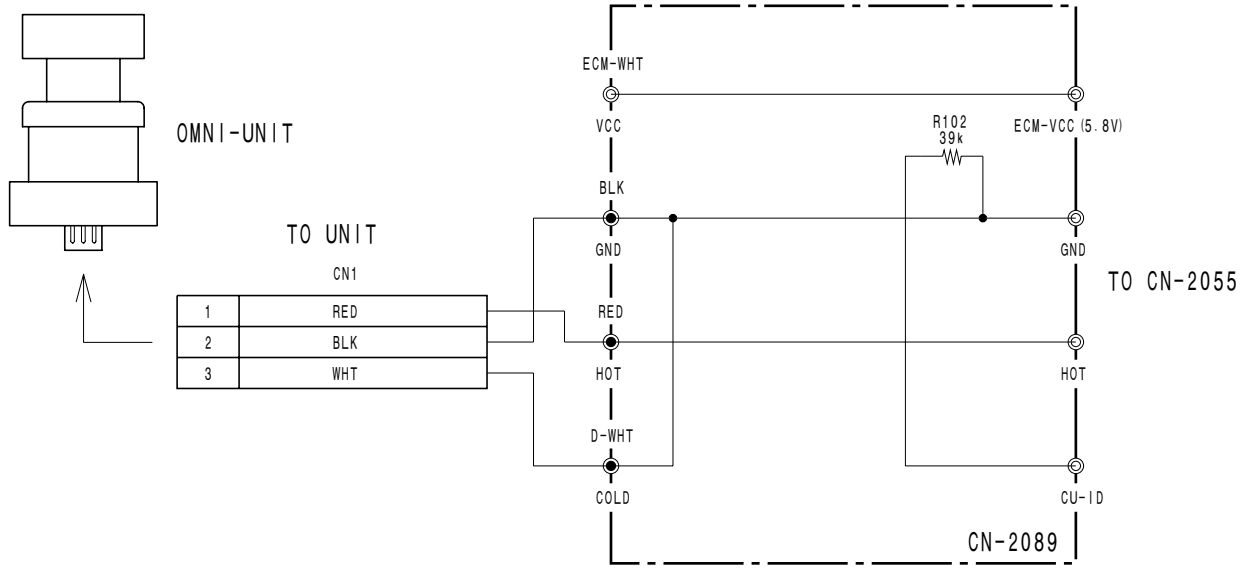
1

2

3

4

5



CN-2089

## 5-4. Spare Parts

### 5-4-1. Notes on Repair Parts

#### 1. Safety Related Components Warning

##### **WARNING**

Components marked  $\triangle$  are critical to safe operation. Therefore, specified parts should be used in the case of replacement.

#### 2. Standardization of Parts

Some repair parts supplied by Sony differ from those used for the unit. These are because of parts commonality and improvement.

Parts list has the present standardized repair parts.

