

# Panasonic<sup>®</sup>

**Operating Instructions / Owner's Manual**

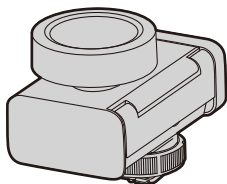
**<Complete Guide>**

Digital Shotgun Microphone

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Model No. **DMW-DMS1**

**LUMIX**



Please read these instructions carefully before using this product.

DVQP3481ZA  
F0226TN0

# About Operating Instructions

This document, "Operating Instructions / Owner's Manual <Complete Guide>", includes detailed explanations of the functions and operations of the unit.

- The external design and specifications of this product, as described in this document, may differ from the actual product.
- Illustrations used in this document may differ from the actual product and the actual images displayed on the product.
- Images used in this document are sample pictures used to explain the functions and effects.

## ❖ Symbols Used in This Document

### Notification classification symbols

In this document, notifications are classified and described using the following symbols:



: Notifications and supplementary items regarding specifications



: Related functions and information

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# Introduction

This chapter describes information you should know before starting.

- [Precautions: 5](#)
- [Standard Accessories: 7](#)
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## Precautions

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This unit is a Digital shotgun microphone for Panasonic digital cameras. By using in combination with a digital camera, it is possible to make superior-quality audio recordings, high-resolution audio recordings, and backup audio recordings (4ch audio recording).

Furthermore, by using in combination with a digital camera that supports float recording, it is also possible to make 32-bit float recordings capable of high-quality audio recordings without having to make settings for the recording level.

### ❖ **Compatible models (As of February 2026)**

#### **Compatible models:**

**DC-S1M2\*, DC-S1M2ES\*, DC-S1RM2\*, DC-S5M2\*, DC-S5M2X\***

\* Use with the firmware on the Digital Camera updated to the most recent version.

DC-S5M2/DC-S5M2X models do not support float audio recording or backup audio recording (4ch audio recording).

- For the latest information on the firmware or to download/update the firmware, visit the following support site:  
<https://panasonic.jp/support/global/cs/dsc/download/index4.html>  
(English only)
- For the latest information on compatible devices, see the operating instructions, catalogue or website of the digital camera.

## ❖ Handling the unit

**Do not subject the unit to strong vibration or impact. Those actions may result in malfunctions and failure.**

**Sand and dirt may cause the unit to malfunction. When using the unit in an environment such as a beach, take steps to protect it from sand and dirt.**

**When using the unit on rainy days or on a beach, take care to keep the unit dry.**

**This unit is neither dust-proof nor splash-resistant. If by any chance water droplets, etc. are splashed on the unit, wipe them off with a dry cloth. If the unit fails to function correctly, consult your dealer or Panasonic.**

**Remove dirt and dust from the microphone condenser if any gets on it. Dirt and dust may have an adverse effect on microphone performance.**

**Please also read the manual of your digital camera.**

- Please be advised that Panasonic is not liable for any damage directly or indirectly caused by use or malfunction of this product.
- The external design and specifications of this product, as described in this document, may differ from the actual product due to improvements made.

## Standard Accessories

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Check the supplied items. (Product numbers correct as of February 2026.)

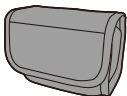
### Wind screen

DVZE1067Z



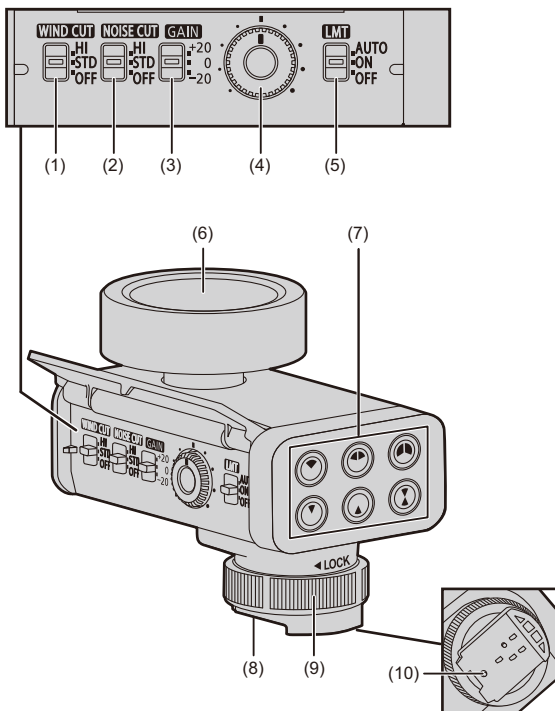
### Pouch







DVPY1026Z



- Consult the dealer or Panasonic if you lose the supplied accessories. (You can purchase the accessories separately.)
- Fibers from the wind screen or pouch can become attached to the unit. Before use, if fibers are attached, remove them with a blower, etc.

