

Roland



WAVE/MP3 RECORDER
R-05



WAVE/MP3 RECORDER
R-09HR



WAVE/MP3 RECORDER R-05



WAVE/MP3 RECORDER R-09HR



Advanced recorders conceived and created by

Because we understand the essence of sound, we make no compromises in quality. And because we have a solid track record as a pioneer in the field, no other product family compares to the R-series' quality and ease of use. Roland WAVE/MP3 recorders symbolize a no-compromise pursuit of high-quality sound recording and a passion for perfection. Whether you choose by performance or value, you will find your solution here.

Unique ICA omnidirectional mic system accurately captures the depth and ambience of the environment

High-quality design enables perfect and detailed recordings. The core recording component is our proprietary ICA (Isolated Capsule Architecture) omnidirectional mic system, outstanding for capturing detailed ultra-low frequencies, especially when compared to standard unidirectional mics. The shape of the special capsule that covers the unit provides focus. As a result, the sounds recorded on these recorders are realistic and have a natural stereo feel.



Floating construction reduces noise

In order to eliminate vibrations that can cause noise, the mic housing has been isolated from the unit's circuit board. It rests on a floating base enclosed in a rubber damper, providing excellent vibration insulation. These recorders achieve high-quality live recordings by reducing noise in all possible areas.



■ Floating construction prevents noise from vibration and handling (R-09HR).

Proprietary IARC analog circuitry is the key to excellent sound quality

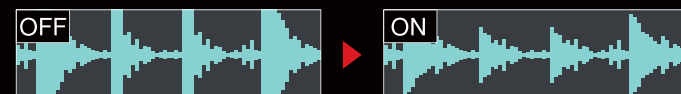
R-Series recorders are equipped with Roland's proprietary IARC (Isolated Adaptive Recording Circuit). Input levels reaching the A/D converter are optimized to ensure that audio is digitally converted while retaining its natural, pure quality. Additionally, the independent power-supply circuitry prevents noise caused by interference between circuits. Every step has been taken to reduce noise.



Limiter and AGC prevent recording errors before they happen

The Limiter and AGC (Auto Gain Control) adjust input levels to prevent recording errors. Use either of these to suit the situation, and enjoy recordings with consistent quality.

Limiter prevents distortion caused by excessive input levels



The limiter prevents distortion by compressing the level when there is excessive input from transient, high-volume sounds. With the ability to handle sources with large fluctuations in volume, these recorders are ideal for recording musical performances and vocals.

AGC (Auto Gain Control) smooths the volume of the entire recording



This feature amplifies weaker input and attenuates strong input to ensure a consistent overall volume. This is best for situations such as conferences where you want to capture all speakers at the same volume.

Roland, the trusted leader in music technology

Linear PCM recording exceeds audio-CD quality

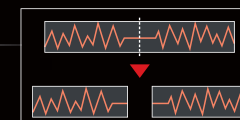
With support for linear PCM recording (WAVE) up to 24-bit at 96 kHz, the R-series lets you create astonishingly realistic recordings, capturing the finest details of the source. MP3 is also supported, so you can choose the audio format that best suits your application. Recordings are captured and stored on industry-standard SDHC/SD memory cards, supporting high-quality sound and lengthy recording times.

Edit your recordings with built-in tools such as Divide and Combine

A variety of editing functions lets you customize your recorded files directly onboard the unit. You can combine multiple files of the same format into one, for example, or divide a single file into multiple files. Regardless of the file format you recorded in — WAVE or MP3 — you can edit them right on the spot.

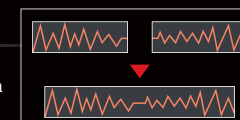
Divide (file splitting)

Divide your file at any point after you record. You can use this in a variety of ways, including dividing a continuous file at spaces between songs.



Combine (file merging)

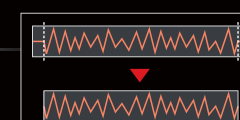
Combine two files. Use this to create a medley of multiple songs, for example, or merge all songs from a continuous recording into a single audio file.



