Preparations

1. Remove the battery cover, and insert batteries.

   ![Unlock the cover and pull it open]

   **HINT**
   A ZOOM AD-17 AC adapter can also be used.

2. Open the microSD card slot cover, and insert a microSD card.

3. Slide HOLD toward  to turn the power on.

   **HINT**
   Slide HOLD toward HOLD to disable the keys and prevent misoperation during recording.

4. Set the language displayed.
   Select the language: Press LO CUT or LIMITER
   Confirm: Press REC LEVEL

5. Set the date and time.
   Move cursor: Press LO CUT or LIMITER
   Change value: Press LO CUT or LIMITER
   Confirm: Press

   **HINT**
   Language and date and time settings can be changed later from the menu screen. To open the menu screen, press REC LEVEL while pressing .
Assembly and connections

Shock mount

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

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

2. Attach the other arms one at a time to the other belt loop.
   Using the elasticity of the arms, attach their ends to the belt loops while bending them slightly.

3. Slide the shock mount onto the camera accessory shoe and tighten the screw to attach it.

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.
Lavalier mics

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

2. Attach the belt clip to the \textbf{F1} with the screw.

3. Connect the lavalier mic to the MIC/LINE IN jack, and tighten the screw lock.

\textbf{HINT}

- Press \textbf{LIMITER} while pressing \textbf{■}, and select ON to provide plug-in power to a mic that uses it.
- Mics without screw locks can also be connected to the MIC/LINE IN jack.
Input and output settings

Adjusting input levels

Adjust the level of the signal input to the F1.

**HINT**
- Adjust so that the peak level stays around −12 dB.
- If the REC LED flashes, the sound could become distorted, so lower the input level.

**■ When using a mic capsule**
1. Turn on the mic capsule to adjust the input level.

**■ When using a lavalier mic**
1. Press , and select the input level.

**NOTE**
- To change the setting, press the same key again while the parameter appears enlarged.
- Select "AUTO" if you want the input level to be adjusted automatically.

**■ Adjusting the side mic level (stereo width) of a mid-side mic capsule.**
1. When the mic capsule is connected, press , and select the side mic level.

**■ Monitoring audio while recording**
1. Connect headphones to the PHONES OUT jack.
2. Use and to adjust the volume.
Adjusting the levels of connected devices

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

1. Minimize 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 (Play), press (Rec Format).
   
   This plays a test tone from the PHONE OUT jack.
   
   **NOTE**
   
   Be careful of the volume if you are monitoring the sound with headphones, for example.

4. Use (Up) and (Down) to adjust the input 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 other device, adjust the audio signal level in small increments until it is about −6 dB.

6. While pressing (Stop), press (Rec Format).
   
   Stop test tone playback.
   
   **NOTE**
   
   See the operation manual of the other device for information about its operation.
Recording

1. Make recording settings
   • Recording format: Press
     - The MP3 format compresses data, so the sound quality is lower than WAV format, but it also uses less SD card space. Higher values provide better audio quality in both WAV and MP3 formats.

     **HINT**
     - Low-frequency cut: Press
       - This can reduce noise from wind and vocal pops.
     - Limiter: Press
       - This prevents clipping caused by sudden loud noises.
     - Pre-recording: While pressing , press
       - Recording will start about 2 seconds before is pressed.

2. Press to start recording.

3. Press to pause/resume recording.
   - Pausing will automatically add a mark.
   - During playback, you can jump to the positions of added marks.

     **HINT**
     - The function that adds a mark when is pressed to pause can be changed on the menu screen

4. Press to end recording.
Playing recordings

1. Press ▶ to start playback.

2. Control playback.

<table>
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<tr>
<th>Action</th>
<th>Instructions</th>
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<td>Adjust the volume</td>
<td>Use + and -</td>
</tr>
<tr>
<td>Pause/resume playback, add a mark</td>
<td>Press ▷/‖</td>
</tr>
<tr>
<td>Search forward/backward</td>
<td>Press and hold REC_FORMAT or REC_LEVEL</td>
</tr>
<tr>
<td>Select files/jump to marks</td>
<td>Press REC_FORMAT and REC_LEVEL</td>
</tr>
<tr>
<td></td>
<td>If a file has marks, jumping to marks will occur first.</td>
</tr>
<tr>
<td>Delete a mark</td>
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<tr>
<td>Delete a file</td>
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<tr>
<td>Check file information</td>
<td>Press LO CUT</td>
</tr>
<tr>
<td>Change page:</td>
<td>Press LO CUT or LIMITER</td>
</tr>
<tr>
<td>Return to the playback screen:</td>
<td>Press REC_FORMAT</td>
</tr>
</tbody>
</table>

HINT

The function that adds a mark when ▷/‖ is pressed to pause can be changed on the menu screen.

