



VP83F

LensHopper™ Camera-Mount Condenser Microphone with Integrated Flash Recording

The Shure professional shotgun microphone, VP83F, user guide.
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VP83F

LensHopper™ Camera-Mount Condenser Microphone with Integrated Flash Recording

General Description

The Shure VP83F is a professional-quality condenser microphone designed for use with DSLR and video cameras. The VP83F features built-in flash recording and captures crystal-clear, high definition audio, completely independent from other hardware. The intuitive menu makes configuration fast and simple for use in almost any sonic environment.

Features

Exceptional Audio Quality

- High-resolution recording (24 Bit/48khz sampling, WAV format)
- Supercardioid/lobar pickup pattern rejects unwanted sounds
- Interference tube for increased directionality
- RF Immunity

Built-in Flash Recording

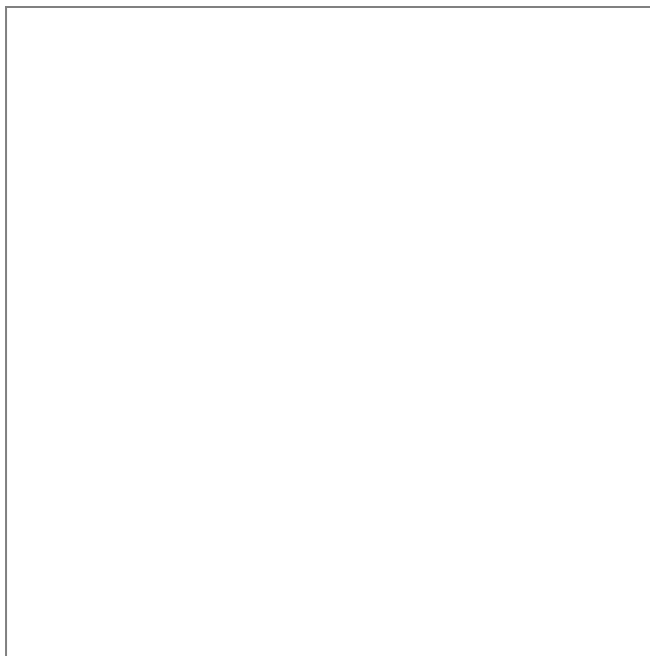
- Records directly to microSD card (32 GB maximum)
- Intuitive menu for easy microphone configuration and track management
- Separate outputs for headphone monitoring and camera input with independent volume adjustment

Rugged and Reliable

- Durable, all-metal housing
- Integrated shockmount
- Shoemount adapter for easy installation

VP83F

- ① Windscreen
- ② Camera audio output
- ③ Camera shoe mount
- ④ Battery and memory card compartment
- ⑤ Integrated shockmount
- ⑥ Control panel
- ⑦ Headphone audio output



Accessories

- Foam windscreen
- 3.5 mm coiled audio cable
- (2) AA batteries (except in Argentina)
- Rycote® Windjammer™ (optional)

Installing the Memory Card and Batteries

The VP83F requires two AA batteries to operate (compatible with Alkaline, NiMH, or Lithium). Installing a MicroSD memory card enables recording functionality.

Audio is still passed through to the camera and headphone outputs if there is no memory card installed.

① Opening the front panel

Squeeze the latches on each side and open the front panel to access the memory card and battery compartment.

② Installing the memory card

Always turn the power off before removing or installing a memory card.

To Install: Insert the card into the slot located above the battery door, with the contacts facing up. When fully inserted, the card locks into place.

To Remove: Press the card to unlock it, then pull it from the device.

Note: Format the memory card in the device prior to first use. Refer to the memory card requirements section in the user guide for additional information.

③ Installing and replacing batteries

Open the battery door located inside the front panel by pressing the fastener down. Insert the batteries according to the polarity indicators.

Note: The battery door must be closed and latched before closing the front panel.

