ZOOM

F1
Field Recorder

F1 Field Recorder

REC FORMAT LO CUT LIMITER REC LEVEL

OPTION

Operation Manual

You must read the Usage and Safety Precautions before use.

Usage and Safety Precautions

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

⚠ WARNING	Something that could cause serious injury or death	⚠ CAUTION	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 using an AC adapter

❗ Never use any AC adapter other than a ZOOM AD-17.

⊘ Do not do anything that could exceed the ratings of outlets and other electrical wiring equipment.

Before using the equipment in a foreign country or other region where the electrical voltage differs, always consult with a shop that carries ZOOM products and use the appropriate AC adapter.

■ Operation with batteries

❗ Use 2 commercially-available AAA batteries (alkaline dry cell batteries, NiMH batteries or lithium dry cell batteries).

❗ Carefully study the warning indications of the batteries before use.

❗ Always keep the battery cover closed during use.

■ 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.

■ AC adapter handling

❗ When disconnecting the power plug from an outlet, always pull on the plug itself.

❗ Disconnect the power plug from the outlet when the unit will not be used for a long time and whenever there is lightning.

■ 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.

■ Interference with other electrical equipment

In consideration of safety, the F1 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 F1 and the other device farther apart.

With any type of electronic device that uses digital control, including the F1, 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 breaks or malfunctions, immediately turn the power off, disconnect the AC adapter, remove the batteries and disconnect other cables. Contact the store where you bought the unit or ZOOM 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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FCC regulation warning (for U.S.A.)

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

$\mathsf{C}\,\mathsf{E}$　　**Declaration of conformity**

Introduction

Thank you for purchasing a ZOOM F1 Field Recorder (hereafter, "F1").
The F1 has the following features.

Wearable and compact

Thanks to its compact design, the F1 can be easily attached to clothing during recording sessions.
In addition, the dedicated removable shock mount can be used to reduce noise when mounted on a digital SLR camera.

Compatible with ZOOM mic capsules

The F1 is compatible with all Zoom mic capsules, allowing you to switch microphones according to your audio needs.

Supports various recording formats

Use 96 kHz/24-bit Mono/Stereo PCM (WAV/BWF), MP3 and other formats when recording.
Marks can also be added to and removed from WAV and MP3 files.

Supports multiple languages

In addition to Japanese and English, the F1 allows loading of dedicated files to support various languages.

Compatible with microSDHC cards

The F1 can use microSDHC cards with capacities up to 32 GB. Moreover, the F1 can also be used as a card reader when connected to a computer via USB.

Utilizes an asynchronous transfer system

The F1 utilizes an asynchronous transfer system that is not affected by computer jitter, enabling faithful reproduction of the original sound.

Convenient test tone function

When connecting the F1 to a camera, you can adjust the audio levels for optimal recording.
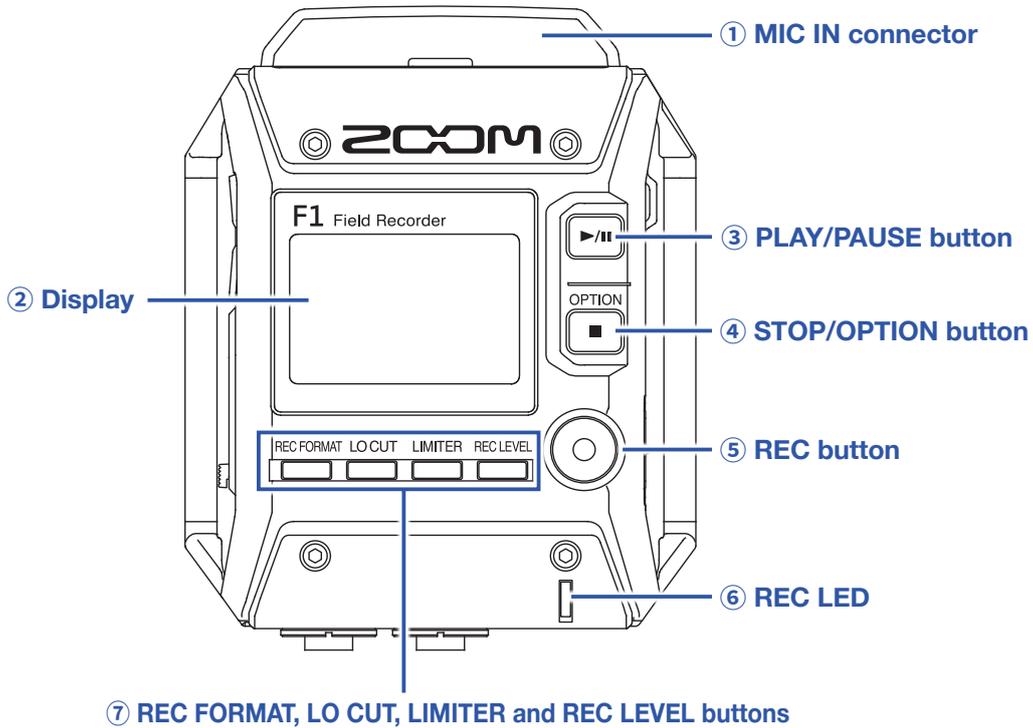
Useful operation features

Other functions include prerecording of up to two seconds, sound markers convenient for aligning video and audio files, a low-frequency cut filter, a limiter and plug-in power support.

Contents

Names of parts

■ Front

① MIC IN connector

② Display

③ PLAY/PAUSE button

④ STOP/OPTION button

⑤ REC button

⑥ REC LED

⑦ REC FORMAT, LO CUT, LIMITER and REC LEVEL buttons

① MIC IN connector

Connect a ZOOM mic capsule here.

② Display

This shows various types of information.

③ PLAY/PAUSE button

Use this to start and pause playback of recorded files.

④ STOP/OPTION button

Use this to stop file recording/playback and to switch the functions of the function buttons.

⑤ REC button

Use this to start recording.

⑥ REC LED

This lights during recording. It blinks when the input sound level is high.

⑦ REC FORMAT, LO CUT, LIMITER and REC LEVEL buttons

Use these to operate the function buttons shown at the bottom of the display.

To change the setting, press the same key again while the parameter appears enlarged.

■ Left and right sides

① **VOLUME buttons**

② **USB port**

③ **microSD card slot**
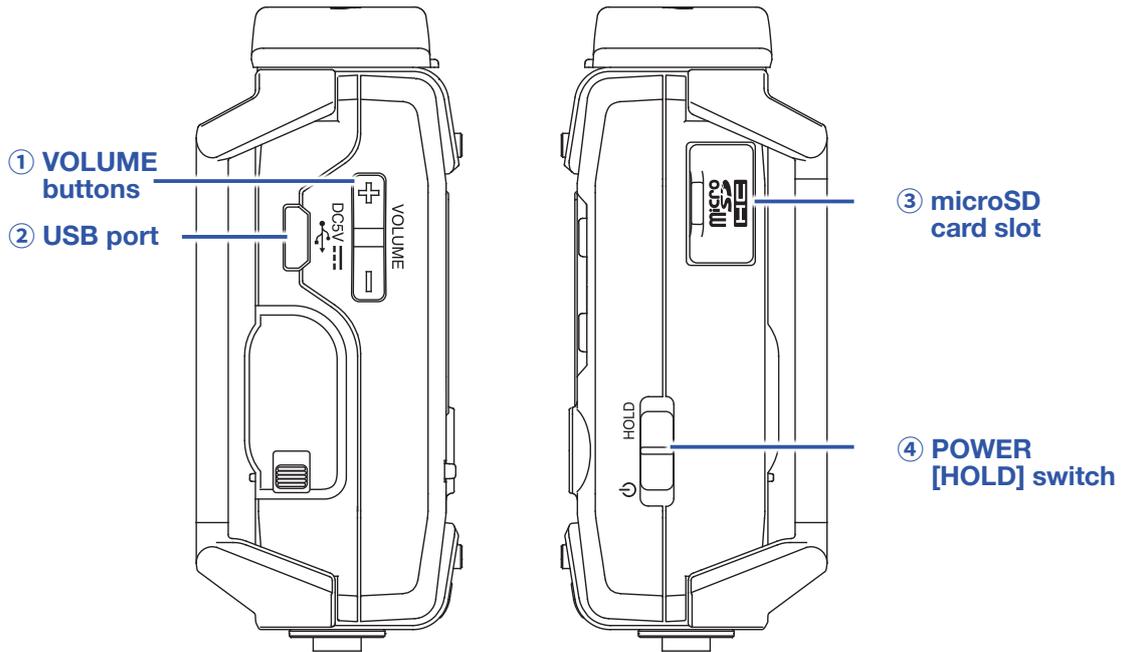
④ **POWER [HOLD] switch**

① **VOLUME buttons**

Use these to adjust the headphone output volume.

② **USB port**

Connect this to a computer or iOS device to use the F1 as an audio interface or card reader.

③ **microSD card slot**

Insert a microSD card here.

④ **POWER [HOLD] switch**

Use this to turn the power ON/OFF and to disable button operation.

■ Bottom

① **MIC/LINE IN jack**
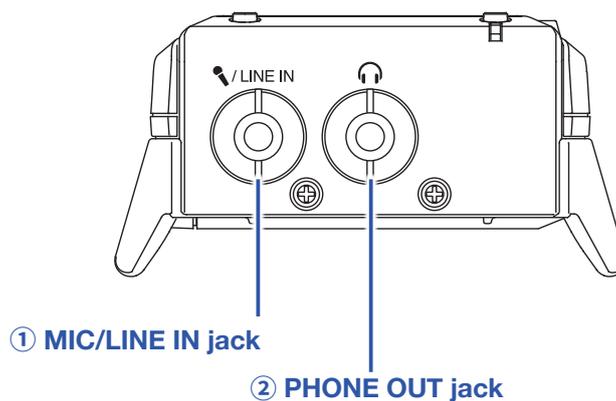
② **PHONE OUT jack**

① **MIC/LINE IN jack**

Connect an external mic here. Mics that require plug-in power can be used with this jack.

② **PHONE OUT jack**

Connect headphones here.

Display overview

Home Screen (in recording standby)

① File name — `ZOOM0001.WAV`

② Status icon — 🆂🅳 `006:12:12`

③ Level meter

④ Function buttons — `48k 24bit` `OFF` `OFF` `Mid`

`-48-32-18    -12    -6    0`

⑤ Remaining battery charge

⑥ Counter

⑦ Clipping indicator
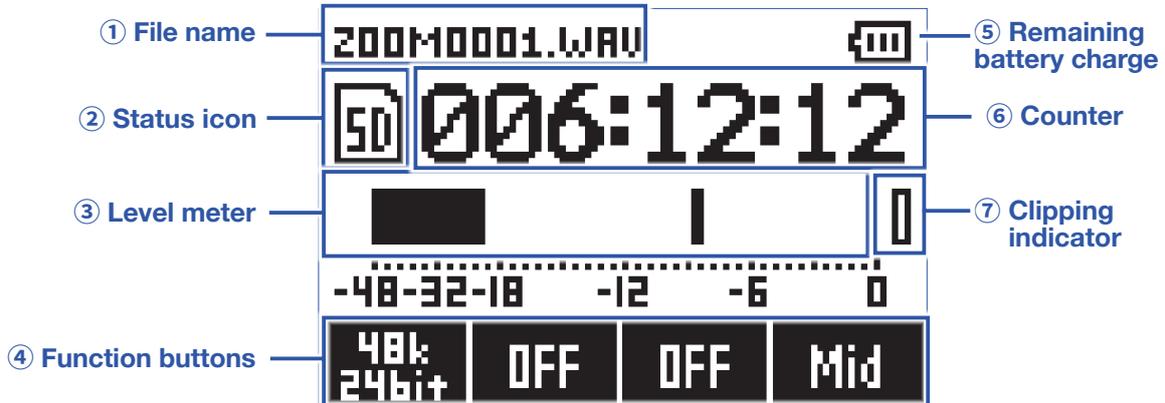
① File name

This shows the name of the recording file.

② Status icon

This shows the recording status.

🆂🅳 Ready   ⬤ Recording   ❚❚ Paused

③ Level meter

This shows the current input level. The number of level meters displayed changes according to the type of recording file and mic capsule.

④ Function buttons

These display functions that can be set on the Home Screen. From left to right, these correspond to REC FORMAT ▭ , LO CUT ▭ , LIMITER ▭ and REC LEVEL ▭ .

⑤ Remaining battery charge

This shows the remaining battery charge. When the remaining battery charge becomes low, replace the batteries (→ "Using batteries") or connect an AC adapter (→ "Using an AC adapter").

⑥ Counter

This shows the remaining recording time when standing by and the current elapsed recording time when recording or in recording standby (→ "Setting how the counter is displayed").

⑦ Clipping indicator

This lights when the input level exceeds the threshold of overload. If the clipping indicator lights, turn down the input level or set the limiter. (→ "Adjusting input levels") or set the limiter (→ "Setting the limiter").

HINT

Press OPTION ▣ when the Home Screen is open to switch the functions of the function buttons.

