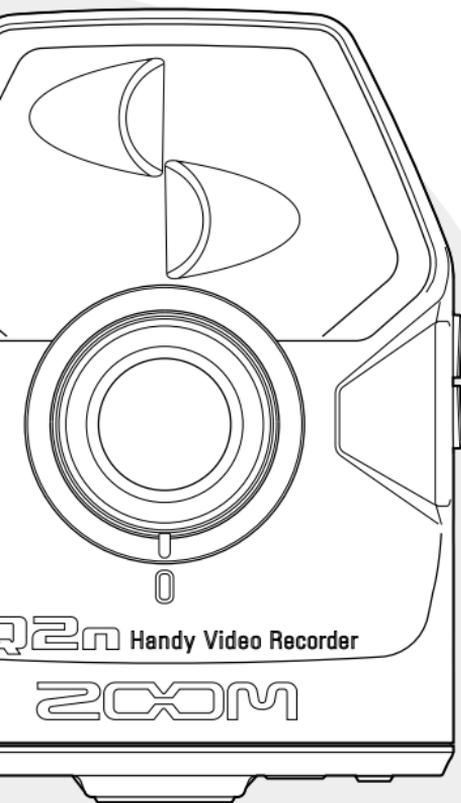


**ZOOM**®



# Q2n

Handy Video Recorder

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## User Guide

Safety and Operation  
Precautions must be read  
before using this unit.

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Q2n

## Contents

Safety Precautions .....	3	■ Mic that supports plug-in power ...	16
Usage Precautions .....	4	Headphones/line and HDMI output ...	17
Parts and their functions .....	5	■ Headphones/line output .....	17
■ Front .....	5	■ HDMI output .....	17
■ Back .....	5	USB connections .....	18
■ Sides .....	6	■ Connecting by USB .....	18
■ Bottom .....	6	■ Using as a web camera (computer)	18
■ Mic overview .....	7	.....	18
Turning the power on and off .....	8	■ Using as a card reader (computer/	19
■ Turning the power on .....	8	iOS device) .....	19
■ Turning the power off .....	8	■ Using as a USB mic (computer/	19
Preparing for use .....	9	iOS device) .....	19
■ Formatting SD cards .....	9	Updating the firmware .....	20
■ Setting the date and time .....	9	Responding to Alert Messages .....	21
Adjusting recording levels .....	10	■ Alert Messages that appear during	21
Recording .....	11	startup .....	21
■ Recording operations .....	11	■ Alert Message that appears when	21
■ Using the Recording Screen .....	12	batteries are used .....	21
■ Setting the recording format .....	12	■ Alert Messages that appear when	21
Playing recordings .....	14	the Recording Screen is open .....	21
■ Using the Playback Screen .....	14	■ Alert Messages that appear when	21
Deleting files .....	14	the Playback Screen is open .....	21
Making system settings .....	15	Troubleshooting .....	22
■ Using the Setting Screen .....	15	Specifications .....	23
Connections with external input jacks .....	16		
.....	16		

## Safety Precautions

In this User Guide, symbols are used to highlight warnings and cautions that you must read to prevent accidents. The meanings of these symbols are as follows.

 <b>WARNING</b> Something that could cause serious injury or death.	 <b>CAUTION</b> Something that could cause injury or damage to the equipment.
---	---

### Other symbols used

 An action that is mandatory	 An action that is prohibited
---	--

### **WARNING**

#### ■ Operation with batteries

- ❗ Use 2 commercially-available 1.5V AA batteries (alkaline dry cell batteries or nickel metal hydride batteries).
- ❗ Carefully study the warning indications of the batteries before use.
- ❗ Always keep the battery/SD card cover closed during use.

#### ■ Operation using an AC adapter

- ❗ Never use any AC adapter other than a ZOOM AD-17.
- ❗ Always hold the AC adapter itself when disconnecting it from an outlet.

#### ■ Alterations

- ⊘ Do not open the case or modify the product.

### **CAUTION**

#### ■ Product handling

- ❗ Do not drop, bump or apply excessive force to the unit.
- ❗ Be careful not to allow foreign objects or liquids to enter the unit.