## Names of Parts



- (1) WIND CUT switch
- (2) NOISE CUT switch
- (3) GAIN switch
- (4) AUDIO LEVEL dial
- (5) LMT switch
- (6) Microphone condenser
- (7) Directivity buttons
  - : Forward directionality cardioid
  - : Stereo
  - : Wide stereo
  - : Forward directionality supercardioid
  - : Rearward directionality supercardioid
  - : Bidirectional supercardioid
- (8) Hot shoe mount
- (9) Lock ring
- (10) Lock pin

# Getting Started

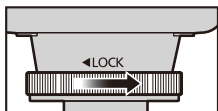
Before recording, read this chapter to prepare.

- [Attaching to the Camera: 11](#)
- [Attaching the Wind Screen: 13](#)

## Attaching to the Camera

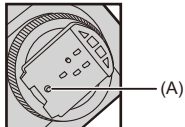
Confirm that the camera is off. Attaching or removing the microphone while the camera is on may result in malfunction.

- 1 Turn the lock ring in the direction opposite to [◀ LOCK] until it stops.



- Check that the lock pin is retracted.

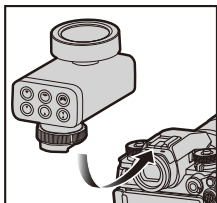
Do not attempt to attach the microphone to a digital camera while the lock pin is protruding. This may cause malfunction.



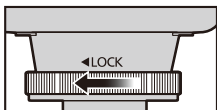
(A) Lock pin

- Do not apply more force than necessary to the lock ring.
- Do not touch the contacts with your fingers, fittings, etc.

- 2** Slide the microphone into the hot shoe until it clicks securely into place.



- 3** Turn the lock ring in the [◀ LOCK] direction until it stops.



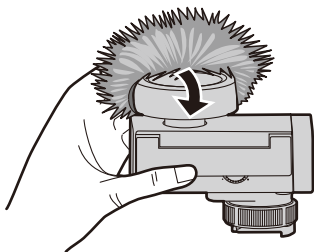
- When removing the microphone, turn the lock ring in the direction opposite to [◀ LOCK] and remove the microphone.

## Attaching the Wind Screen

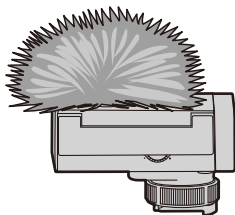
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Attach the wind screen if you want to cut out the sound of wind. It is effective in reducing the noise of wind.

- 1 Catch one side of the wind screen under the microphone condenser and hold in place with a finger, then draw the other side of the wind screen over the microphone condenser to fit it.**

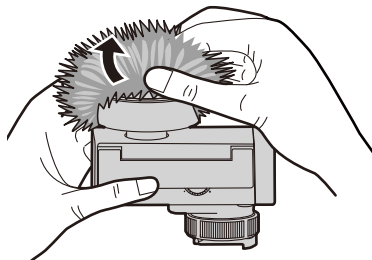


- 2 Check that the fitting part of the wind screen is completely fitted under the microphone condenser.**



## ❖ Removing the Wind Screen

With the microphone itself secured, peel the wind screen off from the side of the microphone condenser.



- Do not pull on the fluff of the wind screen to remove the wind screen.



- Refer to "Cautions for Use" for information about the handling and care of the wind screen. (→ [The Wind Screen: 33](#), [Cleaning: 34](#))

# Using the Digital Shotgun Microphone

This unit can be used by turning the power of the digital camera [ON] while this unit is mounted on the digital camera.

- The operational sound of the switch operation may be recorded or the sound may get interrupted, such as when the switch is operated during the recording of a motion picture.
- [Using the Backup Audio Recording Function: 16](#)
- [Setting Input Gain: 18](#)
- [Setting the Recording Level: 19](#)
- [Reducing the Noise Caused by Wind: 21](#)
- [Reducing the Noise That Occurs Around You: 22](#)
- [Switching Directionality: 23](#)

## Using the Backup Audio Recording Function

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When using digital cameras compatible with 4ch audio recordings, you can make backup audio recordings to CH3 and CH4.

Refer to the Operating Instructions for the digital camera for details.