`ZOOM0001.WAV`

🆂🅳 `006:12:12`

`PLAY TONE` `PRE REC OFF` `PLUGIN POWER ON` `MENU`
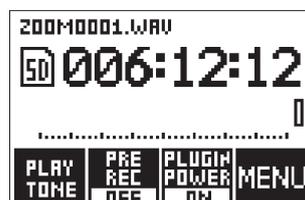
Playback Screen

① **File name** — `200M0001.WAV`

⑦ **Remaining battery charge**

② **Status icon** — ▶

000:00:20

⑧ **Counter**

③ **Progress bar**

④ **Number of selected file/ total number of files** — `0001/001`

`000:00:40`

⑨ **Remaining playback time**

⑤ **Level meter**

U — ⑩ **Clipping indicator**

⑥ **Function buttons** — ⏮ **INFO** **DELETE** ⏭
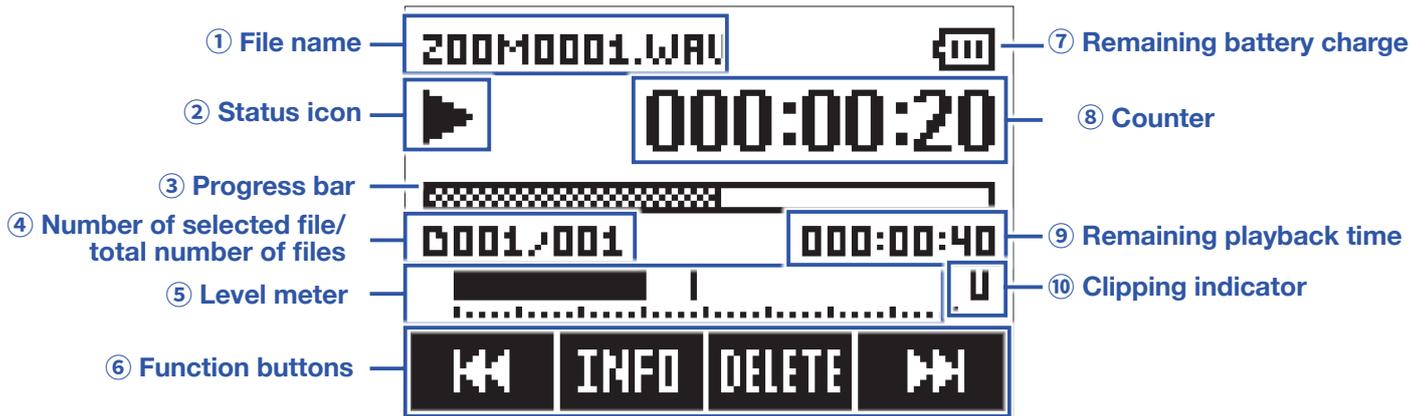
① File name

This shows the name of the file being played.

② Status icon

This shows the playback status.

▶ Playing   ⏸ Paused   ◀ Searching backward   ▶ Searching forward

③ Progress bar

This shows the current playback location.

④ Number of selected file/total number of files

⑤ Level meter

This shows the audio playback level.

⑥ Function buttons

These display functions that can be set on the Playback Screen.

⑦ Remaining battery charge

This shows the remaining battery charge. When the remaining battery charge becomes low, replace the batteries (→ "Using batteries") or connect an AC adapter (→ "Using an AC adapter").

⑧ Counter

This shows the elapsed playback time.

⑨ Remaining playback time

⑩ Clipping indicator

This lights when the playback level is too hot.

Preparations

Providing power

Using batteries

1. Turn the power off and then remove the battery cover.
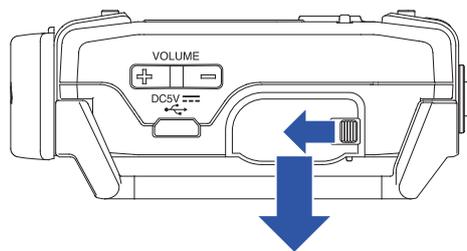
Unlock and pull
the cover open

2. Install the batteries.
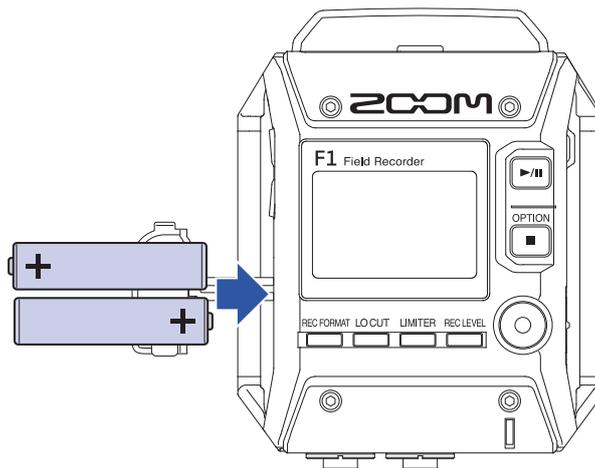
3. Replace the battery cover.

> **NOTE**
> • Use only one type of batteries (alkaline, NiMH or lithium) at a time.
> • If the remaining battery power indicator drops to 0, turn the power off immediately and install new batteries.
> • After installing the batteries, set the battery type correctly (→ "Setting the type of battery used").

Using an AC adapter

1. Connect the cable of an AD-17 AC adapter to the USB port.
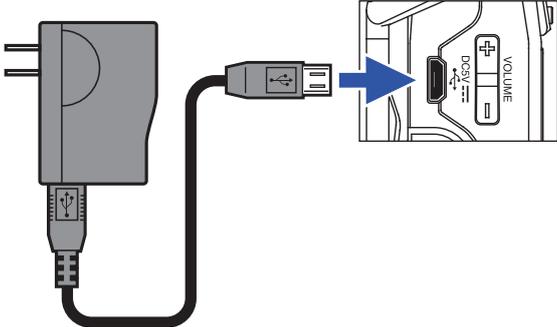
2. Plug the AC adapter into an outlet.
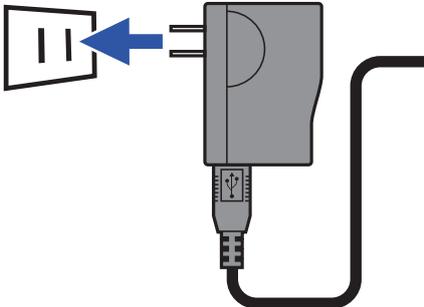
Inserting microSD cards

1. Turn the power off and then open the microSD card slot cover.
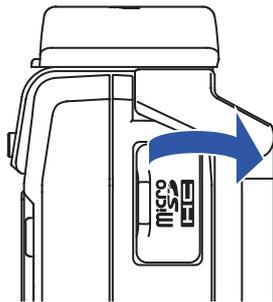
2. Insert the microSD card into the card slot.
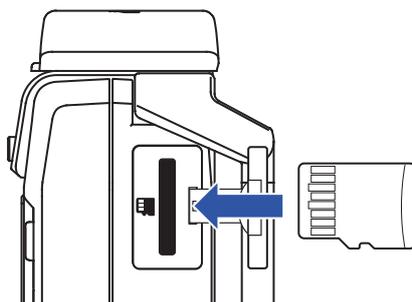
To remove a microSD card, gently push it further into the slot and then pull it out.

3. Close the microSD card slot cover.

> **NOTE**
> • Always make certain that the power is off when inserting or removing a microSD card. Inserting or removing a card while the power is on could result in data loss.
> • When inserting a microSD card, be sure to insert the correct end with the top side up as shown.
> • Recording and playback are not possible when a microSD card is not loaded in the F1.
> • To format a microSD card, see "Formatting microSD cards".

Turning the power on/off

Turning the power on

1. Slide ⎓⊡⊡ toward ⏻ until the Home Screen appears on the display.
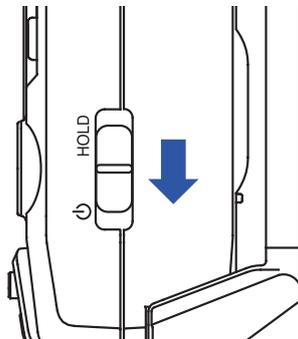
> **NOTE**
> - The first time you turn the power on after purchase, you must set the language (→ "Setting the language shown") and the date/time (→ "Setting the date and time").
> - If "No SD Card!" appears on the display, confirm that a microSD card is inserted properly.
> - If "Invalid SD Card!" appears on the display, the card is not formatted correctly. Format the microSD card (→ "Formatting microSD cards") or use a different microSD card (→ "Inserting microSD cards").

Turning the power off

1. Slide ⎓⊡⊡ toward ⏻.
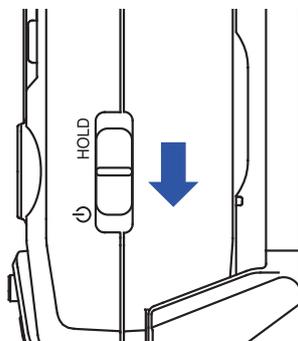
> **NOTE**
> Keep sliding the switch until "Power off" appears on the display.

Setting the language shown

Setting the language

Set the language shown on the display.

1. While pressing $\boxed{\blacksquare}$ ^OPTION, press [MENU] to open the MENU screen.

2. Use [▲] and [▼] to select "Language", and press [▶].

```
        MENU
    SD Card
    Version
  ▶ Language
EXIT  ▲    ▼      ▶
REC FORMAT LO CUT LIMITER REC LEVEL
  ▭     ▭    ▭     ▭
```

3. Press [▲] or [▼] to select the language, and press [✓].

```
     Language
  ✔English
   日本語

  ◀  ▲    ▼      ✔
REC FORMAT LO CUT LIMITER REC LEVEL
  ▭     ▭    ▭     ▭
```

HINT
The first time you turn the power on after purchase, this screen opens automatically.

Adding languages

In addition to Japanese and English, various display languages can be added.

1. Copy the file for the language you want to add to the root directory on a microSD card.

> **HINT**
> Download language files from the ZOOM website (www.zoom.co.jp).

2. Insert the microSD card into the **F1** (→ "Inserting microSD cards")

3. While pressing ⬛ (OPTION), press MENU to open the MENU screen.

4. Use ▲ and ▼ to select "Language", and press ▶.

```
            MENU
    SD Card
    Version
  ▶ Language
  EXIT   ▲    ▼       ▶
REC FORMAT LO CUT LIMITER  REC LEVEL
  ▭    ▭    ▭       ▭
```

5. Use ▲ and ▼ to select "Add Language", and press ▶.

```
         Language
    English
    日本語
  ▶ Add Language
  ◀    ▲    ▼       ▶
REC FORMAT LO CUT LIMITER  REC LEVEL
  ▭    ▭    ▭       ▭
```

6. Use ▲ and ▼ to select the language you want to add, and press ✓.

```
┌─────────────────────────┐
│  Add Language           │
│ ✓Français               │
│                         │
│                         │
│  ◀    ▲    ▼      ✓      │
└─────────────────────────┘
  REC FORMAT LO CUT LIMITER  REC LEVEL
   [____]  [____] [____]   [____]
```

NOTE

• Only one other language can be added at a time. If a different language is added when another language has already been added, the previous language will be deleted.

• Added languages will be deleted if the **F1** is reset (→ "Restoring default setting values").

Setting the date and time

Setting the date and time

Set the date and time used when recording files.

1. While pressing [■] ^OPTION, press MENU to open the MENU screen.

2. Use ▲ and ▼ to select "Date/Time", and press ▶.

MENU
Record/Play
▶ Date/Time
LCD
EXIT ▲ ▼ ▶
REC FORMAT LO CUT LIMITER REC LEVEL

3. Use ▲ or ▼ to select "Set Date/Time", and press ▶.

Date/Time
▶ Set Date/Time
Date Format
◀ ▲ ▼ ▶
REC FORMAT LO CUT LIMITER REC LEVEL
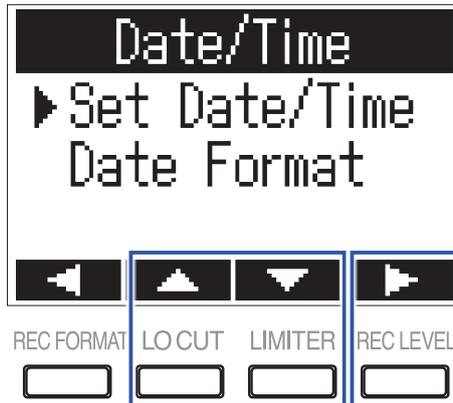
4. Use ◀ and ▶ to select the item to change.

