

Zoom F4 Field Recorder/Mixer

Setup Guide



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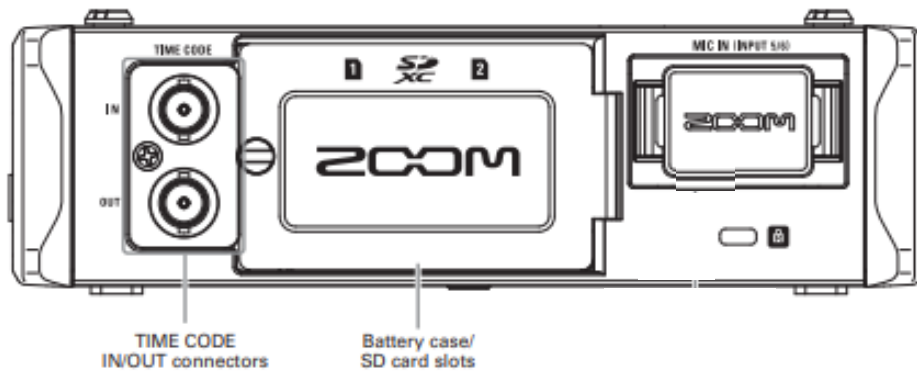
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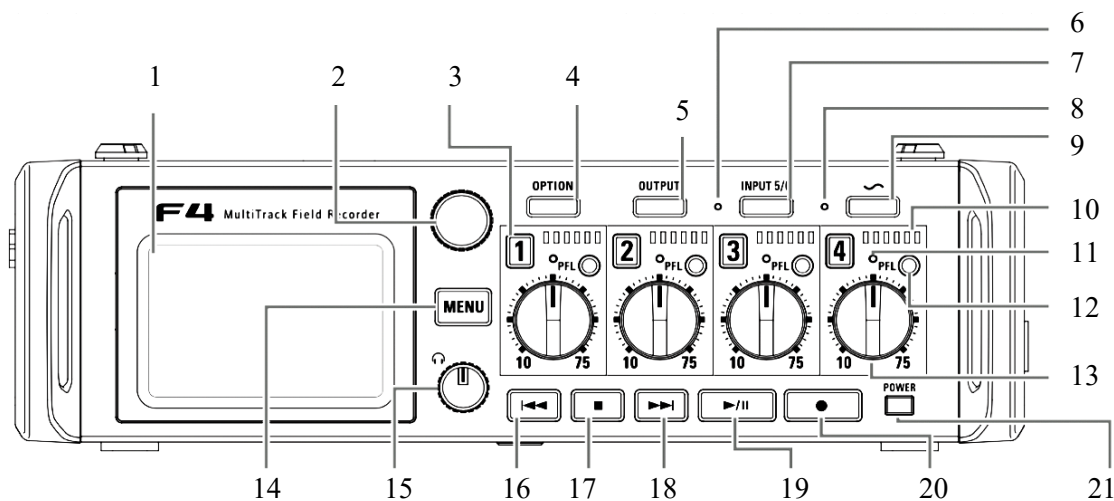
Zoom F4 Mixer/Recorder Instructions

When the Zoom F4 is issued to you it comes with a protective case and a rain hood. You can unhinge the hood by tearing the Velcro strip on one side or remove it by unzipping it on the other side.

The bottom of the case contains a large battery, able to power for three days of continuous filming, and access to the timecode, inputs and sd cards.

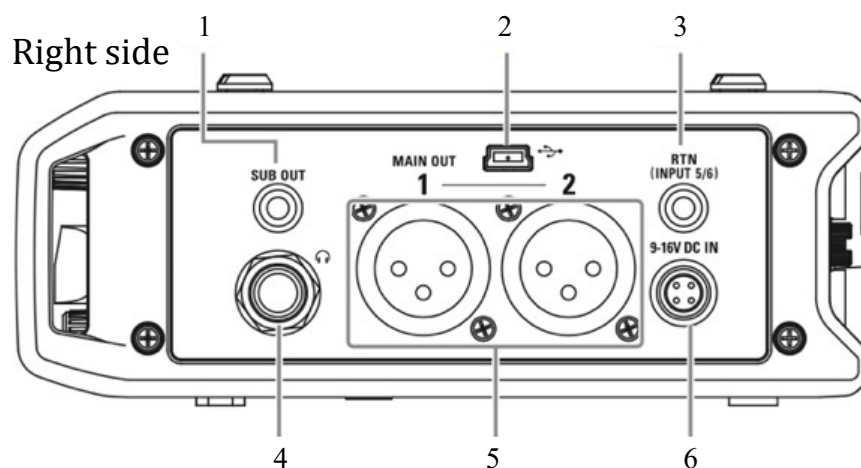


At the top of the case there are two Velcro straps that are threaded through metal loops. These support the weight of the Zoom F4 and should not be removed.