3. Press ■ to stop playback.
Using USB functions

1. Use a USB cable to connect a computer or iOS device.

2. Select the function to use.
   - Move cursor: Press **LOCUT** or **LIMITER**
   - Confirm: Press **REC LEVEL**

   **Card reader**
   You can use a computer to exchange data with the F1.

   To disconnect the F1, end the connection on the computer first, and then press **EXIT**.

   **Audio interface**
   F1 input signals can be sent directly to a computer or iOS device, and playback signals from that computer or device can be output from the F1.

   1. Set the type of device used.
      - Move cursor: Press **LOCUT** or **LIMITER**
      - Confirm: Press **REC LEVEL**

      **NOTE**
      After selecting "iOS", turn the F1 power on, follow the instructions on screen, and disconnect the cable once. Then, select "iOS" again and reconnect the cable.

   2. Set the power source if using a PC/Mac.
      - Move cursor: Press **LOCUT** or **LIMITER**
      - Confirm: Press **REC LEVEL**

   3. To set direct monitoring, press **REC FORMAT** while pressing **EXIT**.
      - This enables monitoring without latency by directly outputting the F1 input signal before sending it to the computer or iOS device.

      To disconnect the F1, press **REC LEVEL** while pressing **EXIT**.
Other functions and settings

While pressing [■], press [REC LEVEL] to open the menu screen where you can use the following functions and settings.

<table>
<thead>
<tr>
<th>Menu item</th>
<th>Explanation</th>
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<td></td>
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<tr>
<td>Rec File Name</td>
<td>Set the recording file name format.</td>
</tr>
<tr>
<td>Rec File</td>
<td>Set the recording file format (stereo/mono).</td>
</tr>
<tr>
<td>Rec Hold</td>
<td>Automatically hold keys during recording to prevent misoperation.</td>
</tr>
<tr>
<td>Sound Marker</td>
<td>Output half-second tone signals when starting and stopping recording.</td>
</tr>
<tr>
<td>Rec Counter</td>
<td>Set how the counter appears on the display.</td>
</tr>
<tr>
<td>PLAY Key Option</td>
<td>Set the function when [■] is pressed during recording/playback.</td>
</tr>
<tr>
<td>Playback Mode</td>
<td>Set the file playback mode.</td>
</tr>
<tr>
<td>Date/time</td>
<td></td>
</tr>
<tr>
<td>Set Date/Time</td>
<td>Set the date and time added to recording files.</td>
</tr>
<tr>
<td>Date Format</td>
<td>Set the format of the date shown for file names and on the Playback Screen.</td>
</tr>
<tr>
<td>LCD</td>
<td></td>
</tr>
<tr>
<td>Backlight</td>
<td>Set the time until the display backlight turns off.</td>
</tr>
<tr>
<td>Contrast</td>
<td>Set the display contrast.</td>
</tr>
<tr>
<td>Battery</td>
<td>Set the type of batteries used.</td>
</tr>
<tr>
<td>Auto Power Off</td>
<td>Set to turn off automatically if not used for a certain amount of time.</td>
</tr>
<tr>
<td>SD card</td>
<td></td>
</tr>
<tr>
<td>Format</td>
<td>Format a microSD card for use with the F1.</td>
</tr>
<tr>
<td>Test</td>
<td>Test whether a microSD card can be used with the F1.</td>
</tr>
<tr>
<td>Version</td>
<td>Check the firmware version.</td>
</tr>
<tr>
<td>Language</td>
<td>Set the language shown on the display.</td>
</tr>
<tr>
<td>Factory Reset</td>
<td>Restore F1 settings to factory defaults.</td>
</tr>
</tbody>
</table>
### 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 format 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 |
|        | 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  
|        | Input impedance: 2 kΩ or more |
| Output | 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  
|        | 44.1/16-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 |