EU
2013 Catalog

RANE

Audio Products
for Professionals

AUTOMIXERS • MIC/LINE MIXERS • DJ MIXERS • SPLITTERS • PREAMPLIFIERS • CROSSOVERS • DELAYS • COMPRESSORS • EQUALIZERS • TRANSFORMERS • DIGITAL SIGNAL PROCESSORS • CAT 5 AUDIO • PAGING PROCESSORS •

HAL Sistemi

Giriş

HAL is more than just another DSP drag-and-drop system. It has revolutionized system design and installation.

HAL is an expert in room combining, paging and distributed audio systems. This groundbreaking architecture is dimensions beyond any other solution. HAL easily guides even novice users through what used to be complex tasks in just minutes. No intricate matrix mixing or presets are required for room combining and paging. No virtual wiring required to distribute pages and background music to multiple zones.

Seamlessly interface HAL to your application with a broad variety of peripheral devices including smart Digital Remotes, Remote Audio Devices (RADs), portable or rack automixers, audio I/O and logic expansion devices, wall sensors, ambient sensing mics, small remote amplifiers, and an advanced Paging Station.

In addition, the HAL Multiprocessor and Halogen™ software check the status, location, CAT 5 wiring integrity, and that audio is flowing in all peripheral devices, so you know your system is properly connected and ready to go.

Four HAL multiprocessors provide various audio I/O and control options for both large and small installations.

- HAL1x supports 16 in x 16 out audio, which may be increased an additional 512 in x 512 out by adding EXP1x, EXP3x or EXP5x Expanders. Up to 32 Expanders can be daisy-chained to a single HAL1x. Add more mic inputs with AM Automixers. Add AEC with the new EXP7x (October 2013).
- HAL2 supports 18 in x 18 out audio, of which 2 x 2 come from AES3 on XLR connections.
- HAL3 supports 4 in x 8 out audio, of which 2 "Line-Plus" Inputs accept balanced line, or mono left/right unbalanced lines.
- HAL4 supports 2 in x 2 out audio, of which 2 "Mic/Line-Plus" Inputs accept balanced mic, line, or mono left/right unbalanced lines. (October 2013).

Halogen software includes Ethernet control support for third-party control systems. Standard TCP/IP set and get ASCII text messages control levels, selectors, presets and toggle actions within Halogen. Since the same Halogen software code runs on both Windows® and within HAL hardware, third-party control developers can test all their code using only the Halogen Windows software. Use only software to test your control systems software code and buy the hardware only when the install date arrives.

Well-documented example programs for AMX®, Crestron® and Stardraw Control™ ease programming headaches. These flexible control options present many possible system control solutions.

In version 4.0 (October 2013) Halogen will include support for 3rd-party and Web Controls using any device with a web browser such as a tablet, smart phone or laptop.
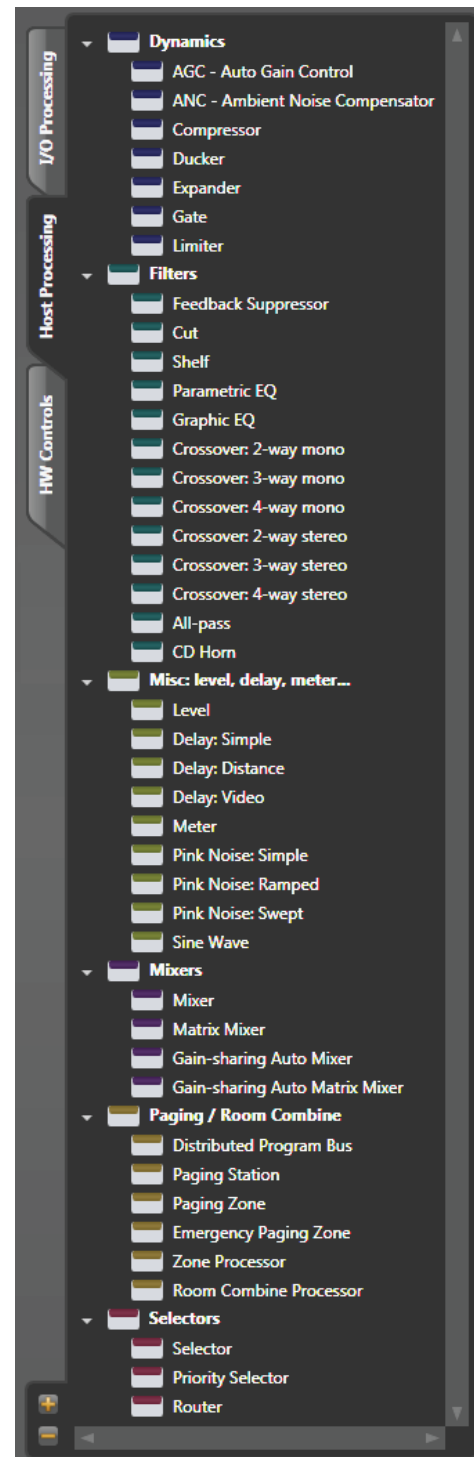
Download Halogen and design a system now!