1. **LCD screen** – displays information you currently have selected based on menu or monitor options
2. **Selection dial** – Cycles through the menus, press down to confirm menu option, and changes the home screen window when menu is not active.
3. **Track key** – There are four buttons labelled 1, 2, 3 and 4. Pressing them makes the record channel live. A red light shows when they are pressed.
4. **Option key** – press to show shortcut menu. Press option and track 1 to go to timecode jam (sync). All available options can be viewed in the menu under System, Shortcut List
5. **Output key** – opens a virtual menu where you can route or select outputs from the Zoom. These options do not affect the recording only the output.
6. **Input 5/6 indicator** – Shows if input 5 and 6 are active or not. Activation is set in the input 5/6 menu.
7. **Input 5/6 key** – opens the input 5/6 menu. Monitor/record the output of a DSLR or equivalent.
8. **Slate tone indicator** – a solid red light will show the slate tone is active and must be disabled if recording.

9. **Slate Tone Key** – press once to play slate tone for 1 second, press and hold to play slate tone until disabled. Slate tone is useful when monitoring audio and it gives a fixed sound.
10. **LED level meter** – shows the audio metering above each live channel
11. **Status Indicator** – shows if the channel is in normal track select mode (red) or PFL mode (orange). If in PFL mode, the status lights of all other tracks will shut off.
12. **PFL (Pre-fade Listen)** - Next to each input select buttons are a smaller PFL button, which stands for pre-fade-listen. Pressing one of these gives you the input sound for that particular channel. This is useful, for example, if you are listening to a mix of various inputs and your boom op signals that they want to hear only their audio. The red channel light turns amber when the PFL buttons are pressed.
13. **Track knob** – turning the dials under each track increases (Turned to right) or decreases (turned to left) the recording volume of the track.
14. **MENU** - accesses menu options
15. **Headphone volume** – turning the dial increases (Turned to right) or decreases (turned to left) the headphone volume. **Note:** this does not change the recording volume of the track(s) used.
16. **|◀◀** - If on home screen goes back through files.
17. **Stop** – When recording press stop to stop the recording and save as a new file. During playback press Stop to end playback early.
18. **▶▶|** - If on home screen goes forward through files.
19. **Play/pause** – When recording pauses the current recording and places a mark on the clip. This does not stop the recording and therefore does not create a new file. This can trap people in having a massive file instead of multiple for each recording. During playback press to play or pause the current audio file.
20. **Record** – press to record. Light is solid red when recording.
21. **Power button** – Turns on/off the Zoom, this function is disabled while recording.



1. **Sub out** – send an output to a subwoofer
2. **USB** – The zoom can connect to a computer for data transfer via USB. The USB is not able to power the zoom like in other recorders. USB options can be set in the menu.
3. **RTN Input 5/6** – Input from a DSLR or equivalent.
4. **Headphone Jack** - needs ¼ inch adapter for regular headphones.
5. **Main out 1 and 2** – the main line outputs. Can output to a more detailed mixer system or monitor.
6. **DC in** - Cable should be provided for V-Lok power or USB hub power. Note: do not use the zoom without external power, the batteries inside the zoom are for the internal clock and timecode.

Zoom F4 - Setup

There is a six-step procedure for setting up the Zoom F4 field recorder so that it is ready to record professional film audio.

Check the SD card

Turn the recorder on and watch the screen. When the home screen loads, a warning display appears for a few seconds that reads "SD2 : No Card!" By deduction you must have a card in SD1 slot, since no warning appears for that. Another way of checking the presence of a card is to look in the SD Card menu this will tell you if you have one active or not.

