

H4n Pro Handy Recorder

QUICK GUIDE

You must read the Usage and Safety Precautions before use.



The Operation Manual can be downloaded from the ZOOM website (www.zoom.jp/docs/h4n_pro). This page has files in PDF and ePub formats. The PDF file format is suitable for printing on paper and reading on a computer. The ePub format can be read with electronic document readers and is designed for reading on smartphones and tablets.

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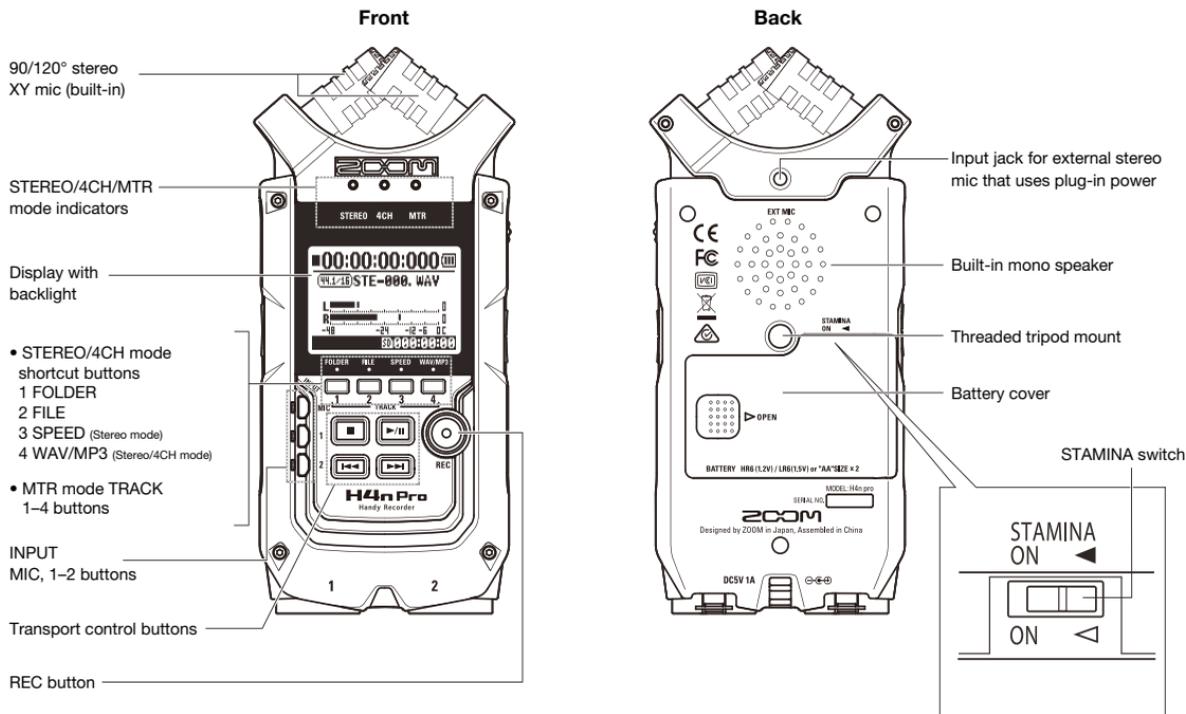
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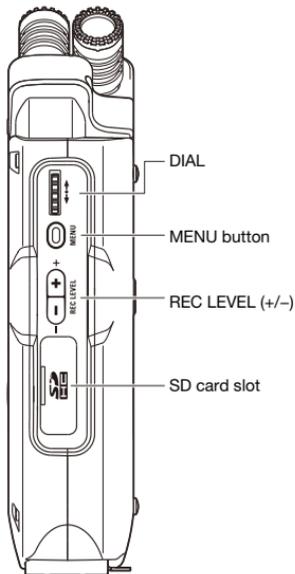
You might need this manual in the future. Always keep it in a place where you can access it easily.

The contents of this manual and the specifications of the product could be changed without notice.

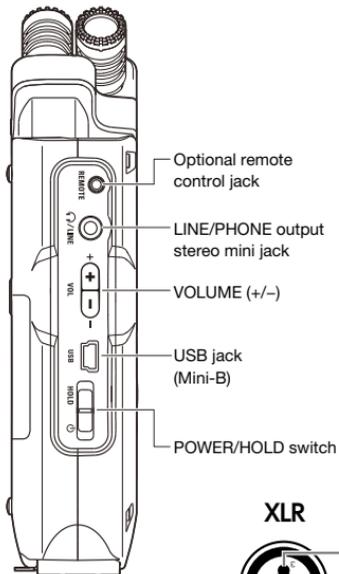
Names and functions of parts



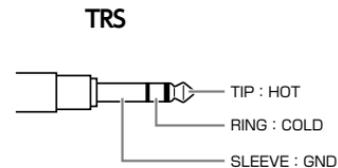
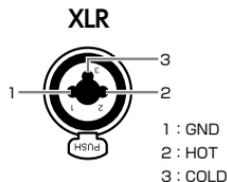
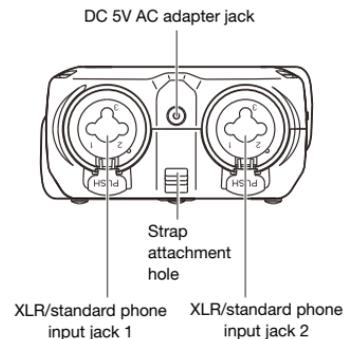
Right side