#### ■ Battery handling

- ❗ Install batteries with the correct +/- orientations.
- ❗ Use the specified batteries.  
Do not use new and old batteries together.  
Do not use batteries of different brands or types together.
- ❗ Remove the batteries when the unit will not be used for a long time.  
If a leak occurs, thoroughly wipe the battery case and battery terminals to remove the

leaked fluid.

#### ■ Operating environment

- ⊘ Do not use in extremely high or low temperatures.
- ⊘ Do not use near heaters, stoves and other heat sources.
- ⊘ Do not use in very high humidity or where it could be splashed by water.
- ⊘ Do not use in places with frequent vibrations.
- ⊘ Do not use in places with much dust or sand.

#### ■ Volume

- ⊘ Do not use at a loud volume for a long time.

You might need this User Guide in the future. Always keep it in a place where you can access it easily.

## Usage Precautions

### ■ Interference with other electrical equipment

In consideration of safety, the **Q2n** has been designed to minimize its emission of electromagnetic waves and to suppress interference from external electromagnetic waves. However, equipment that is very susceptible to interference or that emits powerful electromagnetic waves could result in interference if placed nearby. If this occurs, place the **Q2n** and the other device farther apart.

With any type of electronic device that uses digital control, including the **Q2n**, electromagnetic interference could cause malfunction, corrupt or destroy data and result in other unexpected trouble. Always use caution.

### ■ Cleaning

Use a soft cloth to clean the exterior of the unit if it becomes dirty. If necessary, use a damp cloth that has been wrung out well to wipe it.

Never use abrasive cleansers, wax or solvents such as alcohol, benzene or paint thinner.

### ■ Breakdown and malfunction

If the unit becomes broken or malfunctions, immediately disconnect the AC adapter, turn the power off and disconnect other cables. Contact the store where you bought the unit or ZOOM customer service with the following information: product model, serial number and specific symptoms of breakdown or malfunction, along with your name, address and telephone number.

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Recording from copyrighted sources, including CDs, records, tapes, live performances, video works and broadcasts, without permission of the copyright holder for any purpose other than personal use is prohibited by law. Zoom Corporation will not assume any responsibility related to infringements of copyrights.

### FCC regulation warning (for U.S.A.)

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 receiver.
- Connect the equipment into 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.

