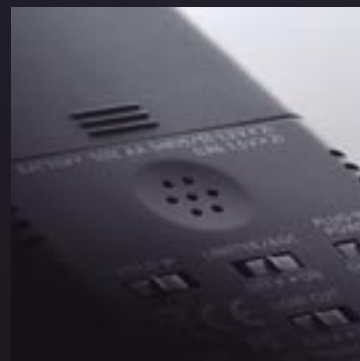
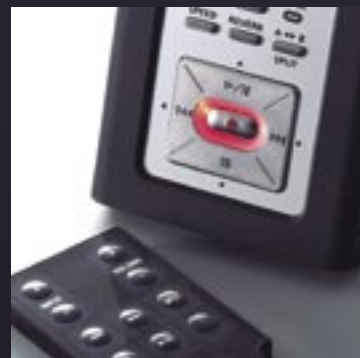


24 bit 96 kHz  
WAVE/MP3 RECORDER

# R-09HR

**EDIROL**  
by Roland


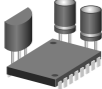
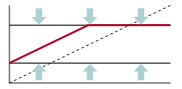




# Advanced Technology That Inspires You To Record

The R-09HR is a professional, high-resolution recorder that travels light and performs like a heavyweight. With crystal-clear, 24/96 fidelity, plus analog limiting, remote control, and a handy preview speaker, the R-09HR is the new flagship of EDIROL's award-winning R-series recorders. Thanks to its rubberized body, the R-09HR fits snugly and comfortably in hand, while minimizing handling noise. Designed entirely to let you record live sound easily at high quality, the R-09HR is a portable dream.

## 24 bit 96 kHz WAVE/MP3 RECORDER **R-09HR**

SDHC **USB 2.0** IARC

<b>Built-In Stereo Mic</b> 	<b>I.A.R.C</b> 	<b>Limiters &amp; AGC</b> 
<b>Linear PCM</b> <b>24bit / 96kHz</b>	<b>Remote Controller</b> 	<b>Computer Connectivity</b> 



# High-quality recording for any occasions

## Broadcast



## Acoustic Instruments



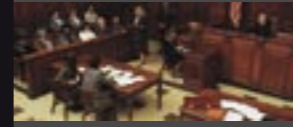
## Band Rehearsals/Piano Lessons



## Journalism/Interviewing



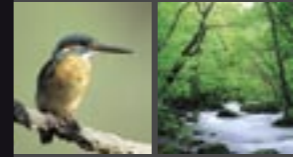
## Courtroom Law



## Performances/Recitals



## Field Recording



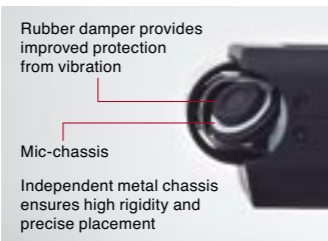
## Lectures/Others



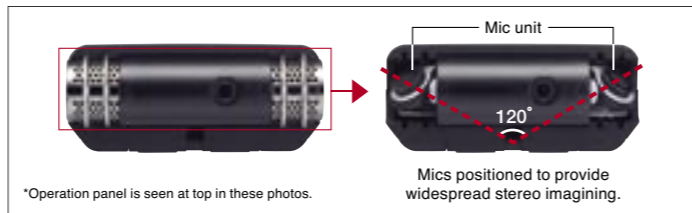
# Great features and high-quality sound

## Built-in stereo mics for perfect capture

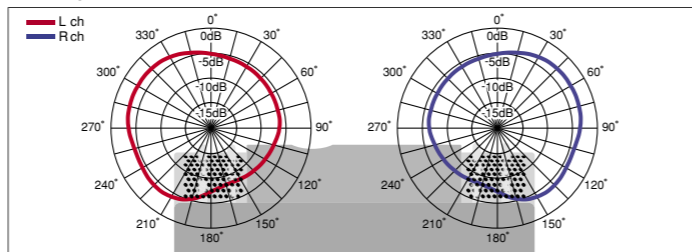
With the R-09HR, there's no extra gear to buy or cables to connect. A pro-quality stereo microphone is built into the unit, complete with a dedicated analog input control, mono/stereo selector, low-cut filter, limiter/AGC (Auto Gain Control), and gain boost. The electret condenser microphone elements are compact, ultra-sensitive, and placed to capture sound accurately. To further avoid interference, the mic housing is separated from the main circuit board. (An external mic can also be used with the R-09HR's 1/8" stereo input.)