Factory Reset

It is possible that other users have left the Zoom F4 with some functionality that will ambush you. For example, delaying record audio or other terrors! Therefore, it is best to do a factory reset when you first get the machine. That way you start with a clean slate.

To do this from the HOMESCREEN:

- MENU
- SYSTEM
- FACTORY RESET - an "are you sure" warning appears" select "yes." The Zoom will then turn itself off.

Setting the Clock

When you turn the Zoom back on, a clock menu appears in the LCD display. Use the dial to set and enter the correct date and time. Each of the sound files you record with the Zoom include the time as metadata. The clock time also generates the time of day timecode embedded in the files. You do not have to set the seconds, although try to enter the time values near a full minute.

Phantom power (+48)

This sends power to the condenser microphones that we use to record professional audio.

To access phantom power:

- MENU
- INPUT
- PHANTOM
- ON/OFF - scroll down the list to "All", turn on.

Setting the timecode

The Zoom F4 does not generate timecode. It takes it from the clock. You will need time of day timecode to be embedded on each file you record with the Zoom F4. You also will need the timecode to be PAL so that it is compatible with the cameras/edit software we use.

To access the timecode options:

- MENU
- TIMECODE TC - change Mode to "Input RTC Run", change FPS to "25nd"

Setting the input limiter

You do not want your recording to exceed 0dBFS or you will get clipping. Clipping is digital distortion, and it is most unpleasant! The limiter acts as a barrier for the signal preventing it from clipping.

- MENU
- INPUT
- Input limiter
- All
- On - Type/soft knee.

Now you are ready to make a recording

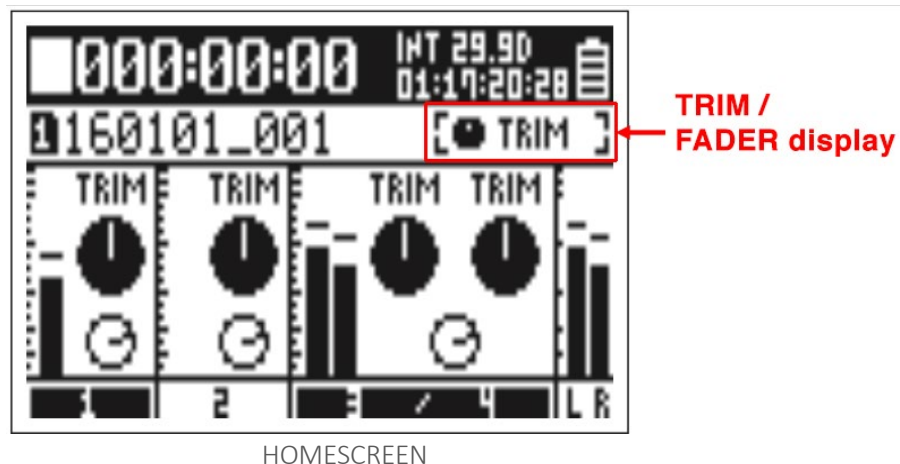
Making a recording

Recording format

The default recording format is Tracks 1-6 Poly WAV. This produces a WAV file with 6 individual tracks that correspond to Inputs 1-6¹. Each track is separate and unmixed. The default sample rate is 48Hz and the bit depth is 24.

Home/Mixer screen

The default Home or mixer screen, below, is what you see when you power up the Zoom F4. It can be identified because it has four virtual dials on it.



Trim mode

Pressing down on the menu dial highlights in black an item called trim. When you are in trim mode you can adjust the input gain which controls the actual sound that is being recorded. For example, selecting one of the buttons labelled 1 – 4 and turning the physical dial associated with that channel, either increases (turn to right) or decreases (turn to left) the record level of the input audio signal.

