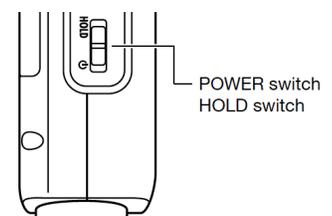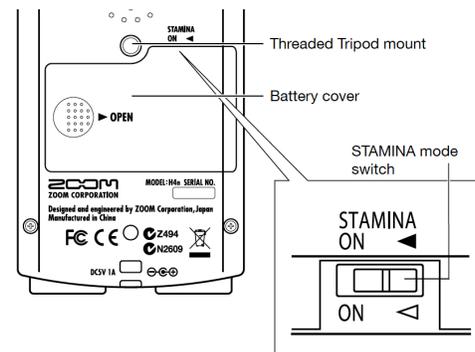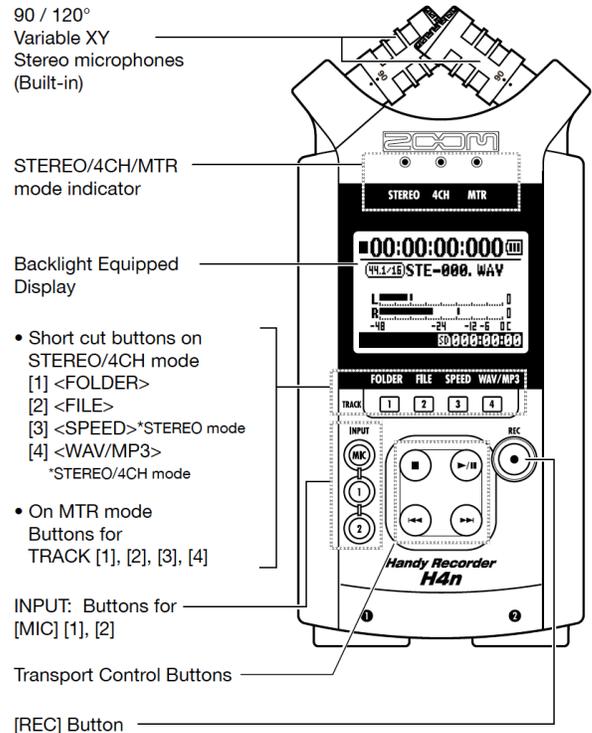# Zoom H4n QuickStart

Thrown together by David Tamés, https://kino-eye.com/contact/
(v.5, September 29, 2020)

Part 1 walks you through using the Zoom H4n recorder for the first time using the built-in stereo microphone; Part 2 covers recording with an external mono microphone for the first time; Part 3 covers recording with an external stereo microphone for the first time. Refer to the Zoom H4n Manual (PDF) manual for more details on the operation and configuration of the recorder. In this guide we will stick to the essential for location sound recording, which is probably all you will need.
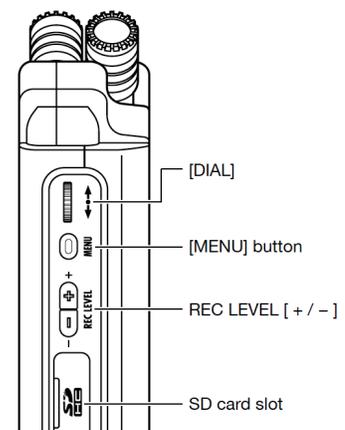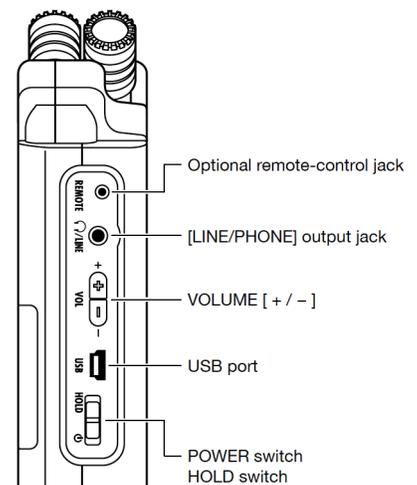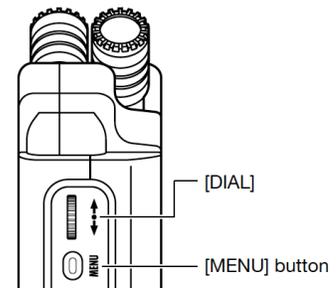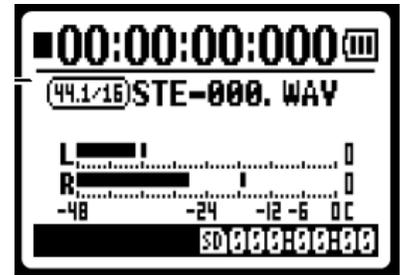
Warnings: The Zoom likes to consume batteries, so always have a backup set of AA batteries available. The Zoom is a treacherous device with a confusing menu structure and indicator system; as a result, it's easy to do things like record mono when you want stereo (and with the stereo light on!). The steps in this guide will help you avoid these problems.