Left side



Bottom

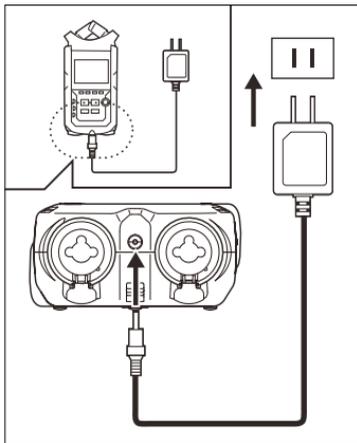


Battery/Power setting

The H4n Pro can be powered by a standard power outlet or batteries.

• Using a standard power outlet

Always use the specified AC adapter.

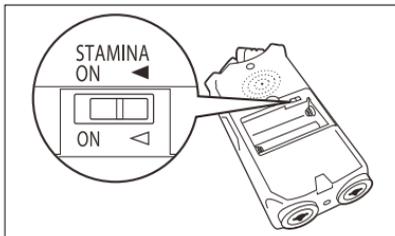
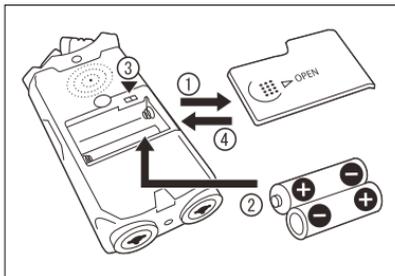


Specified AC adapter:
ZOOM AD-14A/D

Use of an AC adapter other than the specified model could cause malfunction.

• Using batteries

Install two AA batteries.



1 Open the battery compartment cover.

NOTE:

Make sure the power is off!

Confirm that the power is off whenever you open the battery compartment cover or connect/disconnect the AC adapter. Failure to do so could damage recording data.

2 Insert the batteries.

(Follow the +/- orientation.)

3 Set the STAMINA switch.

◀ Ordinary use
(using AC adapter or batteries)

ON: STAMINA mode on
(conserves power when using batteries)

4 Close the battery compartment cover.

- You can use conventional alkaline and nickel metal hydride rechargeable batteries.
- Use MENU > SYSTEM > BATTERY to set the type of battery so that the amount of remaining battery charge can be shown accurately.

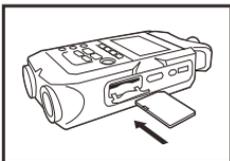
Loading an SD card

The SD card is required to record. Make sure to turn off power before inserting or removing the SD card.

How to install an SD card

1 Make sure power is off.

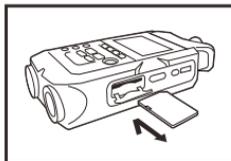
2 Insert the SD card into the slot.



How to remove an SD card

1 Make sure power is off.

2 Push the SD card in to remove it from the slot.



SD card recording capacity (approximate)

SD card recording capacity (approximate)	Recording time (approximate)
16GB SDHC card	Recording time (approximate)
44.1 kHz/16-bit WAV (stereo track)	25 hours
44.1kHz/128kbps MP3 (stereo track)	276 hours

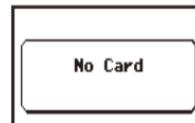
NOTE:

TURN THE POWER OFF!

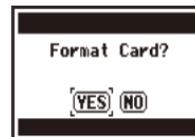
Never insert or remove an SD card while the power is on. This could destroy data.

CAUTIONS WHEN INSERTING SD CARDS

- You can use 16MB to 32GB SD cards. For a list of operation-certified SD cards please refer to the ZOOM website: zoomcorp.com
- If you use an SD card that was used by a computer, digital camera or other machine, formatting in the H4n Pro is required.
- If “No Card” appears on the display at startup, check if the SD card is correctly inserted.
- When “Format Card” appears on the display at startup, this means the SD card has not been formatted in the H4n Pro. To format it, press the DIAL and select YES.
- When the startup screen says “Card Protect”, the card is write-protected. To disable this, slide the lock switch on the SD card.

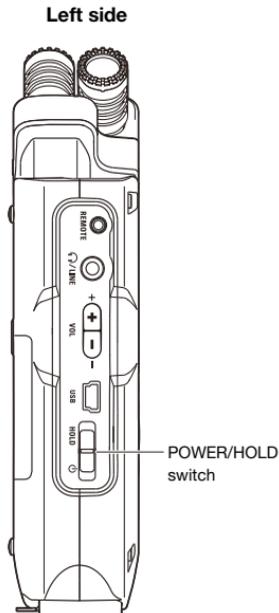


No SD card warning when starting up.



This warning will appear if an SD card is not in a recognized format. Select YES to format the card. This will delete all of its data.