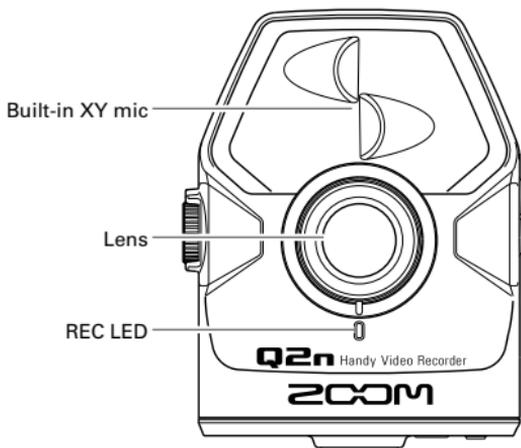
### For EU Countries



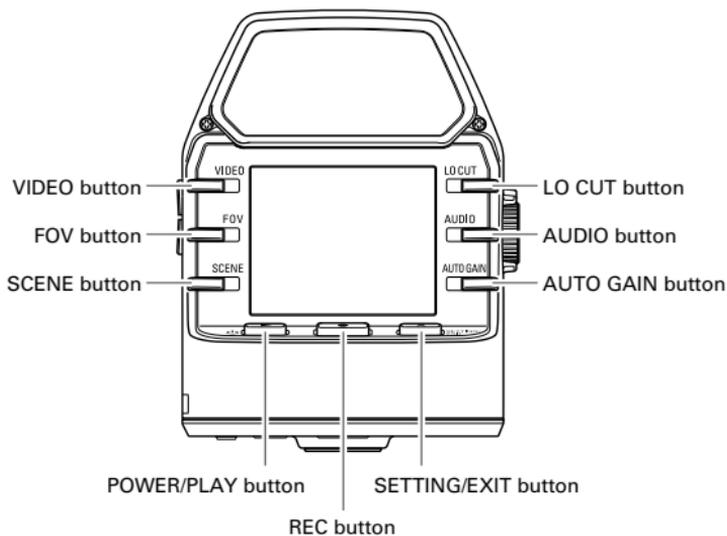
Declaration of Conformity

## Parts and their functions

### ■ Front

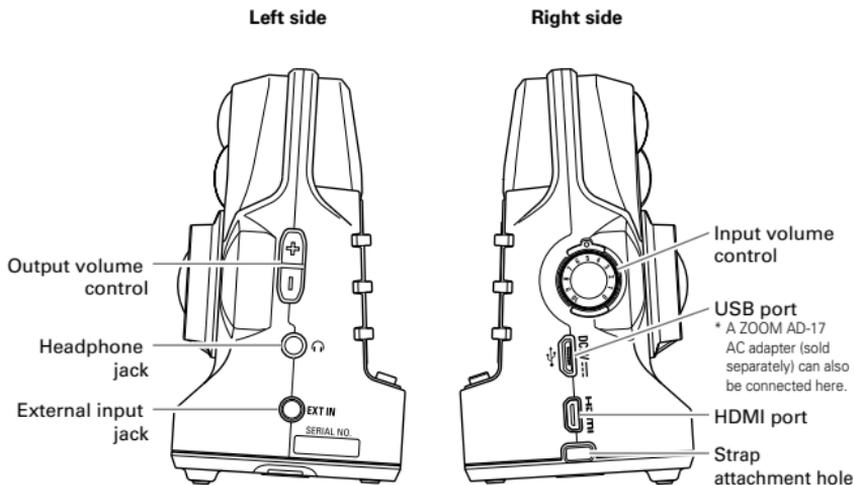


### ■ Back

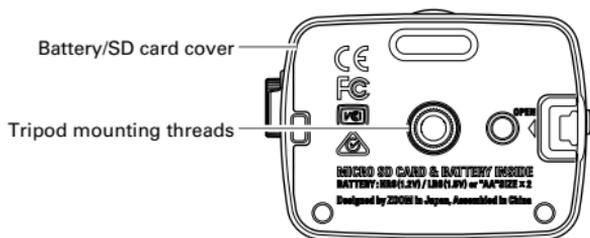


## Parts and their functions (continued)

### ■ Sides



### ■ Bottom



#### NOTE

Remove the battery/SD card cover, and load batteries and an SD card as shown in the illustration below. Use alkaline batteries or rechargeable NiMH batteries.



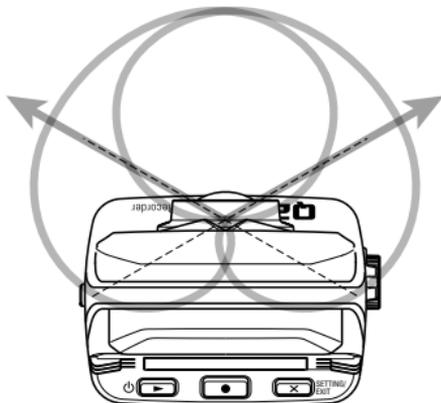
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## Parts and their functions (continued)

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### ■ Mic overview

The **Q2n** uses the XY technique with two crossing directional mics.

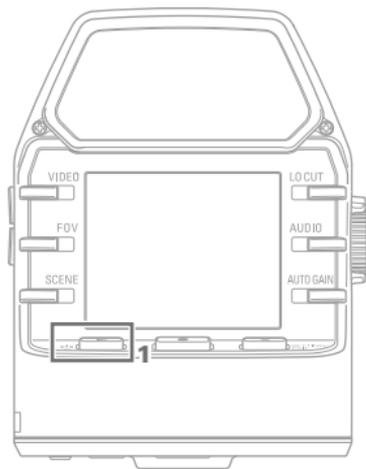


Features:

Providing a three-dimensional sound with natural depth and width, this technique is ideal for recording when you want to capture a specific sound source that is nearby or at a medium distance. This is suitable for situations that include solo performances, chamber music, live rehearsals and field recording.

## Turning the power on and off

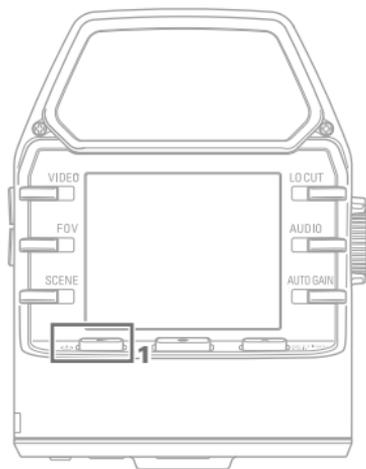
### ■ Turning the power on



1. Press .

The REC LED on the front will light red and then green.