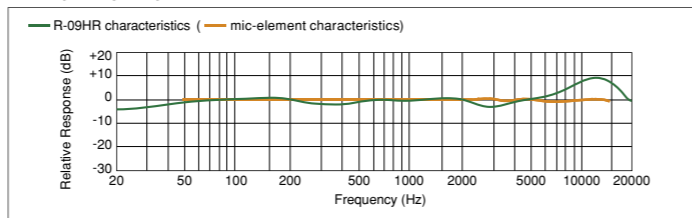
### Built-in stereo mic



### Polar pattern



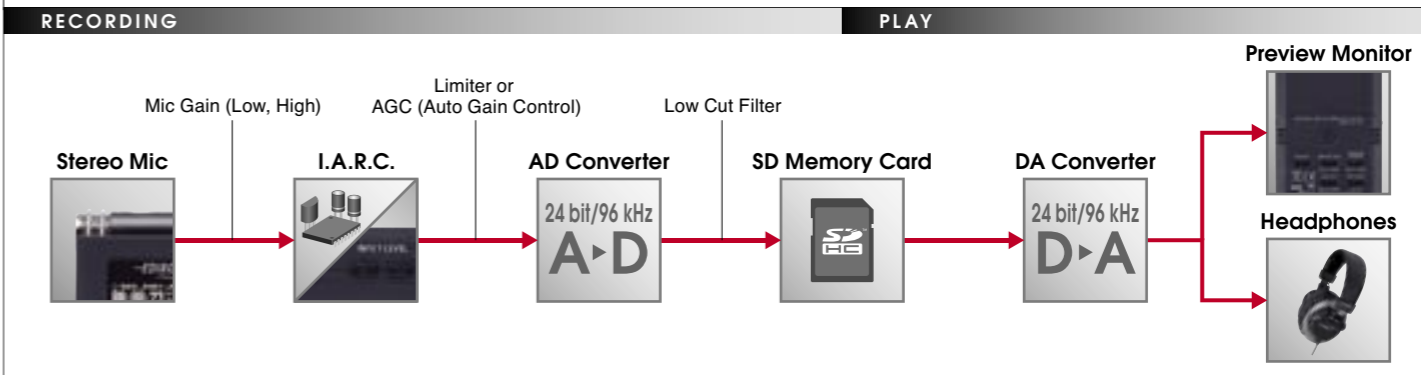
### Frequency Response



## I.A.R.C.: analog circuit ensures high-quality sound

The R-09HR supports up to 24-bit/96kHz linear PCM recording, which has over twice the digital audio resolution of a standard audio CD. I.A.R.C. (Isolated Adaptive Recording Circuit) is a newly developed, dedicated analog circuit optimized for recording with the R-09HR's onboard A/D converter. Electrolytic capacitors provide stable, reliable power with an independent power source for the analog circuitry, and another power source for the digital circuit board, thus eliminating DC interference between components in the R-09HR. The R-09HR offers an input gain volume control to manually adjust recording levels.

## Carefully designed for premium sound quality throughout the signal chain

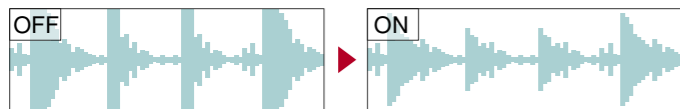


## Intuitive point-and-capture recording

### Preventing clipped recordings: Analog Limiter and AGC

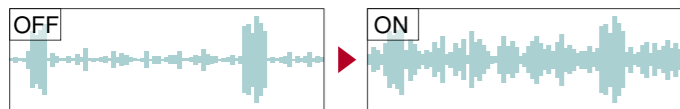
You often get just one chance at capturing sound. To prevent unexpected audio bursts from spoiling the recording, the R-09HR has analog limiting and AGC (Auto Gain Control) capabilities. Use these functions for confidence when recording.

For recording ensembles or dynamic performances, the analog limiter prevents clipping



If there's a sudden, excessive increase, the level will be compressed to prevent clipping. The analog limiter is a lifesaver when recording dynamic instrumental and vocal performances.