Set Date/Time
YYYY   MM   DD
2017 / 01 / 01
[00] 00
■STOP:CANCEL ●REC:OK
◀ — + ▶
REC FORMAT LO CUT LIMITER REC LEVEL
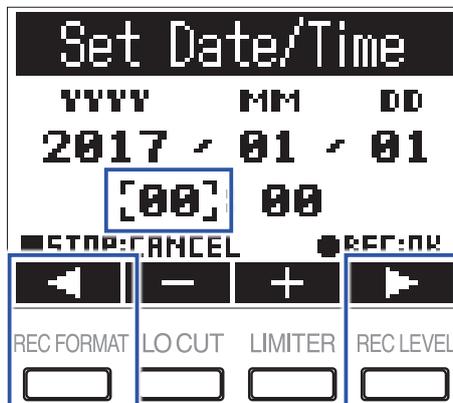
HINT
The first time you turn the power on after purchase, this screen opens automatically after you set the language used.

5. Use ▬▬ and ➕ to change the value of the selected item.

```
Set Date/Time
  YYYY     MM     DD
2017 / 01 / 01
    [12]   00
■STOP:cancel   ▲REC:OK
◄    ─    ＋    ►
```
REC FORMAT   LO CUT   LIMITER   REC LEVEL
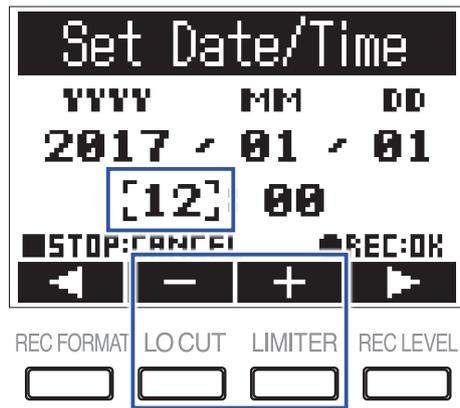
6. Press ⦿.

> **HINT**
>
> Press ☐ to cancel the setting change.

Setting the date format

The date format can be changed. This is used when adding dates to file names and when showing the date on the Playback Screen.

1. While pressing ☐ (OPTION), press MENU to open the MENU screen.

2. Use ▲ and ▼ to select "Date/Time", and press ►.

```
MENU
  Record/Play
▶ Date/Time
  LCD
EXIT  ▲  ▼  ►
```
REC FORMAT   LO CUT   LIMITER   REC LEVEL

3. Use ▲ and ▼ to select "Date Format", and press ▶.

```
┌──────────────────────┐
│      Date/Time       │
│   Set Date/Time      │
│  ▶Date Format        │
│                      │
│                      │
│  ◀    ▲    ▼      ▶  │
└──────────────────────┘
 REC FORMAT LO CUT LIMITER  REC LEVEL
   ▭        ▭     ▭          ▭
```
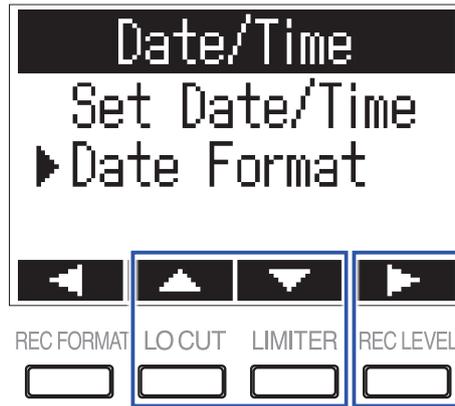
4. Use ▲ and ▼ to select the date format, and press ✔.

```
┌──────────────────────┐
│     Date Format      │
│  ✔YYMMDD             │
│   MMDDYY             │
│   DDMMYY             │
│  ◀    ▲    ▼      ✔  │
└──────────────────────┘
 REC FORMAT LO CUT LIMITER  REC LEVEL
   ▭        ▭     ▭          ▭
```
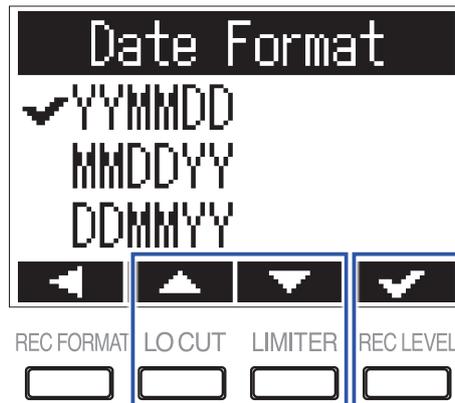
The following date formats can be used.

Setting value	Explanation
YYMMDD	Year, month, day order
MMDDYY	Month, day, year order
DDMMYY	Day, month, year order

Preventing misoperation

In order to prevent misoperation while recording, the hold function can be used to disable the buttons on the F1.

Activating the HOLD function

1. Slide ⏻ HOLD to HOLD.
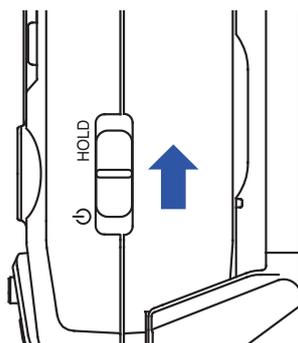
Deactivating the HOLD function

1. Slide ⏻ HOLD back to the middle.

Connections

Attaching to a camera

Connecting the shock mount

This reduces noise when the F1 is mounted on a digital SLR camera.

1. Attach the ends of two arms from the shock mount to one belt loop on the F1.

2. Attach the other arms to the other belt loop, one at a time.

Using the elasticity of the arms, attach their ends to the belt loops while bending them slightly.

Arms (2 each on left and right)
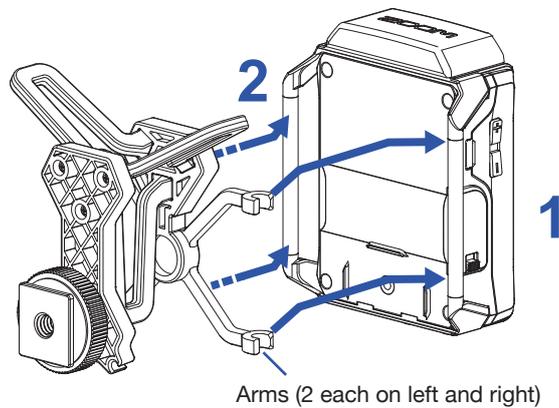
3. Slide the shock mount onto the camera accessory shoe and tighten the screw to attach it.
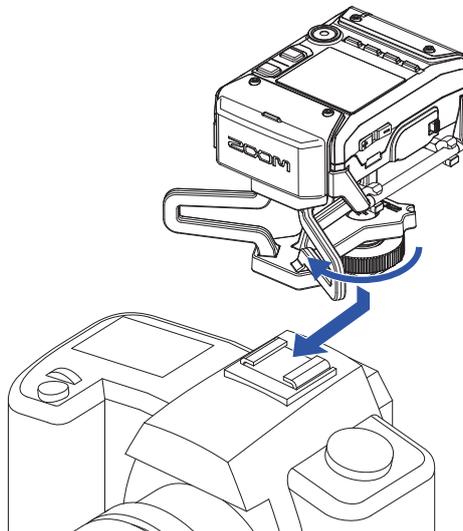
Connecting mics

Connecting mic capsules

1. Remove the protective caps from the F1 and the mic capsule.
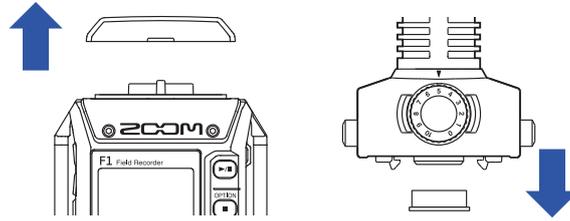
2. While pressing the buttons on the sides of the mic capsule, connect it to the F1, inserting it completely.

3. To disconnect the mic capsule, pull it away from the unit while pressing the buttons on its sides.
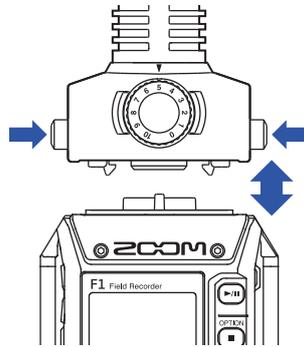
Connecting lavalier mics

1. Attach the windscreen and the clip to the lavalier mic.

Lavalier mic

Windscreen

Mic clip
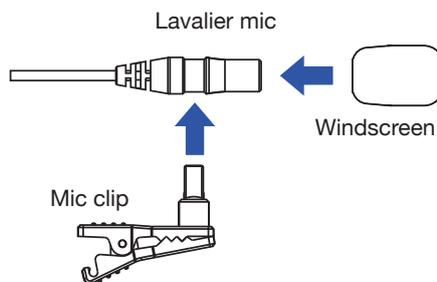
2. Attach the belt clip to the F1 with the screw.
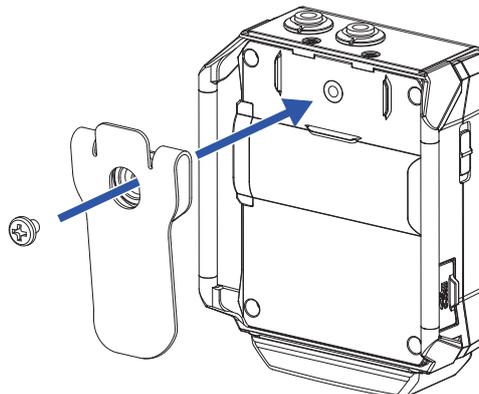
3. Connect the lavalier mic to the MIC/LINE IN jack, and tighten the screw lock.
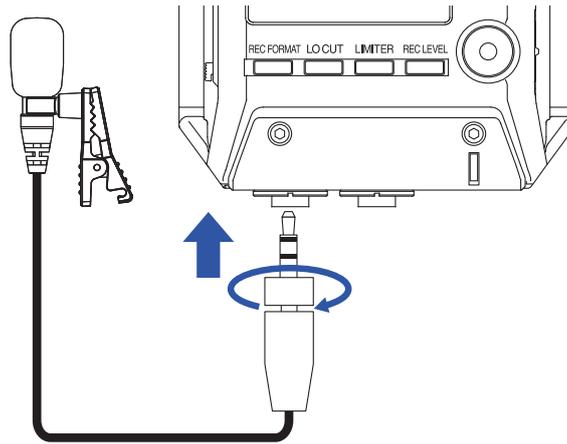
HINT
- This jack can provide plug-in power to mics that use it. (→ "Setting plugin power")
- Mics without screw locks can also be connected to the MIC/LINE IN jack.

Connection examples

Recording is possible in a variety of situations like these.

■ Recording video while using a lavalier mic

Record sound of performer with lavalier mic connected to the **F1** MIC/LINE IN jack.

Lavalier mic

MIC/LINE IN jack
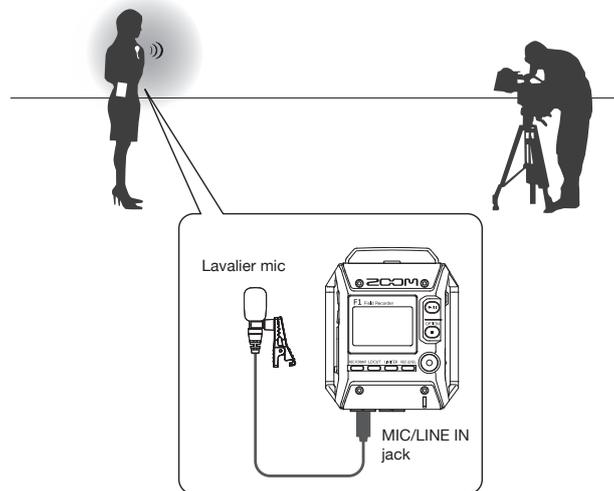
■ Recording video

Record sound of main subject with shotgun mic capsule connected to the **F1**.

Connect the **F1** PHONE OUT jack to the camera mic input.

PHONE OUT jack

Mic input
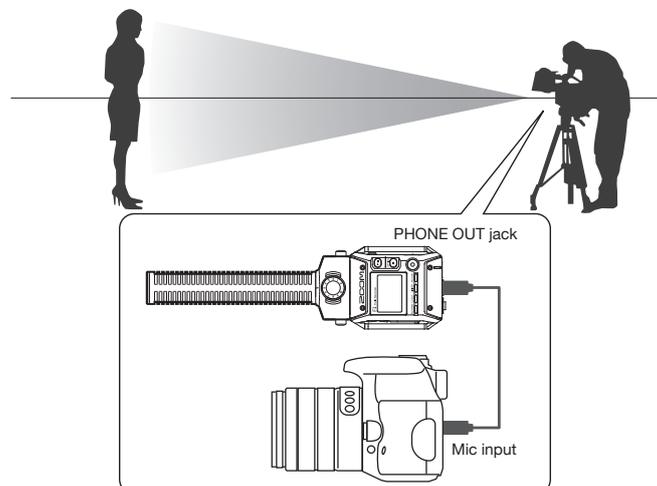
HINT

When connecting the **F1** to the camera, calibrate the levels of both devices by using the built-in test tone.
(→ "Adjusting connected equipment levels (playing test tones)").

Setting plugin power

Use this setting when a mic that is compatible with plug-in power is connected to the **F1** MIC/LINE IN jack or to the MIC/LINE input jack of a mic capsule connected to the **F1**.