Trim (trimming unwanted sections)

Keep only the parts of the recorded file that you need and erase the rest. This is an easy way for trimming out the unwanted space before and after a song.

*Supported on R-05 only



Stress-free usability for fast, high-quality recordings

Functions that are used most often are controllable via hardware switches, including the INPUT LEVEL button for adjusting input level, MIC GAIN for configuring mic sensitivity, and LOW CUT for eliminating irritating low-frequency noise. These compact recorders fit in your palm, and are just the right size for comfortable, single-hand operation.



■ Hardware switches on the back of the unit (R-09HR)

Convenient playback functions such as speed control

A variety of playback options add versatility to these recorders, including Repeat, Shuffle, and A-B Repeat.

Variable speed playback

Change the playback speed in 10 steps from 50-150% with simple button operations. This is convenient for dissecting phrases in fast-tempo songs or transcribing conference minutes.

A-B repeat

Repeat a particular section of your recording over and over. This lets you recheck a particular section of your recording over and over, and is very convenient for practicing instruments or language training.

A variety of functions to expand the range of use

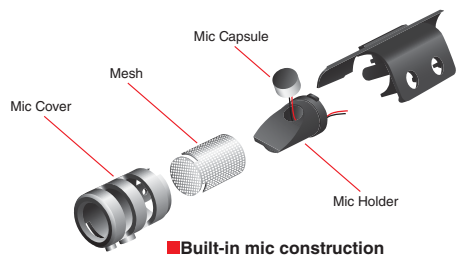
- Supports high-speed USB (USB 2.0) for fast data transfer to your computer (Windows or Mac).
- The date and time of the recording can be stamped on the file, which makes it easier to manage your recorded data.
- Self-timer feature lets you set, in seconds, the time to begin recording.
- This is handy for recording your own performances.



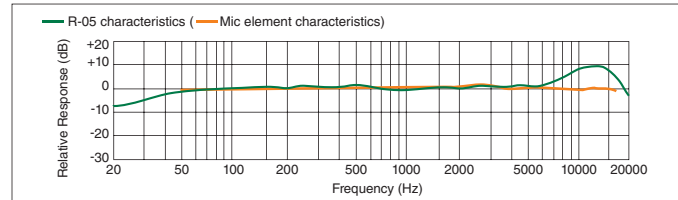
Actual size

Independent mic housing for accurately capturing depth of field

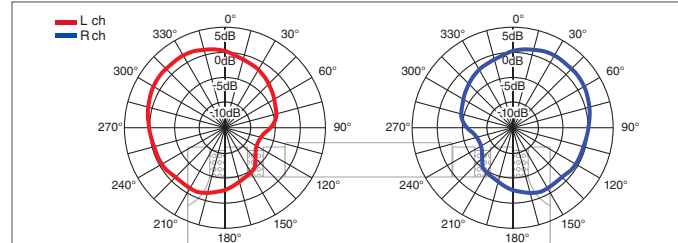
The R-05's internal microphone is housed in an independent enclosure that's isolated from the unit's circuit board. With its unique capsule shape, the ICA omnidirectional mic system ensures localization, and can capture the sound field accurately and realistically. The mic is enclosed in a frame made of vibration-insulating rubber material to prevent noise transmission from the unit.



Frequency Response



Polar pattern



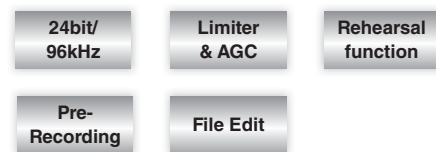
WAVE/MP3 RECORDER R-05



Our WAVE/MP3 recorders have become popular around the world for their ease of use and no-compromise, high-quality audio.

The R-05 model inherits this concept, packing a wide variety of great recording functions into a compact body.

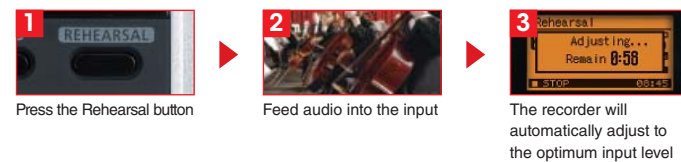
Our aim is to bring high-quality recording and ease of use to the masses, no matter the skill level or budget.



