MV51

Digital Large-Diaphragm Condenser Microphone

The Shure digital large-diaphragm condenser microphone, MV51, user guide.
Version: 4.0 (2021-A)

Table of Contents

MV51 Digital Large-Diaphragm Condenser Microphone 3

General Description 3

Features 3

Mounting and Placement 3

Quick Setup 4

Touch Panel Interface Controls 5

Preset Modes 5

Advanced Mic Settings 6

Equalizer 6

Applications 6

Podcast and Voice Recording 7

Acoustic Instruments and Music 7

Bands and Loud Sources 7

Bypass EQ and Compression (Flat) 8

Additional Tips 8

Adjusting Microphone Level 8

Adjusting Headphone Level 8

Accessing the Control Panel 9

Input Meter Level 9

Monitoring with the MOTIV Device 9

Sampling Rate and Bit Depth 10

Troubleshooting 10

System Requirements and Compatibility 10

Specifications 11

Accessories 13

Furnished Accessories 13

Certifications 13

Information to the user 13

MV51
Digital Large-Diaphragm Condenser Microphone

General Description

The Shure MV51 is a professional-quality USB condenser microphone, ideal for home recording, podcasting, and video conferencing. The attractive and durable all-metal design features an adjustable kickstand for desktop use, and can also mount onto a microphone stand. A touch panel user interface provides control of microphone gain, headphone level, application modes, and muting.

Features

- Easily adjust settings with the intuitive touch panel interface
- Compatible with most iDevices (iPhone, iPad, and iPod) through Lightning® interface
- Compatible with most computers, tablets and smart phones through USB interface
- Large-diaphragm electret condenser microphone captures speech and music with excellent clarity
- Sleek design includes all-metal housing for professional-grade durability
- Headphone output allows real-time monitoring of the live signal and audio from the computer or device
- Preset DSP modes include equalization and compression settings for specific applications
- Desktop kickstand includes a removable tip for mounting onto a microphone stand

Mounting and Placement

Desktop

Aim the microphone towards the sound source by adjusting the kickstand.

Microphone Stand

Unscrew the end cap to thread the kickstand onto a standard 5/8" microphone stand.



Kickstand End Cap

Quick Setup

The MV51 is compatible with most devices that have a USB or Lightning connector.

1. **Connect the microphone to a computer or mobile device. Use the appropriate cable (USB or Lightning).**

   Drivers will be installed automatically. The touch panel illuminates to indicate a successful connection.

2. **Open the sound control panel. Select the Shure MV51 driver.**

   Raise the level on both the MV51 product and the host computer for proper monitoring.

3. **Confirm that the MV51 is the selected audio device.**

   Plug headphones into the MV51 device audio output and play an audio track. If you can hear sound, the microphone is functioning properly.

   If your computer settings default to another device, open the sound control panel and select the MV51 device.

4. **Adjust the headphone volume on the Shure MV51 device driver.**

   Open the MV51 driver from the sound control panel and raise the headphone volume from the playback or output tab.

5. **Use the MODE button to select the preset mode that fits your application.**

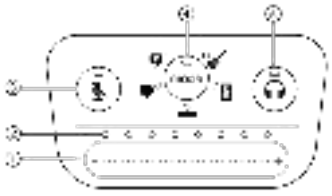
   If the audio is too quiet or causes distortion, adjust the gain manually. Refer to the "Adjusting Microphone Level" topic in this guide for more details.

6. **In your recording application, select the MV51 as the input source.**

   See your software user guide for information on assigning input sources.

You are ready to record.

Touch Panel Interface Controls



Touch Panel

① Volume Control Slider

Adjust microphone or headphone level by sliding your finger across the control surface.

- Press the mode button to activate microphone level.
- Press the headphone button to activate headphone volume.

② LED bar

Displays microphone and headphone level. The LED color indicates the level being displayed or adjusted.

- **Green:** Microphone level
- **Orange:** Headphone level

③ Mute Button

Press to mute and unmute the microphone.

④ Mode Selector

Press to select preset mode.

⑤ Headphone Volume Selector

Press to select headphone level controls (orange LED bar). Then use the volume control slider to adjust headphone level. Press again to return to microphone level display (green LED bar).