Using the POWER/HOLD switch and turning the power on/off

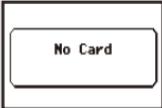
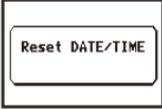


Turning the power on and starting up

- 1 Turn all connected equipment off first.
- 2 Insert an SD card.
- 3 Slide the **POWER** switch to turn the power on and start up.

- 4 Turn connected instruments and monitoring equipment on in that order.

NOTE:

- Before turning the power on, lower the volume of instruments and monitors connected to the H4n Pro.
- If the display reads “No Card” when starting up, make sure that an SD card is inserted correctly.

- If the display says “Reset DATE/TIME” when starting up, the date and time have been set to their default values.


HINT: Turning multiple devices on

When many devices are connected, turn them on in the following order.

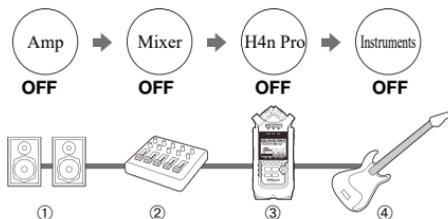


Turning the power off and shutting down

- 1 Turn the monitoring system and connected instruments off in that order first.
- 2 Slide the POWER switch to turn the power off.



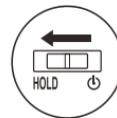
HINT: Order for turning off equipment



HOLD Function

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The H4n Pro features a HOLD function that disables button operation to prevent misoperation during recording.

Activating the HOLD function



Slide the POWER switch toward HOLD.



If you press any button while HOLD is active, the screen will display "Key Hold" for two seconds. To deactivate HOLD, slide the POWER switch away from HOLD.

Setting the date and time

Each file will automatically record the date/time.

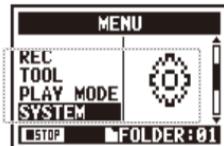
To facilitate searching for files by date, be sure to set the date/time after every battery change.



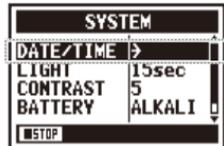
1 Press.



2 Select SYSTEM and press.



3 Select DATE/TIME and press.

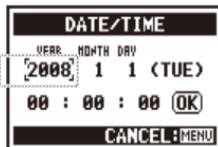


5 Select OK and press.



4 Set YEAR → MONTH → DAY → TIME
(hour: minute: second)

Select the item on DATE/TIME:

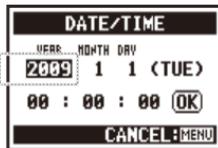


Turn the DIAL to select the item.



Press the DIAL.
The selected item value is highlighted.

Change the value.



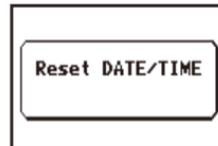
Turn the DIAL to set the value.



Press the DIAL.
The cursor appears again.

NOTE:

If "Reset DATE/TIME" appears during startup, the date/time needs to be set.

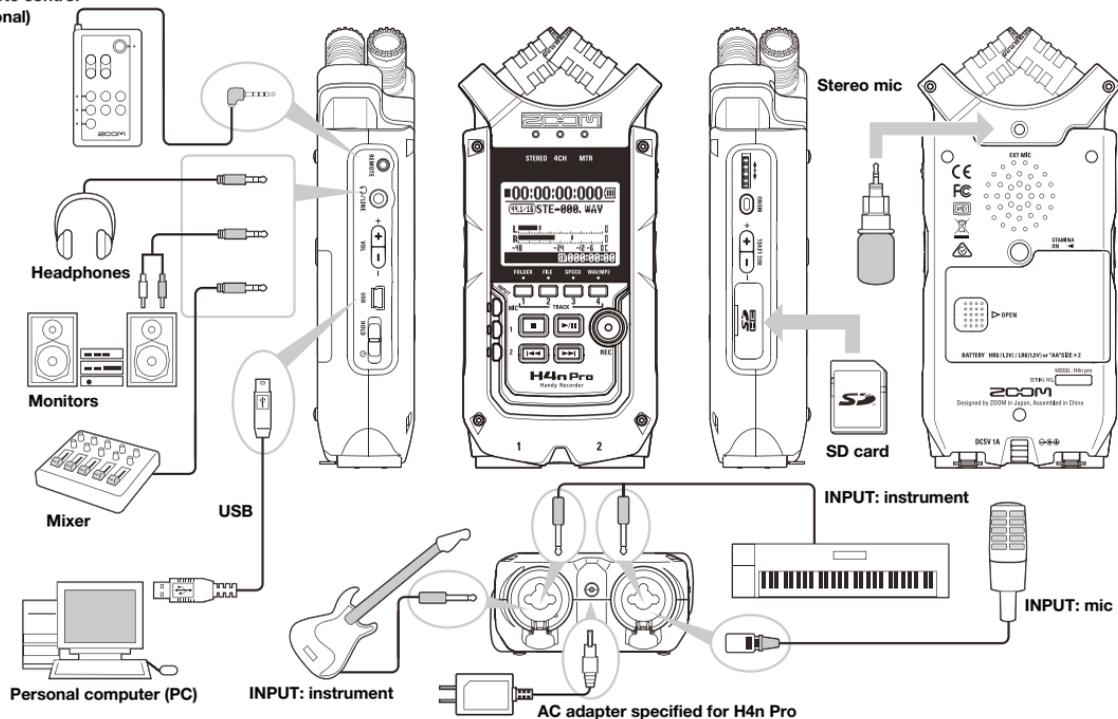


- If no power source is connected for more than three minutes, the DATE/TIME setting will reset to the default value.
- You cannot set this during recording and playback.

