R-88

8-CHANNEL RECORDER and MIXER

All in One Recorder, Mixer and Audio Interface - Anytime, Anywhere

REC **8**ch**+2**mix**Rec** | **8**ch **Mixer** | **10**in**×8**out**USB** | **8**in**×8**out**XLR**
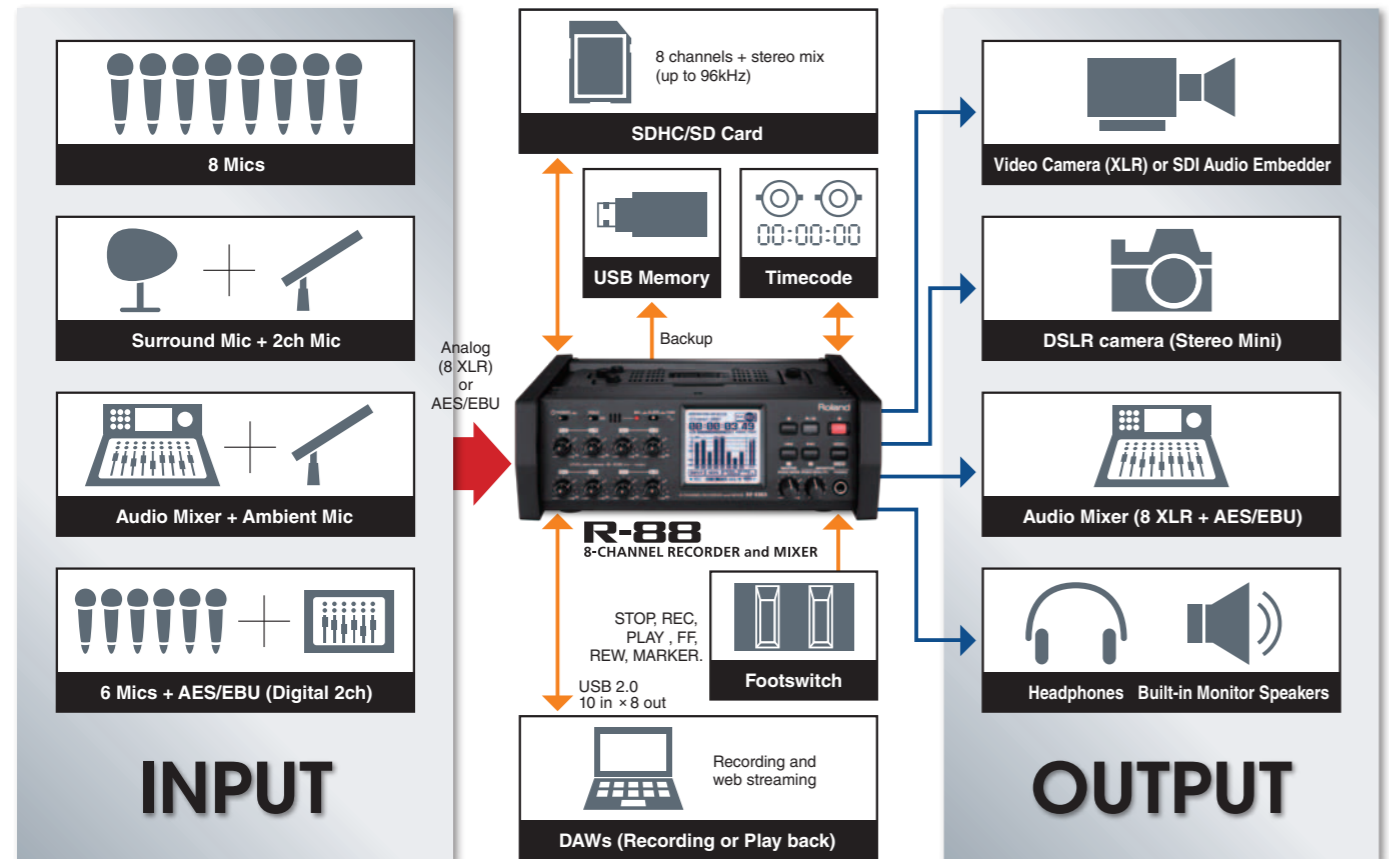
Seamless integration of recording, mixing and an audio interface - a new dimension in professional portable recording.