Preset Modes

Five selectable modes optimize settings for gain, stereo width, equalization, and compression. Set the microphone level and try the modes to find which sounds best. Preset modes can affect the strength of the input signal, so adjust the microphone level as needed after changing presets.

Mode	Application	Characteristics
Speech	speech	Narrow stereo width to reject background noise, equalization that emphasizes clarity and fullness, and gentle compression.
Singing	solo or group vocal performances	Medium stereo width with subtle equalization to add richness and clarity for a natural sound.

Mode	Application	Characteristics
Flat	any	An unprocessed signal (no equalization or compression settings used). Adds flexibility when processing the audio after recording.
Acoustic	acoustic instruments and quiet music	Medium stereo width with transparent compression to smooth out volume spikes and bring out quiet passages. The equalizer setting emphasizes detail and an overall natural sound.
Loud	live performance and louder sources	Wide stereo to increase separation between sources. Equalization further improves definition by reducing frequencies that can make the instrumentation sound crowded.

Advanced Mic Settings

After selecting the preset mode, fine-tune your sound with limiter, compressor, and equalizer settings. These settings are retained in the microphone when using other audio and video recording applications.

Limiter

Toggle the limiter on or off to prevent distortion from volume peaks in your recording.

Compressor

Choose no compression, or select light or heavy compression to control volume when your sound source is dynamic. Quiet signals are boosted and loud signals are lowered.

Equalizer



Change the preset modes to hear the DSP changes, and use the equalizer to boost or cut bands of frequencies to improve sound clarity.

Note: Equalization within presets will not be displayed. However, the EQ icon in the advanced settings status bar indicates user-selected equalization.



Equalization changes are displayed in the equalizer image.

EQ persists between preset mode changes.

Applications

This section suggests microphone placement for typical use cases. Keep in mind that there are many effective ways to record a given source. Experiment with the following microphone placement and settings to find what works best.

Podcast and Voice Recording

Set the microphone to the **Speech** mode. Speak directly into the front of the microphone at a distance of 2-12 inches (5-30 cm) away. Speaking closer to the microphone results in more bass response, similar to voices on a radio broadcast. Make additional gain adjustments if necessary.



Typical position for speech

Acoustic Instruments and Music

To capture acoustic sources, such as singing, acoustic guitar, soft percussion, or other musical instruments, use a close microphone placement.

Aim the microphone directly at the sound source. For a single source, such as a string instrument or a vocalist, place the microphone 6 to 12 inches (15 to 30 cm) away. For a small group or a performer who is singing and playing an instrument simultaneously, use a distance of 2 to 10 feet (0.6m to 3 m). Placing the microphone farther away results in more ambient room sound.

Set the microphone to the **Acoustic** or **Singing** mode and make additional gain adjustments if necessary.

Bands and Loud Sources

To record a band with drums or amplified instruments, aim the microphone towards the group at a distance of 6 to 15 feet (1.8 to 4.6 m). Placement of the microphone depends on the size of the room, number of people, and instrument volume. If possible, walk around the room and listen to find where it sounds best.



For other loud sources, such as an electric guitar amplifier, aim the microphone at the sound source from 0-18 inches (0-45 cm) away.

Set the microphone to the **Band** mode and make additional gain adjustments if necessary.



Bypass EQ and Compression (Flat)

To record a signal without any processing, set the microphone to the **Flat** mode. This mode is appropriate for any application when you want to bypass equalization and compression presets, and is ideal when applying signal processing to the recording at a later time.

Additional Tips

Shure offers additional educational publications on recording techniques for specific instruments and applications. Visit shure.com for more information.

Adjusting Microphone Level

Select the correct preset mode for your recording application. If you hear distortion or the audio is too low, adjust the microphone level in the audio or sound control panel of your computer or recording device.

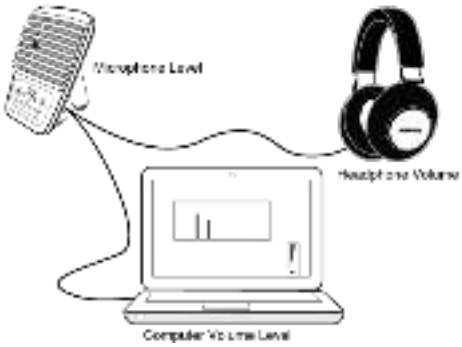
Tips:

- Set the microphone level before adjusting headphone volume.
- The headphone volume does not affect the signal level sent to the computer.
- Use the volume slider on the front panel to adjust the microphone gain level.

