**SPECIFICATIONS**

**Type:** C-55P FET condenser microphone

**Power Supply:** Standard operating voltage; DC 48–54 V  
Current Drain; less than 2.5 mA

**Frequency Response:** 40–16,000 Hz ± 2.5 dB

**Output Level:**

<table>
<thead>
<tr>
<th>Pad switch position</th>
<th>Output impedance</th>
<th>Effective output level</th>
<th>Open circuit output level</th>
<th>EIA rating GM</th>
</tr>
</thead>
<tbody>
<tr>
<td>0 dB</td>
<td>2500Ω</td>
<td>-49.8</td>
<td>-50 (3.16 mV)</td>
<td>-141.8</td>
</tr>
<tr>
<td>-8 dB</td>
<td>2500Ω</td>
<td>-57.8</td>
<td>-58 (1.25 mV)</td>
<td>-149.8</td>
</tr>
</tbody>
</table>

* 0 dBm = 1 mW/10 μbar, 1,000 Hz  
** 0 dB = 1 V/10 μbar, 1,000 Hz  
*** EIA standard SE-10B

**Directivity:** Uni-directional

**Output Impedance:** 260 Ω ± 20% at 1,000 Hz balanced

**Noise Level:** S/N ratio; more than 50 dB (1,000 Hz, 1 μbar)  
Inherent noise; less than 24 dB SPL  
Wind noise *1; less than 43 dB SPL  
Induction noise of external magnetic field *2; less than 5 dB SPL/milligauss

*1: The value measured by applying a wind of 6.6 ft/second velocity from all directions to the microphone. The mean value is taken and converted to the equivalent input sound level. (0 dB = 2 x 10^-4 μbar)

*2: The external magnetic field induction noise is measured with the microphone placed in the alternating magnetic field of 50 Hz, 1 milligauss. The maximum noise value is taken and then converted to the equivalent input sound level. (0 dB = 2 x 10^-4 μbar)

**Maximum Input Sound Pressure Level *3:** 154 dB SPL

*3: This is the maximum input level which produces less than 1% wave distortion at the output with 1,000 Hz, and less than 1% intermodulation distortion at the output signal with 70 Hz–7 kHz.

**Dynamic Range:** 130 dB (0 dB = 2 x 10^-4 μbar)

**Semiconductors:** 1-module, 1-transistor

**Dimensions:** 1-3/10” diam. x 6-9/16”  
(33 mm diam. x 167 mm)

**Weight:** 10 oz (280 g) without cable

SONY®

SERVICE MANUAL
1. GENERAL DESCRIPTION

The SONY Model C-55P is a lightweight handy type uni-directional condenser microphone intended for broadcast or recording studio use, featuring as follows.

- **Phantom Powering System**

  This microphone is operated on ac power source by using SONY ac adaptor AC-148A (optional). The microphone cable, shielded two-conductor cable, is used as both an audio signal cable and a dc power supply cable by connecting to AC-148A. Positive dc current is supplied to the microphone through the inner two conductors of the cable and negative dc current through the shield conductor.

- **High-cut Switch**

  This switch has the following two positions.
  - Flat frequency response
  - Attenuation in the frequency range higher than 5 kHz

  ![Fig. 1-3. High-cut switch](image)

- **Pad Switch**

  This switch has the following two positions.
  - 0: No attenuation
  - -8 dB: 8 dB attenuation in the entire frequency range, used for high-pressure sound pick-up.

  ![Fig. 1-4. Pad switch](image)

- **Low-cut Switch**

  This switch has the following three positions.
  - M: Flat frequency response
  - M1: Slight attenuation of low frequency
  - V1: Extreme attenuation of low frequency

  ![Fig. 1-2. Low-cut switch](image)

- **Capsule Angle Change**

  The capsule angle can be changed for 90 degrees vertically by pushing the two side buttons.

  ![Fig. 1-5. Capsule angle change](image)
2. DISASSEMBLY

2-1. Grip Removal (Refer to Fig. 2-1.)

1. Slide down the switch cover along the grip in the direction of the cable.
2. Remove the four screws marked A in Fig. 2-1.
3. Remove the grip and the switch cover.

3. Unsolder the lead wires at the terminal on the back side of the capsule.

Fig. 2-1.

2-2. Cage Removal (Refer to Fig. 2-1.)

1. Remove the capsule direction indicating label with a knife.
2. Remove the screws (F 1 x 2.4) with a jeweler's screwdriver and remove the capsule turning buttons.
3. Remove the four screws marked B in Fig. 2-1.
4. Carefully remove the cage assembly.

2-3. Capsule Removal (Refer to Fig. 2-2.)

1. Remove the cage assembly referring to Procedure 2-2.
2. Pull off the capsule in the direction shown by the arrow in Fig. 2-2.

2-4. Pad and High-cut Switch Removal (Refer to Fig. 2-3.)

The both switches can be removed in the same way as follows:
1. Remove the grip referring to Procedure 2-1.
2. Carefully remove the switch panel with a knife.
   Note: Do not deform the panel since it is attached with the contact cement.
3. Remove the screws marked E in Fig. 2-3.
4. Remove the switch and unsolder the lead wires.

2-5. Circuit Board Removal (Refer to Fig. 2-3.)

1. Remove the grip referring to Procedure 2-1.
2. Remove the two screws marked B in Fig. 2-3.
3. Remove the circuit board in the direction shown by the arrow in Fig. 2-3.
   Note: By removing the two screws marked A in Fig. 2-3, the circuit board is removable along with bosses on the circuit board.