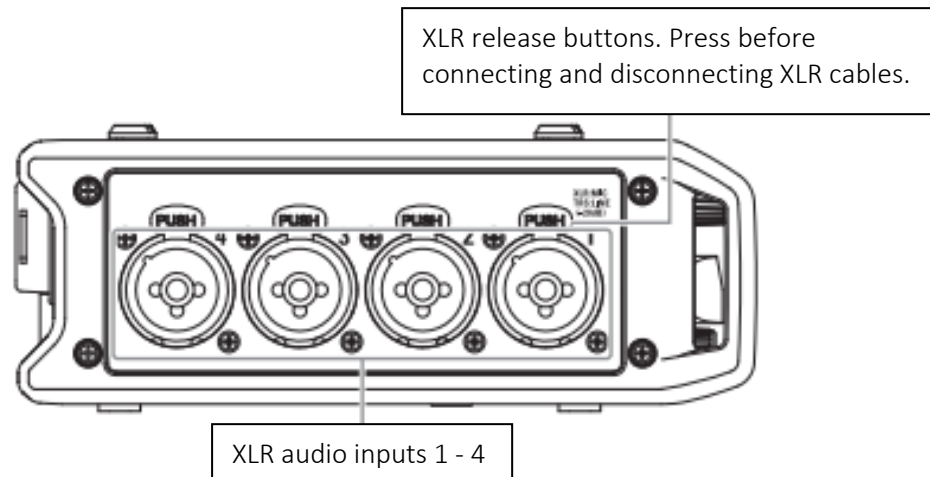
BE AWARE that if you are adjusting the physical dials, the virtual ones may not move and therefore you will not be hearing any difference to the sound. To solve this problem, move the physical dial to the same angle as the virtual one. Then it will connect with the virtual dial and you can start adjusting the sound.

Fader

With trim highlighted, pressing down on the menu dial and turning it clockwise accesses the fader mode. Fader mode is for monitoring. In fader mode, you can adjust the audio balance between the various channels without affecting the recording.

Connecting microphones and headphones

Microphones are plugged in on the left-hand side panel of the Zoom F4.



There are four XLR inputs. The one nearest the top panel is input 1. Typically, you might have a boom and 2 Lavalier mics connected to inputs 1, 2 and 3. The technicians supply a short XLR lead already plugged into input 1. This is to avoid wear and tear on the machine.

The headphones are plugged in on the right-hand side.

Typically, there is an audio splitter plugged. This is so, if there is a separate boom operator to sound mixer, the boom op and the Zoom op can both listen to the audio being recorded.

Setting the audio level

When recording you should aim for your average signal to be between -12 and -14 DBFS. To make things easier, when you are in trim mode, deselect the highlight on trim by pressing down on the menu dial, then turn the dial clockwise. The display turns into a large audio meter shown.

In the image shown a superimposed sign wave has been added to show where your average peak level should fall. It does not matter if certain sounds peak much louder than the average level, as long as they do not go near 0dBFS. So, for example, peaking sound at -5, is still acceptable.

Similarly, quiet sounds peaking at -30 dBFS are also fine, as long as the average sound for the recording is at -12 to -14 dBFS.



Recording

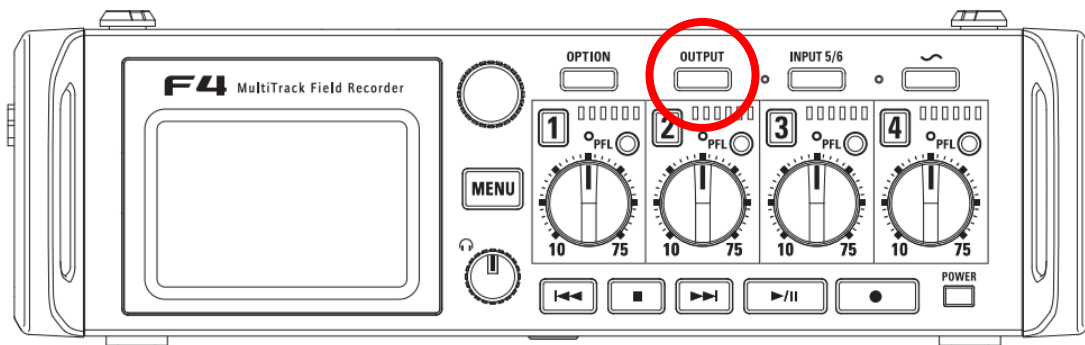
When you are happy with the level, press the physical record button. A solid red light should show if you are recording.

- If you press the stop button, a new audio file is written to the SD card.
- If you press play/pause the recording is halted and pressing play/pause again will resume it without writing a new file to the SD card. If, however, you press record after pausing, a new file is written to the SD card.

