ZOOM H4NSP Digital Voice Recorder

The world acclaimed H4n is now available in a new package

Creators have found the H4nSP to be the most trustworthy field recorder available. Used by videographers, musicians, bloggers, ghost-hunters, podcasters, educators and journalists everywhere, the ultra-portable H4nSP's 4 tracks of high quality audio make it an essential audio companion for everyone.

The H4nSP at a Glance:

Onboard X/Y Mics:
High quality with easy to set selectable recording width (90 and 120 degrees)

2 XLR/TRS Inputs:
Connect mics, instruments, and line level devices for added possibilities

24-bit/96kHz Recording:
High resolution audio

Expanded Capabilities:
Built-in effects, audio interface mode, and onboard speaker make it the recorder of choice

Great on Location

The H4nSP's onboard X/Y microphone delivers stunning stereo and its dual input combo connectors allow you to use your choice of external microphones as well.

WAV files recorder with the H4nSP – up to 24bit, 96kHz – are automatically time stamped to ensure perfect sync with your video footage, while built in multi-effects and MS (Mid-Side) decoding gives you plenty of options in postproduction. With the use of Zooms very own HS-1 Hot Shoe adaptor, you can even mount the H4nSP directly to your camera.

Instant Studio

The H4nSP transforms any rehearsal room into a recording studio. Connect mics and line level devices like electronic keyboards (even electric guitar or bass) and record up to four tracks of digital audio simultaneously, and then bounce the tracks down to stereo or mono for additional overdubbing with no loss of quality.

Punch-in features and onboard effects such as compression, limiting, reverb and guitar and bass amp modelling enable you to quickly and easily turn your musical ideas into full-fledged productions. You can now even convert your finished song to an MP3 file for emailing and posting to your favourite social site.

Live Recording

Capture the sound of concerts, rehearsals, meetings or lectures. The H4nSP's built in X/Y microphone allows you to record natural sounding stereo with a strong centre image, and the angle of its two matched unidirectional mic elements can easily be changed from 90 degrees for a tightly focused stereo image to 120 degrees for a wider image.

In addition, dual combo XLR/TRS input jacks (complete with phantom power) allow you to use a wide variety of external microphones and to connect line level signals such as a feed from a mixing board.

H4nSP Inputs and Outputs

Inputs

Dual XLR/¼" combo input jacks allow you to connect microphones, line level signals, or even instruments directly into the H4nSP. Phantom power of +24 or

48+ volts can be applied to both inputs, allowing the use of condenser mics. There's also a secondary stereo ⅛" input for the connection of microphones requiring 2.5 volts of Plug-In Power.

Outputs

A stereo ⅛" Line/Phone Out with dedicated volume control allows private monitoring over headphones as well as connection to the audio input of your DSLR. The H4nSP even has a built in speaker for fast monophonic monitoring without the need to make any connections. In addition, a USB port allows recorded audio to be sent to your favourite DAW and or/editing software and enables the H4nSP to act as a 2-in/2-out computer interface.

Pre-Record and Auto-Record

Pre-Record

The H4nSP's Pre-record function ensures that you'll never miss the start of a great take. It automatically keeps the H4nSP silently but continuously recording in the background, all the time, keeping the previous two seconds* of audio whenever you hit RECORD.

One second when recording at 96k in 4CH mode

Auto-Record

When enabled, Auto Record sets the H4nSP to automatically start recording at a level of sound. An equivalent Stop function can be used to end recording as soon as incoming signal drops below a certain threshold.

Onboard Effects

Effects can make all the difference. They make your recordings sound professional and polished, and can be used both to enhance audio and to compensate for acoustic problems in the recording environment.

The H4nSP offers a variety of effects, ranging from compression and limiting to reverb, delay, echo, and a low-cut filter for the elimination of wind noise, pops and other kinds of unwanted low frequency noise. There's also an onboard metronome and tuner, along with dozens of effects crafted especially for guitar and bass, such as amp models. In addition, playback can be looped and the

playback speed varied without pitch change (or vice versa), making the H4nSP perfect for phrase training.