#### 3. Stock of Parts

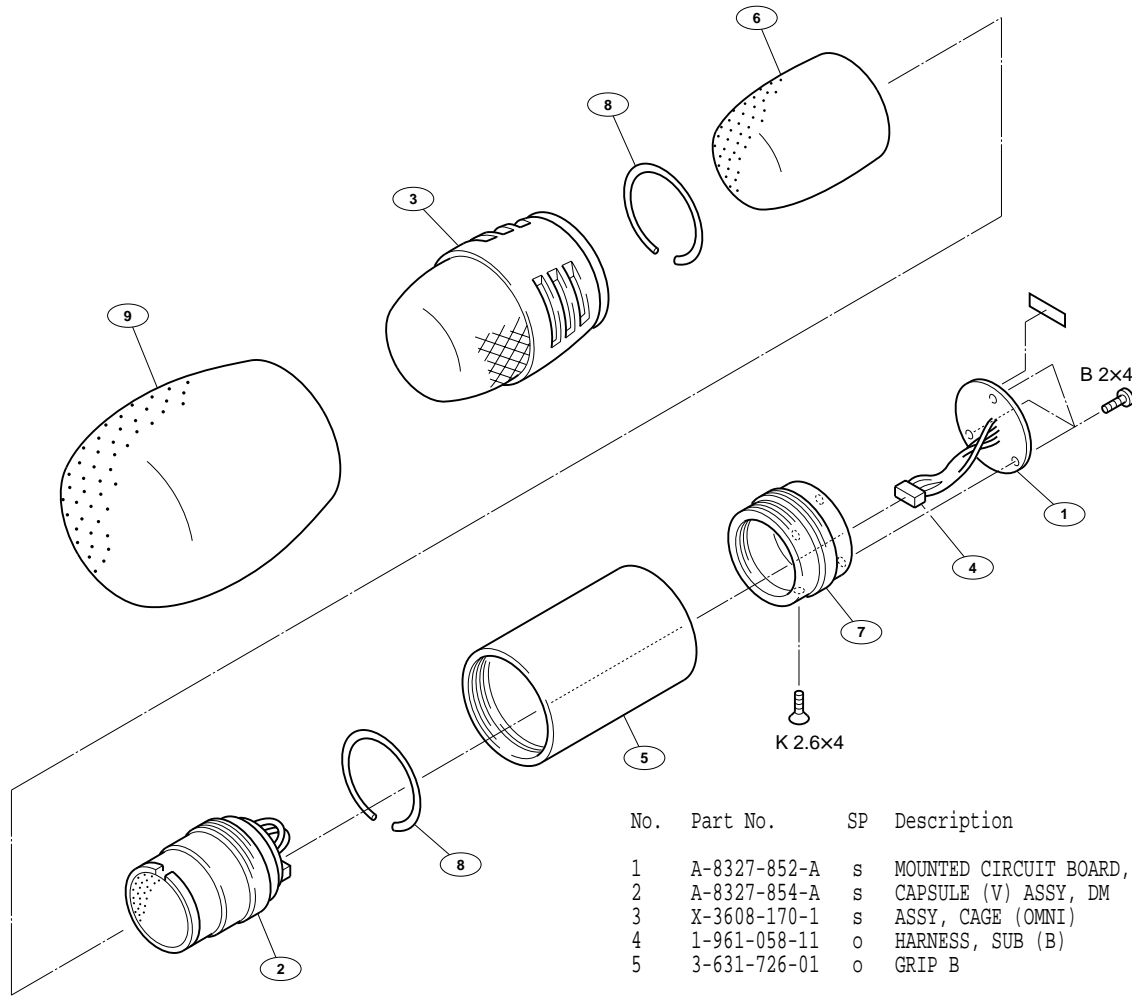
Parts marked with “o” at SP (Supply Code) column of the spare parts list may not be stocked. Therefore, the delivery date will be delayed.

#### 4. Harness

Harnesses with no part number are not registered as spare parts.

In need of repair, get components shown in the list and repair using them.

## 5-4-2. Exploded Views and Parts List



No.	Part No.	SP	Description
1	A-8327-852-A	s	MOUNTED CIRCUIT BOARD, CN-2089 (OMNI)
2	A-8327-854-A	s	CAPSULE (V) ASSY, DM
3	X-3608-170-1	s	ASSY, CAGE (OMNI)
4	1-961-058-11	o	HARNESS, SUB (B)
5	3-631-726-01	o	GRIP B
6	3-631-743-01	s	SCREEN (OMNI)
7	3-631-744-01	o	JOINT
8	3-631-750-01	o	RING
9	3-633-277-01	s	SCREEN, WIND (SUPPLIED ACCESSORY)

## 5-4-3. Electrical Parts List

### ----- CN-2089 BOARD -----

Ref. No. or Q'ty	Part No.	SP	Description
1pc	A-8327-852-A	s	MOUNTED CIRCUIT BOARD, CN-2089
1pc	1-961-058-11	o	HARNESS, SUB (B)
R102	1-216-689-11	s	RESISTOR,CHIP 39K 1/10W(2012)

### ----- FRAME -----

Ref. No. or Q'ty	Part No.	SP	Description
1pc	1-564-013-11	o	PIN,CONNECTOR 3P

## 5-4-4. Supplied Accessories

Ref. No. or Q'ty	Part No.	SP	Description
1pc	3-205-156-02	s	OPERATING INSTRUCTIONS
1pc	3-633-277-01	s	SCREEN,WIND





CU-F780 (SY)  
CU-G780 (SY)  
CU-E700 (SY)  
CU-E672 (SY)  
CU-F117 (SY) E  
9-976-895-01 (1)

**Sony Corporation**

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