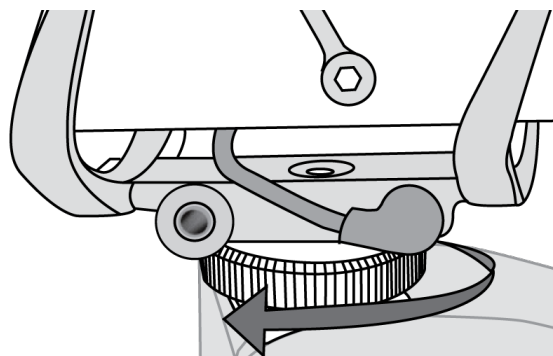
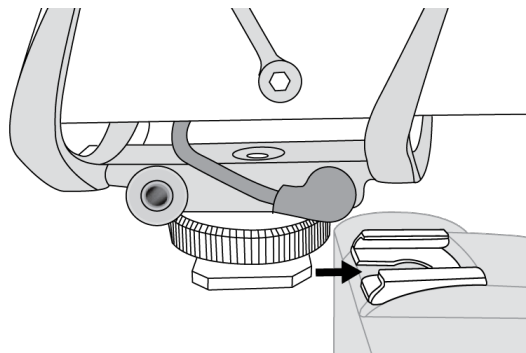


Mounting the Microphone

On a Camera:

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.



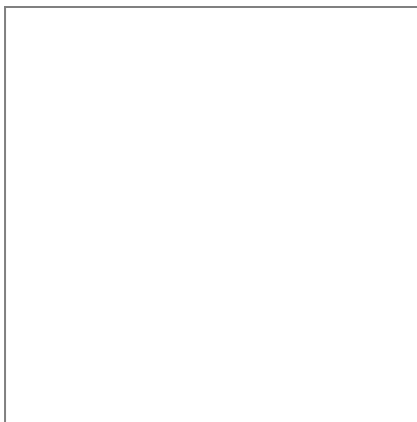
On a Tripod:

The 1/4 inch screw hole at the base of the shoe mount is compatible with tripods that have a 1/4 inch center column. Carefully rotate the microphone clockwise to tighten onto a tripod. For other mounting solutions, such as microphone stands or boom poles, an adapter may be required.

Audio Connections

Camera Output (Red)

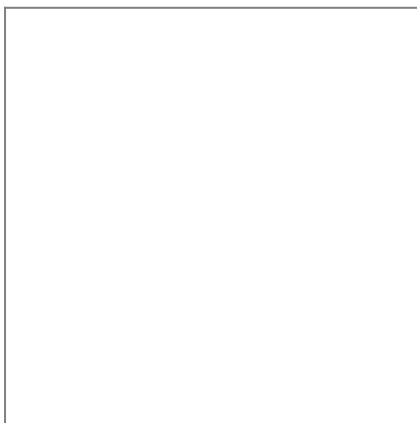
The camera output passes the audio signal for recording a backup track on the camera. Use the 3.5 mm coiled cable to connect the VP83F camera output to the camera's audio input.



Headphone Output (Black)

Connect a pair of headphones to the headphone output for monitoring recordings and listening during playback.

Important: Never use the microphone gain to adjust the headphone volume, as this may result in poor signal quality or distortion.



Control Panel

① Menu Display

Displays menu information and settings.

② Power Button

Turns the unit on and off.

③ Five-Position Joystick

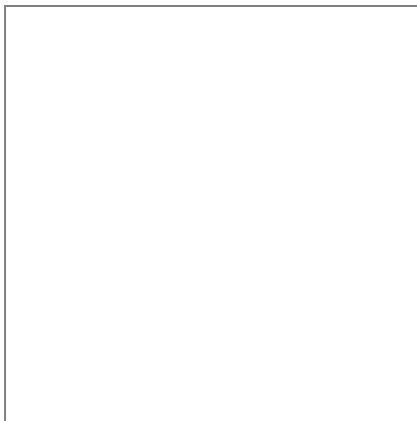
Navigates through the menu. Push the center of the joystick to make a selection.

④ Record Button

- Press to begin and pause recording
- Press and hold to stop recording
- When in the menu, press to return home

⑤ LED Record Indicator

- Solid red = recording
- Flashing red = paused



Home Screen Indicators

① Track information

Displays track title and duration

② Low-cut filter icons

On:



Off: 

③ Remaining recording time

Displays time remaining on the memory card

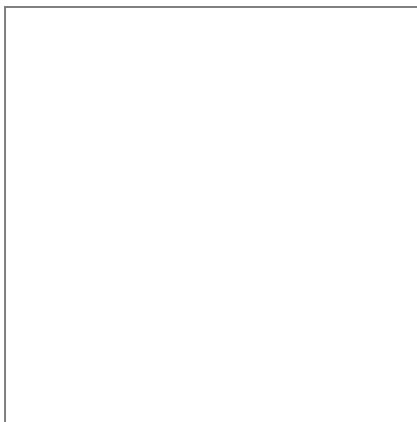
④ Headphone volume

⑤ Battery meter

⑥ Audio meter (Gain)

Displays microphone signal level, with range indicator for suggested peak levels

⑦ Microphone gain value



Quick adjustments from the home screen

The following settings are adjustable when highlighted in the homescreen:

- Headphone volume
- Microphone gain
- Low-cut filter

Press the joystick left or right to highlight an icon for adjustment, and use up/down to change the value.