File Types

Audio recorded with the H4nSP is stored in your choice of WAV or MP3 format. WAV files are uncompressed and full fidelity, and thus provide optimum quality. The H4nSP provides support for 16 and 24bit WAV audio at sampling rates of 44.1, 48 or 96khz. In addition, H4nSP WAV files are automatically time stamped, making them Broadcast Wave Format (BWF) compliant, and allowing precise synchronisation in post-production.

MP3 recordings are compressed, removing unnecessary data so that they require less storage space and are easier to upload and download.

Battery Life

The H4nSP requires just 2 AA batteries – either alkaline or rechargeable NiMH. Battery life when using alkaline batteries is up to 6 hours in normal operation, or up to 11 hours when operating in STAMINA mode. Alternatively, an optional AD-14 AC adaptor allows the H4nSP to be powered from any standard wall outlet.

Recording Times

The H4nSP records directly to SD and SDHC cards, up to 32GB. The charts below show maximum recording times for different file types and card sizes.

Stereo Mode

REC Format		SD/SDHC Card Capacity				
		1GB	4GB	8GB	16GB	32GB
MP3	128kbps	17hrs 21min	69hrs 26min	138hrs 53min	277hrs 46min	555hrs 33min
	320kbps	6hrs 56min	27hrs 46min	55hrs 33min	151hrs 6min	342hrs 13min
WAV	16bit / 44.1kHz	1hr 34min	6hrs 17min	12hrs 35min	25hrs 11min	50hrs 23min
	16bit / 48kHz	1hr 26min	5hrs 47min	11hrs 34min	23hrs 8min	46hrs 17min
	24bit / 96kHz	28min	1hrs 55min	3hrs 51min	7hrs 42min	15hrs 25min

4 Channel Mode

REC Format		SD/SDHC Card Capacity				
		1GB	4GB	8GB	16GB	32GB
WAV	16bit / 44.1kHz	47min	3hrs 8min	6hrs 17min	12hrs 35min	25hrs 11min
	24bit / 48kHz	28min	1hrs 55min	3hrs 51min	7hrs 42min	15hrs 25min

MTR MODE (monaural tracks)

REC Format		SD/SDHC Card Capacity				
		1GB	4GB	8GB	16GB	32GB
WAV	16bit / 44.1kHz	3hrs 8min	12hrs 35min	25hrs 11min	50hrs 23min	100hrs 46min

Recording times are approximations. Actual times may differ according to recording conditions.
The Maximum file size is limited to 2GB.

Features at a Glance

- Includes H4nSP Handy Recorder, protective case, two AA batteries, owner's manual, and download license for Steinberg Cubase LE and WaveLab LE software
- Four-track simultaneous recording
- Built in X/Y stereo mic, adjustable between 90˚ and 120˚
- Onboard MS decoding
- Dual mic/line/instrument level inputs with XLR/TRS combo connectors
- Stereo ⅛" Mic/Line In mini phone jack
- +24 or +48V phantom power for main inputs and Plug-in power (2.5V) via Mic/Line In mini phone jack
- Output/headphone jack with dedicated volume control
- Built in reference speaker for fast monitoring
- Large 1.9 inch backlit LCD display
- Records directly to SD and SDHC cards up to 32GB
- Supports up to 24bit/96kHz audio in BWF-compliant WAV or a variety of MP3 formats
- Auto-record and Pre-record features
- Internal mixdown: four-track to stereo and stereo to dual mono

- Up to 99 marks per recording
- Flexible overdubbing and punch-in/out
- Built in effects, including compression/limiting, low-cut filtering, modulation, reverb/delay and amp models
- Normalise (maximum gain) and Divide (file splitting) functions
- Chromatic tuner and metronome
- Loop playback with user defined start and stop points
- Variable playback speed, from 50% to 150% without affecting pitch
- Variable pitch without affecting playback speed
- USB port for data exchange to and from computer
- 2-in/2-out USB audio interface for PC/Mac computers
- SD card reader function
- Mounts to mic stand or tripod, or directly to DSLR with optional Hot Shoe adaptor
- Runs on only 2 standard AA alkaline or NiMH rechargeable batteries
- Up to 6 hours of operation with 2 AA alkaline batteries (up to 11 hours in Stamina mode)

Accessories

What's included with the H4nSP?