1. While pressing ⏹ (OPTION), press **PLUGIN POWER** to turn it ON.
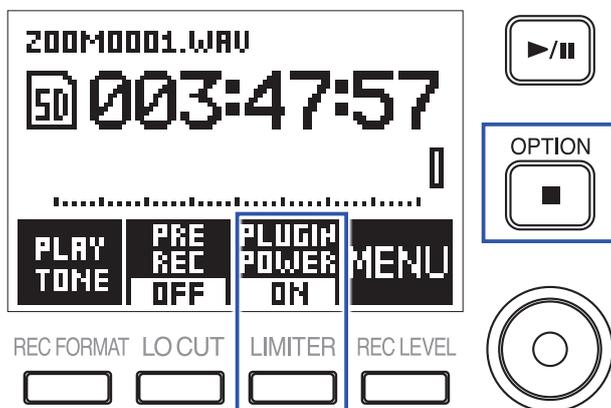
Adjusting the side mic level of a mid-side capsule

You can adjust the side mic level (stereo width) before recording when using a mid-side mic capsule

1. When the mic capsule is connected, press ^{REC LEVEL} ⬜ , and select the side mic level.

```
ZOOM0001.WAV
[SD] 001:53:55
L ▮▮▮▮▮▮▮▮▮▮▮▮        0
R ▮▮▮         ▮       0
  ·····································
 -48-32-18   -12   -6    0
┌─────┬─────┬─────┬─────┐
│ 48k │     │     │ MS  │
│24bit│ OFF │ OFF │120° │
└─────┴─────┴─────┴─────┘

REC FORMAT  LO CUT  LIMITER  REC LEVEL
  ⬜        ⬜       ⬜        ⬜
```
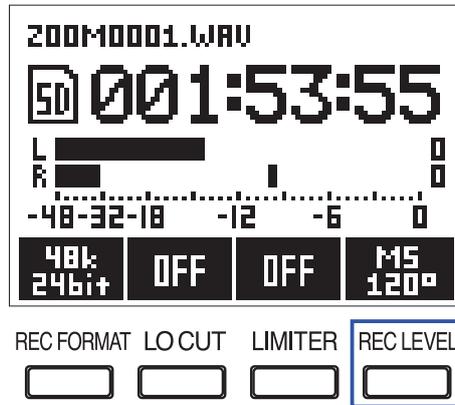
HINT

This can be set to OFF, 30°, 60°, 90°, 120° or 150°.

NOTE

This cannot be changed while recording.

Adjusting connected equipment levels (playing test tones)

Use the test tone in order to adjust the level of a digital SLR camera or other device connected to the F1.

1. Turn down the input gain of the other device.

> **NOTE**
> If the automatic gain control function on the other device is on, turn it off.

2. Use an audio cable to connect the external mic jack of the other device with the PHONE OUT jack of the F1.

3. While pressing [■] OPTION, press [PLAY TONE].
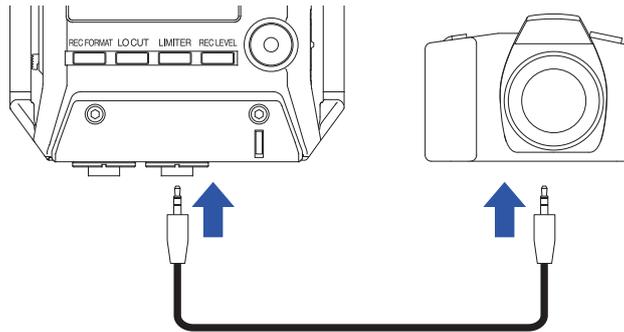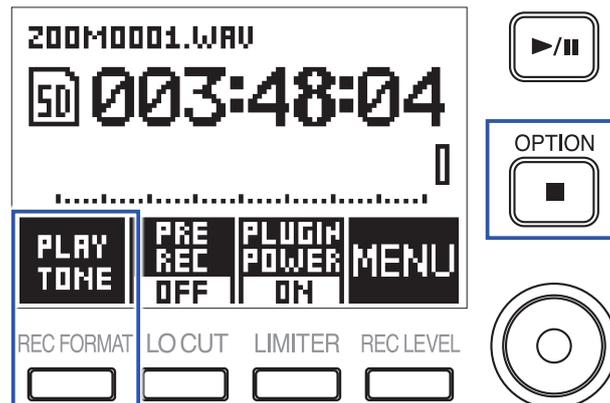
This plays a test tone from the PHONE OUT jack.

> **NOTE**
> Be mindful of the volume if you are monitoring the sound with headphones, for example.

> **HINT**
> The test tone is a 1kHz sine wave at -6 dBFS.

4. Use ⊞ and ⊟ to adjust the output level.
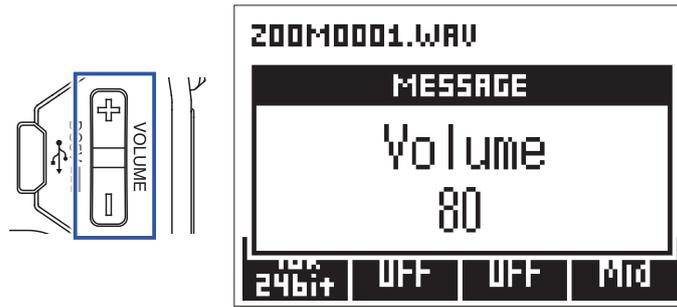
While checking the audio level meter of the other device, adjust the audio signal level so that it never exceeds −6 dB.

5. Adjust the input gain of the other device.

While checking the audio level meter of the connected device, make small adjustments to the input gain of that device until the audio signal level is about −6 dB.

6. While pressing ■ (OPTION), press STOP TONE.
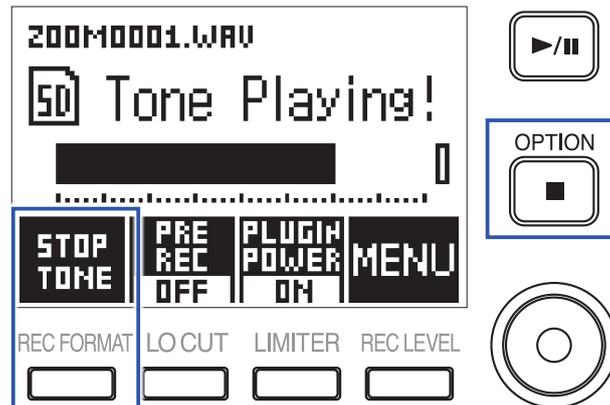
Stop test tone playback.

> **NOTE**
> See the operation manual of the other device for information about its operation.

Recording

Adjusting input levels

Adjust the recorded level of signals coming in to the **F1**.

HINT
- Adjust so that the peak level stays around −12 dB.
- Plug-in power can be supplied by the MIC/LINE IN jack as well as by the MIC/LINE IN jack of a connected mic capsule (→ "Setting plugin power").
- If the sound distorts even when you lower the input level, try changing mic positions and adjusting the output levels of connected devices.
- To cut noise from wind and other sources during recording, see "Reducing noise".
- To stop input signal clipping, see "Setting the limiter".

NOTE
Lower the input level if the REC LED flashes.

When using a mic capsule

1. Turn ⊙ on the mic capsule to adjust the input level.
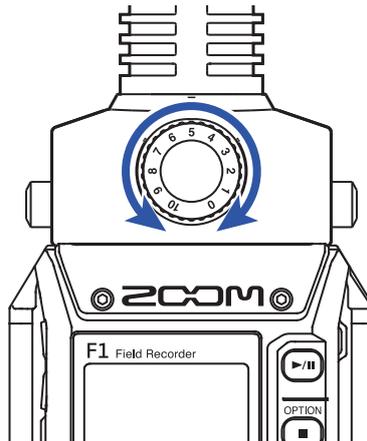
When using the MIC/LINE IN jack

1. Press $\fbox{\tiny REC LEVEL}$, and select the input level.

```
ZOOM0001.WAV
SD 003:47:57

-48-32-18    -12    -6    0
48k    OFF    OFF    Mid
24bit
```

REC FORMAT LO CUT LIMITER REC LEVEL
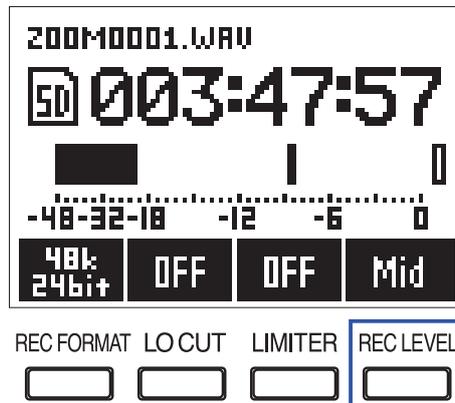
HINT
- This can be set to Lo-, Lo, Mid-, Mid, Mid+, Hi-, Hi, Hi+, Hi++ or AUTO.
- Select AUTO if you want the input level to be adjusted automatically.

Monitoring recording

The sound being recorded can be monitored using headphones.

1. Connect headphones to the PHONE OUT jack on the **F1**.

2. Use ⊞ and ⊟ to adjust the headphone volume.


```
ZOOM0001.WAV
       MESSAGE
      Volume
        80
24bit   OFF   OFF   Mnd
```
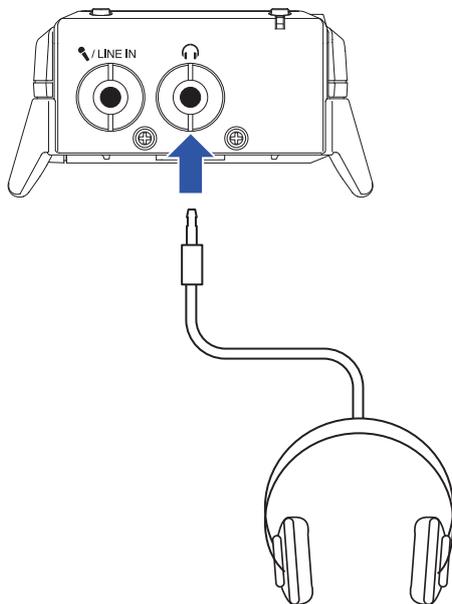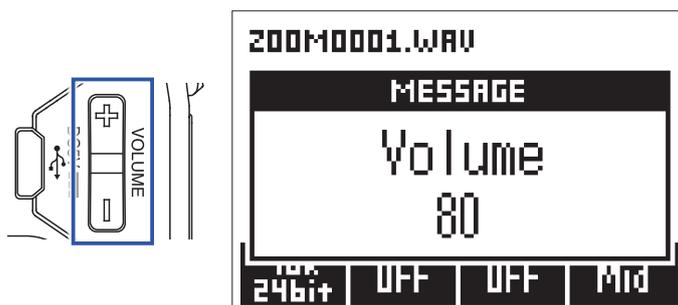
HINT
The volume can be set from 0 to 100.

Reducing noise

This function can reduce low-frequency noise, including wind and vocal pops.

1. Press $\overset{\text{LO CUT}}{\boxed{}}$ to set the cutoff frequency.
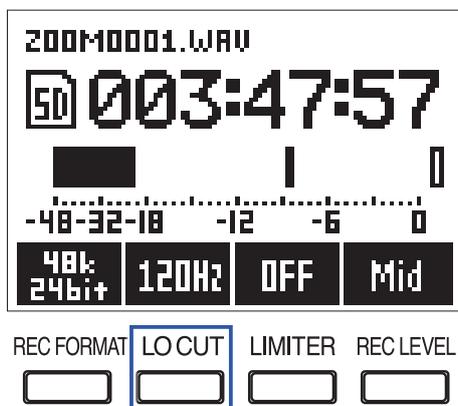
HINT
Select OFF or 80 Hz, 120 Hz or 160 Hz as the frequency.

Setting the limiter

The limiter can prevent distortion by reducing input signals that have excessively high levels.

1. Press $\boxed{\text{LIMITER}}$ to select ON.

```
ZOOM0001.WAV
[SD] 003:47:57
                              ▯
 ·········|·········|·········|·········|·········
-48-32-18    -12      -6      0
 48k   OFF    ON    Mid
24bit
```

REC FORMAT   LO CUT   LIMITER   REC LEVEL
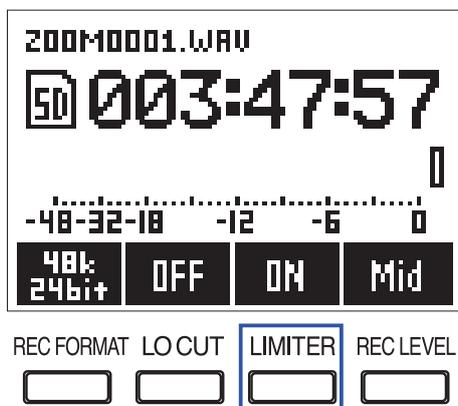
> **NOTE**
> When the limiter is ON, noise will be more audible when the input signal level is low.

Selecting the recording format

The recording format can be selected in consideration of audio quality and file size.