• Simultaneous recording of 8 channels + stereo mix (up to 96kHz) • Up to 24bit/192kHz uncompressed linear PCM recording (up to 4 channels) • 3 hours of recording time using 32GB SDHC card (24bit/96kHz, 10ch) • Up to 5 seconds pre-recording • 8 XLR inputs, 8 XLR outputs, AES/EBU input/output • Selectable input delay per channel - adjustable by 0.05 - 20 ms - ideal for surround micing • Built-in 8 channel mixer with 3-band EQ and MS microphone decoder • Built-in 10in/8out USB audio interface to use with any common DAW (up to 96kHz) • Touch Panel Display for intuitive navigation • SMPTE time code In/out for video sync • BWF and iXML embedded metadata (SCENE, TAKE, TIMECODE RATE) • Control the R-88 using MIDI via the Roland UM-ONE mk2 USB MIDI interface - mix with a MIDI-controllable fader unit • Supported power types – AA batteries, rechargeable Ni-MH battery, AC power, and 4-pin XLR external battery types.
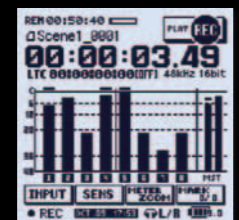
R-88
8-CHANNEL RECORDER and MIXER

for Windows® 8/7/Vista
for Mac OS X

Input, Output, Mix and Interface Options to Cover a Multitude of Recording Applications

INPUT

8 Mics

Surround Mic + 2ch Mic

Audio Mixer + Ambient Mic

6 Mics + AES/EBU (Digital 2ch)

8 channels + stereo mix (up to 96kHz)

SDHC/SD Card

USB Memory Timecode

Backup

Analog (8 XLR) or AES/EBU

R-88
8-CHANNEL RECORDER and MIXER

STOP, REC, PLAY , FF, REW, MARKER.

Footswitch

USB 2.0 10 in × 8 out

Recording and web streaming

DAWs (Recording or Play back)

OUTPUT

Video Camera (XLR) or SDI Audio Embedder

DSLR camera (Stereo Mini)

Audio Mixer (8 XLR + AES/EBU)

Headphones Built-in Monitor Speakers

REC 8ch+2mixRec

8 channels + stereo mix recording simultaneously (up to 96kHz)

8ch Mixer

Built-in, powerful digital mixer allows simultaneous recording and mix-down

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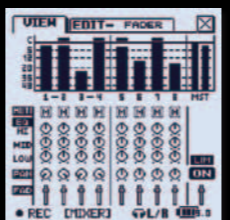
●**Hold Switch**
Prevents unintentional operations by disabling control from the front panel buttons and touch panel display.

●**Power Switch**

●**Input Sensitivity & Level Knobs**
Dual type knobs adjust both input sensitivity(-62dBu to +4dBu) and level for Ch 1 to 8 independently.

●**Peak Indicators**

Touch Panel Display

The front touch panel displays a variety of contextual information making control and adjustments intuitive.

●**Memory Card Slot**
Audio is recorded on SD or SDHC cards (up to 32G).

●**Digital Audio Input/ Output**
AES/EBU Input/Output. Provides digital input capability and stereo mix output from internal mixer.

●**DC Input**
Power via the included AC adaptor or professional external battery systems. (4-pin XLR 9 to 16 V)

●**Outputs 1-2**
XLR balance outputs. Assignable from Channel 1/2, 3/4, 5/6, 7/8 or mixed audio via internal mixer. Selectable output level (+4/-60dBu).

●**Mix Out Terminal**
Stereo miniature phone type. This output offers mixed audio from the internal mixer. Selectable output level (2 Vrms/-30 dBu).

■Top Panel

Battery Pack

The R-88 works with eight (8) AA batteries.

●**Internal speakers**

●**Slate Mic**
For recording voice memos

■ Front Panel

■ Right Side Panel

■ Left Side Panel

■ Rear Panel

●**Slate Switch**
On/Off switch to turn on Slate Mic or Slate Tone (1kHz/-20dBFS)

●**REC Button**
REC button lights during recording and blinks in standby mode. During recording, markers are set by pushing the button.

●**Outputs 3-8**
XLR balance output. Together with Ch.1 and 2, a total of 8 independent outputs are available. Also, mixed audio via internal mixer can be output (+4dBu).

●**PREV/NEXT Buttons**
PREV and NEXT allow selection of the previous or next file. Hold down these buttons for rewind or fast forward.

●**MENU Button**
This button accesses the menu settings, such as recording/ playback settings and specifying the date and time, recording mode, etc

●**Monitor Level knob**
Volume control for built-in speakers and headphones. When pushing the knob, the monitor/PFL/RTA setting menu screen appears.

●**Master Level knob**
Volume control for stereo mix from internal mixer. When pushing the knob, the mixer menu screen appears.

●**Inputs/Phantom Power Switches**
XLR type jacks support line level to mic level. Individual on/off switches control the phantom powered supply to each XLR input.

●**USB Memory Port**
Backup files to USB memory flash drives or Control the R-88 using MIDI via the Roland UM-ONE mk2 USB MIDI interface - mix with a MIDI-controllable fader unit.

USB Port

Enables copying flies to or from computers or using as a 10 in/8 out USB audio interface (up to 96kHz).