rane.com/hal

AMX, Crestron and Stardraw Control Support Packages are installed with Halogen software, or available as separate downloads.

HALOGEN

HAL System
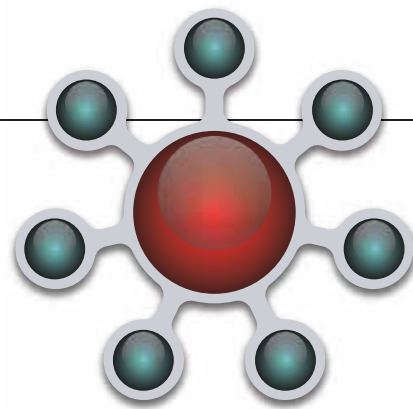
New HAL1x Expansion Bus Supports 32 Daisy-chained EXPs in Any Combination

- Connects with shielded CAT 5e (or better) cable and RJ-45s; Maximum distance between units = 100 meters (300 feet).
- Supports Gigabit Ethernet Media Converters: Multimode max = 2 km (1.2 miles); Singlemode max = 12 km (7.5 miles).

NEW! HAL1x Multiprocessor

- 16 in x 16 out - 8x8 analog & 8x8 digital (RAD ports).
- Up to 4 RADs (without EXP1x), up to 260 RADs (with 32 EXP1s).
- Up to 12 Digital Remotes (without EXPs), up to 268 (with EXPs).
- Four logic inputs, Two relay outputs (more with DR4 or DR5).