Headphone Routing

Headphone routing determines what signal is sent to the headphones and what you monitor when you playback a recording. The default setting is generally a good configuration, so you should not need to adjust anything. But if you need to customise something, here is the information.

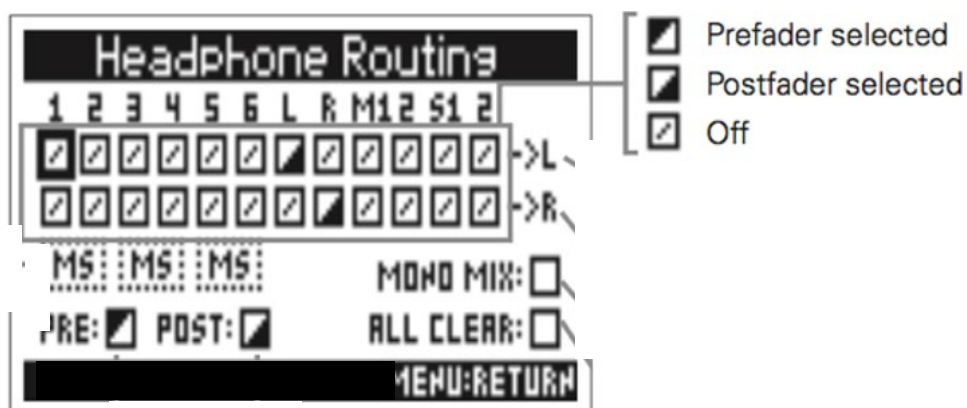
To access headphone routing, press the physical output button on the front panel, select routing, then headphone routing.



Or if you go through the menus the path is:

- MENU
- OUTPUT
- ROUTING
- HEADPHONE ROUTING

Once accessed what you are confronted with is a lot of squares, some of which are half shaded in.



The default setting sets the routing to the Left and Right channels.

Post-fade-listen – Headphones monitor the sound output after adjustment of the fader. What you hear is what is being monitored.

Pre-fade listen – Headphones monitor the sound output before adjustment of the fader. This is not affected by the fader option, what you hear is not what is being monitored.

Using the menu dial, you can select the squares and click on them to activate them. Clicking again changes the pre-fader to a post-fader.

Naming files

The Zoom F4 allows you to name files before you record them and organise your files after they have been recorded.

The first two options on the main menu deal with these operations.

- FINDER is for playback - navigating and playing already recorded files.
- METADATA (Next take) is for recording - naming files.

The METADATA (Next take) menu

The default file naming convention is date (yy mm dd), so if you make a recording on 12 Sept. 2020 it is named 200912.

There are 2 more options; these are folder, which uses the folder name and then names files in numerical order based on this, and User Scene Name, which allows you to specifically label a file, for example Scene 1 actor A.

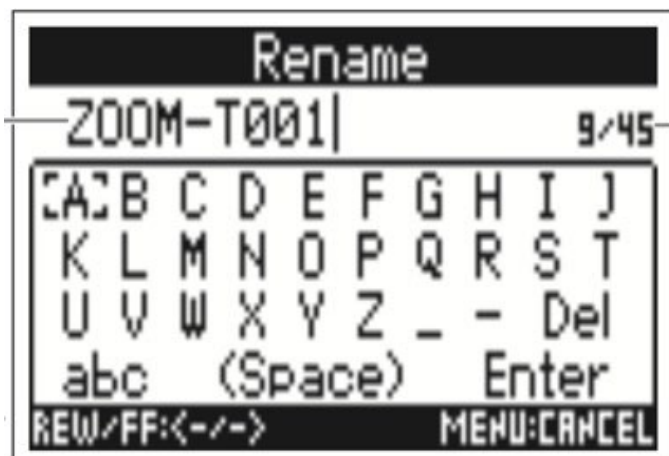
You can make a User Scene Name which may make it easier to find your files.

To do this press

- MENU
- METADATA (next take)
- Scene
- Name mode
- User Name
- Press Menu once to exit the submenu
- Then press User Scene Name
- Edit
- Enter name

The naming interface is tedious, the character input screen consists of a matrix of letters that you have to select individually by using the menu dial

- The character input screen defaults to upper case letters
- If you want to change the case, go to abc at the bottom left. If you want to use numbers, press abc twice



- Del (delete) deletes forward of the cursor, unless you are at the end of a name then it deletes backwards. To delete a specific letter, press the rewind (|◀◀) or fast forward (▶▶|) buttons to navigate there.
- Finally, pressing enter at the bottom right saves the name.

