

SONY®

CAPSULE UNIT

CU-F780

CU-G780

CU-E700

CU-E672

CU-F117

SERVICE MANUAL

1st Edition

⚠ 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

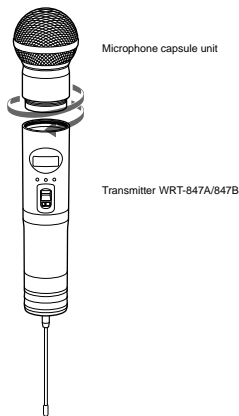
CE

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

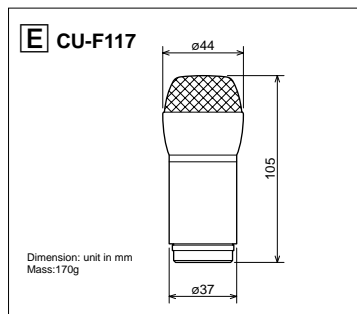
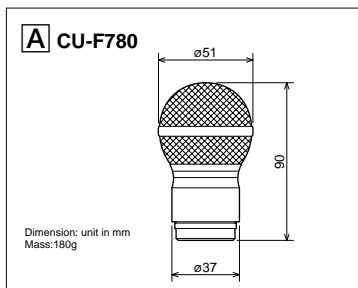
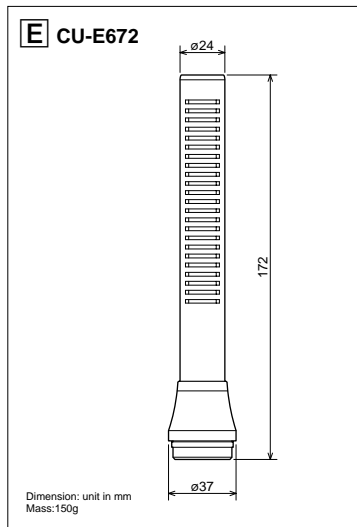
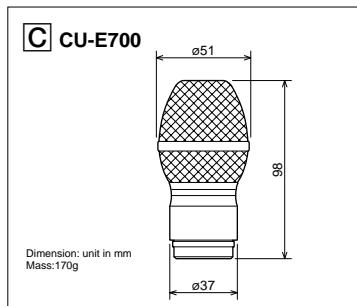
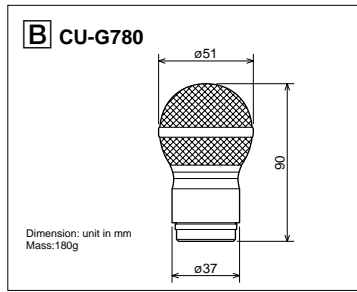
Sony Corporation © 2000 Printed in Japan

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

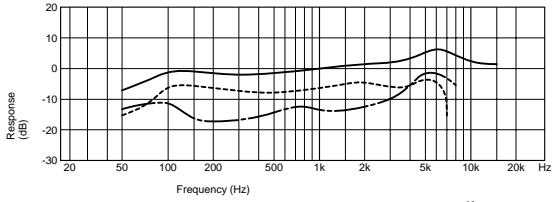
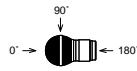
Dimensions and mass See figures [A] to [E].
Operating temperature 0 °C to +50 °C (+32 °F to +122 °F)
Storage temperature -20 °C to +60 °C (-4 °F to +140 °F)

Supplied accessories

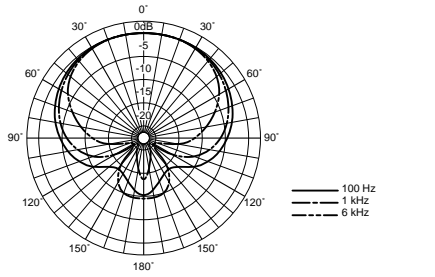
Operating Instructions (1)
Wind screen (supplied only for CU-E672 / CU-F117) (1)

Design and specifications are subject to change without notice.

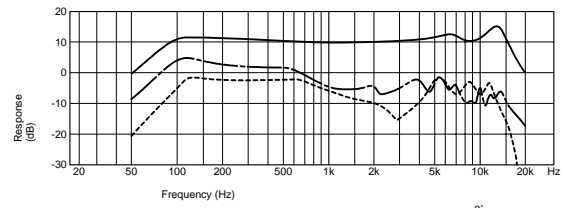
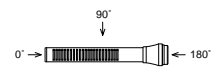
CU-F780



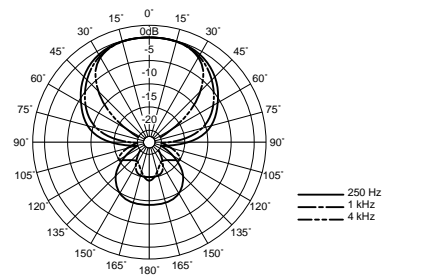
Uni-directional



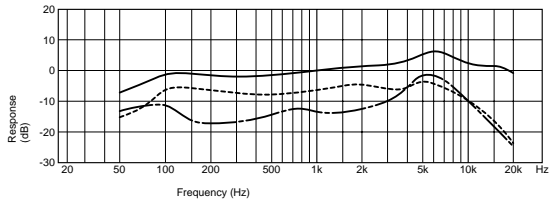
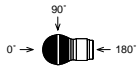
CU-E672



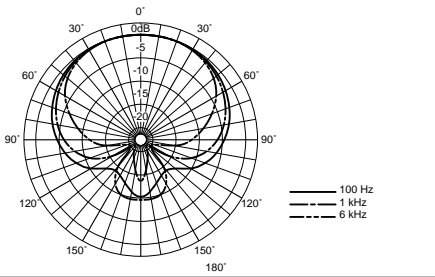
Uni-directional



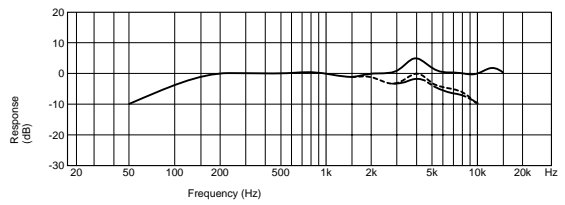
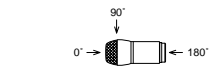
CU-G780



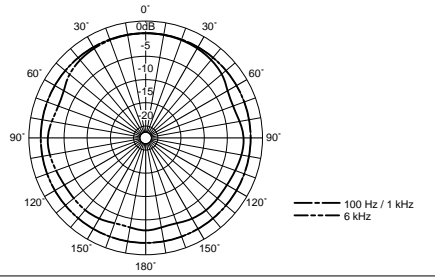
Uni-directional



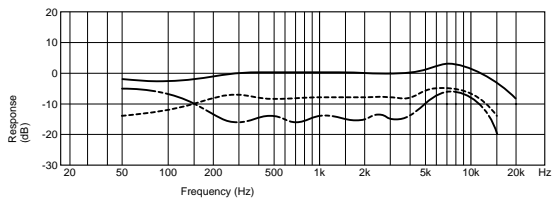
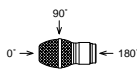
CU-F117