1. Press _{REC FORMAT} to select the recording format.

```
ZOOM0001.WAV
[SD] 003:47:57

-48-32-18  -12   -6    0

48k   OFF   OFF   Mid
24bit

REC FORMAT  LO CUT  LIMITER  REC LEVEL
```
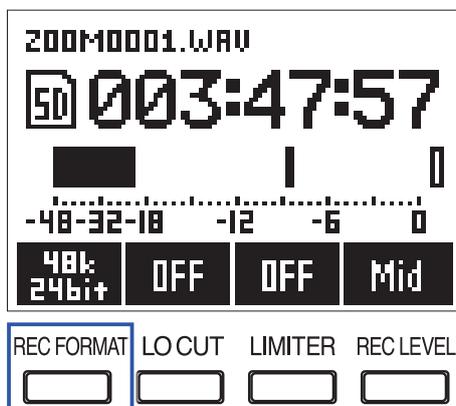
The following recording formats can be set. They are listed in order from highest quality (largest file size) to lowest quality (smallest file size).

- 96k 24bit (96 kHz/24-bit WAV)
- 48k 24bit (48 kHz/24-bit WAV)
- 48k 16bit (48 kHz/16-bit WAV)
- 44.1k 16bit (44.1 kHz/16-bit WAV)
- MP3 320k (320 kbps MP3)
- MP3 256k (256 kbps MP3)
- MP3 192k (192 kbps MP3)
- MP3 128k (128 kbps MP3)
- MP3 48k (48 kbps MP3)

NOTE
This cannot be changed while recording.

HINT
- WAV format is better for recording when audio quality is important.
- When recording in MP3 format, the audio quality is reduced, but the file size is smaller. This is convenient when you want to record large amounts and use less space on the microSD card, for example.

Recording

1. Press ⏺ to record.

```
ZOOM0001.WAV

● 000:00:05

■ |                    []
............................
-48-32-18    -12   -6    0
 48k
 24bit  OFF   OFF   Mid
```

▶/‖

OPTION
■
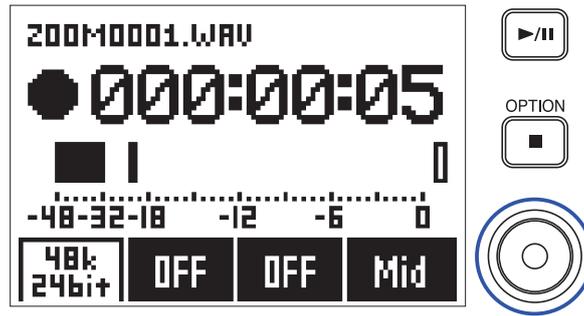
2. Press ▶/‖ to pause/resume.

Pausing during recording will add a mark at that instant.

HINT

How pausing occurs and marks are added when ▶/‖ is pressed can be changed.
(→)

NOTE

• Marks are used as cue points. During playback, press ◀◀ or ▶▶ to jump to a mark position.
• Up to 99 marks can be added to each recording.
• If the file size exceeds 2 GB during recording, a new file will be created automatically and recording will continue without pause.
• When using a mono shotgun mic capsule, recorded WAV files will be mono.

3. Press ■ to stop.

NOTE

If the power is interrupted or another problem occurs during recording, an affected file can be restored to normal by playing it with the F1.

Capturing audio before recording starts (PRE REC)

The input signal can be captured for about 2 seconds before ⊙ is pressed. This is useful when a performance starts suddenly, for example.

1. While pressing [■]^{OPTION}, press [PRE REC] to turn on Pre Rec.

ZOOM0001.WAV

[SD] 003:47:57

PLAY TONE | PRE REC ON | PLUGIN POWER ON | MENU

REC FORMAT LO CUT LIMITER REC LEVEL

▶/❚❚

OPTION
■
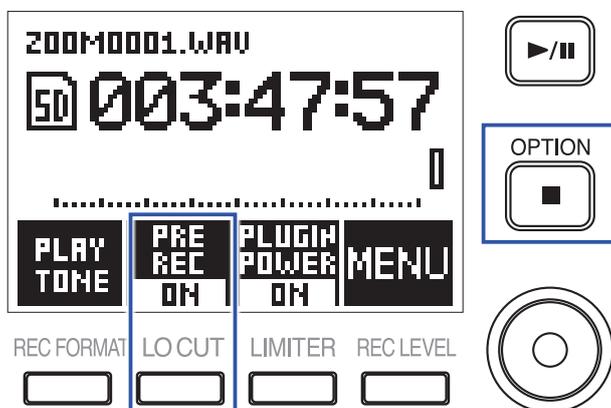
Playback

Playing recordings

1. Press ▶/❚❚ .

```
ZOOM0001.WAV          🔋
▶            000:00:20
▓▓▓▓▓▓▓▓▓▓▓▓▓▓
0001/001              000:00:40
██████████    |       0
....|....|....|....|....|....|....|....
   ⏮    INFO  DELETE   ⏭
```

OPTION

The following operations can be performed during playback.

Adjust the headphone volume	Use ➕ and ➖ .
Pause/resume playback and add a mark (This operation can be changed with a setting.) (→ "Setting how marks are added when recording/playing")	Press ▶/❚❚
Search forward	Press and hold ⏭
Search backward	Press and hold ⏮
Jump to the next mark (if one exists) Play the next file (if no mark exists)	Press ⏭
Jump to the previous mark (if one exists) Jump to the beginning of the file/play the previous file (if no mark exists)	Press ⏮
Delete a mark (→ "Deleting marks")	Press DELETE MARK when paused at a mark
Delete a file (→ "Deleting files")	Press DELETE
Display file information (→"Checking file information")	Press INFO

NOTE

• Marks are used as cue points.

• If you press ⏭ after the last mark during playback, the next file will be played. If you press ⏮ before the first mark during playback, the previous file will be played.

• When searching backward/forward, the longer you press and hold ⏮ ⏭ , the faster the search speed will become.

2. Press ■ to stop.

Setting the playback mode

You can set the file playback mode to Play All, Repeat One, or Repeat All.

1. While pressing [■] OPTION, press [MENU] to open the MENU screen.

2. Use [▲] and [▼] to select "Record/Play", and press [▶].

MENU
▶ Record/Play
Date/Time
LCD
EXIT ▲ ▼ ▶
REC FORMAT LO CUT LIMITER REC LEVEL

3. Use [▲] and [▼] to select "Playback Mode", and press [▶].

Record/Play
Rec Counter
PLAY Key Option
▶ Playback Mode
◀ ▲ ▼ ▶
REC FORMAT LO CUT LIMITER REC LEVEL

4. Use [▲] and [▼] to select the playback mode, and press [✓].

Playback Mode
✓ Play All
Repeat One
Repeat All
◀ ▲ ▼ ✓
REC FORMAT LO CUT LIMITER REC LEVEL

The following playback modes can be set.

Setting value	Explanation
Play All	Every file from the selected one to the last one will be played back.
Repeat One	The one selected file will be played repeatedly.
Repeat All	All files will be played back repeatedly.

Deleting marks

Marks added to files can be deleted when not needed.

1. Pause playback.

2. Use [⏮] and [⏭] to jump to the mark that you want to delete.

3. Press [DELETE MARK].
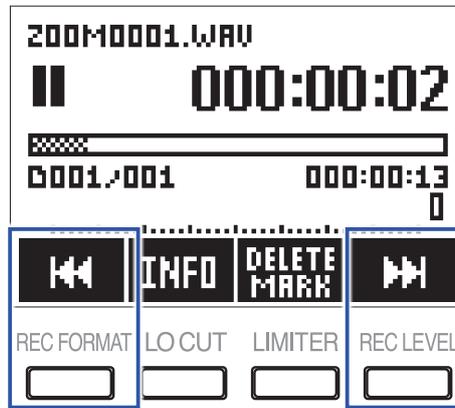
4. Use [▲] and [▼] to select "Delete", and press [✓].

Working with files

Checking file information

You can view a variety of information about the selected file.

1. Press `INFO` while the file is playing to check its information.

```
ZOOM0001.WAV
▶           000:00:20
▨▨▨▨▨▨▨▨▨▨▨▨▨▨▨▨▨
C001/001         000:00:40
████████       |          0
┊┊┊┊┊┊┊┊┊┊┊|┊┊┊┊┊┊┊┊┊┊┊
┃◄◄┃ ┃INFO┃ ┃DELETE┃ ┃►►┃
```

REC FORMAT   LO CUT   LIMITER   REC LEVEL
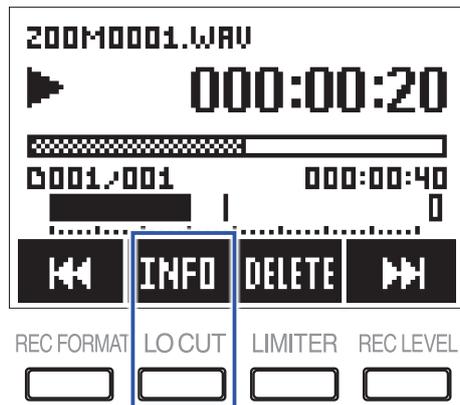
2. Check the file information.

```
ZOOM0001.WAV
Date/Time
        2017/01/01
        09:34:20
┃◄┃ ┃▲┃ ┃▼┃
```

REC FORMAT   LO CUT   LIMITER   REC LEVEL
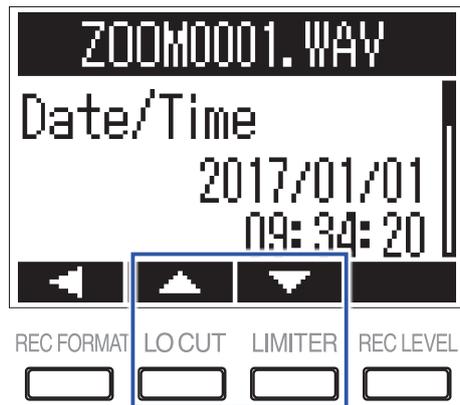
Use ▲ and ▼ to change the page.

HINT
The information items that can be viewed are the date and time, the format, the size, and the recording length.

Deleting files

You can delete unwanted files.

1. Press `DELETE` during playback of the file to delete.

```
ZOOM0001.WAV
▶           000:00:20

▨▨▨▨▨▨▨▨▨▨▨▨▨
▯001/001        000:00:40
███████▌  |          ▯

 ◄◄  │ INFO │DELETE│  ►►
```
REC FORMAT LO CUT   LIMITER   REC LEVEL

2. Use ⬆ and ⬇ to select "Delete", and press ✔ .

```
     Delete File
    ZOOM0001.WAV
  ✔Delete
   Cancel
 ◄  │  ▲  │  ▼  │  ✔
```
REC FORMAT LO CUT   LIMITER   REC LEVEL
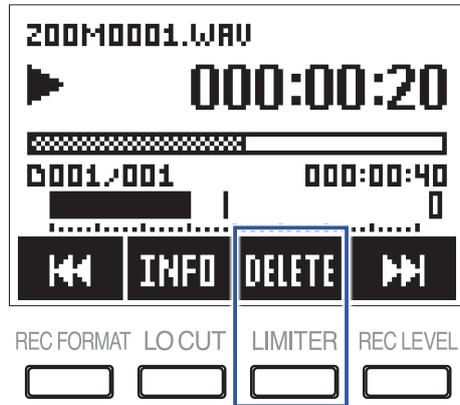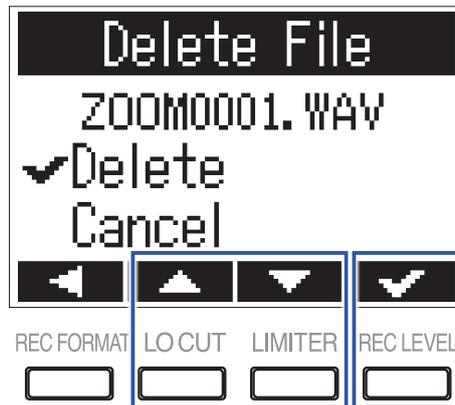
Using USB functions

Connecting to computers and iOS devices

The **F1** can be used as a card reader or audio interface when the **F1** is connected to a computer, iOS device or other equipment.

1. When the Home Screen is open, use a USB cable to connect the **F1** to a computer or iOS device.
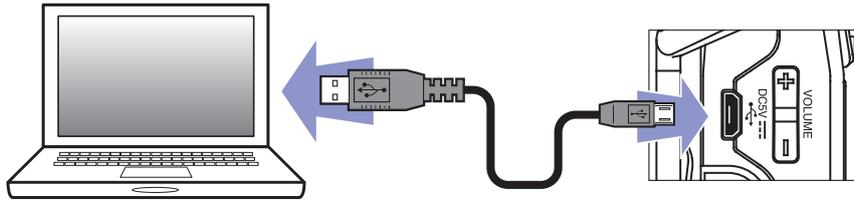
The USB screen will open.

NOTE
A Lightning to USB Camera Adapter is necessary to connect an iOS device.

Using as a card reader

You can use a computer to check the files saved on the microSD card and copy those files to the computer.