*Please see product features (p. 2-3) that are shared by products in the series.

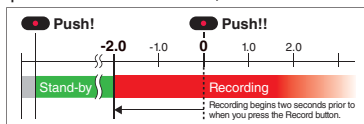
Rehearsal function automatically adjusts input to optimum levels

This feature offers a quick way to adjust input levels before recording, which simplifies the process for first-timers. Input levels can be adjusted automatically using simple button operations. This allows beginners to make high-quality recordings even if unfamiliar with recording techniques.



Pre Record function ensures that you won't miss sounds that occur suddenly

When you keep the unit in Record Standby mode, the recorder captures everything in its memory. When you press the Record button, the actual recording begins from a point two seconds before you pressed the button. You will no longer miss important recording opportunities.

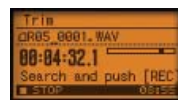


Supports simultaneous recording of WAVE and MP3

The R-05 supports simultaneous recording in WAVE (high quality) and MP3 formats (convenient for PC file exchange). There's no need for format conversion. Choose the format that best suits your needs.

Large display for better visibility

The large LCD provides an intuitive interface that's easy to use, even for beginners.



Supports over 16 hours of continuous recording on battery power

Enjoy over 16 hours of continuous recording* on batteries (two size AA batteries). The R-05 supports large-volume SDHC memory cards, which provide ample space for lengthy recordings.

*Two-way power with support for AC Adaptor (sold separately).

Convenience and ease of use — the foundation of our recorders

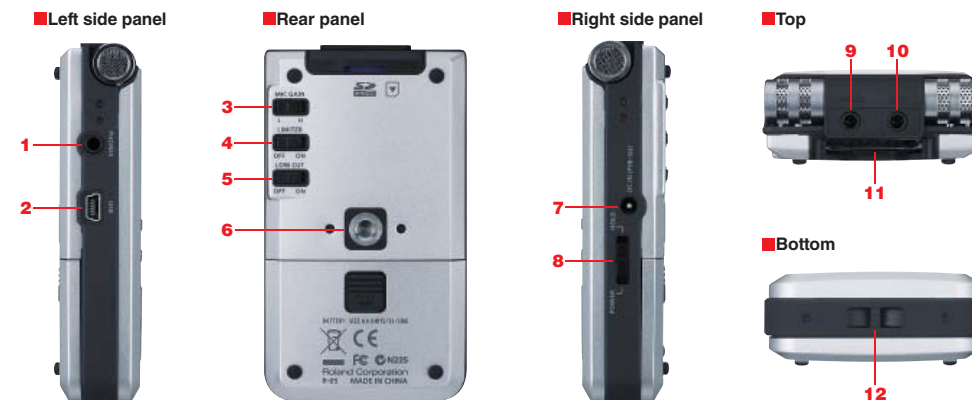
- For hands-off recording at the perfect position, mount your R-series recorder on a standard camera tripod.
- Convert saved WAVE files (WAV) into MP3 directly onboard the unit.
- The Auto Record Start function starts recording when a user-specified input level is reached.



Tripod mounting socket on the back of the unit / R-05 pictured with commercial camera tripod.



*Tripod sold separately.



- HEADPHONE jack
- USB connector
- MIC GAIN switch (LOW/HIGH)
- LIMITER/AGC switch
- LOW CUT switch (ON/OFF)
- Tripod mounting socket
- AC ADAPTOR jack
- POWER/HOLD switch
- LINE IN jack
- MIC INPUT jack
- SD card slot
- Hook for strap

Options only for R-05

Cover/Windscreen Set OP-R05C



Optional accessory set consists of a special cover for protecting the recorder from scratches, shock, and vibration, and a windscreen for reducing noise during outdoor recordings. You can operate the recorder with both of these items attached.