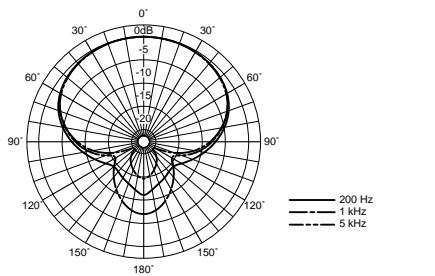
Omnidirectional



CU-E700



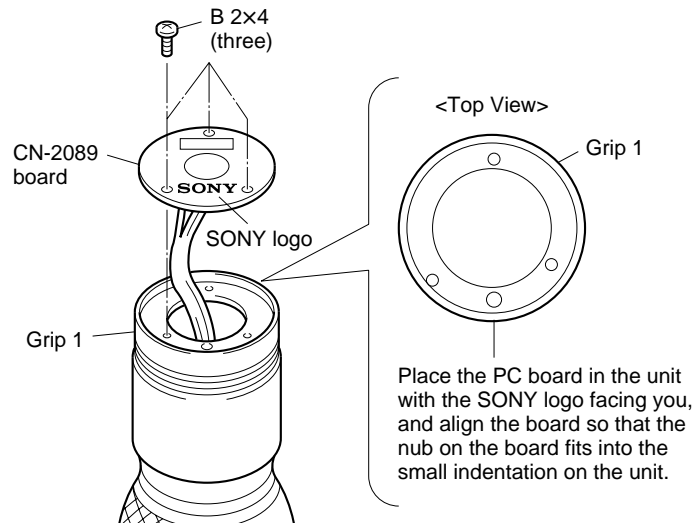
Uni-directional



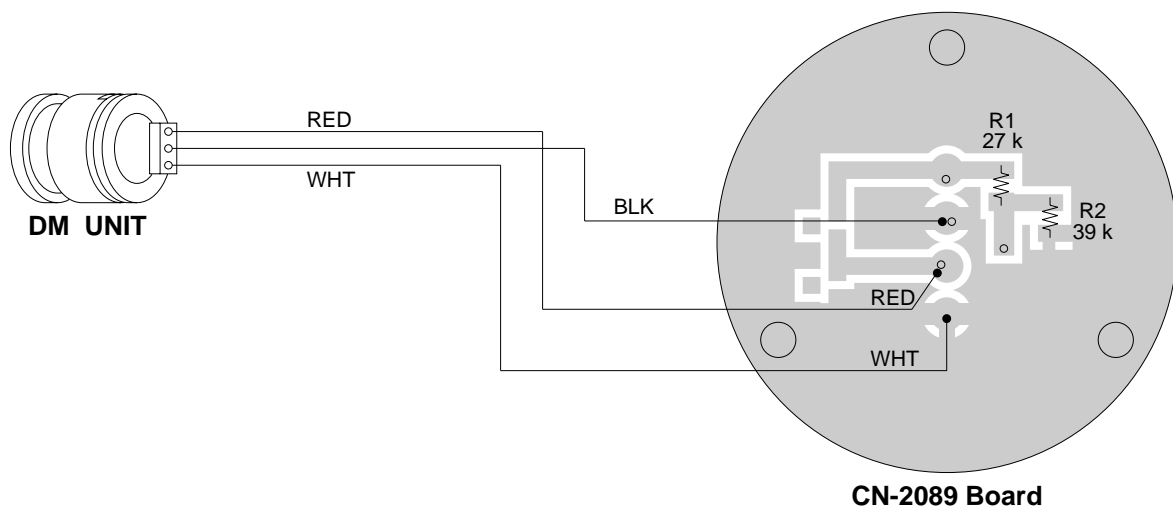
2. CU-F780/CU-G780

2-1. Service Overview

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



2-2. Board Layout



2-3. Schematic Diagrams

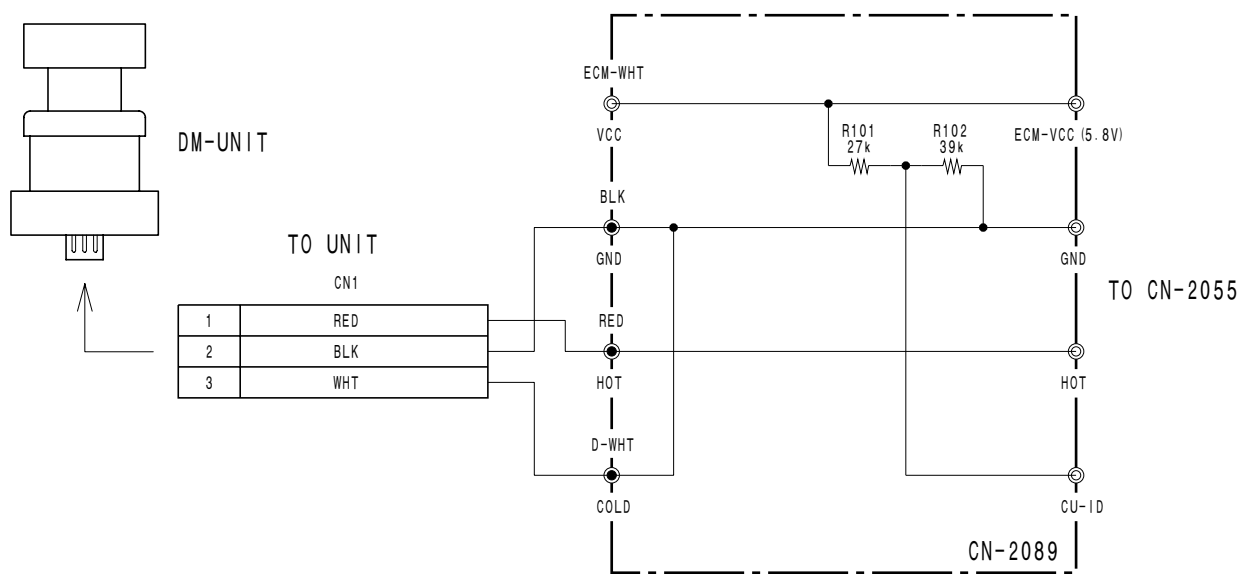
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CN-2089