Menu Navigation

Open menu: Press the joystick to the right to open the main menu and to proceed into submenu screens.

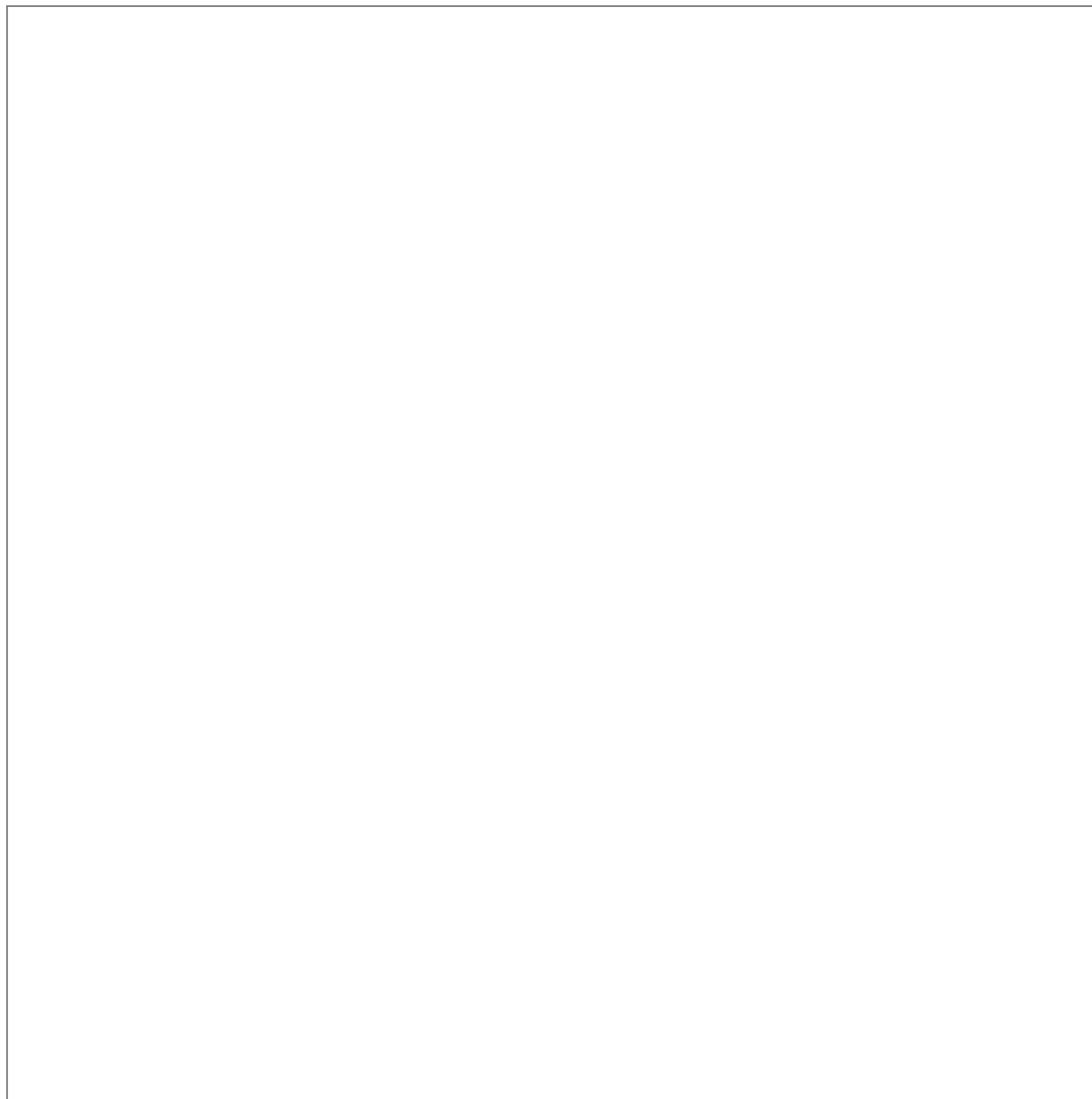
Return to previous screen / select homescreen icons: Press the joystick to the left to back out of the menu. In the home-screen, pushing left will highlight the gain, headphone volume, or low-cut filter and allow them to be adjusted.