### ■ Turning the power off



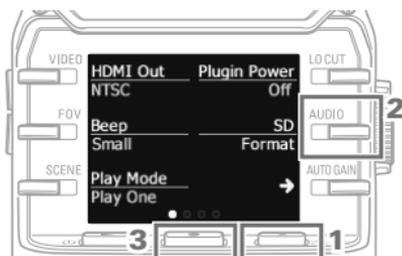
1. Press and hold .

After "Goodbye See You!" appears, the power turns off.

## Preparing for use

### ■ Formatting SD cards

You should format SD cards for use with the **Q2n**.



1. When the Recording Screen is open, press  SETTING/  
EXIT to open the Setting Screen.
2. Select "SD Format"
3. On the Confirmation Screen, press  and select "YES ".  
This will start SD card formatting.

### ⚠ CAUTION

- After purchasing a new SD card, always format it using the **Q2n** to maximize performance.
- All data previously saved on the SD card will be deleted when it is formatted.

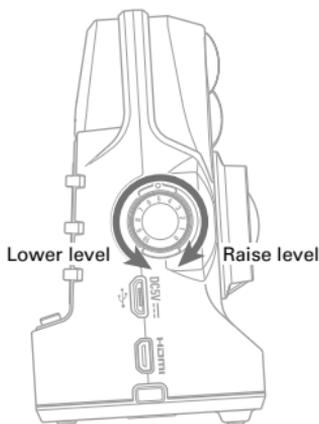
### ■ Setting the date and time

If the date and time are set, the recorder can add the recording date and time to files.



1. When the Recording Screen is open, press  SETTING/  
EXIT to open the Setting Screen.
2. Press → to open the date and time Setting Screen.
3. Use the buttons to set the current date and time.

## Adjusting recording levels



1. Turn  on the right side of the unit.

2. If a peak indicator lights on the screen, turn  to lower the level.

Adjust the level so that the peak indicators do not light even when loud sounds are input.



Level meters

Peak indicators

### NOTE

- In addition to the peak indicators, the REC LED on the front also blinks when loud sounds are input.
- Set AUTO GAIN to adjust the recording level automatically. (→ P. 13)

## Recording

### ■ Recording operations



1. Press .  
This starts video recording.
2. Press  again to stop video recording.

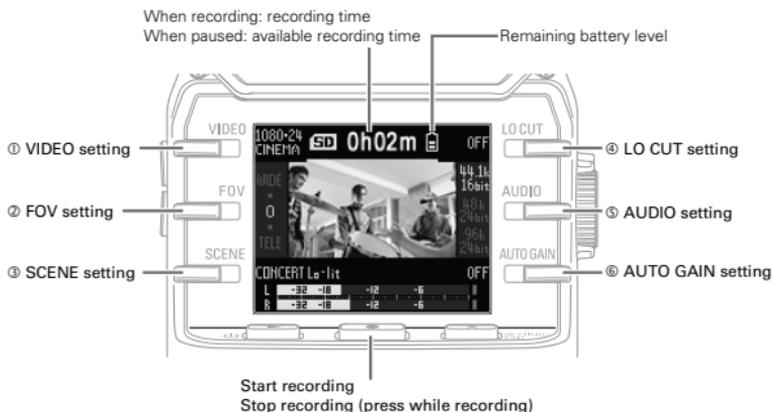
#### NOTE

During video recording, the REC LED on the front lights red.

## Recording (continued)

### ■ Using the Recording Screen

Set recording operations and the recording format on this screen.



### ■ Setting the recording format

Use the buttons on both sides of the screen to change the settings.

#### ① VIDEO: video recording resolution setting

Setting	Resolution	Frames/second	Explanation
1080-30 VIDEO	1920×1080	30	This is good for all types of video recording.
1080-24 CINEMA	1920×1080	24	This records with the frame rate used for filming movies. This is good for recording movies and music videos.
720-30 VIDEO	1280×720	30	This provides a good balance between recording time and video quality.
720-24 CINEMA	1280×720	24	This records with the frame rate used for filming movies. This provides a good balance between recording time and video quality.
CAMERA OFF			Use this to just record audio.