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

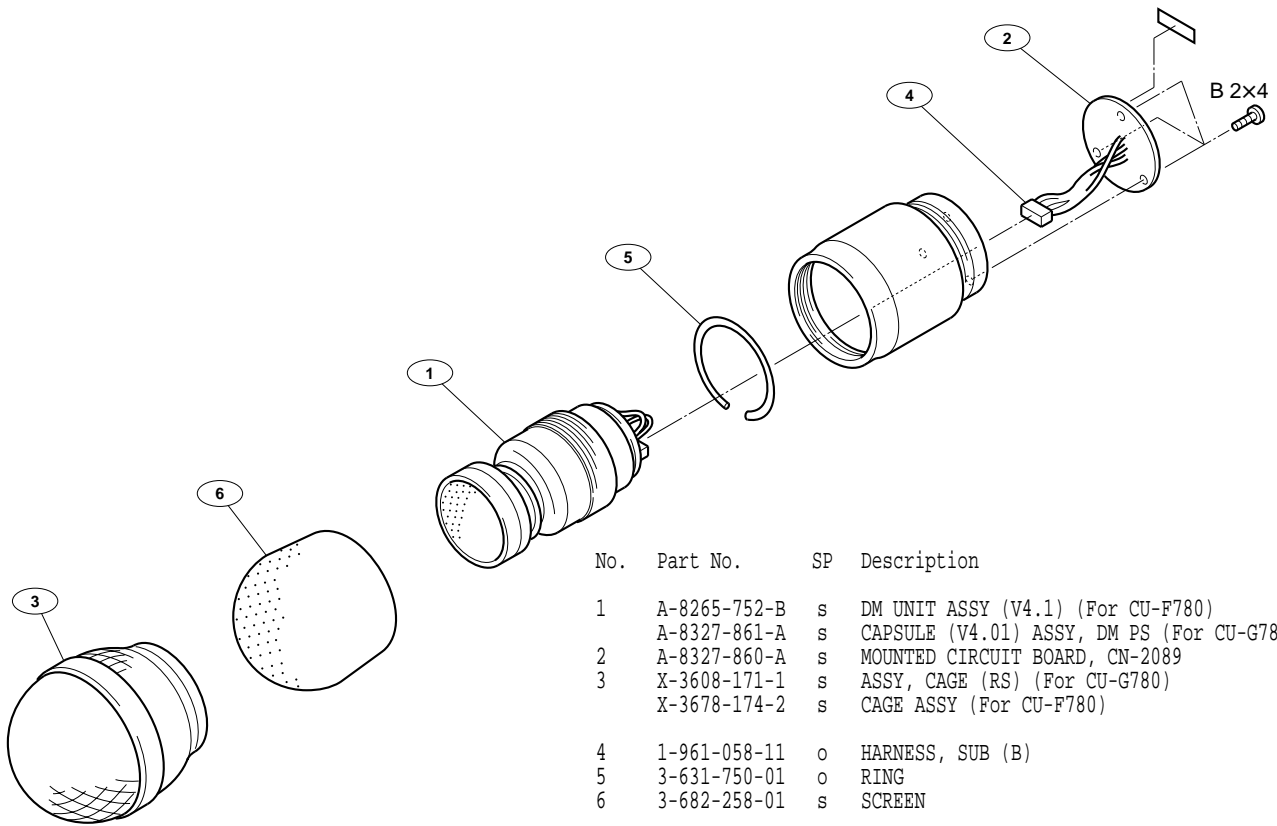
Parts marked with “o” at SP (Supply Code) column of the spare parts list may not be stocked. Therefore, the delivery date will be delayed.