Analog Mic / Line Inputs **8**	**8** Analog Line Outputs
Digital RAD Port Inputs **8**	**8** Digital RAD Port Outputs
Digital Expansion into HAL1x **512**	**512** Digital Expansion from HAL1x
Total in the **HAL1x** DSP Brain **528**	**528**
Inputs	**Outputs**
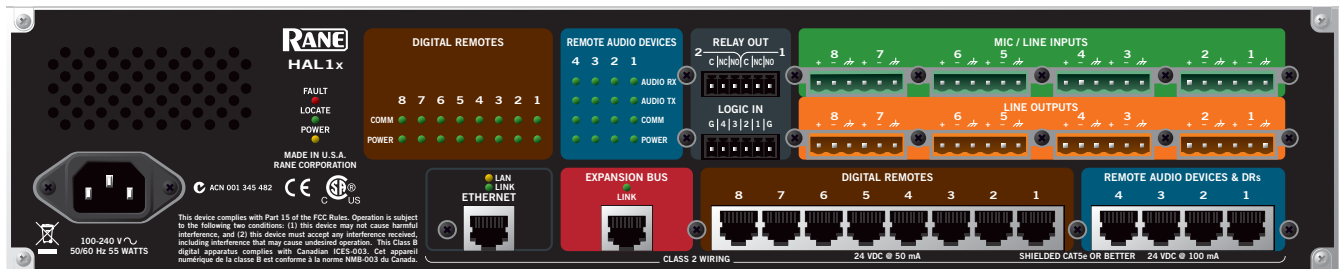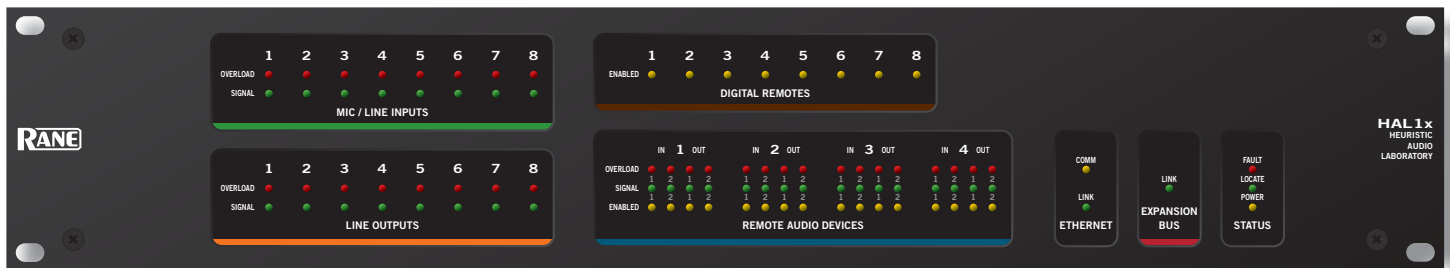
Daisy-chain up to 32 Expanders with the Expansion Bus (in red).
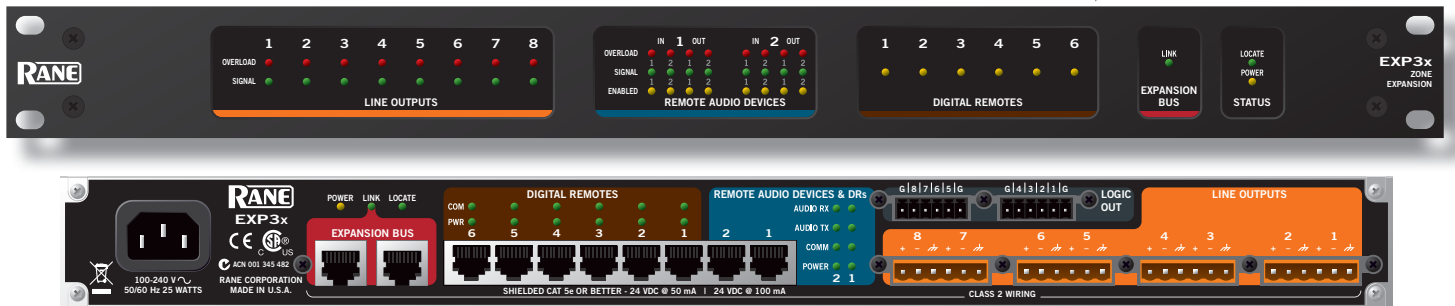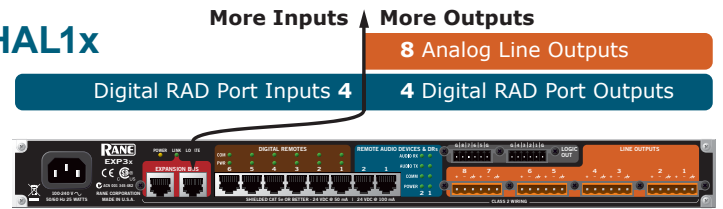
NEW! EXP1x RAD Expander for HAL1x

- Adds 16 in x 16 out digital (8 more RAD ports) to HAL1x.
- Up to 8 Digital Remotes or RADs in any combination.
- Chain up to 32 EXP1x units to a HAL1x for 512 in x 512 out.