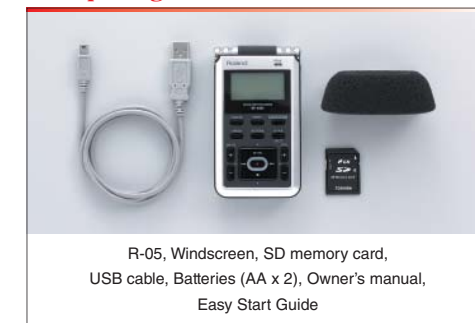
Silicone Rubber Case OP-R05S



The silicone rubber case fits snugly over the unit, protecting it from scratches, dust, and dirt. It also helps reduce noise from handling or vibration that may be transmitted from the surface it's placed on.

AC Adaptor PSB6U

R-05 package contents



In-ear condenser stereo mics for easy binaural recording

(Compatible with R-05/R-09HR/R-09)



Binaural Microphones/Earphones CS-10EM

These high-quality earphones are very comfortable to wear, and have been outfitted with high-performance condenser stereo mics that deliver a flat frequency response. Wear them while you record, and capture sounds at the exact location you hear them. This creates an amazingly realistic feel. You can also monitor your recording through the earphones while you record. The plug-in power design, where power is supplied from the recorder, makes binaural recordings a snap. All you have to do is connect the earphones to the unit.

- Weight: 4.5 g (without cord)
- Cord: 1.5 m
- Plug: Stereo mini (gold-plated) x 2
- Accessories: Carrying Pouch, Ear pieces (S, M, L)



Artist's conception of recording and auditory field.



In contrast to typical stereo localization, binaural recording is capable of reproducing real audio images 360° around your head — above, below, front, and rear — providing an accurate sense of depth.

Special Article "Binaural Recording Described"

Binaural recording is also referred to as the "both-ear effect." Recordings made using this technique, when listened to on headphones, give listeners a realistic feel of actually being in the space where the recording was made. 3D video has become all the rage in recent years, and you could call binaural sound "3D audio." Typical binaural recordings use a dummy head, simulating the human head. Small mics are placed in this dummy head near the area where human eardrums would be. The secret to reproducing 3D audio has to do with the shape of the human head and ear features. Sounds reaching our eardrums have a unique signature that is created as it reflects and refracts against body parts, including features on our ear lobes. In technical terms, this is called the head-related transfer function (HRTF). The human brain takes this sound, which has been altered through various reflections and refractions, and analyzes a variety of factors, including the differences in the volume of sound reaching the left and right ears, as well as the difference in arrival time, to recognize the location of the sound and the space where the sound is being made. Therefore, by recording sounds that possess the unique signature created by the physical features near our ears, and listening to them via headphones, the listener is able to hear a realistic audio image as if he or she were actually in the space where the recording was made. The CS-10EM lets you easily make binaural recordings by wearing the stereo mic like standard earphones. Experience 3D sound with a true realistic feel.

Shobi University, Faculty of Informatica for Arts,
Department of music Expression

Professor Shun-ichi Furuyama

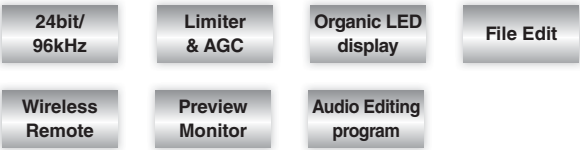


WAVE/MP3 RECORDER

R-09HR



Every detail of this recorder has been designed to enhance the comfort of making high-quality recordings. A rubber-feel body that reduces handling noise, a convenient wireless remote controller, and a preview monitor that lets you hear your recordings on the spot are just some of the details that have gone into R-09HR. The R-09HR is recognized around the world as the de facto standard of portable recorders.



*Please see product features (p. 2-3) that are shared by products in the series.

Organic LED display makes it easy to view recording levels

The R-09HR is equipped with a large organic EL display that displays a wide range of easy-to-view information, including level meters. With its high contrast and a wide field of vision, the display provides excellent viewability indoor and out. The display is also fast and responsive, ensuring that level adjustments are always accurate.



Organic LED display

Includes a wireless remote controller

The remote lets you control functions such as Record Start/Stop and Input Level adjustments wirelessly. An LED indicator illuminates when the R-09HR is recording, and flashes when it receives excessive input. Enjoy accurate control from a distance, and prevent handling noise that typically comes from operating the unit directly by hand.