Setup: Connecting external devices

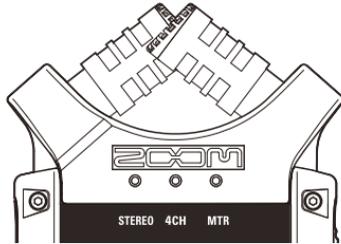
The H4n Pro offers versatile connectivity with options for any recording application.

Remote control
(optional)



Setup: Built-in microphones

These are the special features of the H4n Pros built-in microphones.



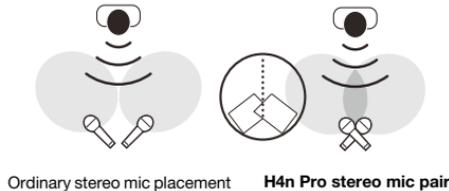
High quality microphones in an XY pattern ensure a natural stereo image when recording sounds.

Stereo recording is often done by placing two microphones in a V-shaped configuration. Pointing microphones outward will result in stereo separation, but the recording will lack definition around the center, resulting in a poor stereo image.

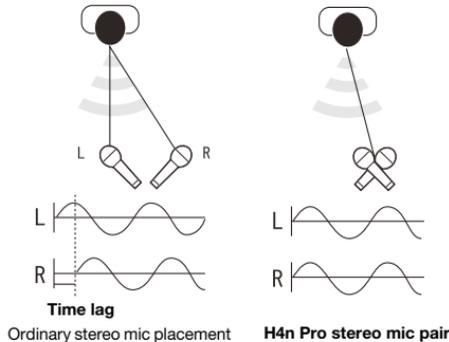
The H4n Pro utilizes an XY stereo mic configuration. By placing two microphones in a crossed pattern (opposite angles), the H4n Pro can cover a wide area and capture sound sources in the center with clarity and definition. Sounds reach both mics simultaneously, so no phase cancellation occurs between right and left channels.

XY mic placement

Capturing the stereo image center

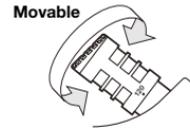
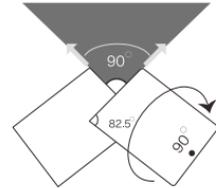


Stereo images without phase cancellation.

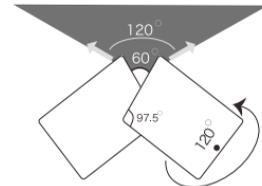


90° or 120° directivity

Centered 90°



Wide 120°



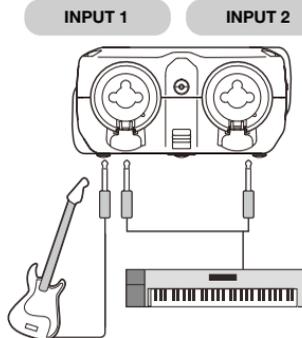
Setup: INPUT 1/2 connections and phantom power

Use INPUT 1 and 2 to connect to a guitar, bass or keyboard, for example.

Connecting instruments

You can directly plug a guitar or a bass into either INPUT 1 or INPUT 2.

Plug a keyboard with stereo output into both INPUT 1 and 2.



Connecting microphones

Connect microphones with XLR plugs to INPUT 1 and INPUT 2. If you need phantom power, such as when using a condenser microphone, make the following setting.



Dynamic microphone



Condenser microphone (phantom power)

Setting PHANTOM power



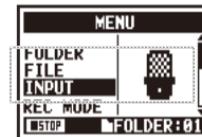
Press the MENU button for more than 2 seconds, and start operation from the top screen.



1
Press.



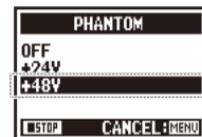
2
Select INPUT and press.



3
Select PHANTOM and press.



4
Select the voltage and press.



Mode overview

The H4n Pro has four operation modes: STEREO, STAMINA, 4CH (4-channel) and MTR (multitrack). Choose the mode according to your need.

• STEREO mode

You can easily create a stereo recording using the built-in microphones or an external microphone.

The STEREO mode is convenient for recording live band performances, acoustic instruments, voices, lectures, and subtle soundscapes. You can then use it to play stereo WAV and MP3 files.



- One-pass stereo recording of live performances and rehearsals
- Direct recording of a single instrument
- Field recording
- Voice memos
- Recording meetings

• STAMINA mode

This mode enables longer battery life. STAMINA mode is similar to STEREO mode, but has less functions.