More Inputs   **More Outputs**

Digital RAD Port Inputs **16**	**16** Digital RAD Port Outputs
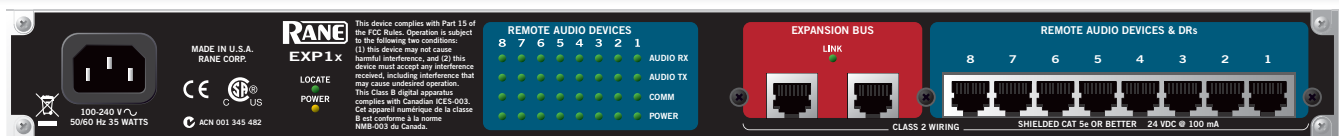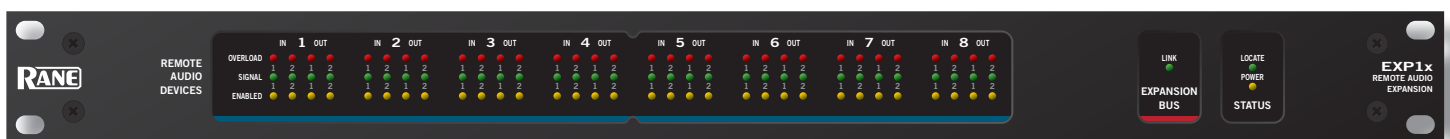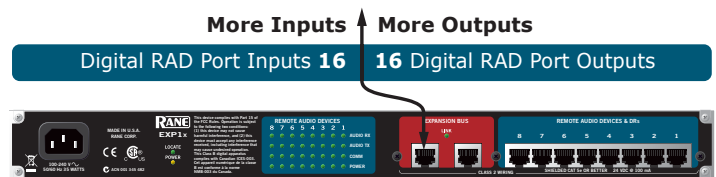
The HAL1x and EXP1x will supercede the original HAL1 and EXP1 models, check the factory or your distributor for stock.
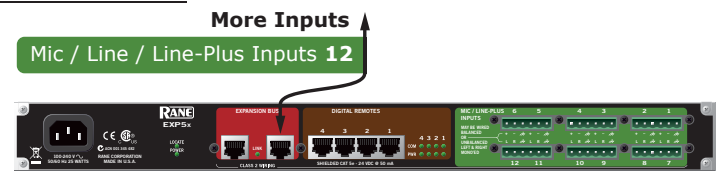Only the HAL1x can be expanded with EXP"x" units.

NEW! **EXP3x** Zone Output Expander for HAL1x

- Adds 8 analog line outputs and 8 logic outputs to a HAL1x.
- Adds 6 Digital Remote ports & 2 RAD ports to a HAL1x.
- Chain up to 32 EXP3x units to a HAL1x for 256 outputs.

More Inputs ↑ **More Outputs** ↑

8 Analog Line Outputs

Digital RAD Port Inputs **4** | **4** Digital RAD Port Outputs

NEW! **EXP5x** Input Expander for HAL1x

- Adds 12 analog mic / line / line-plus* inputs to a HAL1x.
- Adds 4 Digital Remote ports to a HAL1x.
- Chain up to 32 EXP5x units to a HAL1x for 384 analog outputs.

*"Mic / Line-Plus" Inputs accept a microphone, balanced line, or mono left & right unbalanced lines.

More Inputs ↑

Mic / Line / Line-Plus Inputs **12**

NEW! **EXP7x** AEC Expander for HAL1x

- Adds 8 analog line outputs and 8 logic outputs to a HAL1x.
- Adds 6 Digital Remote ports & 2 RAD ports to a HAL1x.
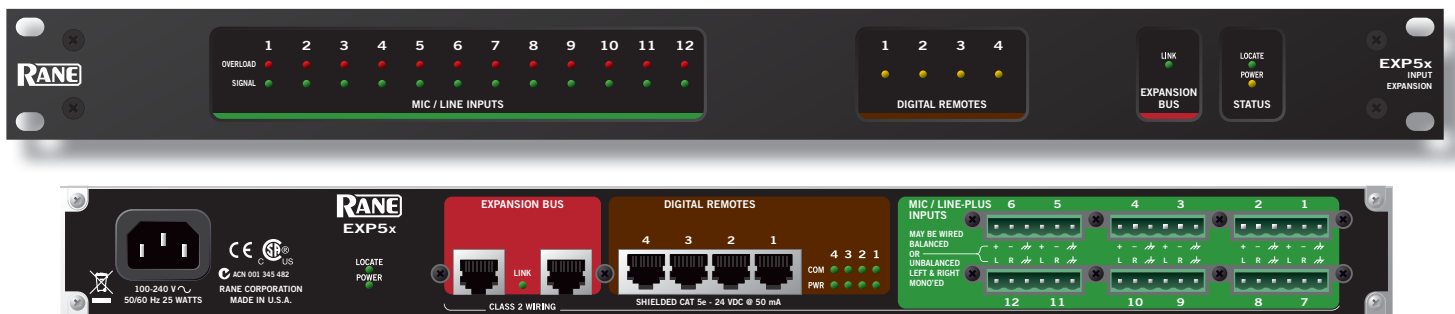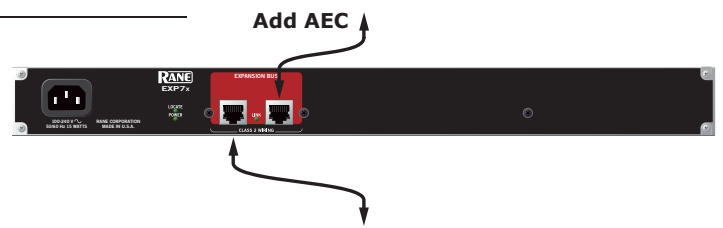- Chain up to 32 EXP3x units to a HAL1x for 256 outputs.