Fig. 2-3.
2-6. Rotary Switch Removal (Refer to Fig. 2-3.)

1. Remove the grip referring to Procedure 2-1.
2. Remove the two screws marked □ in Fig. 2-3 and take off the rotary switch out of the chassis.
3. Remove the lever by removing the screw marked △ in Fig. 2-3.
4. Remove the holder by removing the two nuts (M1.4).
5. Unsolder the lead wires.

2-7. Connector Removal (Refer to Fig. 2-3.)

1. Remove the grip referring to Procedure 2-1.
2. Remove the screw marked □ in Fig. 2-3.
3. Take out the connector from the connector sleeve.

3. ELECTRICAL PARTS LIST

<table>
<thead>
<tr>
<th>Ref. No.</th>
<th>Part No.</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td><strong>SEMI CONDUCTORS</strong></td>
</tr>
<tr>
<td>Q1</td>
<td>2507</td>
<td>Module, CL-112</td>
</tr>
<tr>
<td>Q2</td>
<td>2507</td>
<td>Transistor, 2SC632A</td>
</tr>
<tr>
<td></td>
<td></td>
<td><strong>TRANSFORMER</strong></td>
</tr>
<tr>
<td>T</td>
<td>1-429-042</td>
<td>Output</td>
</tr>
<tr>
<td></td>
<td></td>
<td><strong>CAPACITORS</strong></td>
</tr>
<tr>
<td>C1</td>
<td>1-103-206</td>
<td>70 μF 125V styrol</td>
</tr>
<tr>
<td>C2</td>
<td>1-121-395</td>
<td>25V electrolytic</td>
</tr>
<tr>
<td>C3</td>
<td>1-105-681</td>
<td>50V mylar</td>
</tr>
<tr>
<td>C4</td>
<td>1-131-149</td>
<td>25V tantalum</td>
</tr>
<tr>
<td>C5</td>
<td>1-105-679</td>
<td>50V mylar</td>
</tr>
<tr>
<td>C6</td>
<td>1-121-738</td>
<td>50V electrolytic</td>
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<tr>
<td>C7</td>
<td>1-121-738</td>
<td>50V electrolytic</td>
</tr>
<tr>
<td></td>
<td></td>
<td><strong>RESISTORS</strong></td>
</tr>
<tr>
<td>R1, R2</td>
<td>1-244-531</td>
<td>270 kΩ 1/8W carbon</td>
</tr>
<tr>
<td>R3</td>
<td>1-244-487</td>
<td>18 kΩ 1/8W carbon</td>
</tr>
<tr>
<td>R4</td>
<td>1-244-501</td>
<td>18 kΩ 1/8W carbon</td>
</tr>
<tr>
<td>R5</td>
<td>1-244-457</td>
<td>220 Ω 1/8W carbon</td>
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<tr>
<td>R6, R7</td>
<td>1-244-543</td>
<td>820 kΩ 1/8W carbon</td>
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<tr>
<td></td>
<td></td>
<td><strong>RESISTORS</strong></td>
</tr>
</tbody>
</table>

4. MOUNTING DIAGRAM

<table>
<thead>
<tr>
<th>Ref. No.</th>
<th>Part No.</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>R9</td>
<td>1-244-519</td>
<td>82 kΩ 1/8W carbon</td>
</tr>
<tr>
<td>R10</td>
<td></td>
<td>1,200 MΩ 1/8W metal oxide</td>
</tr>
<tr>
<td>R11</td>
<td></td>
<td>1,200 MΩ 1/8W metal oxide</td>
</tr>
</tbody>
</table>

**MISCELLANEOUS**

<table>
<thead>
<tr>
<th>Ref. No.</th>
<th>Part No.</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>S1</td>
<td>1-513-358-11</td>
<td>Switch, slide; pad</td>
</tr>
<tr>
<td>S2</td>
<td>1-513-358-11</td>
<td>Switch, slide; high-cut</td>
</tr>
<tr>
<td>S3</td>
<td>1-513-359-13</td>
<td>Switch, rotary; low-cut</td>
</tr>
<tr>
<td>CO</td>
<td>Y-20444-11</td>
<td>Capsule, C-7P</td>
</tr>
<tr>
<td>CN</td>
<td>1-509-096-11</td>
<td>Connector, male; CANNON XLR-3-14</td>
</tr>
<tr>
<td></td>
<td>1-539-746-11</td>
<td>Printed Circuit Board, terminal</td>
</tr>
<tr>
<td></td>
<td>1-539-821-11</td>
<td>Printed Circuit Board, main Mounted Circuit Board, main</td>
</tr>
</tbody>
</table>

5. SCHEMATIC DIAGRAM

- Printed circuit board part No. 1-509-821-11.

Note:
All resistors and capacitors are ±10% unless otherwise indicated.
7. PACKING

- 2502-844-14 bag, polyethylene
- 2511-841 cushion
- X-35110-02 screen wind AD-41
- 3407-266-00 bag, polyethylene

- 2511-892 card, warranty (USA Model)
- 2509-012-11 manual, instruction

- 1534-638-11 cable, microphone
- 2508-801-01 band, microphone cable
- 2509-431-00 desiccant
- 2517-836 carton, individual

- 7633-110-41 tape

- 2631-837 carton, master; 6 sets

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