Part 1: Recording with the built-in stereo microphone

1. In the battery compartment, **set the Stamina switch to OFF**. When it's ON the range of configuration options is limited and the menus are different, but we're going to to use some features that require Stamina mode to be turned off.

2. **Insert two fresh AA batteries in the battery compartment**, the door slides on and off, be careful with the battery door since it is fragile, if you have a broken door secure it with a piece of gaffer tape (not just any sticky tape).

3. **Insert an SD card into the SD card slot** (on the right side panel) if a card is not already inserted. Before inserting the card make sure the "write protect" tab is disabled, otherwise you will not be able to format and write to the card.

4. **Power on the recorder** (switch is located on the left side panel), slide it towards the power icon, do this again when you want to turn off the recorder, holding the switch for a couple of seconds, otherwise the recorder will not turn off.

5. **Check the battery level** indicator on the LCD display to make sure you're starting with fresh batteries, if not, you should find an extra pair in the kit (make sure of this when you check out the gear).

6. If the recorder is reporting "No card" try removing and replacing the card. The H4n can be finicky with SD cards. Repeated removal and insertion should resolve the issue. Make sure the contacts on the SD card are clean and free of contaminants.

7. If the recorder is reporting "Card protected" then the write-protect tab on the card is set to not allow recording, remove the SD card and disable the write-protect tab.

8. Select MENU => SD CARD => FORMAT to **format the SD card**, it will ask if you are sure just in case, this wipes out what was there so you can start with a fresh, empty card. It's a good idea to always format prior to using the recorder so you don't have to deal with other people's recordings on the device. This also reduces the chance of problems due to a corrupt file system.

9. Select MENU => REC SETTINGS => REC FORMAT to **set the recording format** WAV 48KHz 16-bit (WAV file format, 48KHz sampling rate, 16 or 24 bit-depth, in other words, you want to record uncompressed audio following the digital video standard); Note: the decision to record 16-bit or 24-bit depends on factors beyond the scope of this guide, in most cases, either one is fine.

10. Select MENU => REC SETTINGS => FILE NAME => DEFAULT so that **file names** will start with "STE" for stereo files and "MONO" for mono files; since it's easy with this recorder to record in mono by mistake, file names on the LCD called STE provide confirmation you are recording in stereo.

90 / 120°
Variable XY
Stereo microphones
(Built-in)

STEREO/4CH/MTR
mode indicator

Backlight Equipped
Display

• Short cut buttons on
STEREO/4CH mode
[1] <FOLDER>
[2] <FILE>
[3] <SPEED>*STEREO mode
[4] <WAV/MP3>
   *STEREO/4CH mode

• On MTR mode
Buttons for
TRACK [1], [2], [3], [4]

INPUT: Buttons for
[MIC] [1], [2]

Transport Control Buttons

[REC] Button

Threaded Tripod mount

Battery cover

STAMINA mode
switch

Disabled

Writing/Erasing possible

POWER switch
HOLD switch

11. Select MENU => MODE => STEREO to **set the recorder to Stereo Mode** so that it will record two track audio files. This does not, in and of itself, mean it will record in stereo, the next step is very important.