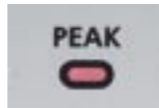
Record at a uniform volume level with AGC (Auto Gain Control)



If the sound is too soft, the volume is boosted; if it's too loud, the level is reduced — perfect for dynamic environments such as meetings.

### Get great recordings with confident level control

The R-09HR enables easy control of input level. When you set the input levels, meter bars clearly show input on the large display. The red PEAK indicator also illuminates if the level is exceeded. Other practical features include Low Cut Filter to eliminate low-frequency noise, and Mic Gain for adjusting sensitivity.



### Organic Light Emitting Diode display provides easy metering

Information is easy to see on the R-09HR's large OLED display thanks to its high contrast and wide viewing angle. The screen allows you to accurately adjust input levels with confidence.



Wide viewing angle: see what's on the screen, even from the side.

### Designed to simplify the recording process

Handy bonus features abound, such as the Split function for separating waveforms at a user-defined point, and a file management setup that can time- and date-stamp each recording. The R-09HR also provides a Line input for connecting MP3 players, etc., and an input for an external mono or stereo mic.

## Capture sound in high quality

### Recording that exceeds CD quality

The R-09HR is capable recording in uncompressed linear PCM (wav) format, with sampling specs at 24 bits and 96 kHz — significantly better than CD quality. This allows you to capture the finest details of the source sound with stunning realism. In addition to lossless wav format, MP3 is also supported.

### Compatible with SD and SDHC media



Record at the highest quality for lengthy periods and you'll still have room on the memory card. The reliability and durability of these types of media are outstanding. Naturally, there are no the background noise problems as there are with tape and vinyl records.

### Recording time (unit: minutes)

Data Format	Memory Size				
	512MB	1GB	2GB	4GB	8GB
WAVE (24bit/96kHz)	13	27	55	110	220
WAVE (24bit/88.2kHz)	15	30	60	120	240
WAVE (24bit/48kHz)	27	54	110	220	440
WAVE (24bit/44.1kHz)	29	59	120	240	480
WAVE (16bit/96kHz)	20	40	80	160	320
WAVE (16bit/88.2kHz)	22	44	88	176	352
WAVE (16bit/48kHz)	40	81	166	332	664
WAVE (16bit/44.1kHz)	44	88	180	360	720
MP3 320kbps	196	392	797	1,540	3,080
MP3 128kbps	490	980	1,993	3,990	7,980

\*Times for recording are ideal values. Absolute time may vary due to card specifications, etc.  
 \*The total recording time will decrease depending on the number of files recorded.  
 \*Use memory cards that have been formatted for the R-09HR.



## Unprecedented ease of use

### You can take it anywhere. Perfect portability

The compact R-09HR fits in the palm of your hand. And it's light; even with an SD card inserted, it weighs just 174 g. In the field, it runs on two AA batteries. Indoors you can power it using the bundled AC adaptor.



### Hassle-free operation. Includes remote controller

The wireless remote lets you control important transport functions such as record-start, playback-start, fast-forward, rewind, volume control, and input level from a distance. This allows the R-09HR to be placed in the perfect position for recording while providing quick and easy hands-free operation. If you see the peak indicator lighting up during recording, for example, you can promptly turn the input level down without touching the unit. Remote control is ideal for eliminating handling noise typically caused by touching the buttons and switches during recording.



### Built in speaker lets you quickly hear the recording

You can easily audition the recorded sounds immediately after recording, thanks to the built-in preview speaker. No need to plug in headphones; you can immediately check the recording through the speaker. Besides being handy for auditioning your recordings, the speaker can also be useful when selecting which files to discard or keep.



□ Preview monitor located on back of unit

### Full suite of playback functions

Repeat and Shuffle playback options are provided. You can even vary the playback by 50% to 150%.\* These features are useful for students practicing music or learning a language, and in business for making transcripts of interviews and minutes of meetings. In addition, there are four types of reverb, which provide ten modes of filtering for warmer, resonant playback.





\*When played back faster or slower, the sound quality is somewhat altered.

## Share and store your data

### Transfer R-09HR data to and from computers via USB

Connect the R-09HR to a computer via USB and simply drag and drop the files, and vice versa. Support for Hi-Speed USB (USB 2.0) lets you quickly transfer large sound files. By loading the R-09HR with MP3 files, you can use it as a portable MP3 player.