Convenient tuner and metronome functions built in

An onboard tuner and metronome are built into the R-09HR, which let you play and record with an accurate pitch and tempo reference.



Tuner screen



Graphic Tuner screen



Metronome screen

Pro specifications and ease of use

•The R-09HR is equipped with a preview monitor for checking recordings on the spot. •The custom cover (included) has a threaded hole for attaching the recorder to a standard camera tripod (sold separately). •The R-09HR can be powered from batteries or AC (AC adaptor included).

Bundled audio-editing program adds power and versatility

The R-09HR comes with Cakewalk pyro Audio Creator LE, a multi-function audio-editing program. You can use pyro to divide, edit, process, and add effects to audio files imported from the R-09HR. It also lets you convert to a variety of audio-file formats. Pyro also has a CD-production function for burning and archiving your music to disc.



pyro AUDIO CREATOR LE for Windows®

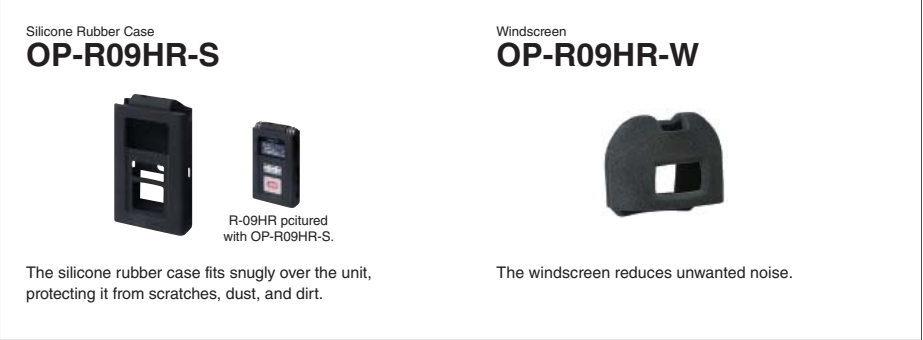
- Audio engine derived from Cakewalk's flagship SONAR recording/editing program
- Normalization function for raising the volume of an audio file to the optimum level
- Tools for noise reduction and sound-quality correction are included
- Supports a wide range of audio formats and file conversions

For more info visit www.cakewalk.com/OEM/AudioCreator_LE.asp



1. (+) and (-) INPUT LEVEL buttons
2. MIC INPUT jack
3. LINE IN jack
4. Preview Monitor
5. HOLD switch
6. LIMITER/AGC switch
7. PLUG-IN POWER switch
8. LOW CUT switch
9. MIC GAIN switch
10. (+) and (-) VOLUME buttons
11. POWER switch
12. AC ADAPTOR jack
13. Optical receiving port for the remote control
14. Remote indicator
15. HEADPHONE jack
16. USB connector
17. SD/SDHC memory card slot

Options only for R-09HR



Common options available for the R-05 and R-09HR



R-05/R-09HR Comparison Chart

	R-05	R-09HR
Recorder		
Tracks	2 (Stereo)	
Signal Processing	AD/DA conversion: 24 bits, 44.1/48/88.2/96 kHz	
Wireless remote controller	—	○
Preview monitor speakers	—	○
Limiter	○	○
AGC(Auto Gain Control)	○	○
WAV+MP3 simultaneous rec.	○	—
Rehearsal function	○	—
Effects *Playback only. Excludes playback in 88.2 kHz or 96 kHz.		
Reverb	4 types (Hall1, Hall2, Room, Plate) *Reverb and Speed Change can't be used at the same time.	4 types (Hall1, Hall2, Room, Plate)
Speed Change	50 to 150 % of playback speed *Reverb and Speed Change can't be used at the same time.	50 to 150 % of playback speed
Other		
Tuner	—	Tuner / Graphic Tuner
Metronome	—	○
File Edit	○	○
Display	128 x 64 dot graphic LCD	128 x 64 dot OLED (Organic Light-Emitting Diode) display
Power Supply	AC Adaptor, Alkaline dry battery LR6 (AA) type x 2, or Nickel-metal hydride battery (HR15/51) x 2	AC Adaptor, Alkaline dry battery LR6 (AA) type x 2, or Nickel-metal hydride battery (HR15/51) x 2
Dimensions	59.6 (W) x 103.0 (D) x 25.0 (H) mm 2-3/8 (W) x 4-1/16 (D) x 1 (H) inches	62.0 (W) x 112.9 (D) x 27.0 (H) mm 2-1/2 (W) x 4-1/2 (D) x 1-1/16 (H) inches
Weight	140 g/5 oz (including batteries)	174 g/7 oz (including batteries and memory card)
Dedicated cover	Optional	Included
Audio Editing Software	—	Cakewalk pyro Audio Creator LE

