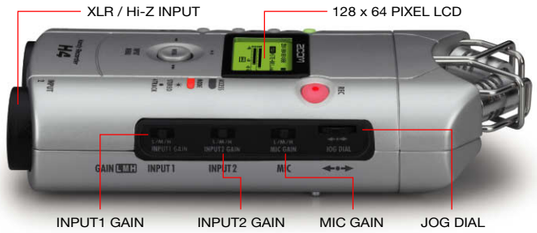
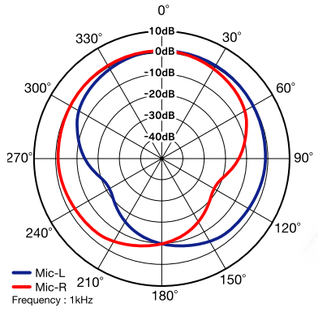
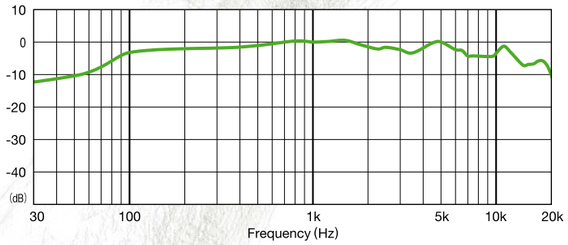
SIDE VIEW



Built-in Mic, Polar Pattern



Built-in Mic, Frequency Response



EFFECT LIST

4 TRACK MODE >>>

PREAMP module

Guitar Amp & Stomp Box models:
FD Clean, VX Clean, HW Clean, US Blues, BG Crunch, MS #1959, PV Drive, Rect Vnt, DZ Drive, TS+FD_Combo, SD+MS_Stack, FZ+MS_Stack, Acoustic Sim.

Bass Amp & Pre-Amp models:
SVT, Bassman, Hartke, SuperBass, Sansamp, Tube Pre

Mic Preamps:
Vocal Micpre, AG Micpre, Flat Micpre

EFX module

Compressor / Limiter:
Rack Compressor, Limiter

Modulation:
Auto Wah, Phaser, Tremolo, Ring Mod, Slow Attack, Chorus, Ensemble, Flanger, Step, Vibrato, Cry, Pitch Shift

Delay / Reverb:
Air, Delay, Tape Echo, Analog Delay, Reverse Delay, Hall, Room, Spring, Arena, Tiled Room, Modern Spring

STEREO MODE >>>

MIC MODEL module
SM57, MD421, U87, C414

COMP / LIMIT module
Compressor, Limiter

Maximum Recordable Time (unit: minutes)

SD Memory Card

Stereo Mode

Data Format		Memory Size				
		128MB	256MB	512MB	1GB	2GB
MP3	64 kbps	266	533	1066	2083	4166
	128 kbps	133	266	533	1041	2083
	192 kbps	88	177	355	694	1388
	320 kbps	53	106	213	416	833
WAV	16bit / 44.1kHz	12	24	48	94	188
	24bit / 44.1kHz	8	16	32	62	125
	16bit / 48kHz	11	22	44	86	173
	24bit / 48kHz	7	14	29	57	115
	16bit / 96kHz	5	11	22	43	86
	24bit / 96kHz	3	7	14	28	57

4-Track Mode (mono tracks)

Data Format		Memory Size				
		128MB	256MB	512MB	1GB	2GB
WAV	16bit / 44.1kHz	24	48	96	188	376

*Recording times are approximations. Actual times may differ according to recording conditions.
*A 128MB SD memory card is supplied accessory.

Supplied Accessories

Usage example
Wind screen + Tripod adaptor
*A tripod is not included.