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

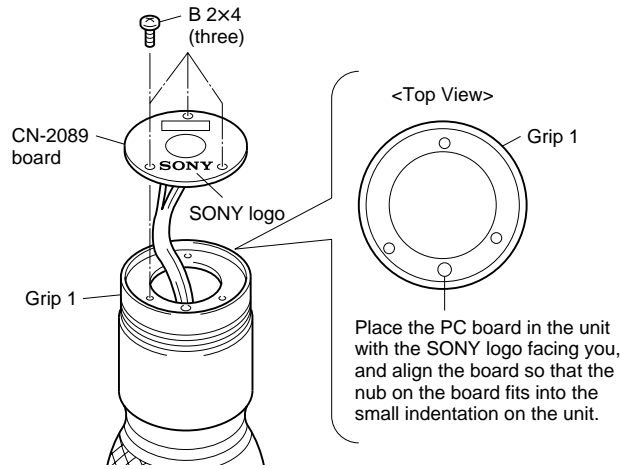
2-4-4. Supplied Accessories

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

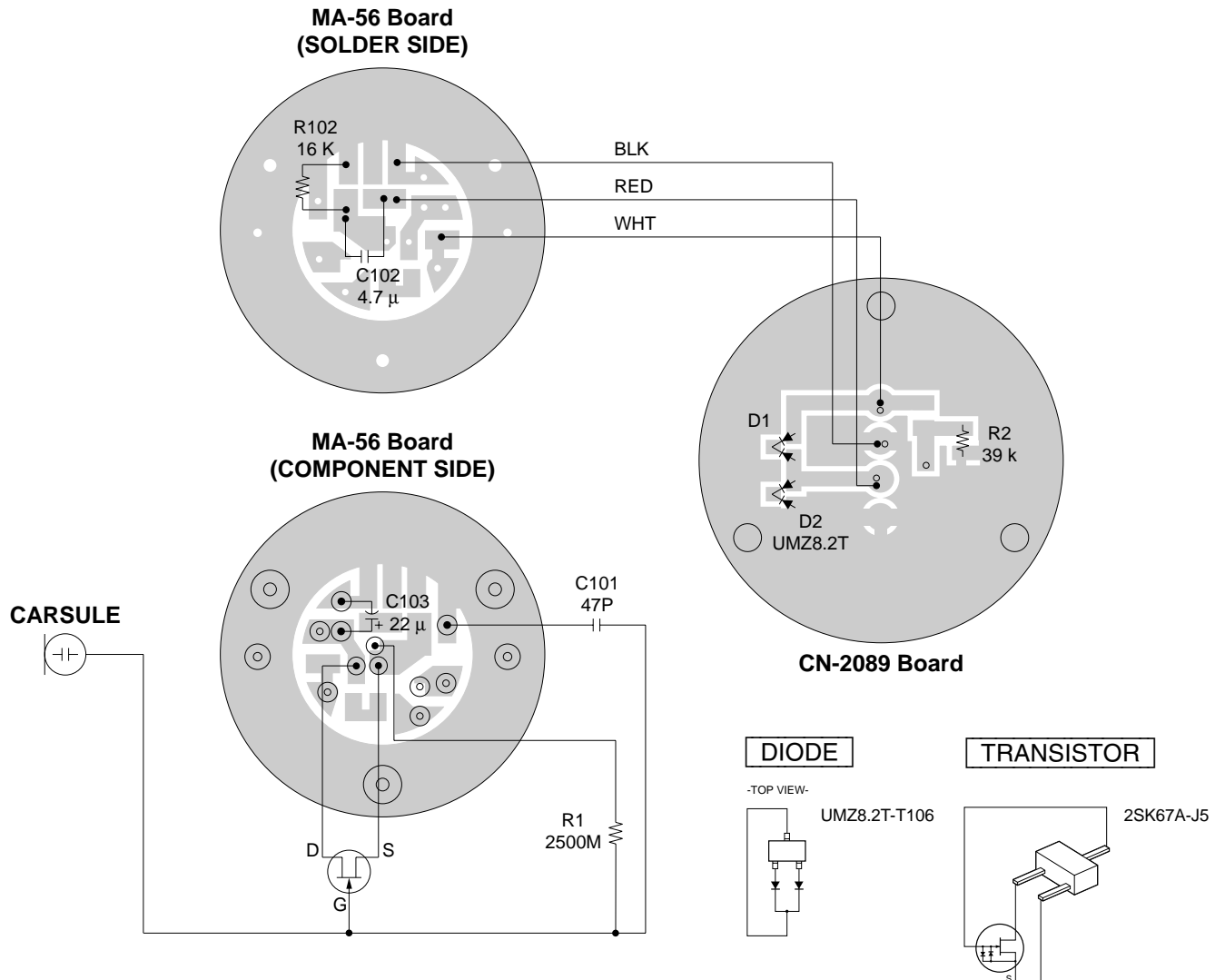
3. CU-E700

3-1. Service Overview

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



3-2. Board Layout



3-3. Schematic Diagrams

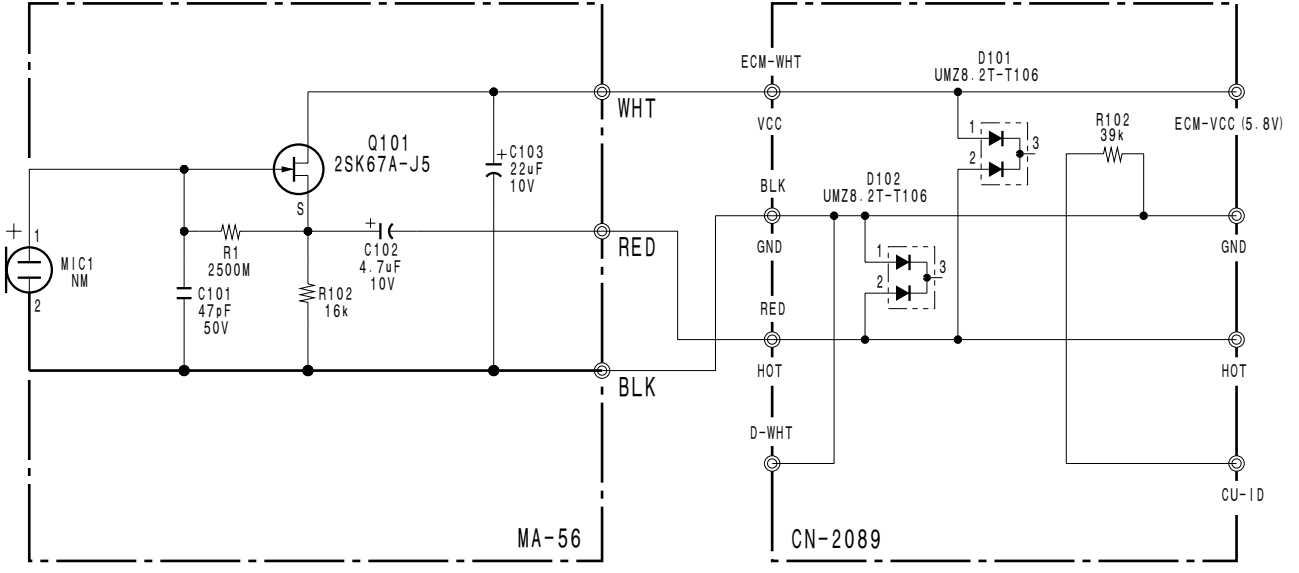
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**CN-2089
MA-56**

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

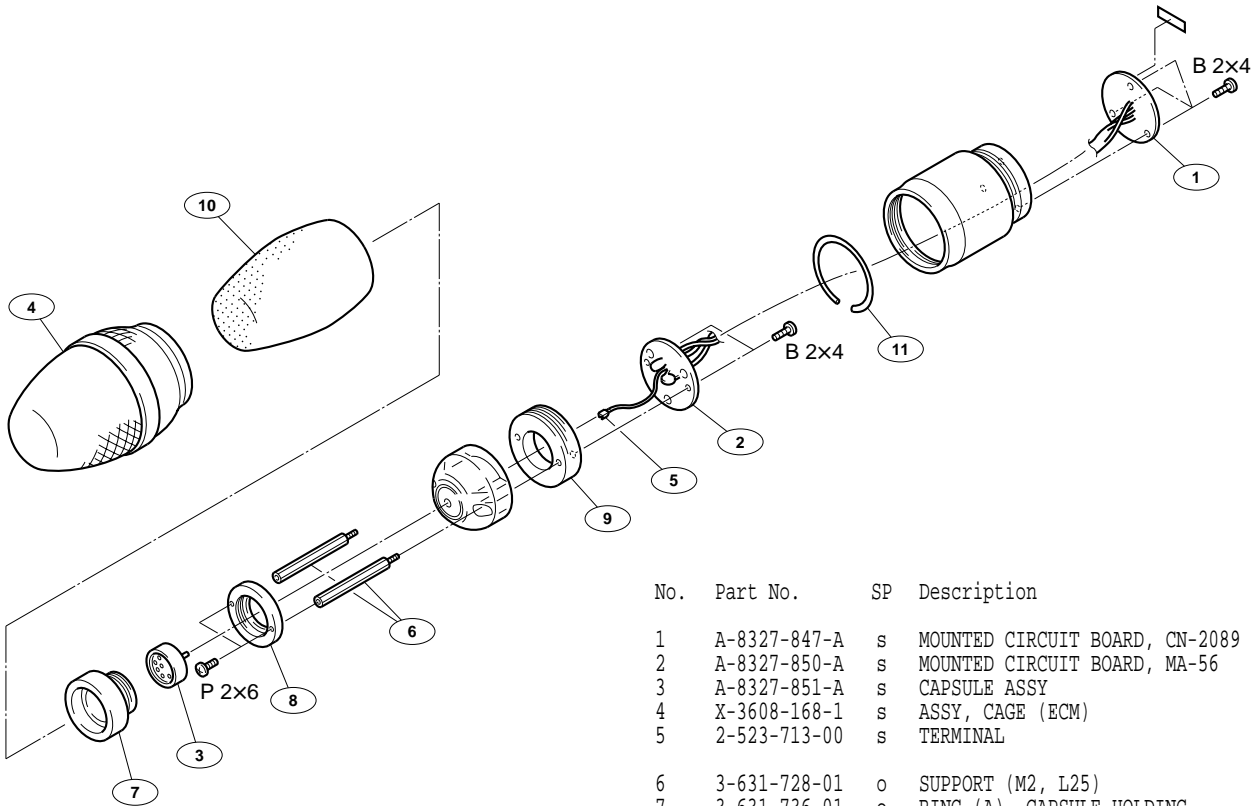
Parts marked with “o” at SP (Supply Code) column of the spare parts list may not be stocked. Therefore, the delivery date will be delayed.

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

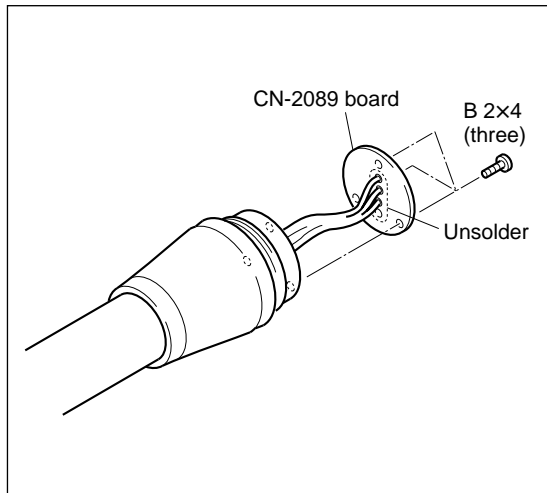
Ref. No. or Q'ty	Part No.	SP	Description
1pc	3-205-156-02	s	OPERATING INSTRUCTIONS