### Digital cameras compatible with 4ch audio recording (As of February 2026)

DC-S1M2, DC-S1M2ES, DC-S1RM2

The following two backup audio recording modes can be selected with the menus on the digital camera.

<b>[DMS1 BACKUP1]</b>	The following types of audio are recorded to CH3/CH4 irrespective of the noise reduction setting and directional mode. This is recommended when you want to pick up ambient sounds. <ul style="list-style-type: none"><li>• CH3: Records with directionality across all the full range</li><li>• CH4: Records with directionality across all the full range (records sounds 20 dB smaller than CH3)</li></ul>
<b>[DMS1 BACKUP2]</b>	Records sounds 20 dB smaller than the audio recorded with CH1 and CH2. <ul style="list-style-type: none"><li>• CH3: Records with the same directionality as CH1 (records sounds 20 dB smaller)</li><li>• CH4: Records with the same directionality as CH2 (records sounds 20 dB smaller)</li></ul>

CH1 and CH2 record according to the directionality of the microphone. (→ [Switching Directionality: 23](#))

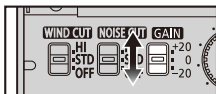


- Backup audio recording is not a means of preventing the distortion that occurs when audio is input at high volumes.
- When [DMS1 BACKUP1] is selected, the WIND CUT and NOISE CUT settings for CH3/CH4 are not used.

## Setting Input Gain

You can change the input gain with the GAIN switch.

**Set the input gain with the GAIN switch.**



[+20]	+20 dB
[0]	0 dB (Default setting, standard level)
[-20]	-20 dB



- Input gain cannot be changed during 32-bit float recording.

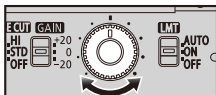
## Setting the Recording Level

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Set the recording level for audio.

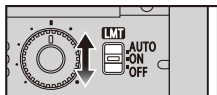
**Turn the AUDIO LEVEL dial to set the recording level (volume).**

- Setting the level while checking with headphones connected to the digital camera or the digital camera microphone level display is recommended.
- Sound is muted if you turn the dial all the way to the left.



## ❖ Setting the Limiter

Set the limiter with the LMT switch.



LMT switch	Limiter	Sound recording level setting	Standard level
[AUTO]	Enabled	Automatic	74 dBSPL
[ON]	Enabled	Manual	94 dBSPL
[OFF]	Disabled	Manual	94 dBSPL

- When the limiter is enabled, it makes sure the volume does not exceed a certain level, and this prevents distortion.
- By setting the recording level to automatic, recording level and input gain will be fixed.



- The recording level of the built-in microphone of the digital camera and the [MIC] terminal cannot be set.
- Recording levels other than mute cannot be changed during 32-bit float recording.
- The limiter setting is not used during 32-bit float audio recording.
- The recording volume may vary if you switch between float format and linear format.

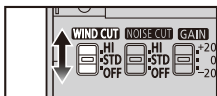
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## Reducing the Noise Caused by Wind

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This reduces the noise that occurs when wind hits the microphone. Set to [OFF] if there is a noticeable change in sound quality.

**Set the WIND CUT switch to [HI] or [STD].**



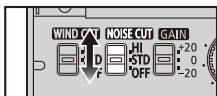
<b>[HI]</b>	Reduces wind noise by reducing low-pitched sounds.
<b>[STD]</b>	Reduces wind noise while maintaining sound quality.
<b>[OFF]</b>	Disables the function.

## Reducing the Noise That Occurs Around You

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This reduces noisy ambient sounds and harsh noises. Set to [OFF] if there is a noticeable change in sound quality.

**Set the NOISE CUT switch to [HI] or [STD].**



<b>[HI]</b>	Reduces noise by increasing the noise reduction effect.
<b>[STD]</b>	Reduces noise while maintaining sound quality.
<b>[OFF]</b>	Disables the function.

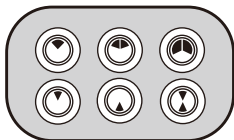
## Switching Directionality





- [Frequency responses and directionality pattern diagrams: 25](#)



You can switch directionality to match the audio you want to record and the situation.

### Press the directivity button.

- The directivity button you set lights.