The Finder menu

The finder menu allows you to navigate to, select and edit recorded files

To go to the menu:

- MENU
- FINDER
- SD1:F4_SD (this is the name of your SD card, it may be different for you)

You can edit these files, i.e. change their name, move them, or even delete them (although the latter is not advisable—you never know what becomes useful in the edit!)

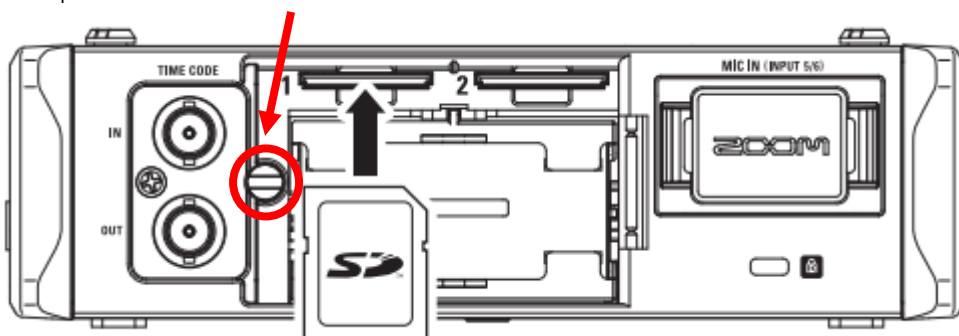
When you are in finder, extra functionality is provided by pressing the physical OPTION button (on the front panel, above the channel 1 dial) when you do this, an options menu appears. To edit a file, i.e. rename it, highlight the file and press the option button, then use the dial to enter a new name and enter to overwrite.

Removing the SD Card and transferring files

To access the SD card, turn the Zoom carry case upside down and unzip the bottom of the case.

Inside there is a large camera battery. Carefully remove it. Ideally you should not detach the cable connecting the battery to the Zoom.

Under the battery there is a panel with the Zoom logo on it. Unscrew the screw to the left of the logo to open the panel.



At the top, there are two slots, the left one is SD 1, the right SD 2.

Remove the SD card from slot one by pressing on the card. It should pop out, be aware though SD cards have been known to fly out if pushed too hard. You can now plug the SD card into a computer, and it should be readable to transfer files.

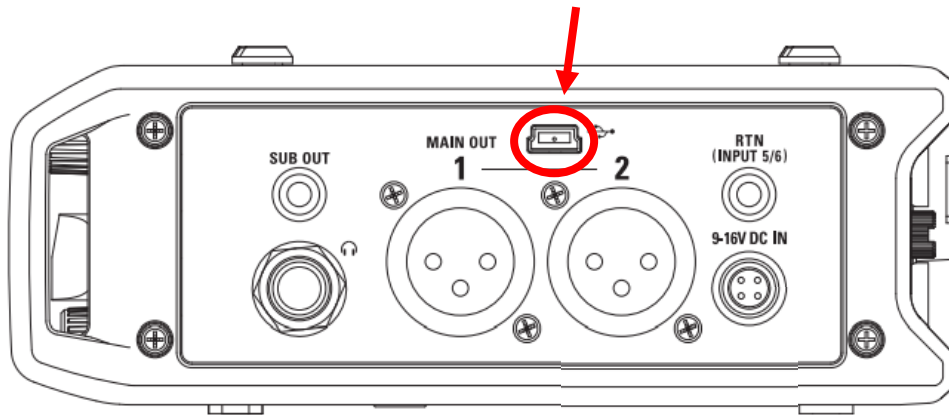
Once done remember to replace the card by pushing it in until it clicks, close the panel, and put the battery back in place.


USB menu

You can also transfer files via USB.

You do not have to physically remove the SD card to transfer the files to a computer. Go to USB menu, the bottom item on the main menu.

Plug a mini-USB cable into the Zoom using the mini USB socket on the right panel.



You get this symbol on the display 

The SD card will appear as an external hard-drive on the computer you are using.