The continuous usage time with alkaline batteries is approximately 11 hours (but could be less depending on usage).

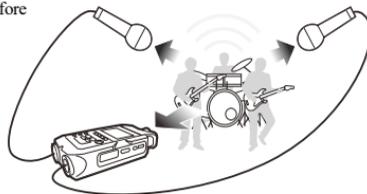
When in STAMINA mode, the H4n Pro can only record/playback in WAV 44.1kHz/16-bit and MP3 formats.

To enable STAMINA mode when using batteries, set the STAMINA switch before turning the power on.

- Field recording
- Live outdoor recording
- At conferences and in other situations when changing batteries is difficult

• 4CH mode

In 4CH mode, you can record two stereo signals simultaneously. You can capture live sounds via the built-in mics and direct instruments via external inputs at the same time.

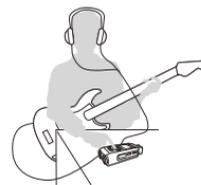


- Simultaneous recording with both line input and mics
- Surround recording via front and rear microphone placement
- Simultaneous recording of both ambient and direct sound sources
- Recording both ambient and direct sounds to add a live feel to recorded performances

• MTR mode

You can record using effects in this mode. You can also overdub recordings and use sound files previously recorded using the other modes.

When creating a demo, you can record backing tracks at home and record instrumental tracks in the studio while listening to the backing tracks.



- Recording parts one track at a time
- Overdubbing
- Recording using effects
- Mixing track levels after recording
- Indoor and outdoor rehearsals

Switching and confirming modes

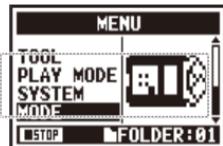
Be sure to select the appropriate mode for your application.



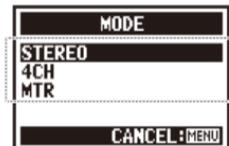
1 Press.



2 Select MODE and press.



3 Select among STEREO, 4CH and MTR modes and press.

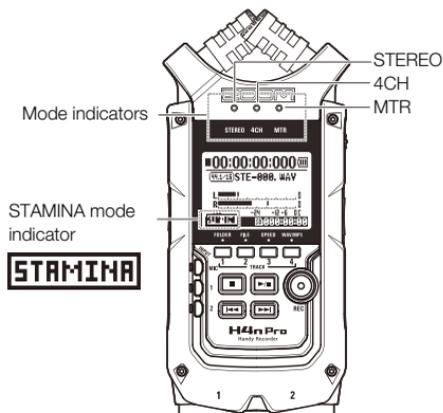


Note: To engage STAMINA mode, use the switch located in the battery compartment.

HINT:

Mode confirmation

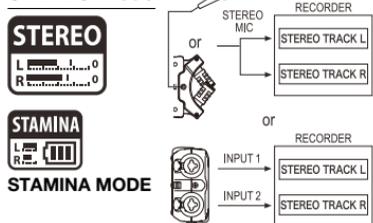
- The current mode is indicated by a mode indicator LED on the front panel.
- The H4n Pro will power up in the same mode it was in when turned off.
- When starting up for the first time, the default mode is STEREO.



Mode details

Input and output levels as well as saving and file formats are different in each mode.

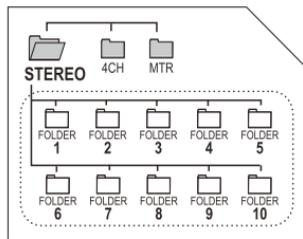
STEREO mode



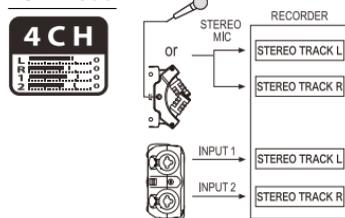
In STEREO mode, you can select 2 different inputs either INPUT MIC or INPUT 1 and 2, and record and play one stereo file at a time.

Files are saved in one of the ten sub-folders in the STEREO folder.

In STAMINA mode, the functions are limited to maximize the battery life time.

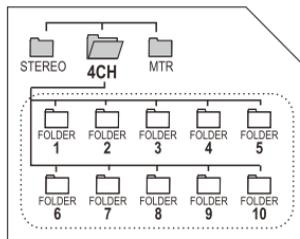


4CH mode

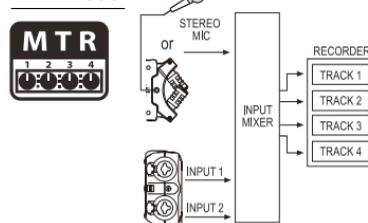


In 4CH MODE, the H4n Pro records two stereo WAV files: one stereo WAV file for the built-in mic or stereo mic input and one stereo WAV file for INPUT 1 and 2.

These FILES are saved in one of the ten 4CH sub-folders.