Tripod adaptor

Wind screen

H4 SPECIFICATIONS

[Stereo Mode]

<Recorder> • Simultaneous Recording / Playback Tracks: 2(stereo) • Locator: Hours / Minutes / Seconds / Milliseconds • File Editing: Rename, Delete, Size check • Other Function: A-B repeat <Effect> • Modules: 2 • Types: 6 <Data Type> • Recording Format: WAV(Quantization: 16 / 24bit, Sampling frequency: 44.1 / 48 / 96kHz), MP3(Bit rate: 48 / 56 / 64 / 80 / 96 / 112 / 128 / 160 / 192 / 224 / 256 / 320kbps / VBR, Sampling frequency: 44.1kHz) • Playback Format: WAV(Quantization: 16 / 24bit, Sampling frequency: 44.1 / 48 / 96kHz), MP3(Bit rate: 32 / 40 / 48 / 56 / 64 / 80 / 96 / 112 / 128 / 160 / 192 / 224 / 256 / 320kbps / VBR, Sampling frequency: 44.1 / 48kHz)

[4-Track Mode]

<Recorder> • Simultaneous Recording Tracks: 2 • Simultaneous Playback Tracks: 4 • Locator: Hours / Minutes / Seconds / Milliseconds • Projects: 1000 / card • File Editing: Rename, Delete, Size check, Copy, Import • Other Functions: A-B repeat, Punch-in / out, Bounce <Effect> • Modules: 2 • Types: 47 • Patches: 60 • Tuner: Chromatic, Guitar, Bass, Open A/D/E/G, DADGAD <Data Type> • Recording / Playback Format: WAV (Quantization: 16bit, Sampling frequency: 44.1kHz)

[Common Specs]

• Metronome: 5 sounds (Beat: 0/4 - 8/4, 6/8, Tempo: 40.0 - 250.0BPM) • A/D Conversion: 24bit, 128times oversampling • D/A Conversion: 24bit, 128times oversampling • Signal Processing: 32bit • Recording Media: SD memory card (16MB–2GB) • Display: 128 x 64 pixel, backlit LCD • Balanced / Unbalanced Input: 2 x XLR-1/4" phone combo Jack • Input Impedance: balanced input = 1kΩ balanced / pin 2 hot, Unbalanced input = 480kΩ unbalanced • Input Level: balanced input = -20/-30/-40dBm, Unbalanced input = -10/-30/-40dBm • Phantom Power Supply: 48V, 24V, OFF • Built-in Stereo Mic: Unidirectional condenser microphone (Gain switch: +6/+20/+30dB) • Line Output: 1/8" stereo phone jack (Output load impedance: 10kΩ or more, Rated output level: -10dBm) • Headphones Output: 1/8" stereo phone jack (Output level: 50mW into 32Ω load) • USB Interface: Mini-B type (USB2.0 Full-speed compatible), Mass Storage Class operation / Audio Interface operation (16bit, 44.1kHz / 48kHz) • Power Requirements: AA size (LR6) battery x 2, or Supplied AC adaptor AD-0006 (DC9V/300mA/center minus type) • Battery Life (with alkaline batteries): 4 hours recording, 4.5 hours playback • Dimensions: 70(W) x 152.7(D) x 35(H)mm • Weight (without batteries): 190g • Supplied Accessories : AC adaptor (AD-0006), USB cable, SD memory card (128MB), Wind screen, Tripod adaptor, Cubase LE Install CD

*0dBm=0.775Vrms

www.zoom.co.jp

ZOOM CORPORATION
ITOHPIA Iwamotocho 2chome Bldg. 2F,
2-11-2 Iwamoto-cho, Chiyoda-ku, Tokyo 101-0032, Japan
•TEL: +81-3-5835-2206 •FAX: +81-3-5835-2201 •E-mail: info@zoom.co.jp

*Windows® is a registered trademark of Microsoft Corp. *Mac and Macintosh are registered trademarks of Apple Computer. *SD logo is a trademark. *Manufacturer names and product names are trademarks or registered trademarks of their respective owners. The names are used only to illustrate sonic characteristics and do not indicate any affiliation with the Zoom Corporation. *Specifications subject to change without notice.

•September 2006 Printed in Japan.

ZOOM

Digital recording for everyone, everywhere.

It's a Mobile Stereo Recorder. It's a 4-Track Recorder. It's a USB Audio Interface.

H4

HANDY RECORDER

Draw on the inspiration of your sound

Like an artist's sketchbook, the Zoom H4 Handy Digital Recorder lets you capture ideas whenever and wherever inspiration strikes. Just the right words. A punchy guitar riff. A power chord progression. Pure sound effects. Transfer your inspiration to your computer's DAW to shape it into a work of art. The H4, a remarkable portable digital recorder, makes it all possible.

H4
HANDY RECORDER

My Favorite Things

Only a few possessions have earned a special place in my life. Distinctive clothing. Vintage guitars. Musical masterpieces. And of course my H4 Handy Recorder... the perfect tool to capture my musical world.