#### NOTE

If the setting is VIDEO and PAL is selected for HDMI Out, the frames/second will be 25.

#### ② FOV: field of view setting

Setting	Explanation
WIDE	Widen the field of view.
•	↑ ↓
0	
•	↓ ↑
TELE	

## Recording (continued)

### ③ SCENE: camera setting for recording scene conditions

Setting	Explanation
AUTO	Adjustments are made without specific scene conditions.
OUTDOOR	Adjustments are optimized for outdoor recording.
SUNSET	Adjustments are optimized for sunset scenes.
NIGHT	Adjustments are optimized for night and other dark situations.
CONCERT LIGHT	Adjustments are optimized for concert lighting conditions that are bright and change drastically.
CONCERT Lo-lit	Adjustments are optimized for small concert halls and other dim lighting conditions.
CONCERT HALL	Adjustments are optimized for classical concerts, recitals and similar performance conditions.
JAZZ CLUB	Adjustments are optimized for jazz clubs and similar venues.
DANCE CLUB	Adjustments are optimized for dance clubs and other venues where the lighting changes drastically.
REHEARSAL STUDIO	Adjustments are optimized for recording and rehearsal studio conditions.
GARAGE	Adjustments are optimized for band performances in garages.

### ④ LO CUT: low-cut filter setting to reduce wind, vocal pops and other noise

Setting	Explanation
OFF	This disables the lo-cut filter.
80Hz	These set the cutoff frequency.
120Hz	
160Hz	

### ⑤ AUDIO: audio quality setting

Setting	Explanation
44.1k 16bit	The higher the sampling frequency (kHz) and bit rate, the better the audio quality.
48k 24bit	
96k 24bit	

### ⑥ AUTO GAIN: automatic recording level adjustments setting

Setting	Explanation
OFF	This disables Auto Gain. Adjust the recording level manually.
CONCERT	This is good for recording band performances, concerts and other loud situations.
SOLO	This is good for solo performances and other lower volume situations.
MEETING	This is good for meetings and field recordings.

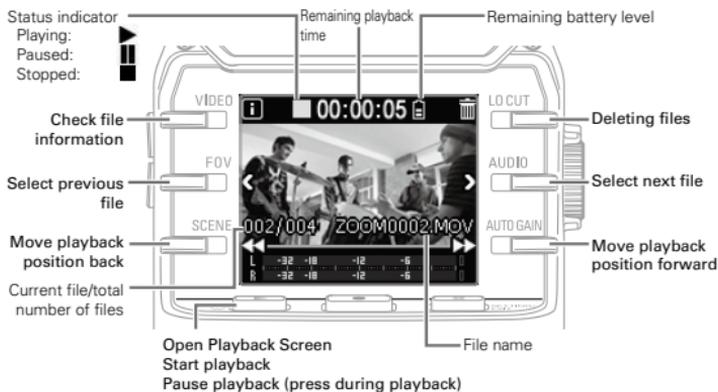
#### NOTE

Using the windscreen included in the APQ-2n accessory pack along with the LO CUT setting can further reduce noise.

## Playing recordings

### ■ Using the Playback Screen

On this screen, you can control playback, check file information and switch and delete files.



#### NOTE

- The **Q2n** can only play videos that it recorded.
- During playback, press  once to return to the beginning of the file. Press  twice to jump to the previous file.

## Deleting files

Press the following buttons when the Playback Screen is open to delete a file.



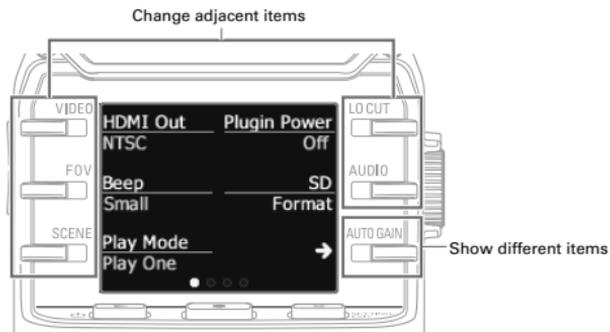
1. Select . This opens the Deletion Screen.
2. Select . A check is added to the box at the left above the file thumbnail.
3. Select .
4. On the Confirmation Screen, press  and select "YES ●". This deletes the checked file. Press  SETTING/EXIT and select "NO X" to cancel.