●**External Control Jack**
Enables STOP, REC, PLAY , FF, REW, REC/STOP, PLAY/ STOP, PLAY(MOMENT), SET MARKER, PREV MARKER, NEXT MARKER using optional FS-6 or FS-5U footswitches.

●**Time Code Input/Output**
The R-88 accepts SMPTE time code offering slave mode to video cameras or VTRs. In addition, the R-88 can be the master, sending out time code to slave devices (Time code mode : OFF, INT, RTC, REC-RUN, EXT SYNC, EXT AUTO JAM, EXT SYNC REC, EXT REC).

■ Specifications

Recorder Part

Channels	8 channels + 2 channels (stereo mix from built-in mixer) (Sampling Frequency 44.1, 48, 88.2 and 96 kHz), 4 channels (Sampling Frequency 192 kHz)
Data Type	Format: BWF (mono, stereo), Sampling Frequency: 44.1, 48, 88.2, 96, 192 kHz, Bit Depth: 16, 24 bits, Meta Data: Origination Time, Frame Rate, etc.
Recording Media	SDHC Memory Card: 4 to 32 GB, SD Memory Card: 2 GB
Pre-Recording	OFF, 1, 2, 3, 4, 5 second(s)

Mixer Part

Mixing Channels	Input: 8 channels, Output: 2 channels (stereo)
Channel Strip	3-band equalizer, Fader, Pan, MS microphone decoder
Master	Fader, Limiter

Audio Input Part

Signal Processing	AD Conversion: 24 bits
AD Dynamic Range	120 dB or greater ([SENS] knob = +4 dBu)
Channel Effects	Limiter, Low Cut, MS microphone decoder
IN 1-8 jacks (Analog Inputs): XLR type (Phantom powered)	Nominal Input Level (chooses with [SENS] knob): -62 (SENS +6dB parameter = ON), -56, -50, -44, -38, -32, -26, -20, -14, -8, -2, +4 dBu (LEVEL KNOB MODE = INPUT: Changes with the [LEVEL] knob positions in the range of –infinity to +8 dB.) Maximum Input Level: +26 dBu Input Impedance: Mic Input ([SENS] knob = -62 to -20 dBu): 3.4 k ohms, Line Input ([SENS] knob = -14 to +4 dBu): 5.6 k ohms * When sampling frequency is 192 kHz, IN 5-8 jacks are inactive.
DIGITAL IN jack: XLR type (AES/EBU, conforms to IEC 60958-4)	* When using Digital Input, IN 1-2 jacks are inactive.
Phantom Power	48 +/- 4 V, 10 mA per 1 channel (8 channels of phantom power available simultaneously)
Slate Microphone	Built-in

Audio Output Part

Signal Processing	DA Conversion: 24 bits
OUT 1-2 jacks (Analog Outputs): XLR type	Output Buses: Channel 1-2, Channel 3-4, Channel 5-6, Channel 7-8, Stereo mix from built-in mixer, Output Level: +4 dBu/ -60 dBu, Maximum Output Level: +24 dBu, Output Impedance: 600 ohms
OUT 3-8 jacks (Analog Outputs): XLR type	Output Buses: Channel 1-2, Channel 3-4, Channel 5-6, Channel 7-8, Stereo mix from built-in mixer, Output Level: +4 dBu, Maximum Output Level: +24 dBu, Output Impedance: 600 ohms * When sampling frequency is 192 kHz, OUT 5-8 jacks are inactive.
MIX OUT jack (Analog Outputs): Stereo miniature phone type	Output Buses: Stereo mix from built-in mixer, Maximum Output Level: 2 Vrms/ -30 dBu, Output Impedance: 1 k ohm
DIGITAL OUT jack: XLR type (AES/EBU, conforms to IEC 60958-4)	Output Buses: Stereo mix from built-in mixer
PHONES jack: Stereo 1/4-inch phone type	Output Level: 80 mW (32 ohms), Output Impedance: 10 ohms
Built-in Speaker	Stereo
Slate Tone	1 kHz, -20 dBFS
Monitor	Pre Fader Listening (PFL), Real Time Analyzer (RTA), Alarm Tone

Characteristics

Residual Noise Level (IHF-A)	OUT 1--8: -80 dBu or less ([LEVEL] knobs = -infinity), MIX OUT: -90 dBu or less ([LEVEL] knobs = -infinity)
Total Harmonic Distortion + Noise	0.02 % or less ([SENS] knob = +4 dBu, [LEVEL] knob = 0)
Frequency Response	20 Hz--40 kHz (0/-3 dB, Sampling frequency = 88.2 kHz, 192 kHz)