 <b>Make recordings for audio CDs</b>	 <b>Record your own podcasts</b>
 <b>Gather sounds for use in films</b>	 <b>Edit recorded sounds on your computer</b>

### High speed file transfer via USB 2.0 connection to computer

The R-09HR can connect to the outside world via Hi-Speed USB (USB 2.0) for importing/exporting audio files via computer very quickly. For example, a 600 MB recording at 44.1 kHz/16-bit takes only 5 minutes to transfer, only 1/12 of the time it would take to transfer the same recording from a MiniDisc or tape (cassette/DAT) recorder.

### Example) Transfer 60 minutes of music data to the computer

MD/DAT	Approx. 60 min. (Actual time necessary to import.)
R-09HR*	Approx. 5 min.

\*16-bit/44.1kHz wave-format data (approx. 600MB)

Transfer time measured with a Pentium® 1.5 GHz laptop via USB 2.0.  
Transfer times will vary based on computer specifications.

### Audio editing software bundle



### pyro Audio Creator LE for Windows Vista®/Windows® XP

The R-09HR is bundled with Cakewalk's versatile pyro Audio Creator LE sound-editing application. It enables you to split, edit, process, store, or practically anything you want with the files recorded on the R-09HR.

- Powered by the same high-quality audio engine as Cakewalk's professional SONAR application.
- Using powerful effects, you can eliminate noise and adjust sound characteristics.
- Wide variety of audio formats for easy conversion between different formats.
- File information tag editor and built-in CD burning functions.

### System requirements: USB Interface

**Windows Operating System**  
• OS Microsoft® Windows® Vista®/Windows® XP Home/ XP Professional/ 2000 Professional/ Me • **Computer** Windows compatible PC equipped with a USB2.0 or 1.1 port

**Macintosh**  
• OS Mac OS X 10.2 or later • **Computer** Apple® Macintosh® series with on-board USB port

### System requirements: Cakewalk pyro Audio Creator LE

• OS Microsoft® Windows® Vista®/Windows® XP Home/ XP Professional • **Processor** Intel® Pentium® 4 1.3 GHz, or AMD Athlon™ XP 1500+ or higher • **RAM** 256 MB • **Hard Disk Space** 50 MB for core program  
• **Video Resolution** 1024 x 768, 16-bit • **Audio Interface** Windows-compatible • **Optical Drive** CD-ROM required for installation / CD-R or CD-RW capability required for CD audio disc burning

\* Does not support Windows95, 98, NT, ME, 2000 or XP Media Center Edition.  
\* Pyro Audio Creator LE includes a 30 day trial version of the MP3 Encoder.

## Options

### Cover/Stand Set for R-09HR OP-R09HR-C



The OP-R09HR-C package comprises of a protective cover plus a small tripod for the R-09HR. The cover has cut-outs for accessing the buttons, plus a belt clip, and a screw hole for attachment to the tripod base.

### Microphone Stand ST-100MB



Mic stands are often heavy and cumbersome, but not the ST-100MB. Made of strong but lightweight aluminum, the ST-100MB boom stand is super easy to transport. The ST-100MB package includes the mic stand, mic clip, and Roland-logo carrying case.

### Stereo Headphones RH-300



Roland's top-of-the-line headphones for the ultimate in sound quality, appearance, and performance.

### Microphone Stand Adaptor OP-R09M



The Adaptor enables you to fix the R-09HR on the microphone stand even when covered with the OP-R09HR-C.

### Carrying Pouch OP-R09HR-P



Transport your EDIROL R-09HR in style with the new OP-R09HR-P cushioned carrying pouch. In addition to the protective compartment for the R-09HR itself, the pouch also comes with a belt clip and a pocket for accessories such as batteries and SD cards.

### In-Ear Headphones RH-iE3



The RH-iE3 in-ear headphones can reproduce cutting-edge, digital-instrument sounds with clarity and precision across a wide dynamic range.

### Stereo Microphone CS-15



For serious field recording, the optional CS-15 cardioid-type stereo microphone is a great match for the R-09HR. For portability and convenience, the R-09HR supplies the power to the mic. Bundled with the microphone are a desktop stand, a hand-held mount, and a windshield.

### Silicone Rubber Case for R-09HR OP-R09HR-S



EDIROL R-09HR pictured with OP-R09HR-S protective cover.

Made of a soft silicone rubber material, this specially designed case allows the R-09HR to be used while inside the protective covering. The case guards against dirt and scratches.