12. Select MENU => INPUT SETTINGS => MONO MIX to OFF in order to **record in stereo**, otherwise you'll be recording MONO even though the recorder is in stereo mode. The STEREO light indicates Stereo Mode, not that it will actually record in stereo. The only way to confirm if you are recording in stereo is when the recorder is creating file names that start with "STE" (if file names start with "MONO" you are not recording in stereo.

13. Select MENU => INPUT SETTINGS => 1/2 LINK to ON, with this mode ON, the recorder will **set both channels 1 and 2 to the same level,** which is usually what you want when recording in Stereo.

14. Select MENU => INPUT SETTING => LIMITER to ON, the Comp 1 setting is fine. You want to **enable the limiter** so that when a peak gets close to 0dBFS it will be attenuated to avoid distortion in your recording.

15. Select MENU => INPUT SETTING => LOW CUT — Set this to ON for most recording, unless low frequencies are important for the sound effects you are recording, however, for dialogue recording it's good to have the **low cut enabled** to reduce rumble and plosives.

16. To **enable the built-in microphone**, press the MIC button on the front panel, it will light up red, if 1 and 2 buttons are selected then the recorder is recording from the external microphone inputs (and for this first part of the QuickStart, we're assuming you want to record with the built-in microphone.

17. **Connect a pair of headphones to monitor your recording**; always monitor your recordings! Adjust the headphone levels using the VOLUME buttons (on the left side panel)

18. Now you're finally **ready to record**, press the RECORD button, it will blink red, this is called **Recording Standby Mode**, check your levels, you're not actually recording yet

19. **Adjust sound levels** as needed using the REC LEVEL buttons (on the left side panel), you want a healthy signal, too low, and the signal is lost in the noise floor, too loud and the peaks will distort. The limiter will catch errant peaks, but don't count on it constantly. Adjusting levels is crucial and takes some practice, set high enough (with peaks sometimes over -6dB but rarely over -3dB) so you have a healthy signal and only in rare occasions should you have a peak for which the limiter needs to kick in and deal with the peak for you.

20. Press RECORD, to **start recording**! Always check for ascending timecode numbers on the display to confirm you're actually recording and not still in Record Standby Mode!

21. Press the STOP button to **stop recording**, a new file is created for each recording and the file name is displayed on the LCD while recording or in record-standby mode.

22. To review the most recently recording, press PLAY. Review your other recordings by pressing the FILE button and then selecting the file you want to listen to using the scroll wheel/button, press play or other transport controls as needed.

23. **Keep a log**. The recorder shows you the file name it is recording to with makes it easy to match recordings to sound log entries. Make a note of the file name, date, place, and other details in your sound log. It's a good idea to SLATE your take (adding a verbal description of what you're recording at the beginning of the recording) which helps in identification of files without having to listen to the whole thing.

24. When recording in STEREO mode, the recorder will save files to one of the ten sub-folders of the STEREO folder. In the menu you can select with subfolder the file will go into, but default it goes into "FOLDER 01" You can change the folder by pressing the FOLDER button

25. When you are done with your recording, copy the contents of the SD card using

[DIAL]

[MENU] button

Optional remote-control jack

[LINE/PHONE] output jack

VOLUME [+ / −]

USB port

POWER switch
HOLD switch

[DIAL]

[MENU] button

REC LEVEL [+ / −]

SD card slot

an SD card reader to a unique folder in your media folder inside your project folder. The iMacs in Shillman 205 and 225 have card readers on the back.

26. It's a good idea to name your media folders with a consistent naming scheme, for example, consider using a date (year.month.day) and name of event in your naming scheme, this results in folder names like "2020.10.12 Atom Egoyan Interview" so it's easier to find things in the future and the folder names sort chronologically.