 <b>Forward directionality cardioid</b>	Records sound naturally while keeping a certain amount of ambient sound. <ul style="list-style-type: none"><li>• Recommended for outdoor recording, conversations, etc.</li></ul>
 <b>Stereo</b>	Places emphasis on the forward direction for recordings that have a sense of presence. <ul style="list-style-type: none"><li>• Recommended for live street performances, studio recordings, etc.</li></ul>
 <b>Wide stereo</b>	Places emphasis on the breadth of the space for recordings that have a sense of presence. <ul style="list-style-type: none"><li>• Recommended for public presentations, sports events, etc.</li></ul>
 <b>Forward directionality supercardioid</b>	Clearly records the sounds from in front while suppressing sounds from the sides and the rear. <ul style="list-style-type: none"><li>• Recommended for places with loud noises and inside where there is a lot of reverberation.</li></ul>

 <b>Rearward directionality supercardioid</b>	Clearly records the sounds from the rear while suppressing sounds from the sides and the front. <ul style="list-style-type: none"><li>• Recommended for occasions when you are narrating as you are recording, etc.</li></ul>
 <b>Bidirectional supercardioid</b>	Clearly records the sounds from in front and the rear while suppressing sounds from the sides. <ul style="list-style-type: none"><li>• Recommended for recording interviews, etc., when there is interaction between the photographer and the subject.</li></ul>



- The brightness of the directivity buttons can be changed with the menus on the camera. Refer to the Operating Instructions for the digital camera for details.

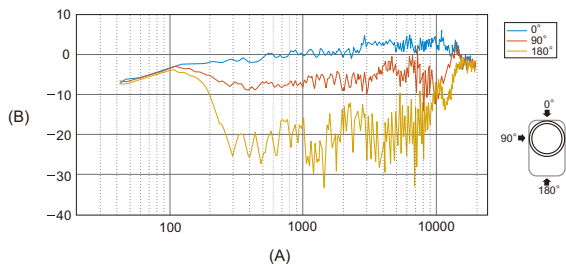
## Frequency responses and directionality pattern diagrams

### ❖ Frequency Responses

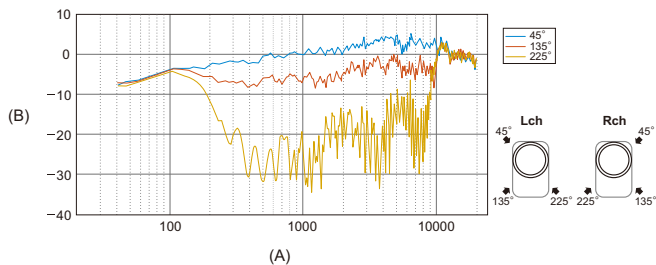
(A) Frequency (Hz)

(B) Response (dB)

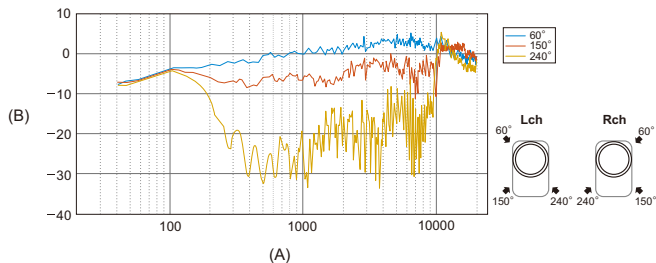
#### • Set to “Forward directionality cardioid”



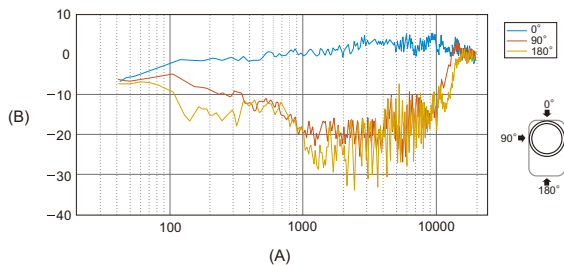
#### • Set to “Stereo”



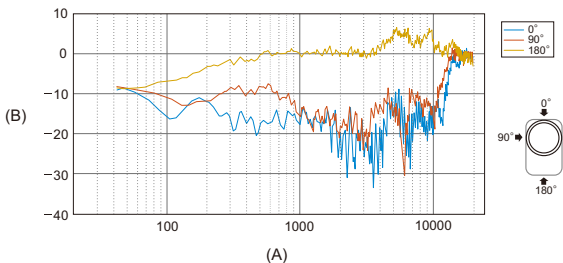
• Set to “Wide stereo”