## Left side panel



Battery compartment  
HOLD switch  
(+) and (-) INPUT LEVEL buttons  
MIC INPUT jack  
LINE IN jack  
LOW CUT switch

## Rear panel



Preview Monitor  
LIMITER/AGC (Auto Gain Control) switch  
PLUG-IN POWER switch  
MIC GAIN switch

## Right side panel



(+) and (-) VOLUME buttons  
POWER switch  
AC ADAPTOR jack

## Top



Optical receiving port for the remote control  
HEADPHONE jack  
Remote indicator

## Slot



USB terminal  
SD/SDHC memory card slot

## Package Contents



- R-09HR
- AC adaptor
- USB cable (mini-B cable)
- SD Memory card
- Clear plastic tabletop stand
- Owner's manual
- Remote control
- CD-ROM  
Cakewalk "pyro Audio Creator LE"

## International Recognition



EDIROL R-09 won the "MIA Music Awards 2006" at The Music Industries Association's Music Awards 2006 held in London.



EDIROL R-09 has received honors by music technology magazines around the world.

## Specifications

Recorder Part		Input/Output		Effects (Playback only. Excludes playback in 88.2 kHz or 96 kHz.)	
<b>Tracks</b>	2 (stereo)	<b>Audio Inputs</b>	Internal Stereo Microphone, Mic input (Stereo miniature phone type, plug-in powered mic), Line input (Stereo miniature phone type) *The Internal/External Mic and the Line input can't be used at the same time; only the Line input is effective.	<b>Reverb</b>	4 types (Hall1, Hall2, Room, Plate)
<b>Signal Processing</b>	AD/DA conversion: 24 bits, 44.1/48/48/88.2/96 kHz	<b>Audio Output</b>	Phones (Stereo miniature phone type)	<b>Speed change</b>	50 to 150 % of playback speed
<b>Data Type</b>	[For Recording] *Stereo only • WAVE Sampling Rate: 44.1/48/88.2/96 kHz Bit Depth: 16/24 bits • MP3 (MPEG-1 Audio Layer 3) Sampling Rate: 44.1/48 kHz Bit Rates: 64/96/128/160/192/224/320 kbps [For Playback] • WAVE Sampling Rate: 32/44.1/48/88.2/96 kHz Bit Depth: 16/24 bits • MP3 (MPEG-1 Audio Layer 3) Sampling Rate: 32/44.1/48 kHz Bit Rates: 32 - 320 kbps or VBR (Variable Bit Rate)	<b>Nominal Input Level (Variable)</b>	Mic input: -33 dBu (Default input level), Line input: 2 dBu (Default input level)	<b>Other</b>	
<b>Memory Card</b>	SD Memory Card (SDHC format compatible)	<b>Input Impedance</b>	Mic input: 30 k ohms, Line input: 15 k ohms	<b>Display</b>	128 x 64 dot graphic OLED (Organic Light-Emitting Diode) display
		<b>Output Level</b>	20 mW (In case 16 ohms load)	<b>Power Supply</b>	AC Adaptor, Alkaline dry battery LR6 (AA) type x 2, or Nickel Hydrogen battery (HR15/51) x 2
		<b>Recommended Load Impedance</b>	16 ohms or greater	<b>Current Draw</b>	370 mA
		<b>Frequency Response</b>	20 Hz to 40 kHz	<b>Dimensions</b>	62 (W) x 112.9 (D) x 27 (H) mm/ 2-1/2 (W) x 4-1/2 (D) x 1-1/16 (H) inches
		<b>USB Interface</b>	Mini-B type connector (supports USB 2.0/1.1 mass storage device class)	<b>Weight</b>	174 g / 7 oz (including batteries and memory card.)
				<b>Accessories</b>	Owner's Manual, AC Adaptor, Remote control, Stand, SD Memory Card (512 M bytes), USB cable (Mini-B type), CD-ROM (Cakewalk "pyro Audio Creator LE" )

Compatible SD/SDHC cards information can be found at [www.EDIROL.net](http://www.EDIROL.net)

\*0 dbu = 0.775 Vrms

**EDIROL**  
by Roland

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or visit us online at [www.EDIROL.net](http://www.EDIROL.net)

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Printed in Japan. APR. 2008 RAM-4337 CEH2 GR-UPR-P