Note: *The microphone gain control is independent of the preset modes. Set your microphone level and experiment with dynamic processing options via the preset modes.*

Adjusting Headphone Level

The headphone monitoring level is affected by the MV51 device level and the computer settings level. Raise your computer volume up and easily adjust headphones through the MV51 device headphone settings.



Accessing the Control Panel

PC

1. Open the sound control panel and select the **Recording** tab.
2. Open the **Shure MV51** device.
3. Under the **Levels** tab, adjust the gain level using the slider.

Mac®

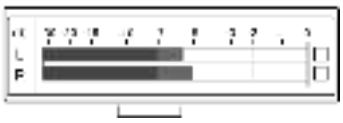
1. Open the **Audio Midi Settings** panel.
2. Select the **Shure MV51** device.
3. Click on **Input** to adjust the gain using the slider.



Mac audio settings panel

Input Meter Level

If your digital audio workstation or recording software has input meters, adjust the microphone level so it peaks between -12 and -6 dB. Otherwise, simply listen to the audio to make sure it is loud enough and not distorting.



Peak Levels

The target range for peak levels on a typical meter is between -12 and -6 dB.

Monitoring with the MOTIV Device

The headphone output provides an equal blend of the direct microphone signal and audio playback from the computer. This allows you to conveniently adjust the overall headphone volume with one control on the device touch panel. To change the playback audio level relative to the direct microphone signal level, adjust the computer or DAW mixer settings.

Tip: When first connecting the microphone to your computer, make sure to raise the volume level in the sound control panel of the computer for a strong audio signal. Then adjust headphone level on the device for comfortable monitoring.

Sampling Rate and Bit Depth

Sample Rate and Bit Depth settings are found in a drop down menu in the audio or sound control panel of your computer. You can adjust these variables to fit your needs. Select a lower sample rate for podcast recording, when it is important to have a smaller file for easy download. Select a higher sample rate for music and more dynamic recordings.

Tip: Record at a higher sample rate and bounce down to an M4A for a file with the highest sound quality at a manageable size.

Tip for PC users: Make sure that the sample rate and bit depth microphone settings, found in the sound control panel of the computer, match with the sample rate and bit depth selected in your software.

Troubleshooting

Issue	Solution
The display does not illuminate	Make sure that the MV51 is fully plugged in.
Audio is too low	Check the computer sound control panel settings. When first connecting the MV51 to your computer, make sure to raise the computer volume level.
Audio sounds bad	Check the sound control panel of the computer to ensure that the MV51 is fully plugged in and recognized.
Audio is distorted	Use the audio meter to ensure that volume peaks are within the target range. If level is reaching the red peak indicator of the input meter, turn the gain down.
Audio sounds unnatural or jittery	Make sure that the sample rate and bit depth microphone settings, found in the sound control panel of the computer, are consistent with the sample rate and bit depth selected in your software.
MV51 is plugged in, but the volume meter does not register a signal.	Edit the privacy setting for the iOS device under `SETTINGS` > `PRIVACY` > `MICROPHONE` to give the recording application permission to use the microphone.
Device not working with USB hub.	The MV51 requires 250 mA per port. Check USB hub documentation for current/port specification.

System Requirements and Compatibility

Windows	Windows 7 and higher Minimum RAM = 64 MB USB 2.0
Macintosh	OS X Lion 10.7 and higher Minimum RAM = 64 MB USB 2.0
iOS	iOS 10.0 and higher
iPhone	iPhone 5 and higher
iPod Touch	5th gen
iPad	iPad 4th gen and higher
iPad Mini	iPad Mini 1st gen and higher

Specifications

MFi Certified
Yes

DSP Modes (Presets)
Speech/Singing/Acoustic/Loud/Flat

Transducer Type
Electret Condenser (25 mm)

Polar Pattern
Unidirectional (Cardioid)

Bit Depth
16-bit/24-bit

Sampling Rate
44.1/48 kHz

Frequency Response
20 Hz to 20,000 Hz

Adjustable Gain Range
0 to +36 dB

Sensitivity
-39 dBFS/Pa at 1 kHz [1] [2]

Maximum SPL
130 dB SPL [2]

Headphone Output
3.5 mm (1/8″)

Power Requirements
Powered through USB or Lightning connector

Mute Switch Attenuation
Yes

Mounting Stand
Built-in

Stand Adapter
5/8-27 thread mount (standard mic stand mount)

Housing
all metal construction

Net Weight
574.7 g (20.27oz.)