Welcome to a whole new world of recording possibilities

Whether you're recording a live performance, a podcast, a class or workshop, a rehearsal, a songwriting session or even a sizzling performance of your band, the H4 has more recording tools available than any device ever made. Weighing a mere 6.7 ounces (190g), the H4 puts a remarkable amount of recording power in the palm of your hand. Underneath its sleek exterior are built-in studio effects such as compression, limiting and mic modeling. Use the combination XLR-1/4-inch inputs for external mics, guitars, bass or keyboards. Also onboard are Zoom's most incredible microphone, guitar and bass modeling, accurately reproducing the tone of the most famous microphones and amps ever made. Audio can be recorded as WAV or MP3 files and moved to a computer via USB for easy editing, mixing and mastering.

Recommended Settings For Each Situation

FIELD RECORDING
Stereo Mode, WAV(16bit/48kHz)
Built-in Stereo Mic, Hi-Gain

PIANO RECITAL
Stereo Mode, WAV(24bit/96kHz)
Built-in Stereo Mic, Mid-Gain

LIVE CONCERT
Stereo Mode, WAV(24bit/96kHz)
Built-in Stereo Mic, Lo-Gain

STREET JAM SESSION
Stereo Mode, WAV(16bit/44.1kHz)
Built-in Stereo Mic, Mid-Gain

BUSINESS SCENE
Stereo Mode, MP3(64kbps)
Built-in Stereo Mic, Hi-Gain

DRUM RECORDING
Stereo Mode, WAV(24bit/96kHz)
Built-in Stereo Mic, Lo-Gain

ANALOG SOURCE RECORDING
Stereo Mode, WAV(16bit/44.1kHz)
INPUT1/2, Lo-Gain

VOCAL RECORDING (Ext. Mic)
4track Mode, WAV(16bit/44.1kHz)
INPUT1, Lo-Gain, Phantom-ON

ACOUSTIC GUITAR
4track Mode, WAV(16bit/44.1kHz)
Built-in Stereo Mic, Lo-Gain

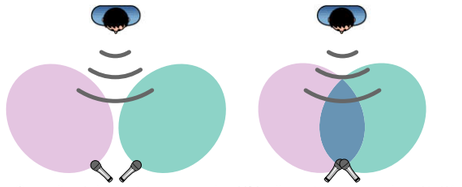
ACOUSTIC GUITAR (Ext. Mic)
4track Mode, WAV(16bit/44.1kHz)
INPUT1/2, Mid-Gain, Phantom-ON

* Recording live concerts and other public performances without permission is prohibited by law.

True stereo imaging

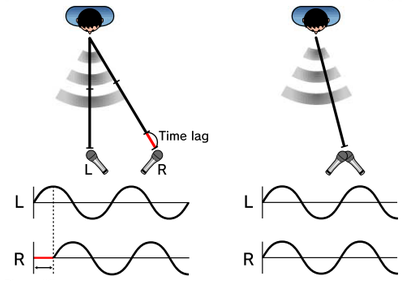
Stereo recording is often accomplished by using two microphones in a V-shaped set up that faces the performer. While this method will result in good stereo separation, responsiveness for the area directly in front of the mics will be low, causing problems with depth perception and imaging. The Zoom H4 uses an X/Y configuration where the two microphones point inward at a crossing angle. This allows the recorder to cover a wide area, and at the same time capture sound sources in the center with perfect clarity and definition. Phase differences between left and right channels are also eliminated because sound is picked up simultaneously by both microphones.

[Sound sources in center are also captured properly]



Conventional stereo mic arrangement — X/Y pattern mic arrangement used in H4

[Absence of phase differences ensures natural stereo imaging]



Phase difference

Conventional stereo mic arrangement — X/Y pattern mic arrangement used in H4

24-bit/96 kHz linear PCM format and MP3 recording

The H4 allows 24-bit/96 kHz linear PCM recording in WAV format, resulting in excellent transparency and definition that exceeds the sound quality of CDs. This is great for capturing the nuances of an acoustic instrument while preserving the ambience of the recording location. Or record directly as MP3 files for longer recordings that still provide excellent sound quality.