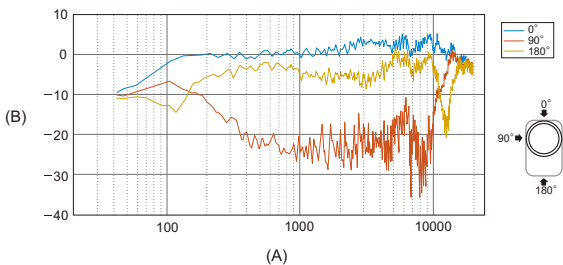
• Set to “Forward directionality supercardioid”



• Set to “Rearward directionality supercardioid”



• Set to “Bidirectional supercardioid”

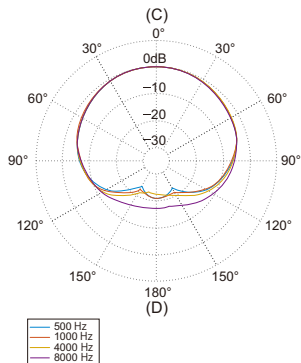


## ❖ Directionality Pattern

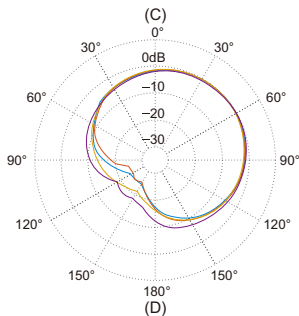
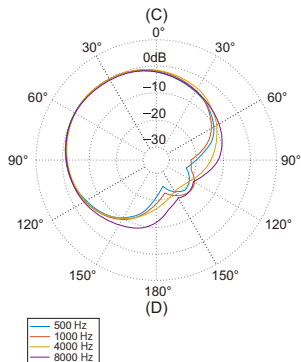
(C) Front

(D) Rear

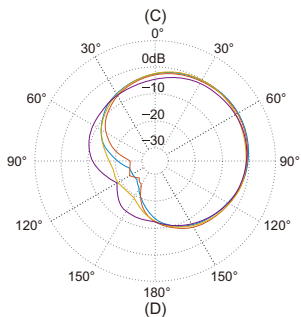
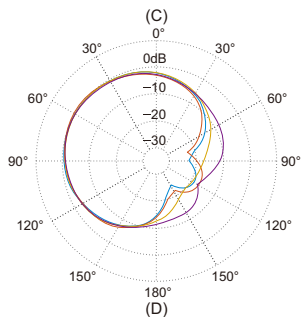
- Set to “Forward directionality cardioid”



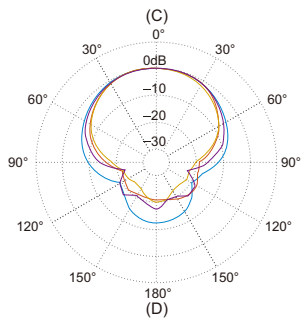
- Set to “Stereo”



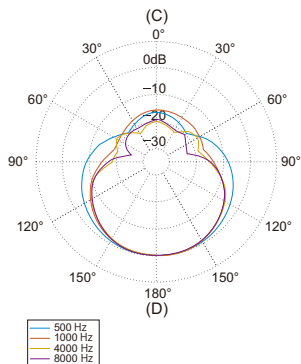
• Set to “Wide stereo”



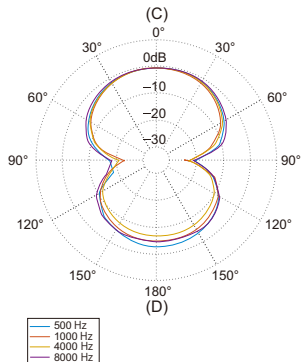
• Set to “Forward directionality supercardioid”



• Set to “Rearward directionality supercardioid”



• Set to “Bidirectional supercardioid”



# Materials

This chapter describes procedures to try when there is a problem and provides information about the specifications for your reference.

- [Cautions for Use: 32](#)
- [Specifications: 35](#)

## Cautions for Use

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### ❖ About the unit

#### **Do not use this unit near radio transmitters or high-voltage lines.**

- Noise may be present in images and sound recorded near radio transmitters or high-voltage lines. Perform recording in locations away from them.

#### **Keep the unit away from insecticide sprays and other volatile substances.**

- Exposure to such substances may cause damage to the external case and the text and symbols printed on the unit.