4. CU-E672

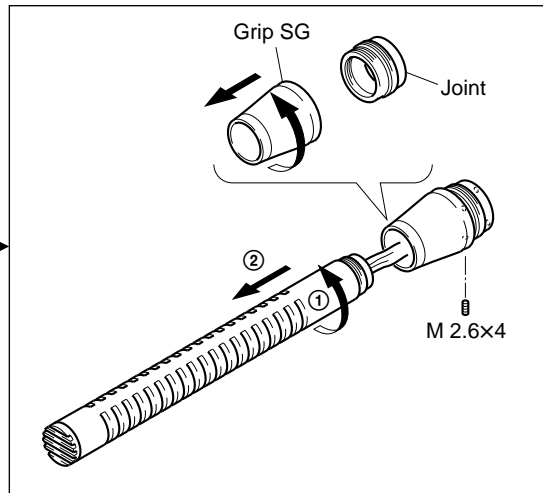
4-1. Service Overview

4-1-1. Disassembly

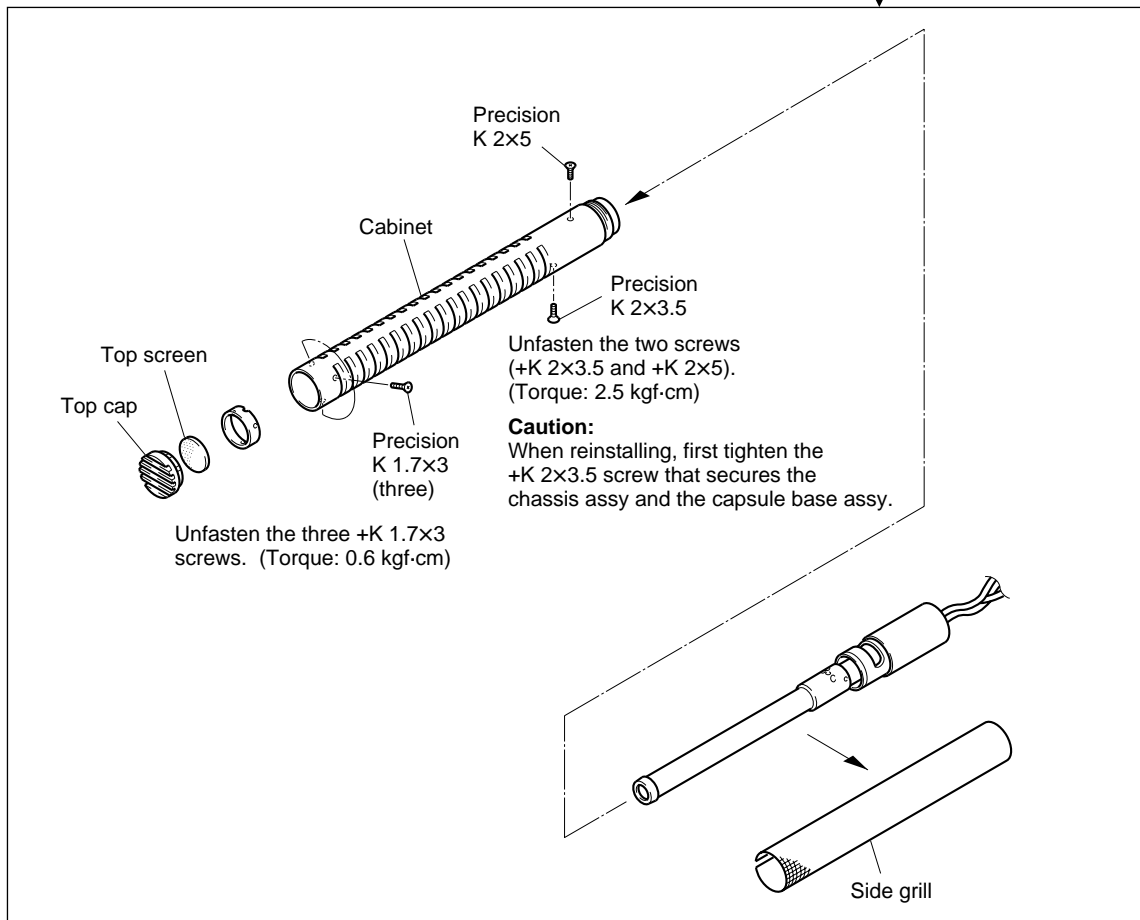
CN-2089 Board



Grip SG, Joint

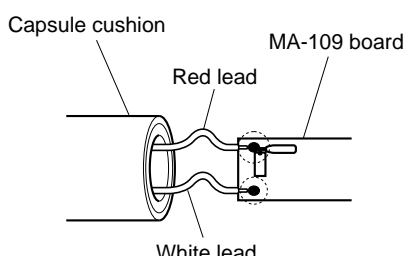


Cabinet



to page 4-2

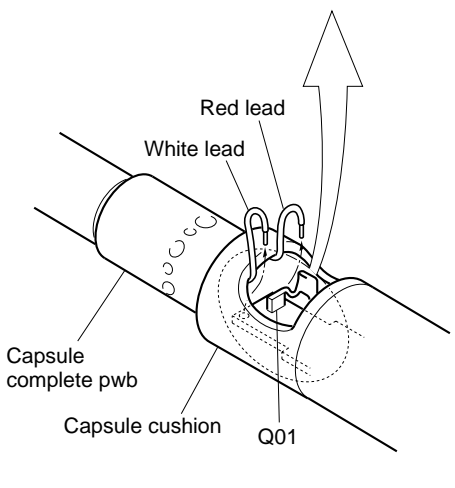
Capsule Black Assy



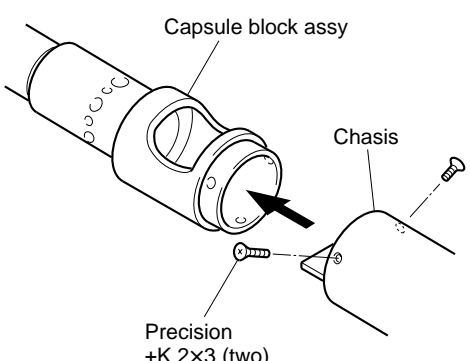
Labels: Capsule cushion, Red lead, MA-109 board, White lead.

Caution:

- When reinstalling the white and red leads, slack off the leads as shown above and be sure not to come in contact with each other and the inside of the capsule cushion.
- After soldering the leads, apply bond (SC608-LUZ) to the parts circled with a dotted line in the illustration to keep the leads from breaking.



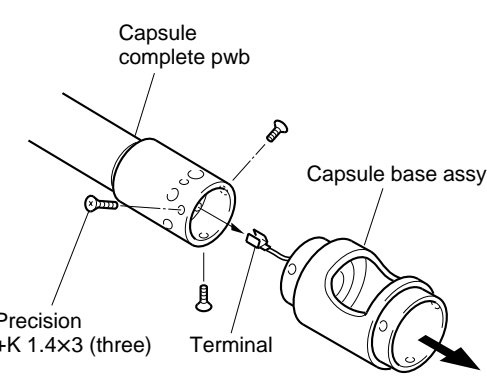
Labels: Red lead, White lead, Capsule complete pwb, Capsule cushion, Q01.



Labels: Capsule block assy, Chassis, Precision +K 2x3 (two).