Secure Digital (SD) Media

The H4 records on Secure Digital (SD) Media cards. These widely available cards boast an amazing amount of recording time in a small package. And unlike tape or disc media, mechanical vibrations do not affect recording quality. With a 2GB SD memory card, the H4 can provide up to 190 minutes of stereo WAV file recording in 44.1 kHz/16-bit mode or as many as 34 hours when recording at 128 kbps in MP3 stereo mode.

Combination XLR-1/4" Inputs

The H4, with its two phantom powered XLR-1/4" input jacks that support direct connection of external microphones, is the solution to an infinite number of recording situations. You can also use the H4's Hi-Z rated phone inputs for direct connection of guitars, bass, or any other line-input device.

Input level optimization for detailed sound

The H4's excellent dynamic range allows you to consistently match the input level to the source. Whether you're recording a band's live performance, a solo vocalist, acoustic instruments, a classroom lecture or even a subtle soundscape, the H4's automatic gain control lets you limit peaks to -6 dB during Rec Stand-by position. And its built-in level meter and separate Low / Mid / High gain settings for the built-in stereo mics mean you can monitor operation and make adjustments on the fly.

Portable multi-track recording

Capture vocals, guitars, bass, keyboards, drum machines and other instruments on separate tracks with the H4's 4-track mode. The H4 allows simultaneous recording on two tracks and simultaneous playback on four tracks. Level and panning can be adjusted for each track individually. Punch-in recording and track bouncing make editing a breeze. Other features include a versatile tuner for guitar and bass, a metronome for use as a rhythm guide and A - B repeat capability.

*While in 4-track mode, the H4 records as 16-bit/44.1kHz WAV files.

Onboard effects with microphone and amp modeling

The integrated DSP effects processor with 32-bit architecture employs the latest modeling technology to replicate the most famous guitar, bass and microphone sounds. The array consists of 4 microphones (SM57 / MD421 / U87 / C414), 12 guitar amps and stomp boxes such as Fender, Marshall, Vox, and Mesa Boogie and 6 bass amps and preamps including Ampeg, Bassman, and Hartke. We've also included a compressor / limiter to prevent input signal overload, Zoom Noise Reduction (ZNR) and other studio quality effects such as chorus, flanger, phaser, delay, and reverb. The effect memory of the H4 accommodates 60 patches. 50 presets are already programmed for applications such as direct recording of guitar and bass as well as mic recording of vocals and acoustic guitar.

*In stereo mode, only mic modeling and the compressor / limiter effects can be used.
*Mic modeling effects are only for use with the built-in microphones.

It's a USB audio interface

The H4 also will function as a direct audio interface for your computer. Connect the supplied USB cable and record directly to your computer. And the H4 comes bundled with Cubase LE from Steinberg so you can start to produce and edit music straight away. Thanks to the direct hardware monitoring function, there is no latency problem, you can hear what you're recording as you're playing it.

*Effects can only be used when the sampling rate is 44.1kHz.

Cubase • LE for Windows® or Macintosh

*Steinberg and Cubase are registered trademarks of Steinberg Media Technologies GmbH.

Drag and drop file transfer

When the H4 is connected to a computer via USB, it also functions as an SD card reader. This allows you to drag and drop audio files to your computer like you would pictures from a digital camera. Create a media player sound library, tailor a recording with a waveform editor, then mix and master with a DAW. Then create your own CDs, send files by e-mail, or use them for podcasting. The possibilities are endless. The H4 will even function as a portable MP3 player.

Intuitive user interface

The H4's easy-to-use control interface uses cursor keys and a jog dial that lets you operate most functions with one hand. Its backlight LCD makes for easy navigation, even in dark settings, thanks to a clear graphic layout and well-designed icons. A key-hold function prevents inadvertent operation during recording.

Power supplies

Thanks to its circuit design optimized for low voltage operation, the H4 can record continuously for about four hours on a pair of AA batteries. The supplied AC adaptor (AD-0006) can be plugged in for extended use. When using the H4 as an SD card reader or USB audio interface, it can be powered via USB.

Record anywhere

Included with the H4 is a windscreen to alleviate unwanted noise from turbulence and a tripod adaptor that allows easy mounting to a standard camera tripod. Together, all these features and accessories make the Zoom H4 Handy Mobile recorder the most powerful, most versatile mobile recording device ever made.