Enter: Press the joystick center button.

Scroll / adjust parameters: Press the joystick up or down to scroll through menu items, or to change parameters when selected.

Audio Path

The following diagram shows how audio flows through the device:



Important: Follow the directions on setting the gain for the best signal-to-noise performance. Since it is first in the signal path, the gain affects everything following it. The gain should never be used to boost or attenuate the headphone signal; use the headphone volume to adjust monitoring levels. The headphone and camera output level adjustments occur after the signal has reached the recording section of the device, and should not be used to compensate if the gain setting is too low or is clipping.

Format The Memory Card Before Use

Format the memory card in the device prior to first use for best recording performance. Formatting the card after tracks have been exported is recommended.

To format the card, enter the menu and select UTILITIES > SD CARD > FORMAT CARD.

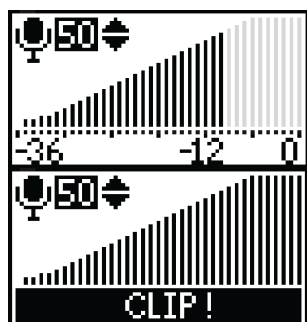


Adjusting Microphone Gain

In order to capture the highest quality audio signal, the microphone gain must be set at the appropriate level. Press the joystick up or down to adjust levels in the MIC GAIN screen in the menu, or from the home screen when the mic gain icon is highlighted. Use the following guidelines to achieve the best results:

- Adjust the gain to correspond to the highest anticipated sound level. The loudest sounds should peak between -12 dB and -6 dB.
- Setting the gain too low will result in more noise in the recording. If set too high, the signal will clip and become distorted. The audio meter will indicate that the signal is clipping when the level reaches the highest bar.

Tip: For higher resolution metering, adjust the gain in the MIC GAIN screen to see more precisely where the signal is peaking.



Headphone and Camera Output Volume

Headphone Volume: Accessible in the menu by selecting HEADPHONE, or in the playback, recording, and home screens by selecting the headphone icon and pressing the joystick up or down.

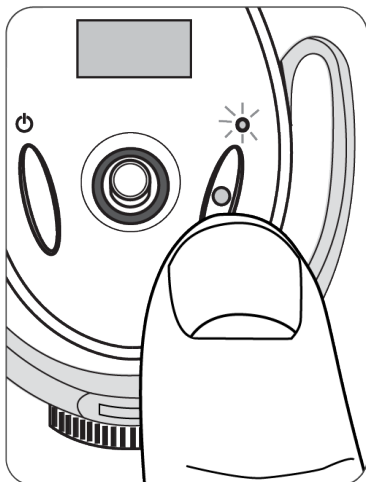
Camera Output Volume: Accessible in the menu by selecting UTILITIES > CAMERA OUT. Level is selectable (LOW, MEDIUM, or HIGH) to accommodate different camera preamp sensitivities.

Note: Always set the gain to the appropriate level prior to adjusting the headphone or camera output volume.

Low-Cut Filter

Rolls off low frequencies 170 Hz and below (12 dB per octave) in order to reduce low frequency rumble caused by camera handling and other environmental factors. A custom Rycote® Windjammer (A83-FUR) can be used to further reduce wind noise.

Recording Audio



Record: Press the record button to begin recording. The LED indicator illuminates while recording. Pressing record always creates a new track, unless resuming a paused recording.

Pause: Press the record button to pause the recording. The LED flashes while recording is paused. Press record again to resume.

Stop: Press and hold the record button (2 seconds).

Adjusting Settings While Recording

If necessary, audio settings (**Microphone gain**, **Headphone volume**, and **Low-cut filter**) can be adjusted while recording to compensate for unexpected changes, such as a volume increase that results in clipping. Press the joystick to the left to highlight an item, and then press the joystick up or down to change the value. For best results, configure all settings prior to recording.






Note: The menu is not accessible during recording.

Managing Tracks

Track Playback

To listen to recorded tracks, select FILE LIST from the menu screen. Highlight a track and select PLAYBACK to open it.

Playback Controls

Function		Joystick action
	Previous / next track	Press left / right
	Rewind / fast forward	Hold left / right
	Play / pause	Center push
	Return to track list	Press left while paused
	Return to home screen	Press record button

Deleting Tracks

To delete audio tracks, select FILE LIST from the menu screen and open the track you would like to delete, and select DELETE.