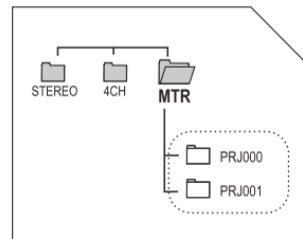
MTR mode



You can record tracks in MONO or STEREO from INPUT 1, INPUT 2 and a stereo microphone.

You can combine them with tracks recorded in other modes and overdub existing tracks.

In MTR mode, project data and settings are saved as a project in the MTR folder.



Mode screens: STEREO and STAMINA modes



• Explanation of the top screen

Recorder status

■ Stopped

|| Recording standby ● Recording

Blinks REC button blinks REC button lights

▶ Playing || Paused
Blinks

File format

Format of file selected, being recorded or playing back

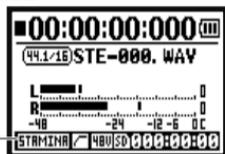
- WAV file: kHz/bit
- MP3 file: bit rate

96kHz/24-bit WAV indicator

128kbps MP3 indicator

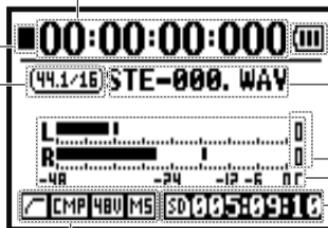
STAMINA MODE

Stamina icon



Counter

Elapsed recording or playback time
(hours):(minutes):(seconds):(milliseconds)



Optional setting indicators

These icons appear on the display when optional functions are ON.

- LO CUT function
- COMP/LIMIT function
- Phantom power (48V/24V)
- MS stereo matrix

Remaining battery life (when battery used)

If "Low Battery" appears on the display, it is time to change the batteries.

File names

Name of file selected, being recorded or playing back
If there is no file in any folder, "No Data" appears.

Clipping indicators

The clip indicators "light" if the recording or playback level reaches 0 dB and remain lit until the file ends or the stop button is pressed.

Level meters

Recording and playback levels

Remaining recording time

Remaining possible recording time on SD card

Mode screens: 4CH mode



• Explanation of the top screen

Recorder status

■ Stopped
|| Recording standby ● Recording
▶ Playing || Paused
Blinks

REC button blinks REC button lights

File format

Format of file selected, being recorded or playing back

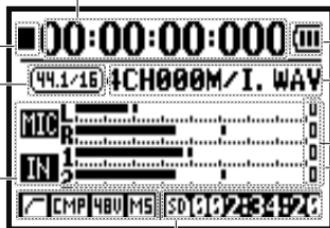
Optional setting indicators

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- LO CUT function
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- Phantom power (48V/24V)
- MS stereo matrix

Counter

Elapsed recording or playback time
(hours): (minutes): (seconds): (milliseconds)



Remaining recording time

Remaining possible recording time on SD card

Remaining battery life (when battery used)



If "Low Battery" appears on the display, it is time to change the batteries.

File names

Name of file selected, being recorded or playing back
If there is no file in any folder, "No Data" appears.

Clipping indicators

The clip indicators "light" if the recording or playback level reaches 0 dB and remain lit until the file ends or the stop button is pressed.

Input sources and level meters

Input sources and recording and playback levels
 MIC Input from either the built-in mics or an external stereo mic
 IN Input from INPUT 1 and INPUT 2

Mode screens: MTR mode



• Explanation of the top screen

Recorder status

Stopped

Recording
 REC button lights

Recording Standby
 ALWAYS NEW recording only
 Blinks REC button blinks

Paused
 ALWAYS NEW recording only
 Blinks

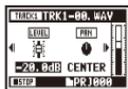
▶ Playing

Track numbers

Icons are highlighted for tracks in recording standby.

② Track menu icons

Select an icon to access the track menu where settings, including volume, panning and stereo/mono, can be made.



Level meters

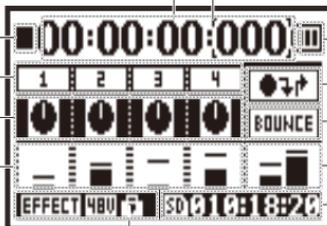
These show the recording or playback levels of tracks 1-4.

DIAL operations on top screen



① Counter

Elapsed recording or playback time (hours): (minutes): (seconds): (milliseconds)



Optional setting indicators

These icons appear on the display when optional functions are ON.

EFFECT Effects
48U Phantom power (48V/24V)
 Protect function

Remaining recording time

Remaining possible recording time on SD card.

Counter function:
Specify a time

Remaining battery life (when battery used)

If "Low Battery" appears on the display, it is time to change the batteries.

③ Auto punch in/out icon

Selecting this icon brings up the PUNCH IN/OUT settings.



The icon only appears when recording in OVER WRITE mode.

④ BOUNCE ICON

Selecting this icon brings up BOUNCE settings.



L/R level meters

These show the master left and right output levels.

Settings/recording: Recording in STEREO and STAMINA modes

These are the steps to record in STEREO or STAMINA mode.

Recording process

Confirm the mode is STEREO.