## Making system settings

### ■ Using the Setting Screen

Use this screen to make system settings.

Use  to change the item shown.

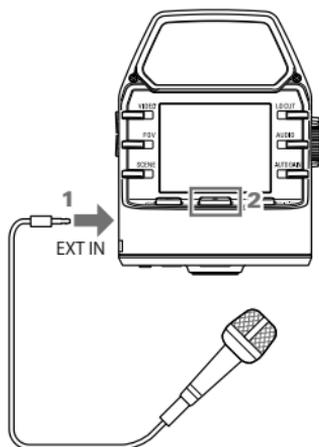


Setting item	Description
HDMI Out	Set the format of the video output from the HDMI port. Select NTSC or PAL.
Beep	Set whether the <b>Q2n</b> makes sounds when it is turned on and operated. Select Off, Small or Large.
Play Mode	Set whether all files are played continuously or only the selected file is played. Select Play One or Play All.
Plugin Power	Set this when using a mic that supports plug-in power. (→ P. 16)
SD Format	Format an SD card. (→ P. 9)
Battery Type	Set the battery type. Select Alkaline or Ni-MH.
Power Save	Set the amount of time until the screen is dimmed automatically if not used. This setting has no effect during playback or when an AC adapter is connected. Select Off, 1, 3 or 5 minutes.
Auto Power Off	Set the amount of time until the power turns off automatically if not used. This setting has no effect during recording, playback or when an AC adapter is connected. Select Off, 1, 3 or 5 minutes.
Setting Reset	Restore the <b>Q2n</b> to its factory default settings.

See P. 18 for USB connection and P. 9 for date setting.

## Connections with external input jacks

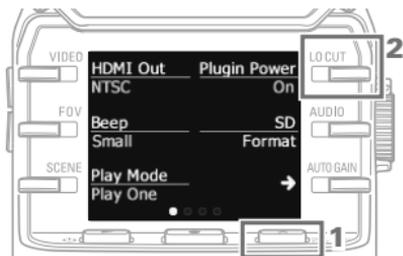
You can capture audio with an external mic or audio device when recording audio or video.



1. Connect the external mic or audio device to the external input jack.
2. Press .  
This starts video recording.

### ■ Mic that supports plug-in power

Enable plug-in power for mics that support it.



1. When the Recording Screen is open, press  SETTING/EXIT to open the Setting Screen.
2. Select Plugin Power, and set it to On.

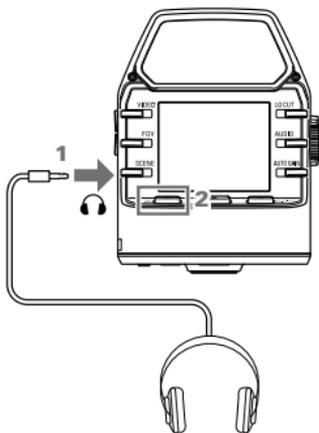
#### NOTE

The built-in mics are disabled when an external device is connected to the external input jack.

## Headphones/line and HDMI output

### ■ Headphones/line output

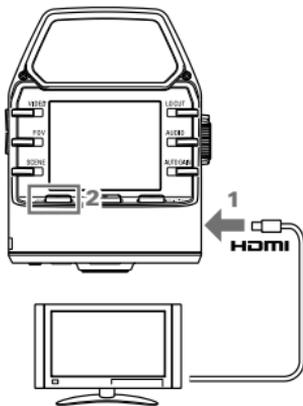
You can listen to the audio with headphones or an external audio amplifier.



1. Connect headphones or audio equipment to the headphone jack using a stereo mini plug cable.
2. Press  to play the video or audio.

### ■ HDMI output

Use an HDMI cable to connect with an HDMI TV to show **Q2n** video recordings on it in high definition.



1. Connect the HDMI cable (commercially-available) to the HDMI jack.
2. Press  to play the video or audio.

### CAUTION

- Some TVs do not support some audio formats, so correct playback might not always be possible.
- When recording video, connecting or disconnecting an HDMI cable will cause video and audio recording to stop.