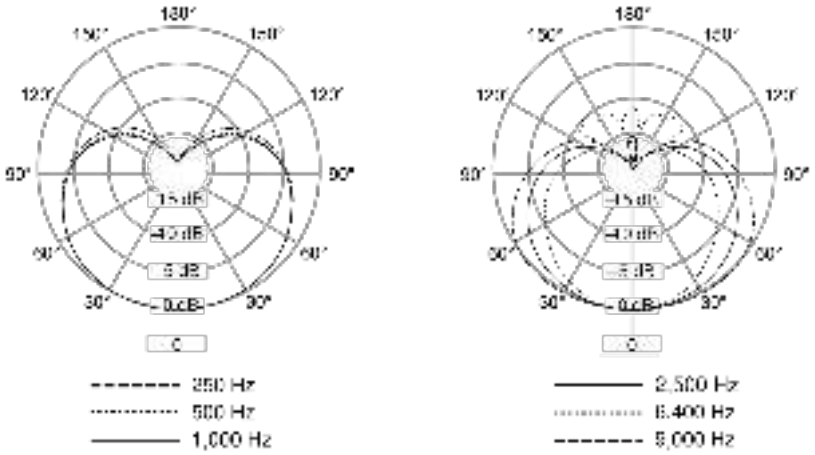
Dimensions
128 x 86 x 70 mm H x W x D

[1]1 Pa=94

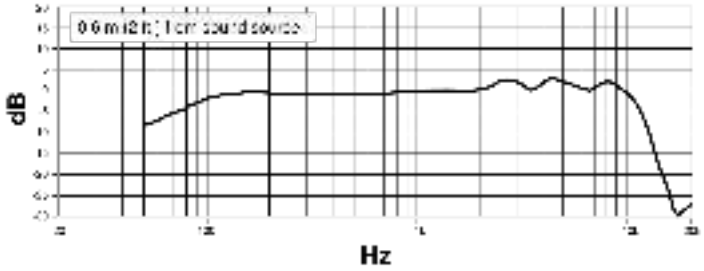
dB SPL

[2]

At Minimum Gain, Flat Mode



Polar Pattern



Frequency Response

Accessories

Furnished Accessories

1 m USB cable	AMV-USB
1 m USB-C cable	95C38076
5/8" to 3/8" (Euro) Threaded Adapter	95A2050

Certifications

Information to the user

This device complies with part 15 of the FCC Rules. Operation is subject to the following two conditions:

1. This device may not cause harmful interference.
2. This device must accept any interference received, including interference that may cause undesired operation.

Note: This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and the receiver.
- Connect the equipment to an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio/TV technician for help.

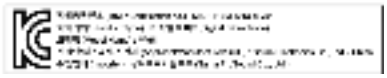
Industry Canada ICES-003 Compliance Label: CAN ICES-3 (B)/NMB-3(B)

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.

This product meets the Essential Requirements of all relevant European directives and is eligible for CE marking.

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

Authorized European representative:
Shure Europe GmbH
Headquarters Europe, Middle East & Africa
Department: EMEA Approval
Jakob-Dieffenbacher-Str. 12
75031 Eppingen, Germany
Phone: +49-7262-92 49 0
Fax: +49-7262-92 49 11 4
Email: info@shure.de





Use of the Made for Apple badge means that an accessory has been designed to connect specifically to the Apple product(s) identified in the badge and has been certified by the developer to meet Apple performance standards. Apple is not responsible for the operation of this device or its compliance with safety and regulatory standards.

Apple, iPad, iPhone, iPod and Lightning are trademarks of Apple Inc., registered in the U.S. and other countries. tvOS is a trademark of Apple Inc. The trademark “iPhone” is used in Japan with a license from Aiphone K.K.

Mac and Lightning are registered trademarks of Apple Inc.