Change recording settings.*
REC FORMAT,
FILE NAME TYPE

Use recording functions.*
AUTO REC/STOP, PRE REC,
REC LEVEL AUTO

Use METRONOME*

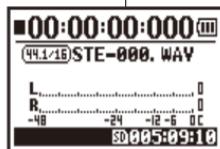
1. Enter recording standby
2. Select input source
3. Adjust recording level of source

Record
4. Start recording.
(Pause, resume recording,
add marks.)

5. End recording

*You can record without making these settings.

STEREO **STAMINA** Press the MENU button for more than 2 seconds, and start operation from the top screen.



STEREO MODE TOP



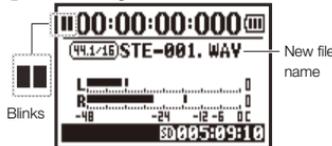
Blinks



Lit



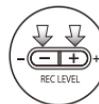
- 1 Press to enter recording standby.



Blinks

- 2 Select input source and press.

Press MIC to use the built-in mics, or press INPUT 1 or 2 to use external inputs.



REC



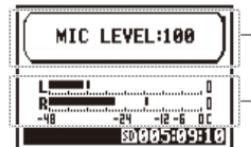
Lit



Unlit



- 3 Adjust the recording level of the input source.



- 4 Press to start recording.



The counter and remaining time start changing.

- 5 Press to end recording.



The counter resets to 0.

Pausing



Counter does not return to 0.

RECORDING AGAIN



HINT:

Recording format

In STEREO mode you can record in 19 different WAV and MP3 file formats. The recording format must be selected before recording a file begins.

File naming

Recorded files are named automatically. Choose from two formats. The default format is DEFAULT.
 DEFAULT: STE-xxx
 DATE: 090531-xxx
 The recording date is in yymmdd format.

Marks

When the recording format is WAV, you can mark a file by pressing the REC button while recording. You can move swiftly to marked positions during playback. When you pause recording of a WAV file, a mark will be added at the paused point.

NOTE:

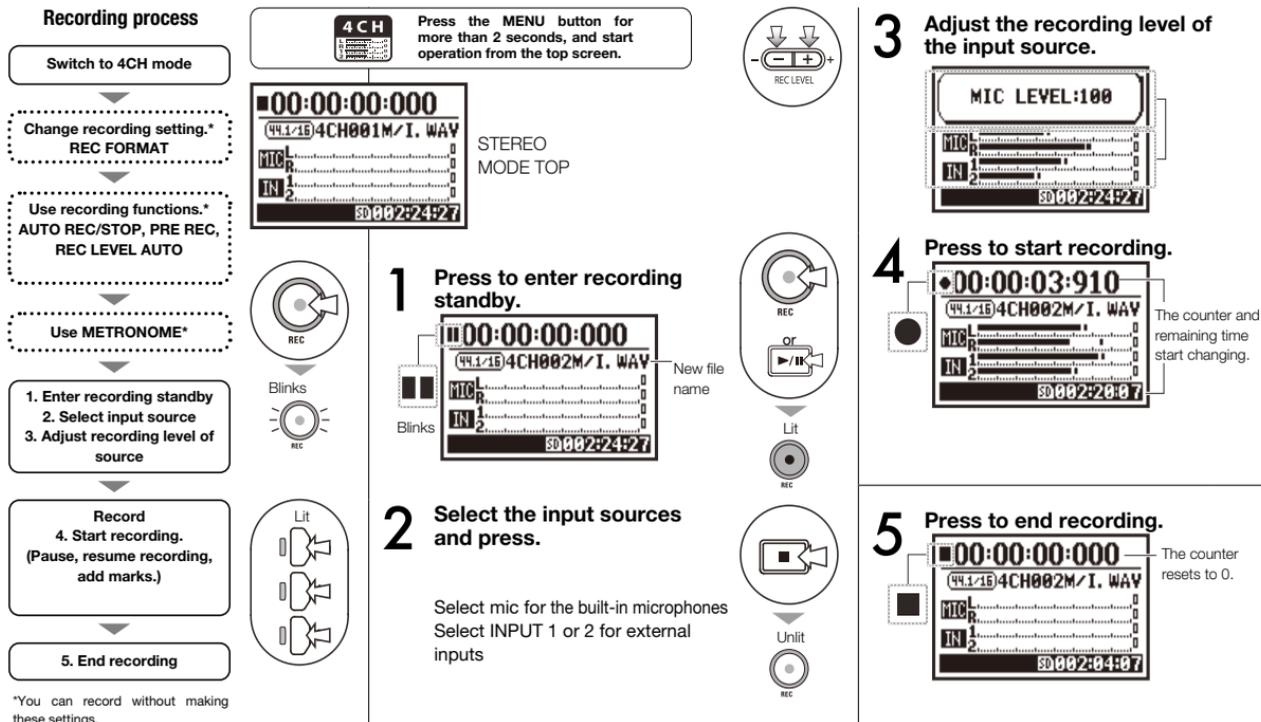
During recording and playback, the recording format and file name type cannot be changed.