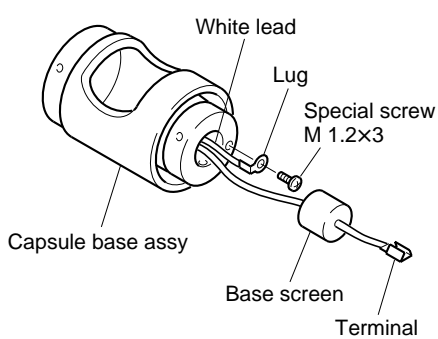
Unfasten the two +K 2x3 screws and remove the capsule block assy from the chassis. (Torque: 1.4 kgf.cm)

Capsule Comple Pwb, Capsule Base Assy



Labels: Capsule complete pwb, Capsule base assy, Precision +K 1.4x3 (three), Terminal.

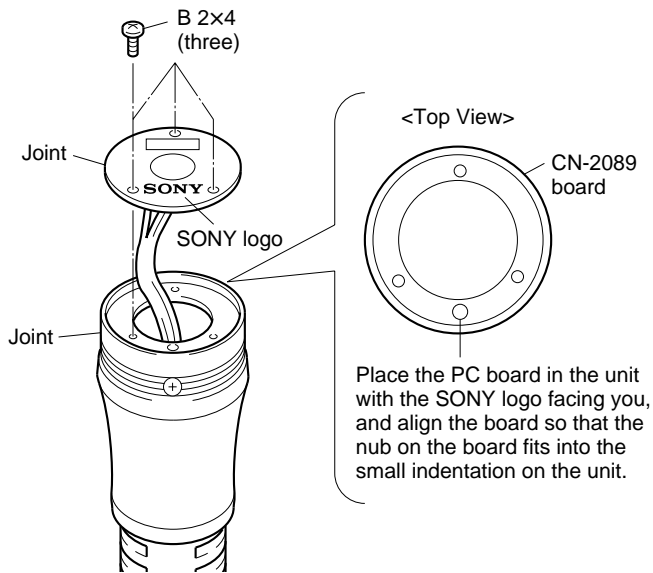
Unfasten the three +K 1.4x3 screws and remove the capsule complete pwb. Pull out the terminal of the capsule base assy with tweezers.



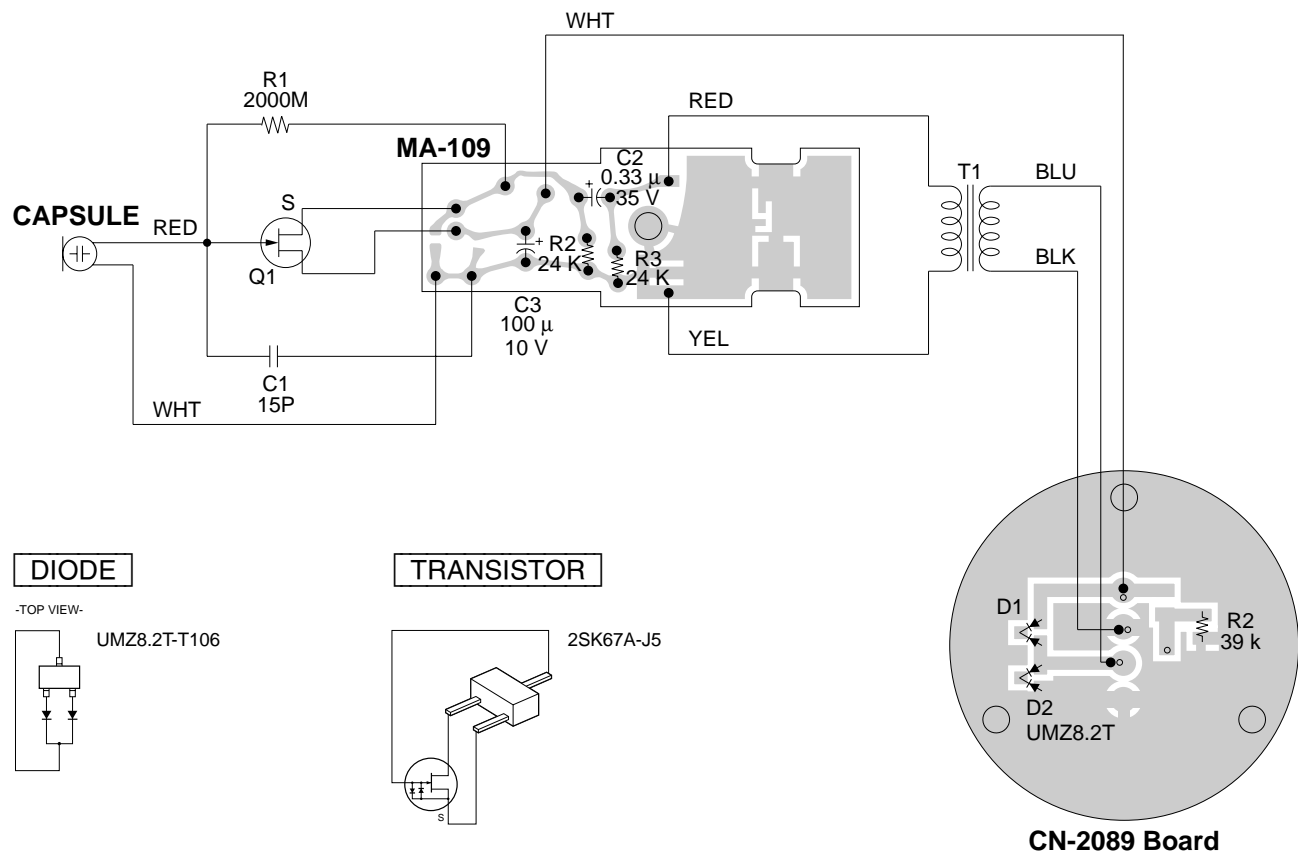
Labels: White lead, Lug, Special screw M 1.2x3, Capsule base assy, Base screen, Terminal.

Remove the base screen and the terminal. Unfasten the M 1.2x3 screw and remove the lug. When removing the white lead, apply toluene to the white lead and the inside of the capsule base assy and remove the lead. When reinstalling the white lead, apply a little of Sony Bond Master to it.