Note: Once tracks have been deleted, they cannot be recovered.

Exporting Tracks

To export .WAV audio files, turn the device off and remove the MicroSD memory card. Transfer files to a computer using an SD card adapter or USB adapter. All imported tracks include a title and timestamp.

Tip: For best performance, format the memory card in the device every time after exporting tracks.

Utilities

SD CARD

Remaining recording time is displayed and the following settings can be accessed:

FORMAT CARD

Formatting the microSD card will **erase all data** and should be done before first use.

MAX FILE TIME

Adjusting the maximum file size determines the partitioning of longer tracks. If the maximum file size is set to 1GB (2 hours), a 6 hour recording will be divided into three separate WAV files.

SET FILE NAME

The file name is set to TRACK by default, but can be changed by selecting a character and scrolling up or down to change it. This feature is useful for identifying different sessions or projects.

BACKLIGHT

Adjusts the duration that the LED screen backlight will remain on.

TIME/DATE

Set the time and date so that tracks include a timestamp when exported.

BATTERY TYPE

Select the appropriate battery type for the meter to read accurately.

CAMERA OUT

Adjusts the volume of the audio signal that is sent to the camera.

HIGH (0 dB)

For cameras with a low-gain preamp.

MEDIUM (-20 dB)

Appropriate for most cameras.

LOW (-40 dB)

For cameras with a sensitive preamp.

CONTRAST

Adjust the contrast value to change the ratio of light to dark on the display screen.

RESTORE DEFAULTS

Restores all default factory settings except for the time and date.

DEVICE DATA

Displays technical device information.

UPDATE FW

Enables firmware updates from the memory card. Having the latest firmware installed on the unit is recommended. Please visit www.shure.com for details.

Battery Life

Use the following information for reference when considering which battery type to use with the device. Actual runtime may vary depending on the brand of memory card and batteries, output volume levels, and the type of headphones used.

Battery Type (AA)	Battery Runtime (Hours)	
	When Recording	Passing Audio Only
Alkaline	9.5	10.5
NiMH	12	15
Lithium	17.5	22.5

Note: The battery icon will begin flashing when the battery has approximately 15 minutes of run time remaining.

Memory Card Requirements

The VP83F requires a MicroSD card rated class 6 or higher. Always format new memory cards in the device prior to recording. Shure recommends using name brand memory cards, as lower quality or slower memory cards may have a negative effect on performance.

Note: If using a UHS-1 microSDHC memory card, format the card from a computer to FAT32 file system, and the allocation size to DEFAULT.

Memory Card Recording Capacity

Memory	Approximate Recording Time
4 GB	8 Hours
8 GB	16 Hours
16 GB	32 Hours
32 GB (maximum card size)	64 Hours

Troubleshooting

Issue	Resolution
Unit does not turn on	Replace batteries and make sure that the batteries are installed correctly.
Sound is distorted	Microphone gain may be set too high, resulting in clipping. Try lowering the gain. If gain appears to be adjusted properly, try lowering the headphone output volume or using a different pair of headphones. Make sure headphone and/or camera outputs are plugged in all the way.
No sound	If the audio meter doesn't register a signal, try increasing the microphone gain. If the audio meter indicates a signal, check the headphone output level and the headphone connection. If gain is adjusted correctly with the headphone output turned up and there is still no sound, try a different pair of headphones.
Sound is not being recorded	Ensure the MicroSD memory card is installed correctly. Try formatting the card in the device and ensure the memory card meets listed requirements. Use a new memory card if problem persists.
Wind noise	Use A83-FUR windscreen and engage low-cut filter
Audio dropouts	Use a memory card with a higher speed class rating or a different brand
Notification screen: SD CARD ERROR	Format the memory card or try a new card that meets the requirements. Be sure to export any tracks before formatting the card.
Notification screen: SET TIME/DATE?	Set the time and date and keep the device on for 30 minutes upon initial power-up to charge the internal clock (RTC) battery. Note: The RTC battery may lose the ability to hold a charge after approximately ten years, in which case the time and date settings will not be saved. This does not affect any other functionality of the device.
Notification screen: BATTERY LOW CANNOT FORMAT	Formatting the memory card and updating the firmware cannot be done when the battery is low. To perform these functions, install a new battery.