## USB connections

By connecting the **Q2n** to a computer or iOS device with a USB cable, you can use it as a WEB camera, USB mic and card reader.

### ■ Connecting by USB



1. When the Recording Screen is open, press  **SETTING/EXIT** to open the Setting Screen.
2. Press **→** to open the USB Connection Setting Screen.
3. Use the buttons to select the desired function.
4. On the Confirmation Screen, press  and select "YES ".

5. Use a USB cable to connect a computer or an iOS device.

6. To end a USB connection, press  **SETTING/EXIT** on the Function Screen.

7. On the Confirmation Screen, press  and select "YES ".

This reopens the Recording Screen.

### NOTE

- For a list of iOS devices that have been confirmed to work with the **Q2n**, visit [www.zoom.co.jp](http://www.zoom.co.jp).
- An iPad Camera Connection Kit or Lightning to USB Camera Adapter (sold separately) is necessary to connect an iOS device.

### ■ Using as a web camera (computer)

The **Q2n** can be used as a web camera to input audio and video to a computer.



1. On the computer, open the application with which you want to use it as a camera, and select the **Q2n**.

### Delay setting

If the application does not have a lip synchronization function, you can set an audio delay time so that it matches the timing of the video. The delay time can be set to 0.0 F–10.0 F in 0.5 increments.  
(1 F = 33 msec)

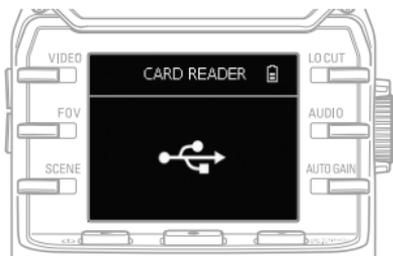
### NOTE

- To use as a web camera, an audio driver must be downloaded from the ZOOM website ([www.zoom.co.jp](http://www.zoom.co.jp)) and installed.
- The recorder can simultaneously transmit video and audio with resolutions up to HD720p and 48 kHz/16-bit PCM to a computer.
- The **Q2n** cannot output computer playback signals.

## USB connections (continued)

### ■ Using as a card reader (computer/iOS device)

You can use the **Q2n** as a card reader to transfer data to and from computers and iOS devices.



1. View the contents of the SD card loaded in the **Q2n** on the file management screen of the computer or iOS device.
2. Work with the files on the SD card.

### ■ Using as a USB mic (computer/iOS device)

You can use the **Q2n** as a USB mic to input audio to a computer or iOS device.

#### Direct monitoring setting



1. On the computer or iOS device, open the application with which you want to use it as a mic, and select the **Q2n**.
2. Use the **Q2n** recording operations.

#### Direct monitoring setting

The input sound can be monitored directly when used as a USB mic.

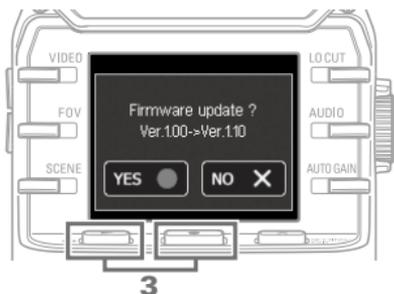
Select **DIRECT MNTR** to turn it ON/OFF.

#### NOTE

When connected to a computer, power can be supplied by USB. When connected to an iOS device, power cannot be supplied by USB.

## Updating the firmware

The **Q2n** firmware can be updated to the latest version.



1. Copy the file for updating the firmware to the root directory on an SD card.

The latest version of the firmware can be downloaded from [www.zoom.co.jp](http://www.zoom.co.jp).

2. Insert the SD card into the card slot on the bottom.
3. Press  while pressing and holding  to turn the power on.

Keep pressing the buttons until the firmware update screen opens.

4. On the Confirmation Screen, press  and select "YES ":

5. On the Final Confirmation Screen, press  and select "YES ":

After updating, the Completion Screen opens.

6. Press  for at least one second to shut down.

### CAUTION

- Do not turn the power off during an update.
- Upgrading the firmware is not possible if the remaining battery power is low.

## Responding to Alert Messages

If one of the following Alert Messages appears, respond according to the contents.

### ■ Alert Messages that appear during startup

Message	Explanation and response
 Reset Date & Time	The clock has been set to its default. Reset the time on the Setting Screen. (→ P. 9)
 File recovery failed.	Since proper data recording did not complete, data recovery efforts were made but recovery was not possible.