- H4nSP Handy Recorder
- Protective case
- 2 AA batteries
- Operation manual
- Download license for Steinberg Cubase LE and WaveLab LE software

Optional H4nSP Accessories

- AD-14 AC adaptor
- Hairy windscreen
- MA2 mic clip adaptor
- RC4 wired remote control
- HS-1 Hot Shoe Mount Adaptor

APH-4nSP Accessory Package Includes

- Hairy windscreen

- Splitter cable
- Attenuator cable
- USB cable
- AD-14 AC adaptor

SPECS

GENERAL

	2 (STEREO mode), 4 (4CH mode), 2 (MTR mode)
Number of simultaneous recording tracks::	
Number of simultaneous playback tracks:	2 (STEREO mode), 4 (4CH mode), 4 (MTR mode)
Recording time 4GB (SDHC):	Approx. 380 minutes (WAV 44.1 kHz/16 bit stereo track) Approx. 68 hours (MP3 44.1 kHz/128kbps stereo track) ** Recording times are approximations. Actual times may differ according to recording conditions.*
Maximum number of simultaneous recording files size:	2GB
Projects:	1000/card
Locate function:	Hours/Minutes/Seconds/Milliseconds
Other functions:	Punch-in/out, Bounce, A-B repeat

GENERAL

Effects modules:	2 STEREO / 4CH Mode: LO CUT, COMP/LIMITER MTR Mode PRE AMP module, EFX module
Types:	50
Patches:	60
Tuners:	Chromatic, Guitar, Bass, Open A/D/E/G, DADGAD
Metronome sound sources:	5
Variable beat:	1/4 - 8/4, 6/8, unaccentuated
Tempo:	40.0 - 250.0 BPM
A/D conversion:	24 bit × 128 oversampling
D/A conversion:	24 bit × 128 oversampling
Recording media:	SD card (16MB - 2GB), SDHC card (4GB - 32GB)
Display:	128 x 64 dots Full-dot backlit LCD

DATA TYPE - WAV FORMAT (RECORD/PLAY)

Quantization:	16/24 bit
Sampling frequency:	44.1 / 48 / 96 kHz

DATA TYPE - MP3 FORMAT (RECORDING)

Bit rate:	48, 56, 64, 80, 96, 112, 128, 160, 192, 224, 256, 320 kbps, VBR
Sampling frequency:	44.1 kHz

DATA TYPE - MP3 FORMAT (PLAYBACK)

Bit rate:	48, 56, 64, 80, 96, 112, 128, 160, 192, 224, 256, 320 kbps, VBR
Sampling frequency:	44.1 / 48 kHz

INPUTS

Input [1] [2]:	XLR (balanced input) / standard phone (unbalanced input) combo jack
Input impedance:	(Using balanced input) 1 kΩ balanced, pin 2 hot (Using unbalanced input) 480 kΩ unbalanced
Input level:	(Using balanced input) −10 dBm to -42 dBm (Using unbalanced input) +2 dBm to -32 dBm
Built-in stereo mic:	Unidirectional condenser microphone Gain: +7 dB to +47 dB
External mic:	Mini stereo phone jack Input impedance: 2 kΩ Input level: -7 dBm to -47 dBm

OUTPUTS

GENERAL

Line/phone:	LINE Output load impedance: 10 kΩ or more Rated output level: -10 dBm PHONE: 20 mW+20 mW (into 32-Ω load)
Monaural speaker:	400 mW 8 Ω
Phantom power:	48 V, 24 V, OFF
USB:	USB 2.0 High Speed Mass Storage Class operation, Audio interface operation (USB functions can be operated by USB bus power)
Power requirements:	DC 5 V 1A AC from AC adapter (ZOOM AD-14)
Batteries:	IEC R6 (size AA) x 2
Continuous recording time:	6 hours (STEREO/4CH/MTR mode) 11 hours (STAMINA mode)
Dimensions:	73 (W) × 156.3 (D) × 35 (H) mm
Weight:	280 g
	* 0 dBm = 0.755 Vrms