Issue	Resolution
BATTERY LOW CANNOT UP-DATE	
Notification screen: WAV FILE ERROR	The .wav file may be corrupted, or the file format is not supported. Files ripped from a CD that include metadata or files with a sampling rate greater than 48 KHz will not play in the VP83F. Export .wav files to a computer if they are not backed up and remove them from the memory card.

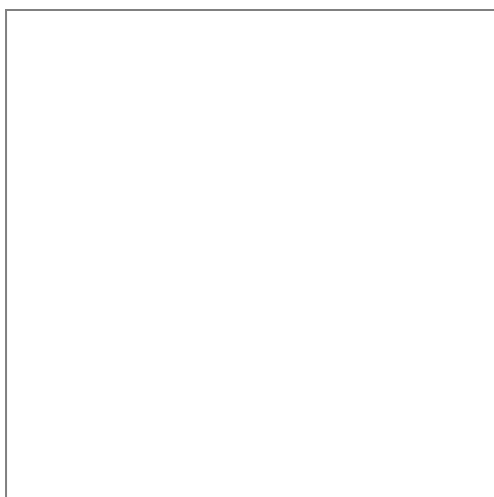
Accessories and Replacement Parts

Replacement foam windscreen	A83W
Rycote® Windjammer™	A83-FUR

Camera and Headphone Output Pin Configuration

The camera and headphone outputs send identical, mono audio signals on the tip and ring portions of the connector. Headphones and stereo inputs, which typically use the tip as the left channel and the ring as the right channel, receive the same audio on both channels.

Tip	Ring	Sleeve
Audio (mono 1)	Audio (mono 2)	Ground



Specifications

Type

Electret Condenser

Polar Pattern

Supercardioid/Lobar

Recording Format

WAV, 24-bit, 48 kHz Sampling Rate

Frequency Response

50 to 20,000 Hz

Sensitivity

open circuit voltage, @ 1 kHz, typical

0 dB Gain	-35.8 dBV/Pa ^[1] (16.2 mV)
+30 dB Gain	-5.8 dBV/Pa ^[1] (512.9 mV)

Maximum SPL

0 dB Gain Setting, 1 kHz at 1% THD ^[2], 1000 Ω load

129.2 dB SPL

Signal-to-Noise Ratio ^[3]

+30 dB Gain Setting

78.4 dB

Self Noise

equivalent SPL, A-weighted, typical, +30 dB Gain Setting

15.6 dB SPL-A

Environmental Conditions

Operating Temperature Range	-18°C (0°F) to 60°C (145°F)
Storage Temperature Range	-29°C (-20°F) to 74°C (165°F)
Operating Relative Humidity	0 to 95%

Housing

Cast aluminum

Power Requirements

2 AA batteries (Alkaline, NiMH, Rechargeable Li-Ion)

Weight

215 g (7.6 oz.)

^[1]1 Pa=94 dB SPL ^[2]

THD of microphone preamplifier when applied input signal level is equivalent to cartridge output at specified SPL
[3]

S/N ratio is the difference between 94 dB SPL and equivalent SPL of self noise, A-weighted