Part 2: Recording with an external mono microphone

Follow these additional steps when using an external microphone connected to the XLR-3F connectors:

1. Make sure you are using the right cables (see sidebar).

2. Connect the microphone cable to the XLR inputs connector on the bottom of the recorder, when using a single mic, the convention is to connect to input channel 1.

3.   If the microphone requires Phantom Power, Select the MENU => INPUT SETTING => PHANTOM => +48V to **enable phantom power,** the recorder will now provide power to the microphone.

4. If the microphone has a built-in LOW CUT FILTER use that instead of the filter in the recorder, to **disable the LOW CUT**, select MENU => INPUT SETTING => LOW CUT => OFF.

5. Select MENU => INPUT SETTINGS => MONO MIX to ON in order to **record dual mono**, in this mode the recorder will create a WAV file with identical audio on both channel 1 and channel 2. This will streamline editing of the audio file, since you will avoid having to manually map channel 1 to both channels 1 and 2 on the timeline for each clip..

6. Press the 1 buttons on the front panel, it will light up red letting you know that the external input is selected.

7. You are ready to record, everything else is pretty much the same as part 1, except now you are recording using an external microphone.

Part 3: Recording with an external stereo microphone

Follow these additional steps when using an external stereo microphone connected to the XLR-3F connectors:

1. Connect the microphone cables to the XLR inputs connector on the bottom of the recorder, when using a single mic, the convention is channel 1/Left and channel 2/Right.

2.   If the microphone requires Phantom Power, Select the MENU => INPUT SETTING => PHANTOM => +48V to **enable phantom power,** the recorder will now provide power to the microphone.

3. If the microphone has a built-in LOW CUT FILTER use that instead of the filter in the recorder, to **disable the LOW CUT**, select MENU => INPUT SETTING => LOW CUT => OFF.

4. Select MENU => INPUT SETTINGS => MONO MIX to ON in order to **record stereo**, in this mode the recorder will create a WAV file with audio from input channel 1 on channel 1 of the WAV file and audio from input channel 2 on channel 2 of the WAV file. This will streamline editing of the audio file, since you will avoid having to manually map channel 1 to both channels 1 and 2 on the timeline for each clip.

5. Select MENU => INPUT SETTINGS => 1/2 LINK to ON, with this mode ON, the recorder will **set both channels 1 and 2 to the same level,** which is usually what you want when recording in Stereo.

6. Press the 1 and 2 buttons on the front panel, it will light up red letting you know that the external input is selected.

7. You are ready to record, everything else is pretty much the same as parts 1 and 2, except now you are recording using an external stereo microphone.

Microphone cables and connectors

XLR-5M

XLR-5F

XLR-3F

XLR-3M

There are two types of balanced microphone cables in common use: **mono cables** (with XLR-3 connectors) and **stereo cables** (with XLR-5 connectors). You want to make sure you have the right cables and adapters.

Mono microphones have an XLR-3M connector on the end and **mono mic cables** have a XLR-3F connector on one end and a XLR-3M on the other.

Stereo microphones have a XLR-5M connector on the end and **stereo mic cables** have an XLR-5F connector on one end and a XLR-5M on the other.

Mixers, cameras, recorders usually have one XLR-3F sockets for each input channel, 1/L and 2/R is the convention.

Y cables are used to adapt between stereo and mono: they have a XLR-5F connector on one end that goes to the mic or mic cable from the mic and two short cables with XLR-3M connectors on the ends for connecting to the inputs on a recorder, mixer, or camera.

Balanced wiring (two conductors and one ground for each signal plus special circuitry on each end) is used in professional production because it is less susceptible to electromagnetic interference (EMI) and also allows for longer cable runs. Consumer wiring with only one conductor and one ground and is very susceptible to interference. For a technical explanation how this works, see [What's the Difference Between Balanced and Unbalanced?](#) (Aviom blog).