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



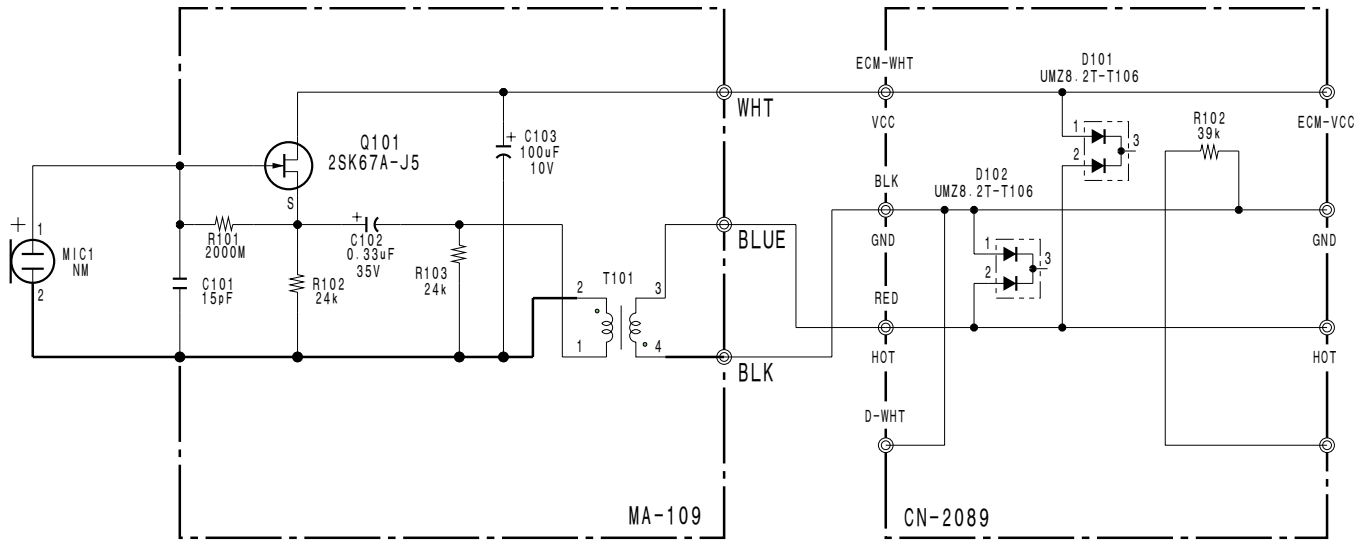
4-2. Board Layout



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.