R-05/R-09HR System Requirements: USB Interface			
Windows		Macintosh	
OS	Microsoft® Windows® 7/Windows Vista®/XP Home/XP Professional	OS	Mac OS X 10.2 or later
Computer	Windows compatible PC equipped with a USB2.0 or 1.1 port	Computer	Apple® Macintosh® series with on-board USB port

System Requirements: Cakewalk pyro Audio Creator LE (bundled with R-09HR)

OS	Microsoft® Windows® 7/Windows Vista®/XP Home/XP Professional SP2 or later
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

*Cakewalk pyro Audio Creator LE does not support Windows Me/98/95/NT/2000/XP Media Center Edition or XP Professional x64.
 *This product does not support Macintosh computers running Microsoft Windows.
 *This product has been tested on representative computers that meet the system requirements, but we cannot guarantee that it will operate on any computer that meets these requirements.
 *This product includes a 30 day trial version of the MP3 Encoder.

For more info visit

www.roland.com/products/en/R-05/ (R-05)

www.roland.com/products/en/R-09HR/ (R-09HR)

R-05/R-09HR recordable time (approximate)

Units: minutes

Rec Mode		SD/SDHC card capacity					
		512 MB	2 GB	4 GB	8 GB	16 GB	32 GB
WAV	WAV (24 bit/96 kHz)	13	55	110	220	450	900
	WAV (24 bit/88.2 kHz)	15	60	120	240	490	980
	WAV (24 bit/48 kHz)	27	110	220	440	900	1800
	WAV (24 bit/44.1 kHz)	29	120	240	480	980	1950
	WAV (16 bit/96 kHz)	20	80	160	320	670	1350
	WAV (16 bit/88.2 kHz)	22	88	176	352	735	1470
	WAV (16 bit/48 kHz)	40	166	332	664	1350	2700
	WAV (16 bit/44.1 kHz)	44	180	360	720	1470	2950
MP3	MP3 (320 kbps/44.1 kHz)	196	797	1540	3080	6450	12950
	MP3 (128 kbps/44.1 kHz)	490	1993	3990	7980	16180	32350
WAV+MP3 (R-05 only)	WAV (16 bit/48 kHz)	40	152	305	610	1240	2490
	MP3 (128 kbps/48 kHz)						
	WAV (16 bit/44.1 kHz)	43	165	330	660	1345	2690

*Each recording time is approximate. The times may change depending on the card specifications.

*In case that there are plural files, the sum of recording time would be shorter than above.

*In the interest of product improvement, the specifications and/or appearance of this unit are subject to change without prior notice. *Microsoft and Windows are registered trademarks of Microsoft Corporation. *Windows® is known officially as: "Microsoft® Windows® operating system" *Apple and Macintosh are registered trademarks of Apple Inc. *The SD logo and SDHC logo are trademarks of SD-3C, LLC. *MPEG Layer-3 audio compression technology is licensed from Fraunhofer IIS Corporation and THOMSON Multimedia Corporation. *Roland is a registered trademark of Roland Corporation in United States and/or other countries. *All trademarks written in this package are the property of their respective companies. *Other product names mentioned are trademarks or registered trademarks of their respective owners. *Unauthorized recording, distribution, sale, lending, public performance, broadcasting, or the like, in whole or in part, of a work (musical composition, video, broadcast, public performance, or the like) whose copyright is held by a third party is prohibited by law.



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