Connector Type

3.5 mm (1/8") dual mono, Unbalanced

Output Impedance

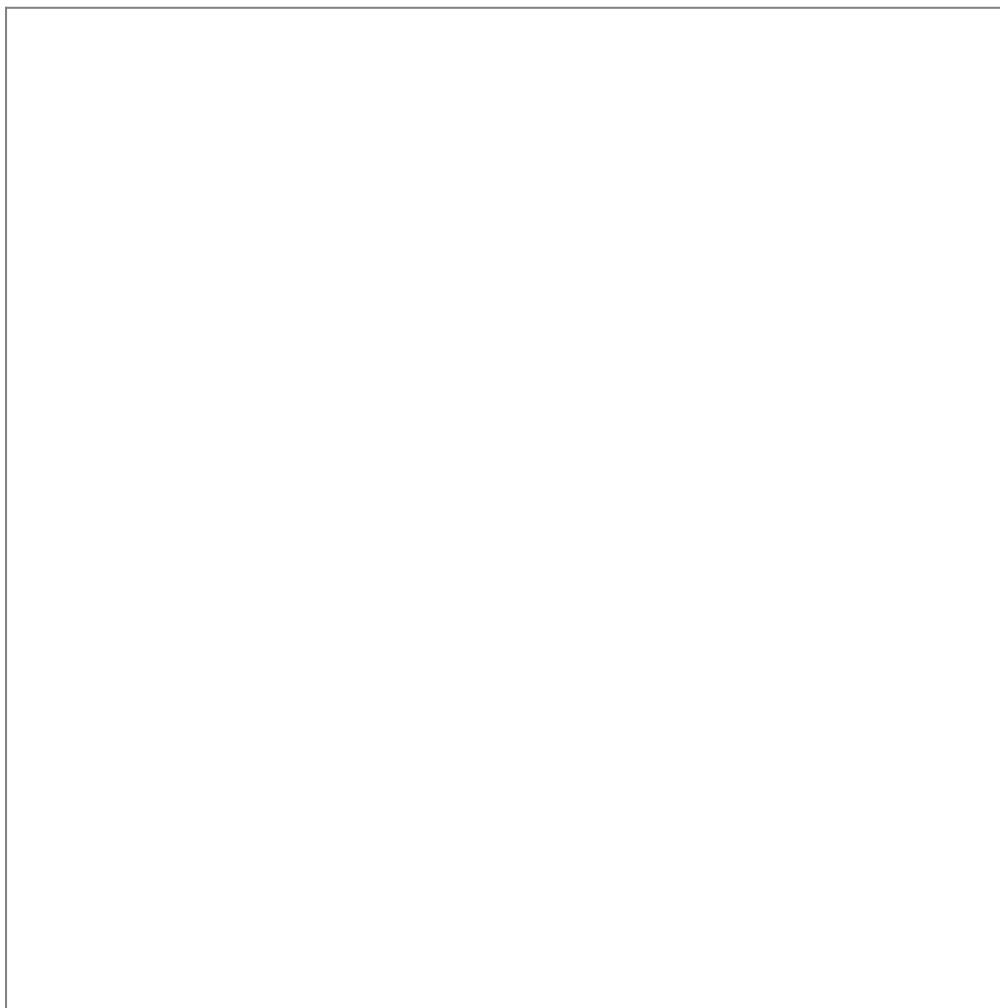
47 Ω

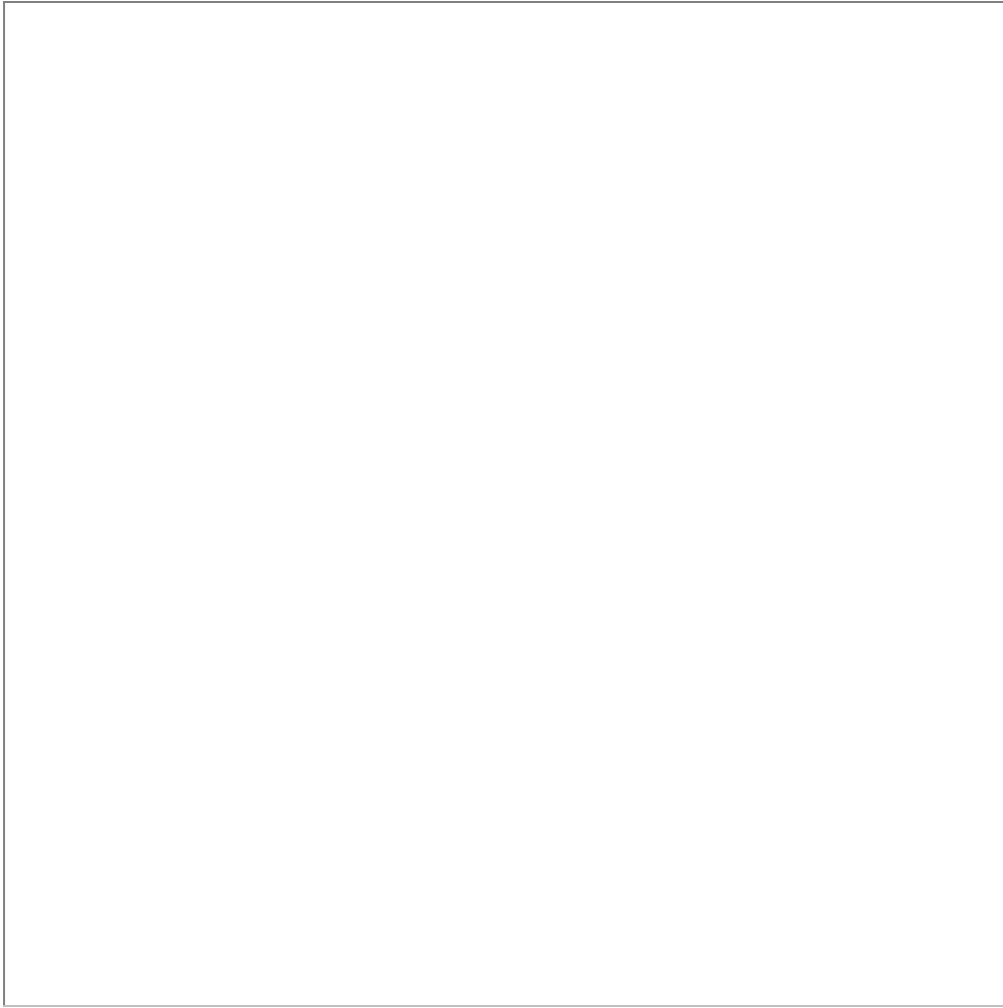
Connector Type

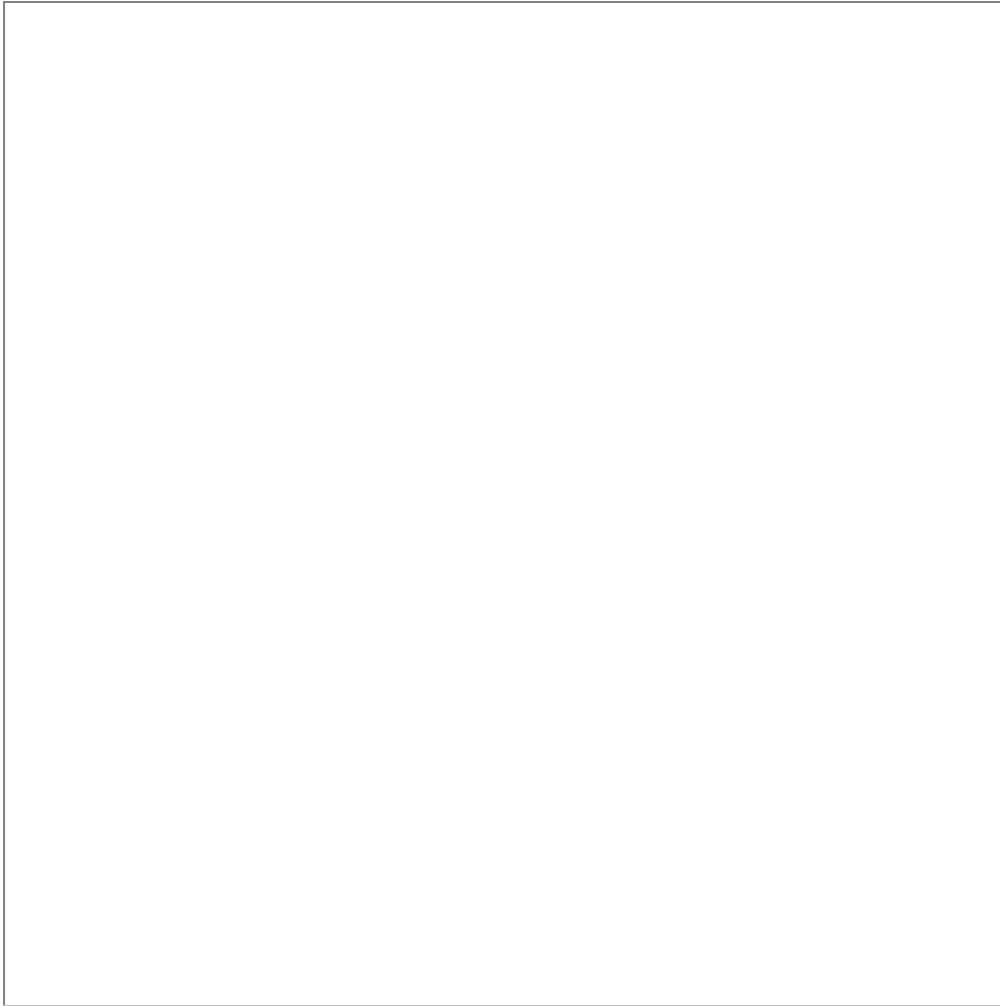
3.5 mm (1/8") dual mono

Output Impedance

5 Ω







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.

Certifications

Following the European Union rule General Product Safety Directive 2001/95/EC: By the inherent nature of its design, this product does not present a safety risk to the user.

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 Shure Incorporated or any of its European representatives. For contact information please visit www.shure.com

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

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