### ■ Alert Message that appears when batteries are used

Message	Explanation and response
 Low Battery !	The remaining battery charge has become low. Replace the batteries with new ones.

### ■ Alert Messages that appear when the Recording Screen is open

Message	Explanation and response
 No SD Card !	No SD card is loaded. Load an SD card.
 Low Speed Card !	Recording stopped because writing to the SD was not fast enough. Use a recommended SD card that has been formatted by the <b>Q2n</b> . For a list of recommended SD cards, visit <a href="http://www.zoom.co.jp">www.zoom.co.jp</a> .
 Card Full !	The SD card has become full. Delete unnecessary data or replace it with a new SD card.

### ■ Alert Messages that appear when the Playback Screen is open

Message	Explanation and response
 Invalid File !	This file is invalid. Files that were not created by a <b>Q2n</b> and invalid files that did not complete recording properly cannot be played back.
 Pickup Full !	The number of files checked for deletion exceeds the limit (256). Reduce the number of checked files.
 Read Only File !	The file is protected, so it cannot be deleted. Use a computer to check the status of the file.

## Troubleshooting

If you think that the **Q2n** is operating strangely, check the following items first.

### Recording/playback trouble

◆ **There is no sound or output is very quiet**

- Check the connection status and volume setting of the connected device.
- Confirm that the output volume is not set low.

◆ **The recorded sound cannot be heard or is very quiet**

- Check the input level settings (→ P.10).
- If a CD player or other device is connected to an input jack, raise the output level of that device.

◆ **Recording audio/video is not possible**

- Check the amount of remaining recording time on the Recording Screen (→ P.12).

## Specifications

Image sensor	1/3-inch 3-megapixel CMOS sensor
Lens	F2.0, FOV 160°, fixed focus (36 cm – ∞), focal distance about 16.6 mm (35 mm equivalent)
Video format	MPEG-4 AVC/H.264 (MOV)
Video resolutions	1080p/30 fps HD, 1080p/24 fps HD, 720p/30 fps HD, 720p/24 fps HD
Audio formats	WAV: 96 kHz/24-bit, 48 kHz/24-bit, 44.1 kHz/16-bit
Audio functions	Low-cut filter (Off/80 Hz/120 Hz/160 Hz), Auto Gain (Off/Concert/Solo/Meeting) <u>During USB use</u> Webcam: 0.0 F, 0.5–10.0 F delay USB mic: direct monitoring ON/OFF
Image functions	Five level digital zoom, scene selection (AUTO/OUTDOOR/SUNSET/NIGHT/CONCERT LIGHT/CONCERT Lo-lit/CONCERT HALL/JAZZ CLUB/DANCE CLUB/REHEARSAL STUDIO/GARAGE)
Display	1.77" full-color LCD (160x128)
L/R inputs	Mic 120° XY stereo format Maximum sound pressure input: 120 dB SPL Input gain: -∞+39 dB
	EXT-IN Input connector: stereo mini jack Input gain: -∞+39 dB Input impedance: 2 kΩ or more Supports plug-in power
Output connector	Combined line/headphone stereo mini jack HDMI micro Type D
Built-in speaker	400 mW 8 Ω mono speaker
Recording media	micro SD (Class 10 or higher, 128 GB maximum)
USB	micro USB <u>Operation as mass storage</u> Class: USB 2.0 High Speed <u>Operation as audio interface</u> Class: USB 1.0 Full Speed Resolution: 44.1 kHz sampling rate, 16-bit <u>Operation as webcam</u> Resolution: WVGA/720p video size, 48 kHz/16-bit audio Note: Audio interface and mass storage operations are supported with iOS devices. Note: USB bus power supported
Power supply	2 AA batteries AC adapter (ZOOM AD-17): DC 5 V/1 A
Battery operation time	Rated: about 2 hours or more (when recording 720p/30 fps video using alkaline batteries) about 3 hours or more (when recording 720p/30 fps video using Ni-MH batteries)
External dimensions	Maximum dimensions of main unit 46.5 mm (D) × 66.0 mm (W) × 85.4 mm (H)
Included accessories	User Guide (this manual), batteries

**ZOOM**<sup>®</sup>

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