1. Press ▲ or ▼ on the USB screen to select "Card Reader", and press ▶.

```
           USB
      Audio I/F
    ▶ Card Reader

   EXIT  ▲    ▼       ▶
REC FORMAT LO CUT LIMITER  REC LEVEL
   ▭     ▭     ▭       ▭
```

2. Use the computer to transfer the files saved on the microSD card.

```
      Card Reader

         ⟜•←⟍⟍
                EXIT
```
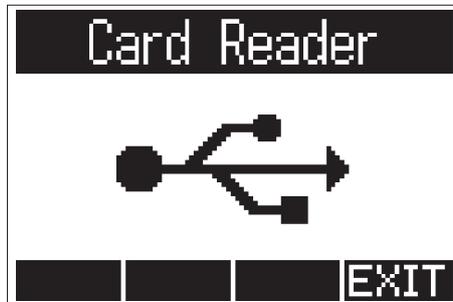
3. When you want to disconnect, use the computer to end the USB connection with the **F1**.

Windows: Select **F1** from "Safely Remove Hardware".

Mac OS: Drag the **F1** icon to the Trash and drop it.

> **NOTE**
> Always properly eject the **F1** before removing the USB cable.

4. Press **EXIT**.

5. Use ▲ and ▼ to select "Exit", and press ✓.

```
      Card Reader
    ✓Exit
     Cancel

   ◀    ▲    ▼       ✓
REC FORMAT LO CUT LIMITER  REC LEVEL
   ▭     ▭     ▭       ▭
```

6. Disconnect the USB cable from the **F1** and the computer.

Using as an audio interface

F1 input signals can be input directly to a computer, iOS device or other equipment, and playback signals on a computer, iOS device or other equipment can be output from the F1.

1. Press ▲ or ▼ on the USB screen to select "Audio I/F", and press ▶.

```
        USB
 ▶Audio I/F
  Card Reader


 EXIT  ▲    ▼    ▶
REC FORMAT LO CUT  LIMITER  REC LEVEL
```

2. Use ▲ or ▼ to select the type of device, and press ▶.

```
      Audio I/F
 ▶PC/Mac
  iOS



 ◀    ▲    ▼    ▶
REC FORMAT LO CUT  LIMITER  REC LEVEL
```

NOTE
After selecting "iOS", follow the instructions on screen, and disconnect the cable once. Then, select "iOS" again and reconnect the cable.

3. After selecting PC/Mac, use ▲ or ▼ to select the power source, and press ▶.

```
       PC/Mac
 ▶Bus Power
  Battery



 ◀    ▲    ▼    ▶
REC FORMAT LO CUT  LIMITER  REC LEVEL
```
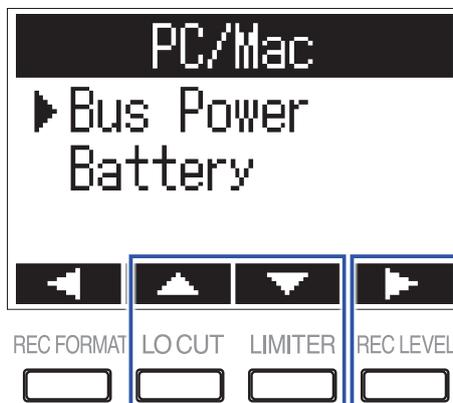
The following power sources can be selected.

Setting value	Explanation
Bus Power	Power is supplied from the computer through the USB cable.
Battery	Power is supplied by the batteries in the **F1**. Select this when connected to a computer that has low USB bus power supply capability.

NOTE
When "iOS" is selected, power is supplied by the batteries in the **F1**. This screen will not be shown.

4. Monitor playback signals from the computer or iOS device.

HINT
When connected to a Windows computer, you can use a dedicated driver for low-latency monitoring.
Download the driver from the ZOOM website (www.zoom.co.jp).

5. To disconnect, while pressing [OPTION ■], press [EXIT].
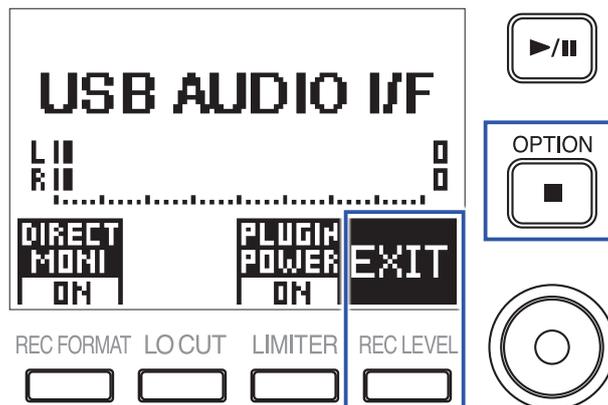
6. Use ▲ and ▼ to select "Exit", and press ✓.

7. Disconnect the USB cable from the **F1** and the computer or iOS device.

Enabling direct monitoring

This directly outputs the F1 input signal from the F1 before sending it to the computer or iOS device. This enables monitoring without latency.

1. While pressing [■]^OPTION, press [DIRECT MONI] to turn on direct monitoring.
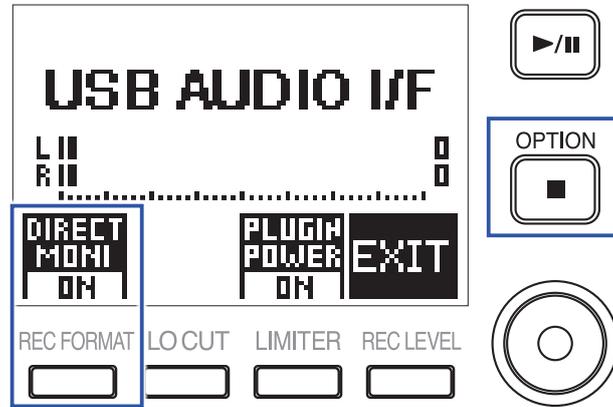
Making various settings

Setting the recording file name format

The format can be set for the names given to files automatically during recording.

1. While pressing [■] (OPTION), press [MENU] to open the MENU screen.

2. Use [▲] and [▼] to select "Record/Play", and press [▶].

```
         MENU
   ▶Record/Play
    Date/Time
    LCD
  EXIT  ▲   ▼      ▶
REC FORMAT LO CUT  LIMITER  REC LEVEL
```

3. Use [▲] and [▼] to select "Rec File Name", and press [▶].

```
      Record/Play
   ▶Rec File Name
    Rec File
    Rec Hold
    ◀    ▲   ▼      ▶
REC FORMAT LO CUT  LIMITER  REC LEVEL
```

4. Use ![up arrow] or ![down arrow] to select the file name format, and press ![check].

```
Rec File Name
✔ZOOM****
  YYMMDD-HHMMSS
```

◀	▲	▼	✔
REC FORMAT	LO CUT	LIMITER	REC LEVEL
⬡	⬡	⬡	⬡
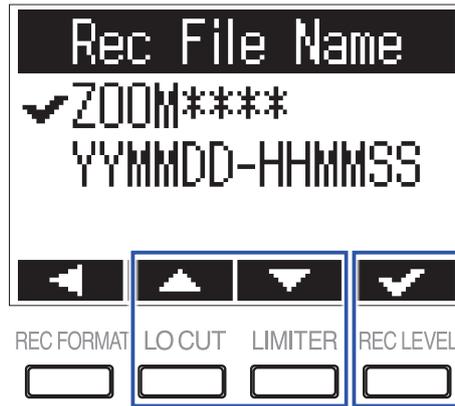
The following file name formats can be used.

Setting value	Explanation
ZOOM****	Files are named with consecutive numbers from "ZOOM0001.WAV/MP3" to "ZOOM9999.WAV/.MP3".
YYMMDD-HHMMSS	Files are named with the date and time that the recording started, using a "YYM-MDD-HHMMSS.WAV/MP3" format. The "Date Format" setting will be used for the date used as the file name (→ "Setting the date format").

Set the recording file type

When using the **F1** MIC/LINE IN jack, the recording file type (mono/stereo) can be selected. This cannot be set when using a ZOOM mic capsule.

1. While pressing OPTION ■, press MENU to open the MENU screen.

2. Use ▲ and ▼ to select "Record/Play", and press ▶.

```
          MENU
    ▶Record/Play
     Date/Time
     LCD
    EXIT  ▲    ▼      ▶
```

REC FORMAT   LO CUT   LIMITER   REC LEVEL

3. Use ▲ and ▼ to select "Rec File", and press ▶.

```
       Record/Play
     Rec File Name
    ▶Rec File
     Rec Hold
    ◀    ▲    ▼      ▶
```

REC FORMAT   LO CUT   LIMITER   REC LEVEL

4. Use ▲ and ▼ to select the file type, and press ✔.

```
        Rec File
    ✔Lch→Mono
     Lch→Stereo
     L+R→Mono
    ◀    ▲    ▼      ✔
```

REC FORMAT   LO CUT   LIMITER   REC LEVEL

The following file types can be set.

Setting value	Explanation
L ch → Mono	The left channel of the input signal is saved as a mono file.
L ch → Stereo	The left channel of the input signal is saved as a stereo file. The same audio is saved to both the left and right channels of the file.
L+R → Mono	The left and right channels of the input signal are mixed together and saved as a mono file.
L/R → Stereo	The input signal is saved as a stereo file.
L+R → Stereo	The left and right channels of the input signal are mixed together and saved as a stereo file. The same audio is saved to both the left and right channels of the files.

Automatically disable buttons during recording

Button operations can be disabled during recording to prevent misoperation.

To stop recording when this function is on, while pressing [■], press ⦿.

1. While pressing [■]^OPTION, press [MENU] to open the MENU screen.

2. Use [▲] and [▼] to select "Record/Play", and press [▶].

```
         MENU
  ▶ Record/Play
    Date/Time
    LCD
  EXIT  ▲   ▼      ▶
REC FORMAT LO CUT LIMITER  REC LEVEL
   ▭      ▭     ▭       ▭
```

3. Use [▲] and [▼] to select "Rec Hold", and press [▶].

```
       Record/Play
    Rec File Name
    Rec File
  ▶ Rec Hold
   ◀  ▲   ▼      ▶
REC FORMAT LO CUT LIMITER  REC LEVEL
   ▭      ▭     ▭       ▭
```

4. Use [▲] or [▼] to select "On", and press [✔].

```
       Rec Hold
     Off
   ✔ On

   ◀  ▲   ▼      ✔
REC FORMAT LO CUT LIMITER  REC LEVEL
   ▭      ▭     ▭       ▭
```
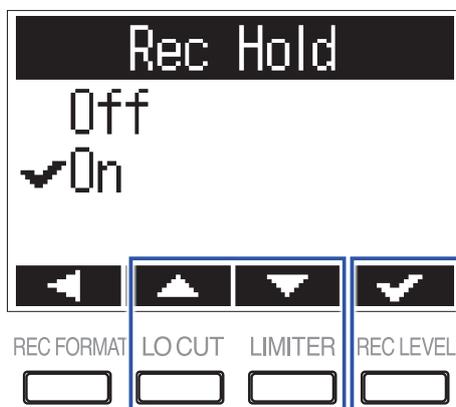
Setting value	Explanation
Off	Button operations will not be automatically disabled during recording.
On	Button operations will be disabled during recording. To stop recording, while pressing ⏹, press ⏺.

HINT

Even while button operations have been automatically disabled during recording, ➕ and ➖ can be used.

Outputting tone signals when starting and stopping recording (sound marker function)

Half-second tone signals (sound markers) can be played from the PHONE OUT jack when recording starts and stops. Since sound markers are also written to files, when recording audio for video with the F1, sending the F1 output signal to the camera input can make synchronizing audio and video easier.

1. While pressing [■]^OPTION, press [MENU] to open the MENU screen.

2. Use [▲] and [▼] to select "Record/Play", and press [▶].

```
        MENU
  ▶Record/Play
   Date/Time
   LCD
 EXIT  ▲   ▼    ▶
 REC FORMAT LO CUT  LIMITER  REC LEVEL
```

3. Use [▲] and [▼] to select "Sound Marker", and press [▶].

```
     Record/Play
     Rec File
     Rec Hold
   ▶Sound Marker
  ◀   ▲   ▼    ▶
 REC FORMAT LO CUT  LIMITER  REC LEVEL
```

4. Use [▲] or [▼] to select "On", and press [✔].

```
    Sound Marker
     Off
   ✔On

  ◀   ▲   ▼    ✔
 REC FORMAT LO CUT  LIMITER  REC LEVEL
```

NOTE
Be careful of the volume if you are monitoring the sound with headphones, for example.

Setting how the counter is displayed

The counter shown during recording can be set to either the elapsed recording time or the remaining possible recording time.

