VP83

General Description

Designed for use with DSLR and video cameras, the Shure VP83 condenser microphone enables videographers to capture professional quality audio. Adjustable gain, superior off-axis rejection, and a selectable low-cut filter provide exceptional definition and clarity. Consistent with Shure's commitment to quality and durability, the VP83 features a lightweight, all-metal housing and a built-in Rycote® shock mount for reliable use in the field.

Features

• Supercardioid/lobar pattern rejects unwanted off-axis sounds
• Low-cut and gain switches for maximum adaptability
• Rycote® integrated shock mount
• 130 hours of battery life
• Built-in 3.5 mm audio output cable
• Superior RF immunity
• Durable, all-metal housing
• Shoe mount adapter for easy installation

Mounting the Microphone

1. Slide the microphone onto the camera shoe.
2. Tighten the knurled ring to secure.

Tip: In addition to the vibration isolation provided by the shock mount, the low-cut filter can be used to further eliminate handling noise and low frequency rumble.

Installing Batteries

This microphone requires one AA battery to operate (Alkaline, NiMH, or Lithium). To install:
1. Squeeze the door latches and pull the battery compartment open.
2. Insert the battery into the holder according to the polarity indicator and secure it into place.
3. Close the compartment by pushing the holder back in until it latches.

Low Battery LED: When the battery is running low, the LED turns red and the battery should be replaced as soon as possible. See the battery life table in the user guide to determine remaining runtime after the LED turns red.
Audio Configuration

1 Connect to the camera or recording device
Plug the attached coiled cable into the camera's audio input. Alternatively, the microphone can be plugged into a field recorder or other external device. It may be connected to both a camera and a recorder by using a Y-splitter cable.

Why Gain Settings are Important
Proper gain adjustment is necessary to achieve the best signal-to-noise ratio. When recording audio, the camera's preamp circuitry may introduce a small amount of noise that increases as the camera's preamp gain is raised, or when volume levels are raised during post production.

How the VP83 improves performance:
The VP83 microphone has very low noise characteristics, which means that using more gain from the microphone and less from the camera will improve the signal-to-noise ratio and result in a cleaner audio signal.

2 Lower the camera's gain (input volume) to the minimum setting
Using the least amount of gain from the camera or recording device and more gain from the VP83 will result in a better signal-to-noise ratio.

Note: If automatic gain control on the camera (when applicable) introduces unwanted audio artifacts, consider bypassing the feature.

Low-cut Filter
The low-cut filter reduces low frequency rumble caused by camera handling and other environmental factors by rolling off low frequencies 170 Hz and below (12 dB per octave). To engage, slide the power switch to the low-cut filter (¬) position.

3 Perform a sound check and adjust the gain switch
The dB gain switch adjusts the level of the audio signal sent to the camera's audio input. Begin with the gain switch set to +20 dB. Monitor the camera's audio meter and adjust the switch so that the loudest sounds do not exceed -6 dB.

| +20 dB: | Appropriate level for many cameras when recording typical sound levels (speech, for example) and for quiet sources. |
| 0 dB: | Use when capturing sounds that are slightly louder than typical speech levels. |
| -10 dB: | Use when the signal is too loud and distorts the camera's preamp, or in loud environments, such as a concert or sporting event. |

Note: Camera input sensitivity varies between manufacturers. Use this information for general reference.

4 If necessary, increase the camera's input gain
The audio signal should peak between -12 and -6 dB on the camera's audio meter. Follow the camera manufacturer's instructions to fine tune the gain to reach the appropriate level.

Monitoring the Audio Signal
To listen to the audio while recording, connect a pair of headphones to the camera's headphone output. Use the camera's headphone volume control to adjust the monitoring level. Do not use the gain switch on the VP83 to adjust the monitoring level.
Specifications

Cartridge Type
Electret Condenser

Polar Pattern
Supercardioid/Lobar

Frequency Response
50 to 20,000 Hz

Output Impedance
171 Ω

Sensitivity
open circuit voltage, @ 1 kHz, typical
-36.5 dBV/Pa\(^1\) (14.9 mV)

Maximum SPL
1 kHz at 1% THD\(^2\), 1000 Ω load
129 dB SPL

Signal-to-Noise Ratio\(^3\)
76.6 dB

Dynamic Range
@ 1 kHz, 1000 Ω load
111.6 dB

Clipping Level
@ 1 kHz, 1% THD, 1000 Ω load
-2.7 dBV

Self Noise
equivalent SPL, A-weighted, typical
17.4 dB SPL-A

Operating Temperature Range
-18°C (0°F) to 57°C (135°F)

Storage Temperature Range
-29°C (-20°F) to 74°C (165°F)

Operating Relative Humidity
0 to 95%

Housing
Cast aluminum

Power Requirements
1 AA battery (Alkaline, NiMH, Lithium)

Net Weight
133 g (4.7 oz.)

Battery Life

<table>
<thead>
<tr>
<th>AA Battery Type</th>
<th>Typical Remaining Runtime (Hours)</th>
<th>After power LED turns red</th>
</tr>
</thead>
<tbody>
<tr>
<td>Alkaline</td>
<td>130</td>
<td>13</td>
</tr>
<tr>
<td>NiMH</td>
<td>108</td>
<td>2</td>
</tr>
<tr>
<td>Lithium</td>
<td>187</td>
<td>¼</td>
</tr>
</tbody>
</table>
**Troubleshooting**

<table>
<thead>
<tr>
<th>Issue</th>
<th>Solution</th>
</tr>
</thead>
<tbody>
<tr>
<td>Unit does not turn on</td>
<td>Replace batteries and make sure that the batteries are installed correctly.</td>
</tr>
<tr>
<td>Sound is distorted</td>
<td>• Check that the audio cable is completely inserted into the camera.</td>
</tr>
<tr>
<td></td>
<td>• Camera input gain may be set too high, resulting in clipping. Try</td>
</tr>
<tr>
<td></td>
<td>lowering the gain. If the camera’s gain appears to be adjusted</td>
</tr>
<tr>
<td></td>
<td>properly, try setting the gain switch set to 0 or -10 dB.</td>
</tr>
<tr>
<td></td>
<td>• If listening through headphones, check the connection or try using</td>
</tr>
<tr>
<td></td>
<td>a different pair.</td>
</tr>
<tr>
<td>No sound</td>
<td>• Make sure the microphone is on and that the audio cable is</td>
</tr>
<tr>
<td></td>
<td>connected to the correct audio input jack on the camera.</td>
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<tr>
<td></td>
<td>• If the camera doesn’t register a signal, try increasing the camera</td>
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<tr>
<td></td>
<td>gain or setting the gain switch to +20.</td>
</tr>
</tbody>
</table>

**Accessories and Replacement Parts**

| Rycote® replacement foam windscreen | A83W       |
| Rycote® Windjammer™                | A83-FUR   |

**Certifications**

**Note:** Testing is based on the use of supplied and recommended cable types. The use of other than shielded (screened) cable types may degrade EMC performance.

The CE Declaration of Conformity can be obtained from: www.shure.com/europe/compliance

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