#### **Do not leave the unit in contact with any items made of rubber or PVC for prolonged periods of time.**

#### **Do not carry by this microphone when it is attached to the digital camera.**

- Under no circumstances should the unit be used or stored in any of the following locations since doing so may cause trouble in operation or malfunctioning:
  - In direct sunlight or on a beach in summer
  - In locations with high temperatures and humidity levels or where changes in temperature and humidity are acute
  - In locations with high concentrations of sand, dust or dirt
  - Where there is fire
  - Near heaters, air conditioners or humidifiers
  - Where water may make the unit wet
  - Where there is vibration
  - Inside a vehicle

- Do not drop the unit, knock it into other objects or subject it to any other kind of strong impact or shock.
- When recording a motion picture, the digital camera or lens sounds or other operating noise may be recorded. If the sound from the lens is particularly bothering, set the camera to manual focus during use.
- If the terminals are dirty they can cause faulty connections. Wipe clean with a soft dry cloth before connecting.
- Do not attach or remove the microphone with the power of the digital camera turned [ON].
- If you start video recording immediately after turning on the digital camera, a period with no sound may be recorded at the beginning.
- Before use, check that the microphone is recording normally.
- Do not disassemble or modify this unit.

## ❖ The Wind Screen

- Be sure to hold the microphone body firmly while you are attaching or removing the wind screen.  
The joint of the microphone condenser is a floating-style construction, so this means it can be unstable.
- The wind screen is not waterproof so take care that it does not get wet when it is raining or while you are at the beach.
- Contact noises may be recorded if you touch the fluff of the wind screen with your fingers, etc., while you are recording videos.
- Do not pull on the fibers of the wind screen. This may cause the fibers to fall out.
- When not using the wind screen for a long time, remove it from the microphone body and store it.
- Check that fibers from the wind screen are not attached to the lens or camera body. Before use, if fibers are attached, remove them with a blower, etc.
- Keep the wind screen out of reach of children to prevent swallowing.

## ❖ Cleaning

### **When cleaning, wipe the unit with a dry soft cloth.**

- When the unit is soiled badly, it can be cleaned by wiping the dirt off with a wrung wet cloth, and then with a dry cloth.
- Do not use solvents such as benzine, thinner, alcohol, kitchen detergents, etc., to clean the unit, as these may damage the external case and the text and symbols printed on the unit.
- When using a chemical cloth, be sure to follow the accompanying instructions.
- If the wind screen is wet, remove it from the microphone body and hang it out to dry in the shade.
- If the wind screen is dirty, lightly wash it with water and hang it out to dry in the shade.

# Specifications

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The specifications are subject to change for performance enhancement.

## Input

- **Microphone type**

4ch Electret Condenser Microphone Array

- **Directional modes**

Forward directionality cardioid, forward directionality supercardioid, rearward directionality supercardioid, bidirectional supercardioid, stereo (90°), wide stereo (120°)

- **WIND CUT**

OFF, STD, HI

- **NOISE CUT**

OFF, STD, HI

- **GAIN**

-20 dB, 0 dB, +20 dB (fixed to 0 dB when float recording)

- **AUDIO LEVEL**

-18 dB to +12 dB (fixed to 0 dB when float recording)

- **LMT**

OFF, ON, AUTO (disabled when float recording)

## Audio characteristics<sup>\*1</sup>

- **Sensitivity**  
-12 dBFS (0 dB=1 V/Pa, 1 kHz)
- **Frequency response**  
40 Hz to 20 kHz
- **Maximum input sound pressure level**  
122 dB SPL or more
- **SN ratio**  
77 dB or more
- **Dynamic range**  
105 dB or more

\*1 Under the following conditions:

Forward directionality cardioid mode, WIND CUT=STD, NOISE CUT=STD,  
48 kHz/32 bit floating

## Output

- **Sampling frequency/bit length/number of channels**

Linear

48 kHz/24 bit/2ch, 96 kHz/24 bit/2ch

48 kHz/24 bit/4ch<sup>\*2</sup>

Floating

48 kHz/32 bit/2ch, 96 kHz/32 bit/2ch

48 kHz/32 bit/4ch<sup>\*2</sup>

\*2 When backup audio recording of CH3/CH4 is performed

### Backup audio recording

- **Backup 1**

CH3: All directions, CH4: All directions (-20 dB)

- **Backup 2**

CH3: Same directionality as CH1 (-20 dB), CH4: Same directionality as CH2 (-20 dB)

### External dimensions

Approx. 45.0 mm (W)×63.7 mm (H)×73.7 mm (D)  
[1.77" (W)×2.51" (H)×2.90" (D)]  
(excluding the projecting parts)

### Mass (weight)

Approx. 100 g/0.22 lb

### Operating temperature

-10 °C to 40 °C (14 °F to 104 °F)

### Operating humidity

10 %RH to 80 %RH

The symbols on this product (including the accessories) represent the following:

=== DC
--------