1. While pressing ▣ (OPTION), press MENU to open the MENU screen.

2. Use ▲ and ▼ to select "Record/Play", and press ▶ .

```
          MENU
   ▶Record/Play
    Date/Time
    LCD
   EXIT   ▲    ▼      ▶
   REC FORMAT LO CUT  LIMITER   REC LEVEL
```

3. Use ▲ and ▼ to select "Rec Counter", and press ▶ .

```
       Record/Play
    Rec Hold
    Sound Marker
   ▶Rec Counter
   ◀    ▲    ▼      ▶
   REC FORMAT LO CUT  LIMITER   REC LEVEL
```

4. Press ▲ or ▼ to select how it is shown, and press ✔ .

```
       Rec Counter
   ✔Elapsed Time
    Remaining Time

   ◀    ▲    ▼      ✔
   REC FORMAT LO CUT  LIMITER   REC LEVEL
```

Setting how marks are added when recording/playing

You can set how marks are added when ▶/Ⅱ is pressed while recording and playing back.

1. While pressing ■ (OPTION), press MENU to open the MENU screen.

2. Use ▲ and ▼ to select "Record/Play", and press ▶.

```
         MENU
  ▶ Record/Play
    Date/Time
    LCD
  EXIT  ▲    ▼      ▶
  REC FORMAT  LO CUT  LIMITER  REC LEVEL
```

3. Use ▲ or ▼ to select "PLAY Key Option", and press ▶.

```
      Record/Play
    Sound Marker
    Rec Counter
  ▶ PLAY Key Option
  ◀    ▲    ▼      ▶
  REC FORMAT  LO CUT  LIMITER  REC LEVEL
```

4. Use ▲ and ▼ to select "Recording" or "Playing", and press ▶.

```
    PLAY Key Option
  ▶ Recording
    Playing

  ◀    ▲    ▼      ▶
  REC FORMAT  LO CUT  LIMITER  REC LEVEL
```

5. Use ▲ and ▼ to select when marks are added, and press ✓ .

```
┌─────────────────────────┐
│      Recording          │
│     Pause Only          │
│   ✓Pause & Mark         │
│     Mark Only           │
├─────────────────────────┤
│  ◄    ▲    ▼      ✓     │
│                         │
│ REC FORMAT LO CUT LIMITER  REC LEVEL │
│  ▭      ▭    ▭      ▭   │
└─────────────────────────┘
```

Setting value	Explanation
Pause	Pressing ▶/❚❚ will pause without adding a mark.
Pause & Mark	Pressing ▶/❚❚ will pause and add a mark.
Mark	Pressing ▶/❚❚ will add a mark without pausing.

Setting the display backlight

You can set the display backlight to turn off after a specific amount of time without use.

1. While pressing [■] (OPTION), press [MENU] to open the MENU screen.

2. Use [▲] and [▼] to select "LCD", and press [▶].

```
┌─────────────────────┐
│       MENU          │
│   Record/Play       │
│   Date/Time         │
│  ▶LCD               │
│ EXIT  ▲    ▼    ▶   │
└─────────────────────┘
REC FORMAT  LO CUT  LIMITER  REC LEVEL
```

3. Use [▲] and [▼] to select "Backlight", and press [▶].

```
┌─────────────────────┐
│        LCD          │
│  ▶Backlight         │
│   Contrast          │
│                     │
│  ◀   ▲    ▼    ▶   │
└─────────────────────┘
REC FORMAT  LO CUT  LIMITER  REC LEVEL
```

4. Use [▲] and [▼] to set the amount of time until the backlight turns off, and press [✓].

```
┌─────────────────────┐
│     Backlight       │
│   Off               │
│   On                │
│  ✓30 sec            │
│  ◀   ▲    ▼    ✓   │
└─────────────────────┘
REC FORMAT  LO CUT  LIMITER  REC LEVEL
```

HINT
This can be set to Off, On, 30 seconds, or 1 to 5 minutes.

Adjusting the display contrast

1. While pressing [■] OPTION, press [MENU] to open the MENU screen.

2. Use [▲] and [▼] to select "LCD", and press [▶].

```
          MENU
     Record/Play
     Date/Time
    ▶LCD
    EXIT  ▲    ▼      ▶
    REC FORMAT  LO CUT  LIMITER  REC LEVEL
    [    ]    [    ]  [    ]   [    ]
```

3. Use [▲] and [▼] to select "Contrast", and press [▶].

```
          LCD
     Backlight
    ▶Contrast

    ◀    ▲    ▼      ▶
    REC FORMAT  LO CUT  LIMITER  REC LEVEL
    [    ]    [    ]  [    ]   [    ]
```

4. Use [−] and [+] to adjust the contrast, and press [✓].

```
       Contrast

        5    ⬍

    ◀    −    +      ✓
    REC FORMAT  LO CUT  LIMITER  REC LEVEL
    [    ]    [    ]  [    ]   [    ]
```
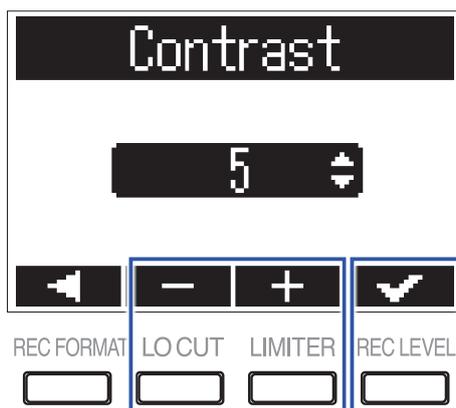
HINT
This can be set from 1 to 10.

Setting the type of battery used

Set the type of battery used so that the amount of remaining battery charge can be accurately displayed.

1. While pressing [■] (OPTION), press [MENU] to open the MENU screen.

2. Use [▲] or [▼] to select "Battery", and press [▶].

```
        MENU
    Date/Time
    LCD
  ▶ Battery
EXIT  [▲]  [▼]     [▶]
REC FORMAT  LO CUT  LIMITER   REC LEVEL
  ⬭         ⬭       ⬭          ⬭
```

3. Use [▲] and [▼] to select the battery type, and press [✓].

```
       Battery
  ✔Alkaline
   Ni-MH
   Lithium
[◀]  [▲]  [▼]     [✓]
REC FORMAT  LO CUT  LIMITER   REC LEVEL
  ⬭         ⬭       ⬭          ⬭
```

Setting the time until the power turns off automatically

You can set the **F1** to automatically turn off after being unused for a specific amount of time.

1. While pressing [■] (OPTION), press [MENU] to open the MENU screen.

2. Use [▲] or [▼] to select "Auto Power Off", and press [▶].

```
        MENU
  LCD
  Battery
 ▶Auto Power Off
 EXIT [▲] [▼]   [▶]
 REC FORMAT LO CUT  LIMITER  REC LEVEL
   [___]  [____]  [____]   [____]
```

3. Use [▲] and [▼] to set the time until the power turns off, and press [✓].

```
   Auto Power Off
 ✓Off
  5 min
  10 min
 [◀] [▲] [▼]   [✓]
 REC FORMAT LO CUT  LIMITER  REC LEVEL
   [___]  [____]  [____]   [____]
```
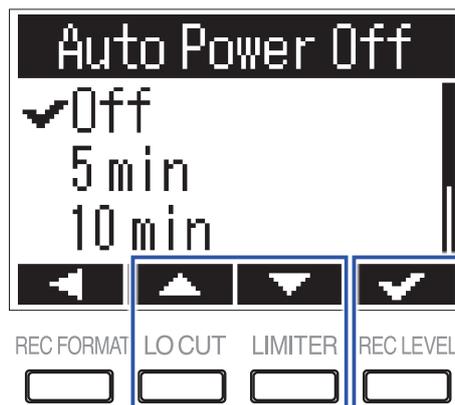
HINT
This can be set to Off, 5, 10, 30, or 60 minutes.

Other functions

Formatting microSD cards

A microSD card that has been purchased or formatted by a computer should be reformatted for use with the F1.

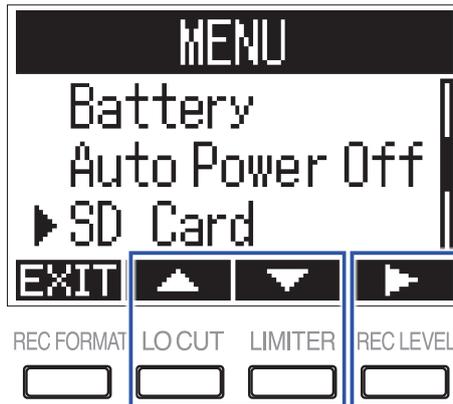**1.** While pressing [■] OPTION, press [MENU] to open the MENU screen.

2. Use [▲] and [▼] to select "SD Card", and press [▶].

```
        MENU
    Battery
    Auto Power Off
  ▶ SD Card
  EXIT  ▲    ▼      ▶
  REC FORMAT  LO CUT  LIMITER  REC LEVEL
```

3. Use [▲] and [▼] to select "Format", and press [▶].

```
      SD Card
  ▶ Format
    Test
    ◀   ▲    ▼      ▶
  REC FORMAT  LO CUT  LIMITER  REC LEVEL
```

4. Use [▲] and [▼] to select "Execute", and press [✓].

```
      Format
  ✓Execute
   Cancel
    ◀   ▲    ▼      ✓
  REC FORMAT  LO CUT  LIMITER  REC LEVEL
```
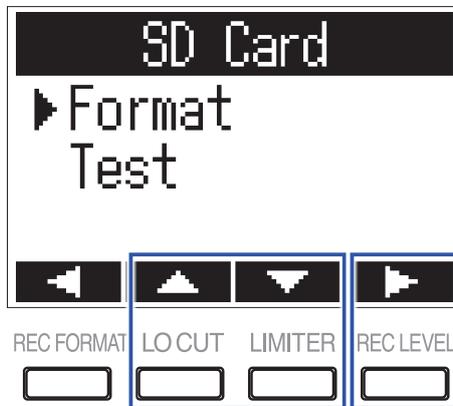
NOTE
- Before using a microSD card, it must be formatted by the F1.
- Be aware that all data previously saved on a microSD card will be deleted when it is formatted.

Testing microSD card performance

Use "Quick Test" or "Full Test" to check the current microSD card's compatibility with the **F1**.

A Quick Test can be done in a short amount of time, while a Full Test takes longer to examine the entire microSD card.

NOTE
Even if a performance test result is "OK", there is no guarantee that writing errors will not occur. Use this information as a guide.

Conducting a Quick Test

1. While pressing ☐ (OPTION), press MENU to open the MENU screen.

2. Use ▲ and ▼ to select "SD Card", and press ▶.
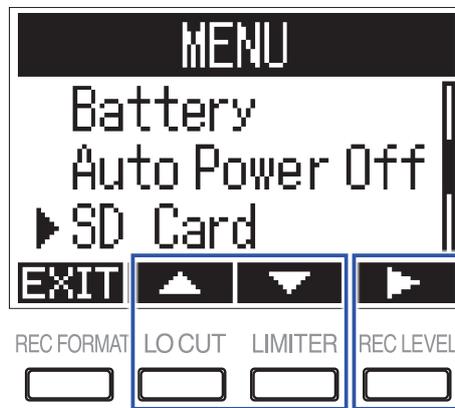
3. Use ▲ or ▼ to select "Test", and press ▶.

4. Use ![up] or ![down] to select "Quick Test", and press ![right].

```
┌─────────────────────────┐
│         Test            │
│ ▶Quick Test             │
│  Full Test              │
│                         │
│ ┌───┐┌───┐┌───┐ ┌───┐  │
│ │ ◀ ││ ▲ ││ ▼ │ │ ▶ │  │
│ └───┘└───┘└───┘ └───┘  │
│ REC FORMAT LO CUT LIMITER REC LEVEL │
│ ┌──┐  ┌──┐  ┌──┐  ┌──┐  │
│ └──┘  └──┘  └──┘  └──┘  │
└─────────────────────────┘
```
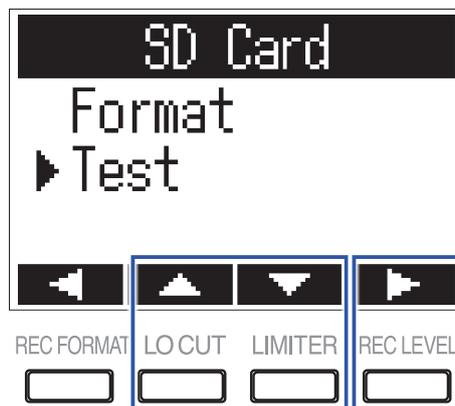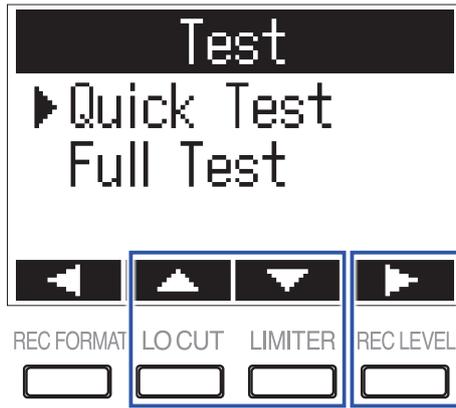
5. Use ![up] and ![down] to select "Execute", and press ![check].

```
┌─────────────────────────┐
│      Quick Test         │
│ ✓Execute                │
│  Cancel                 │
│                         │
│ ┌───┐┌───┐┌───┐ ┌───┐  │
│ │ ◀ ││ ▲ ││ ▼ │ │ ✓ │  │
│ └───┘└───┘└───┘ └───┘  │
│ REC FORMAT LO CUT LIMITER REC LEVEL │
│ ┌──┐  ┌──┐  ┌──┐  ┌──┐  │
│ └──┘  └──┘  └──┘  └──┘  │
└─────────────────────────┘
```