Ref. OPERATION MANUAL

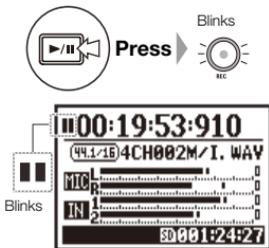
REC FORMAT	P.049	FILE NAME	P.050
Mark setting	P.096	METRONOME	P.079
AUTO REC	P.063	PRE REC	P.065
REC LEVEL AUTO	P.069		

Settings/recording: 4CH mode recording

This is the method to record 4 channels (2 stereo) from the built-in mic and the external input jacks.

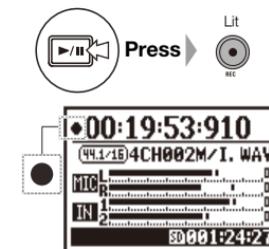


Pausing



Counter does not return to 0.

RECORDING AGAIN



Continue recording from the paused position in the same file.

HINT:

File naming

In 4CH mode the input from the built-in and the external inputs are saved separately as stereo WAV files.

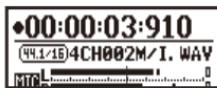
Those 2 files are always managed as a pair and named as follows according to the input.

MIC file: 4CHxxxM.wav

INPUT 1/2 file: 4CHxxxI.wav

On screen, the 2 files are shown together as M/I.

* You cannot change the file names.



File name

Recording format

Change before recording.

Marks

When the recording format is WAV, you can mark a file by pressing the REC button while recording. You can move swiftly to marked positions during playback. When you pause recording of a WAV file, a mark will be added at the paused point.

NOTE:

During recording and playback, the recording format and file name type cannot be changed.

Ref. OPERATION MANUAL

REC FORMAT	P.049	FILE NAME	P.050
Mark setting	P.096	METRONOME	P.079
AUTO REC	P.063	PRE REC	P.065
REC LEVEL AUTO	P.069	Mode change	P.036

Settings/recording: Recording format



Set the recording format (REC FORMAT) before recording.

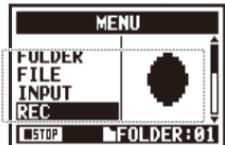
STEREO **4CH** Press the MENU button for more than 2 seconds, and start operation from the top screen.



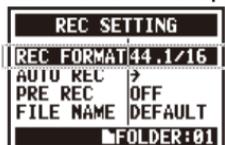
1 Press.



2 Select REC and press.



3 Select REC FORMAT and press.



Shortcut
Press TRACK on the top screen.



4 Select one and press.



Default:
WAV44.1 kHz/16bit

NOTE:

How to use WAV and MP3 format

- WAV files with no compression are used for high-quality sound recording. Since data is not compressed, files are larger than MP3 files.
- MP3 files have lower sound quality because of data compression, but are useful to save SD card capacity and record more.

HINT:

Types of WAV files

44.1/48/96 kHz indicates the sampling rate of the analog-to-digital conversion. 16/24-bit indicates the bit depth of the analog-to-digital conversion.

The larger the number, the higher the sound quality, and the larger the file size.

WAV files recorded in STEREO/4CH/STAMINA mode comply with BWF (Broadcast Wave Format) and include marks and creation dates.

Types of MP3 files

Select the bit rate, which is the amount of data per second. The higher the number, the lower the rate of compression and the better the sound quality. MP3 files that are more compressed occupy less space on SD cards.

VBR (Variable Bit Rate) means the bit rate is automatically adjusted based on the input information.

REC FORMAT	
STEREO mode	
WAV	44.1kHz/16bit
	44.1kHz/24bit
	48kHz/16bit
	48kHz/24bit
	96kHz/16bit 96kHz/24bit
MP3	48kbps
	56kbps
	64kbps
	80kbps
	96kbps
	112kbps
	128kbps
	160kbps
	192kbps
	224kbps
256kbps	
320kbps	
VBR	
4CH mode	
WAV	44.1kHz/16bit
	44.1kHz/24bit
	48kHz/16bit
	48kHz/24bit

Playback (STEREO, 4CH and STAMINA modes)



Immediately after recording, you can play the file by pressing the PLAY/PAUSE button.
Follow these steps to call up a file later for playback.

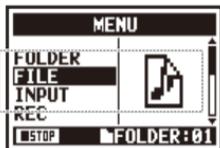
STEREO **4CH** **STAMINA** Press the MENU button for more than 2 seconds, and start operation from the top screen.



1 Press.



2 Select FILE and press.

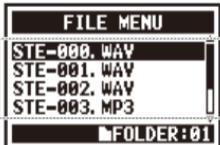


Shortcut

Press TRACK 2 on the top screen.



3 Select the desired file and press.



4 Select SELECT and press.



5 Press to start playback.



Shortcut
You can select files in folders on the top screen.



Confirm the file name.

HINT:

- On the top screen you can move directly to step 3, by pressing the TRACK 2 button.
- If you press the PLAY/PAUSE button after selecting a file, that file starts playback immediately.
- You can select files in folders directly using the DIAL on the top screen.

Ref. **OPERATION MANUAL**
FILE SELECT P.104



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