Other Terminals

USB (MEMORY) port: USB Type A	USB Mass Storage Class (USB 2.0/1.1) * USB HDD cannot be used. USB MIDI Interface (Supports Roland UM-ONE mk2 only)
USB (COMPUTER) port: USB Type mini B	USB Mass Storage Class (USB 2.0/1.1), USB-AUDIO (Hi-Speed USB, Input: 10 channels, Output: 8 channels) * When sampling frequency is 192 kHz, the USB audio is inactive.
TIME CODE (OUT, IN) jacks: BNC coaxial type (Conforms SMPTE 12M-1999)	Mode: OFF, INT, RTC, REC-RUN, EXT SYNC, EXT(AUTO JAM), EXT SYNC AUTO REC, EXT AUTO REC, Frame Rate: 23.976, 24, 25, 29.97, 29.97D, 30, 30D
CONTROL 1, 2 jack: 1/4-inch TRS phone type	STOP, REC, PLAY , FF, REW, REC/STOP, PLAY/STOP, PLAY(MOMENT), SET MARKER, PREV MARKER, NEXT MARKER

Others

Display	Graphic LCD 160 x 160 dots (touch screen)
Indicators	IN 1-8 PK indicators, SLATE MIC indicator, REC indicator, PLAY indicator
Power Supply	AC adaptor (using 4-pin XLR type connector conversion cable), Alkaline battery (AA, LR6) or Rechargeable Ni-MH battery (AA, HR6) x 8, External power supply (4-pin XLR type, 9-16 V)
Current Draw	1.5 A
Dimensions	260 (W) x 235 (D) x 93 (H) mm, 10-1/4 (W) x 9-1/4 (D) x 3-11/16 (H) inches
Weight (including batteries)	2.7 kg, 6 lbs
Accessories	Owner's Manual, AC adaptor, AC adaptor - 4-pin XLR type connector conversion cable

* 0 dBu = 0.775 Vrms

## ■ Recording Time using 32GB SDHC memory card   UNIT: hours

	16 bits/ 44.1 kHz	24 bits/ 44.1 kHz	16 bits/ 48 kHz	24 bits/ 48 kHz	16 bits/ 88.2 kHz	24 bits/ 88.2 kHz	16 bits/ 96 kHz	24 bits/ 96 kHz	16 bits/ 192 kHz	24 bits/ 192 kHz
1ch	100	67	92	61	50	33	46	30	23	15
2ch	50	33	46	30	25	16	23	15	11	7.7
4ch	25	16	23	15	12	8.4	11	7.7	5.7	3.8
8ch	12	8.4	11	7.7	6.3	4.2	5.7	3.8	—	—
10ch	10	6.7	9.2	6.1	5	3.3	4.6	3	—	—

* These recording times are approximate. Actual results may vary somewhat.
* If more than one recorded file exists, the total recordable time will be less.

■ Block Diagram
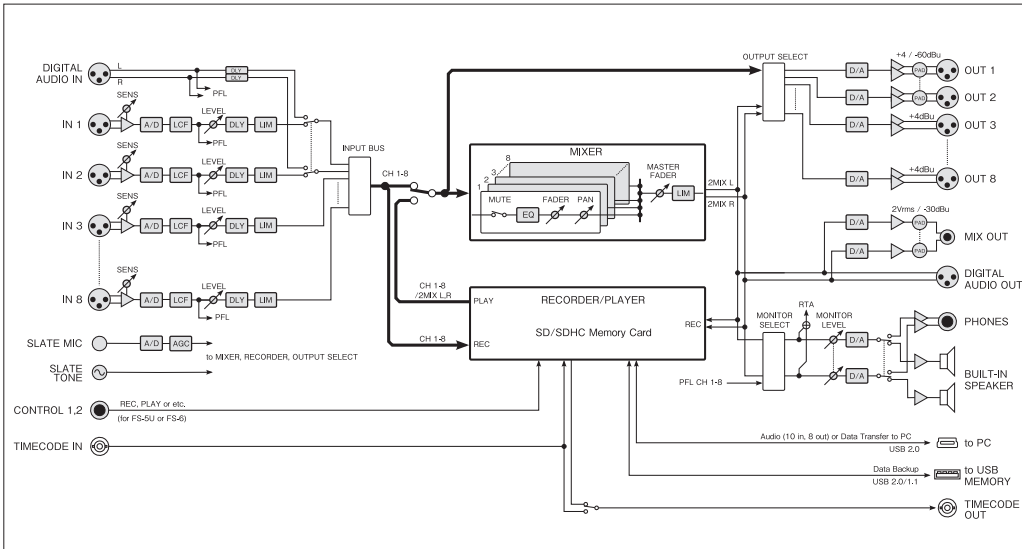
■ Options

R-88 Carrying Bag
CB-R88

Dual Footswitch
FS-6

Footswitch
FS-5U

Stereo Headphones
RH-300

Roland
WE DESIGN THE FUTURE