6. Check the result when the test completes.

```
┌─────────────────────────┐
│      Quick Test         │
│     Result: OK          │
│ 0%       50%      100%  │
│ ▒▒▒▒▒▒▒▒▒▒▒▒▒▒▒▒▒▒▒▒   │
│                         │
│ ┌───┐┌───┐┌───┐ ┌───┐  │
│ │ ◀ ││   ││   │ │   │  │
│ └───┘└───┘└───┘ └───┘  │
└─────────────────────────┘
```

Conducting a full test

1. While pressing [■] (OPTION), press [MENU] to open the MENU screen.

2. Use [▲] and [▼] to select "SD Card", and press [▶].

```
        MENU
   Battery
   Auto Power Off
  ▶ SD Card
  EXIT  ▲   ▼     ▶
  REC FORMAT  LO CUT  LIMITER  REC LEVEL
```

3. Use [▲] or [▼] to select "Test", and press [▶].

```
      SD Card
   Format
  ▶ Test

  ◀   ▲   ▼     ▶
  REC FORMAT  LO CUT  LIMITER  REC LEVEL
```

4. Use [▲] or [▼] to select "Full Test", and press [▶].

```
        Test
   Quick Test
  ▶ Full Test

  ◀   ▲   ▼     ▶
  REC FORMAT  LO CUT  LIMITER  REC LEVEL
```
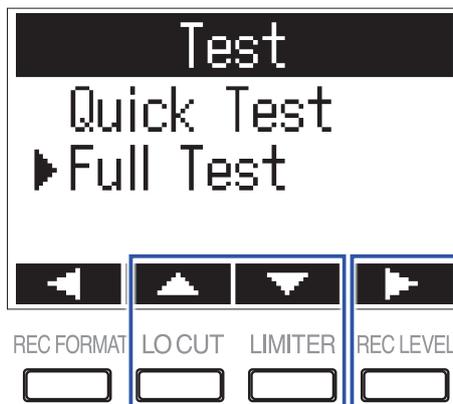
The estimated amount of time required for the full test will be shown.

```
┌─────────────────────────┐
│       Full Test         │
│        MESSAGE          │
│                         │
│     Estimated Time      │
│        0h32m            │
│                         │
│  ◄   ▲   ▼   ✔          │
└─────────────────────────┘
```

5. Use ▲ and ▼ to select "Execute", and press ✔ .

```
┌─────────────────────────┐
│       Full Test         │
│  ✔Execute               │
│   Cancel                │
│                         │
│                         │
│  ◄   ▲   ▼   ✔          │
└─────────────────────────┘
```

REC FORMAT LO CUT LIMITER REC LEVEL

HINT

You can press ▶/❚❚ to pause and resume a test.

6. Check the result when the test completes.

```
┌─────────────────────────┐
│       Full Test         │
│      Result: OK         │
│ 0%      50%     100%    │
│ ▓▓▓▓▓▓▓▓▓▓▓▓▓▓▓▓         │
│            [AVERAGE:  5%]│
│ ACCESS RATE[MAX    : 19%]│
│  ◄                      │
└─────────────────────────┘
```
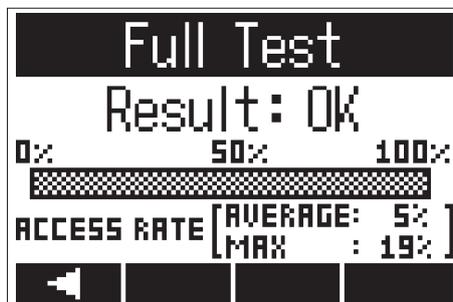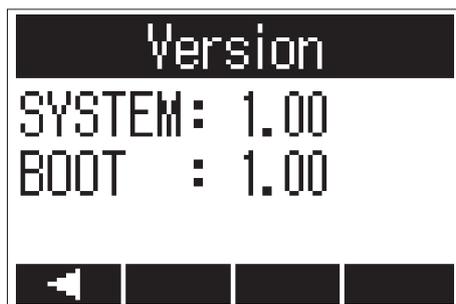
Checking the firmware versions

You can check the current firmware versions.

1. While pressing [■] OPTION, press MENU to open the MENU screen.

2. Use [▲] and [▼] to select "Version", and press [▶].

```
        MENU
    Auto Power Off
    SD Card
  ▶ Version
  EXIT  [▲]  [▼]    [▶]
REC FORMAT LO CUT LIMITER  REC LEVEL
```

3. Check the firmware versions.

```
        Version
  SYSTEM: 1.00
  BOOT   : 1.00

  [◀]
```

HINT

If a language file has been added, its version will also be shown.

```
        Version
  SYSTEM: 1.00
  BOOT   : 1.00
  LANG   : FRA 1.00
  [◀]
```
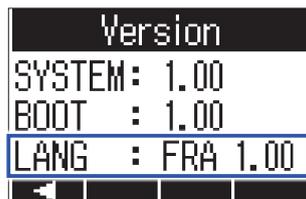
Restoring default setting values

You can restore all `F1` settings to their factory defaults.

1. While pressing [■] (OPTION), press [MENU] to open the MENU screen.

2. Use [▲] and [▼] to select "Factory Reset", and press [▶].

```
        MENU
   Version
   Language
 ▶Factory Reset
EXIT  ▲    ▼    ▶
REC FORMAT  LO CUT  LIMITER  REC LEVEL
```

3. Use [▲] and [▼] to select "Execute", and press [✔].

```
  Factory Reset
 ✔Execute
  Cancel
 ◀    ▲    ▼    ✔
REC FORMAT  LO CUT  LIMITER  REC LEVEL
```

After the settings are restored, the power will automatically turn off.

NOTE
Restoring factory defaults will delete any added language file. (→ "Adding languages")

Updating the firmware

You can update the **F1** to the latest firmware version.

1. Install new batteries in the **F1** (→ "Using batteries") or connect the dedicated AC adapter (→ "Using an AC adapter").

> **NOTE**
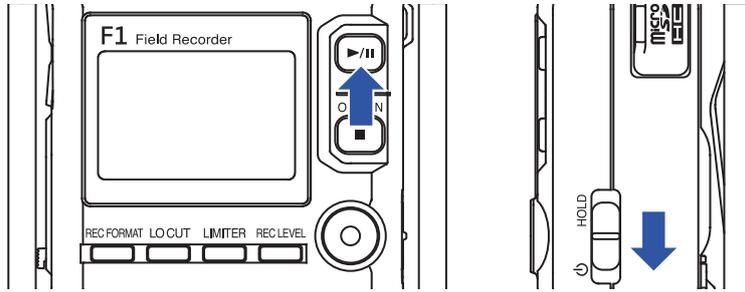> Executing a firmware update is not possible if the remaining battery power is low.

2. Copy the firmware update file to the root directory on a microSD card.
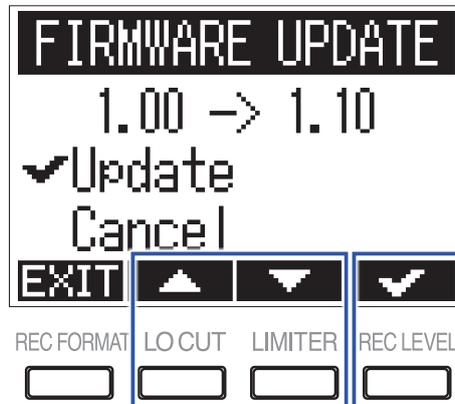
> **HINT**
> Files for the latest firmware updates can be downloaded from the ZOOM website (www.zoom.co.jp).

3. Insert the microSD card into the **F1** (→ "Inserting microSD cards")

4. While pressing [▶/❚❚], turn the power on.
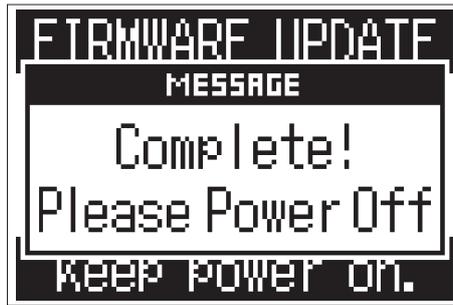

5. Use [▲] and [▼] to select "Update", and press [✔].

> **NOTE**
> During the firmware update, do not turn the power off or remove the microSD card. Doing so could cause the **F1** to become unstartable.

6. After the firmware update completes, turn the power off.

```
FIRMWARE UPDATE
    MESSAGE
   Complete!
 Please Power Off
   Keep Power On.
```

Troubleshooting

If your **F1** is not operating as intended, please check the following items first.

Recording/playback trouble

■ No sound is played/volume is low

- Confirm that the output volume of the **F1** is not set too low.
- Check the volume of the computer, iOS device or other equipment connected to the **F1**.

■ Recorded audio cannot be heard or is very quiet

- Confirm that the mic is pointed in the right direction.
- Check the input level settings (→ "Adjusting input levels").
- Check the plug-in power setting (→ "Setting plugin power").

■ Unable to record

- Confirm that the REC LED is lit (→ "Names of parts").
- Check the remaining recordable time with the counter shown on the Home Screen (→ "Home Screen (in recording standby)").
- Confirm that a microSD card is loaded properly in the card slot (→ "Inserting microSD cards").
- If the HOLD function is on, buttons operations will be disabled. Disable the HOLD function (→ "Preventing misoperation").

Other trouble

■ Computer does not recognize the F1 when they are connected by a USB cable

- Confirm that the operating system of the connected computer is supported on the ZOOM website (www.zoom.co.jp).
- The USB function must be set on the **F1** to allow the computer to recognize the **F1** (→ "Using as an audio interface", "Using as a card reader").

■ Battery operation time is short

Making the following changes could increase the battery operation time.
- Set the type of batteries used (→ "Setting the type of battery used").
- Turn plug-in power off when not using it (→ "Setting plugin power").
- Turn the display backlight off (→ "Setting the display backlight").
- Reduce the sampling rate used to record files. (→ "Selecting the recording format").
- Due to their characteristics, NiMH batteries (high-capacity ones recommended) or lithium batteries should enable longer use than alkaline batteries.

Specifications

Recording media		microSD/microSDHC cards (Class 4 or higher, up to 32 GB)	
Recording formats		WAV	44.1 kHz/16-bit, 48 kHz/16-bit, 48 kHz/24-bit, 96 kHz/24-bit Mono/stereo BWF formats supported
		MP3	48 kbps, 128 kbps, 192 kbps, 256 kbps, 320 kbps Mono/stereo ID3v1 tags supported
Display		1.25" monochrome LCD (96×64) with REC LED (red)	
Inputs	MIC IN	ZOOM mic capsule input	
	Mono shotgun mic (SGH-6)	Directionality	Super cardioid (3 directional mic units)
		Sensitivity	−39 dB/1 Pa at 1 kHz
		Input gain	−∞ − +50 dB
		Maximum sound pressure input	122 dB SPL
	MIC/LINE IN	Connector	3.5 mm stereo mini (with screw lock) Supports plug-in power (2.5 V)
		Input gain	−12 dB − +36 dB
		Input impedance	2 kΩ or more
	Lavalier mic	Plug	3.5 mm stereo mini (with screw lock)
		Directionality	Omnidirectional
		Sensitivity	-32 dB/1 Pa at 1kHz
		Maximum sound pressure input	115 dB SPL
		Cable length	160 cm
Outputs	PHONE OUT	Connector	3.5 mm stereo mini (with screw lock)
		Maximum output level	11 mW + 11 mW (into 32Ω load)
USB		microUSB	
		Mass storage operation	USB 2.0 High Speed
		Audio interface operation	USB class compliant 44.1kHz/16-bit, 48kHz/16-bit, 2-in/2-out Transfer method: asynchronous
Power		2 AAA batteries (alkaline, NiMH or lithium) AC adapter (ZOOM AD-17): DC 5V/1A	
Estimated continuous recording time using batteries		With SGH-6 mono shotgun mic capsule connected (48 kHz/24-bit, mono) Alkaline batteries: about 6.5 hours NiMH batteries 750 mAh): about 6 hours Lithium batteries: about 11 hours When using lavalier mic (48 kHz/24-bit, mono, plug-in power on) Alkaline batteries: about 10 hours NiMH batteries 750 mAh): about 9 hours Lithium batteries: about 16 hours • The above values are approximate. • Continuous battery operation times were determined using in-house testing methods. They will vary greatly according to use conditions.	
External dimensions		64.0 mm (W) × 79.8 mm (D) × 33.3 mm (H)	
Weight (main unit only)		120 g	