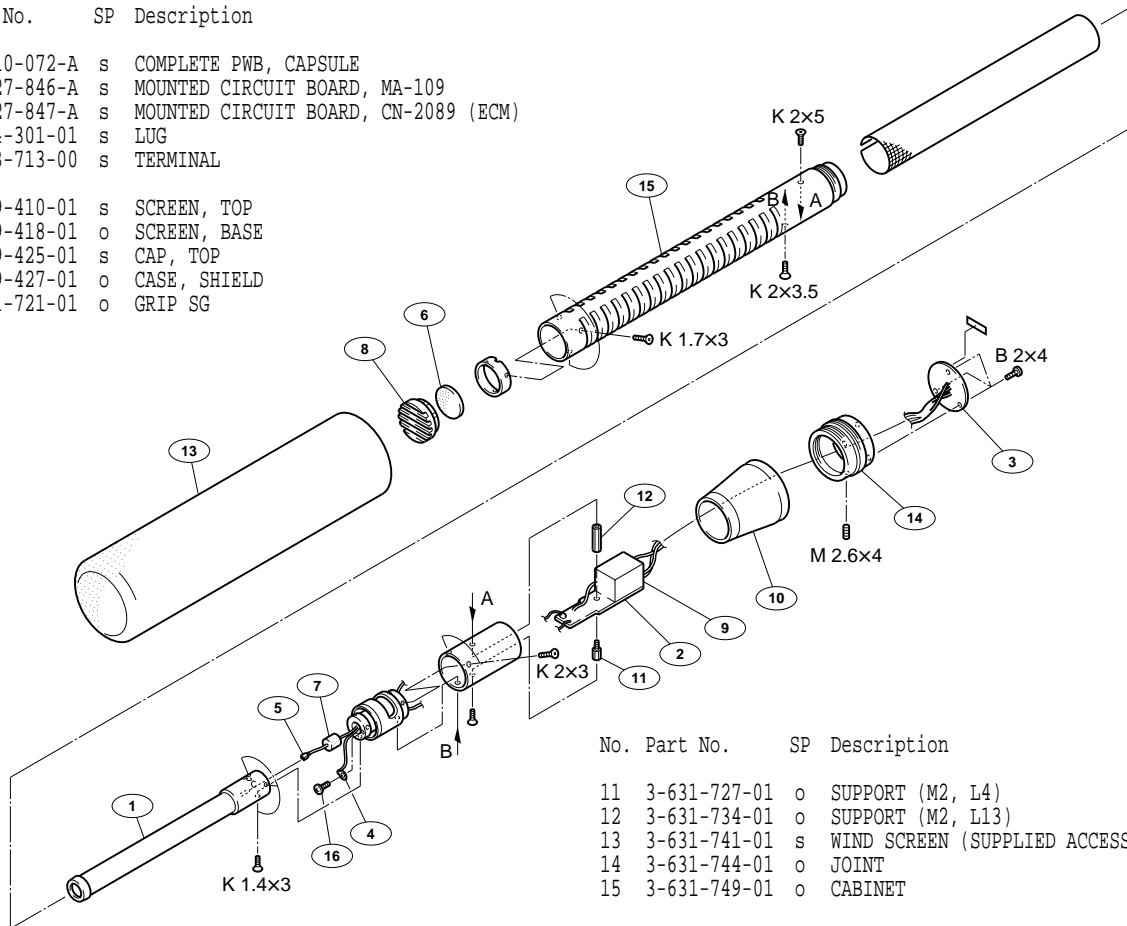
4. Harness

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

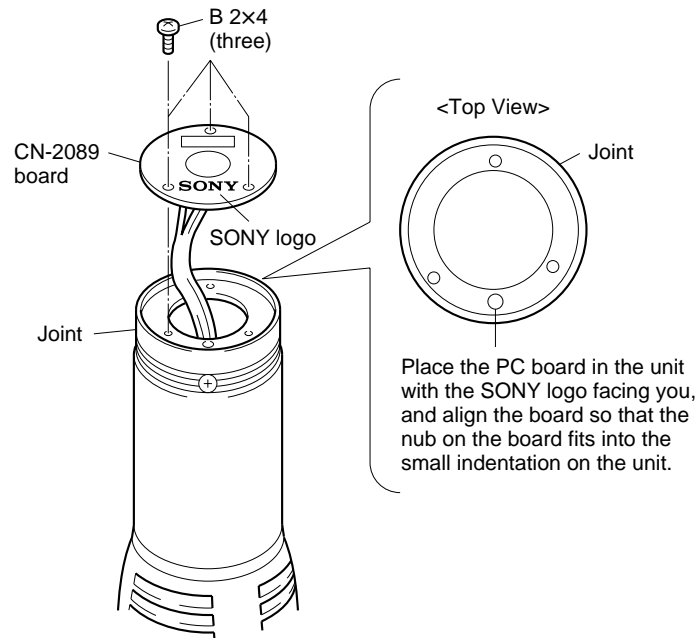
4-4-4. Supplied Accessories

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

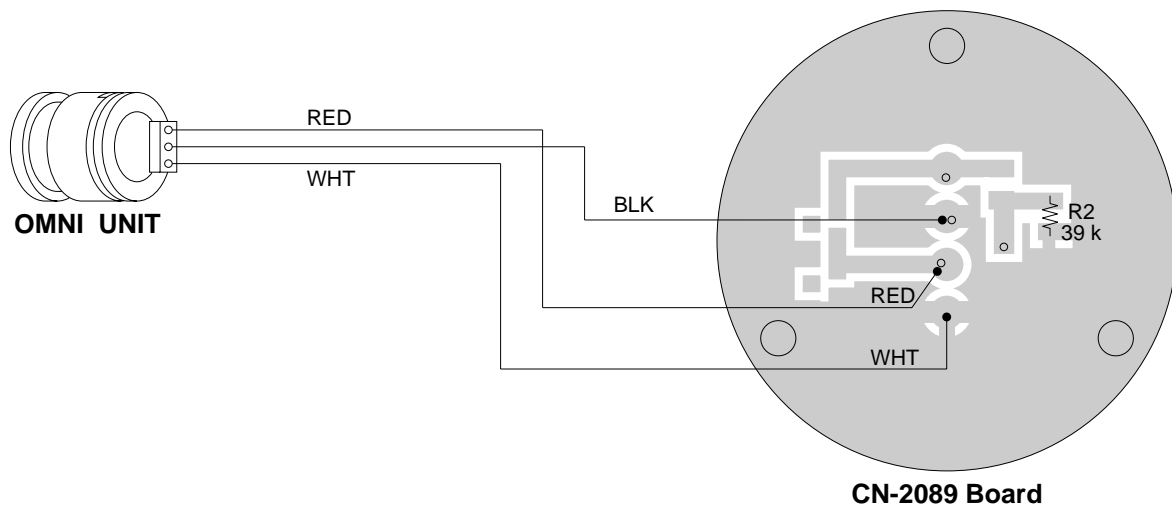
5. CU-F117

5-1. Service Overview

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



5-2. Board Layout



5-3. Schematic Diagrams

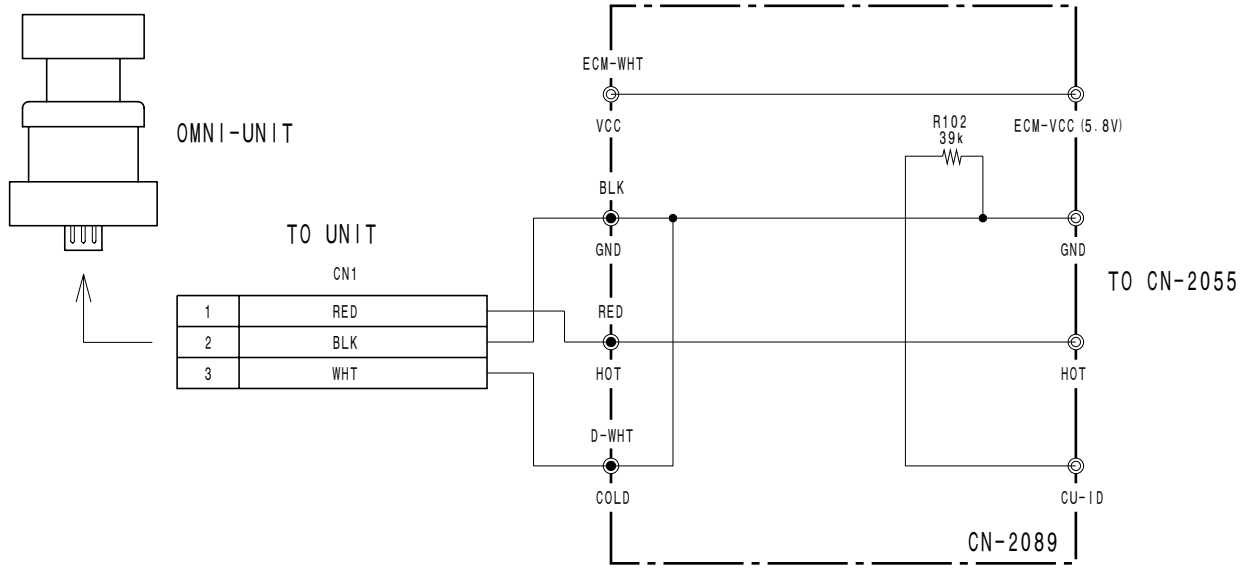
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CN-2089

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

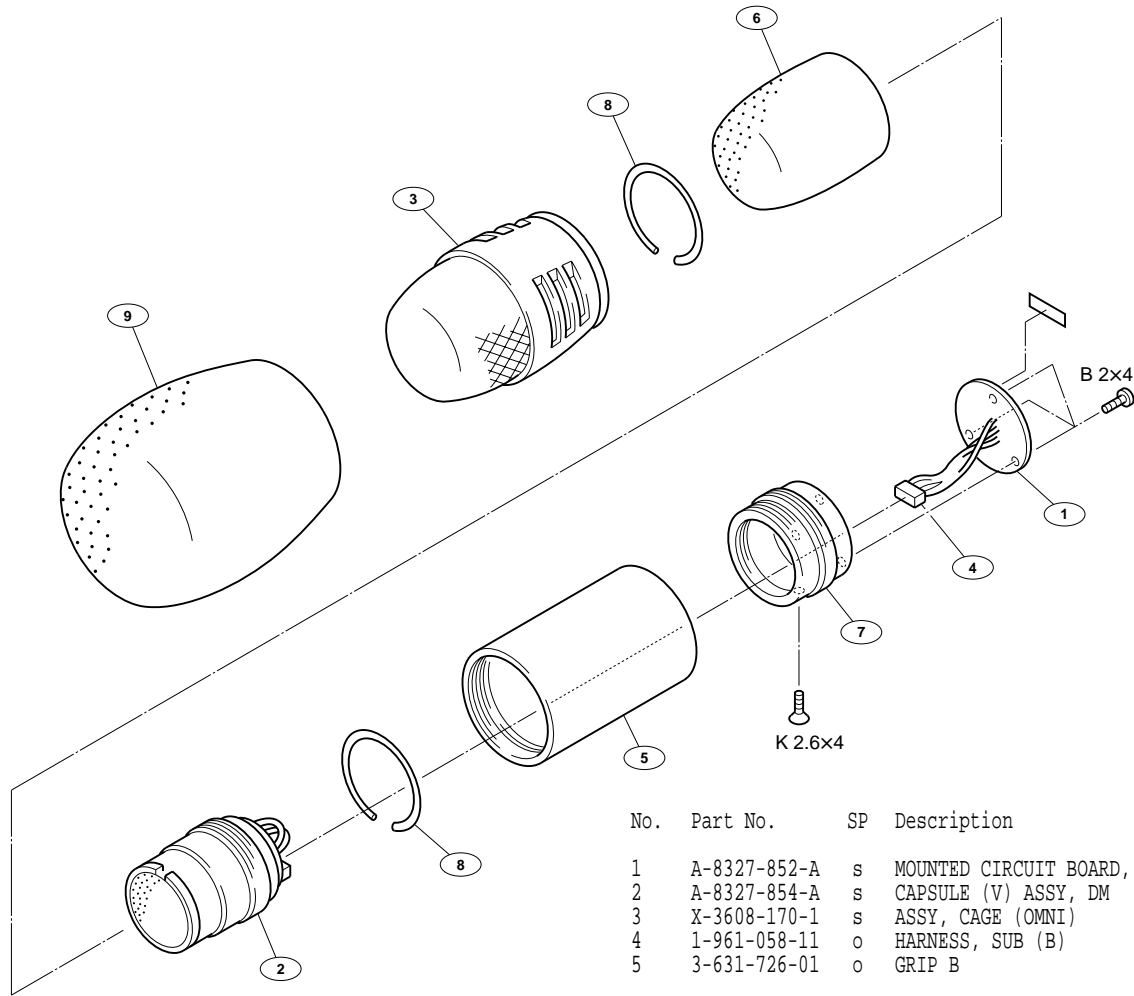
Parts marked with “o” at SP (Supply Code) column of the spare parts list may not be stocked. Therefore, the delivery date will be delayed.

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)

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