**Add AEC** ↑

The EXP7x Expander will ship October 2013.

This device has not been authorized as required by the rules of the Federal Communications Commission. This device is not, and may not be, offered for sale or lease, or sold or leased, until authorization is obtained.

4

HAL System

HAL2 Multiprocessor

- 18 in x 18 out - 8x8 analog & 8x8 digital (RAD ports) & AES3 I/O.
- Up to 8 Digital Remotes.
- Four logic inputs (closure).
- Two relay outputs.

Inputs	Outputs
Analog Mic / Line Inputs **8**	**8** Analog Line Outputs
Digital RAD Port Inputs **8**	**8** Digital RAD Port Outputs
(AES3) Input Channels **2**	**2** (AES3) Output Channels
Total in the **HAL2** DSP Brain **18**	**18**
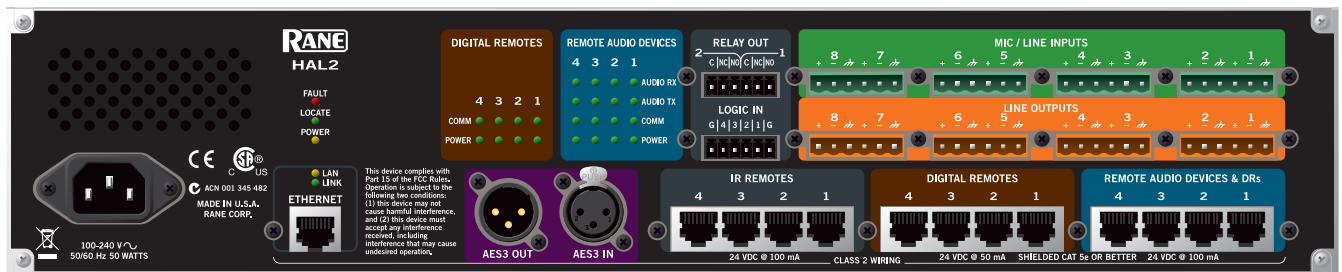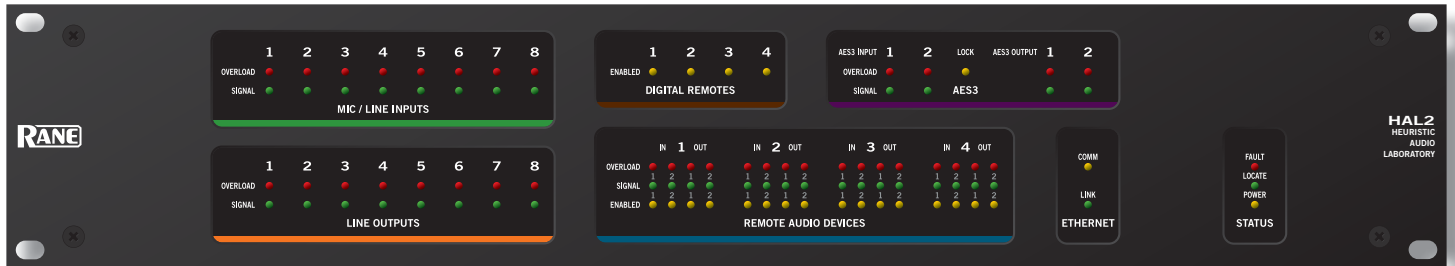
HAL3 Multiprocessor

- 4 line in x 8 line out - 2x6 analog & 2x2 digital (RAD port).
- Up to four Digital Remotes.
- Four logic inputs (closure).
- Inputs are configured in Halogen: "+4 dBu balanced" or "-10 dBV unbalanced Left/Right Monoed."

Inputs	Outputs
Analog Line-Plus Inputs **2**	**6** Analog Line Outputs
Digital RAD Port Inputs **2**	**2** Digital RAD Port Outputs
Total in the **HAL3** DSP Brain **4**	**8**
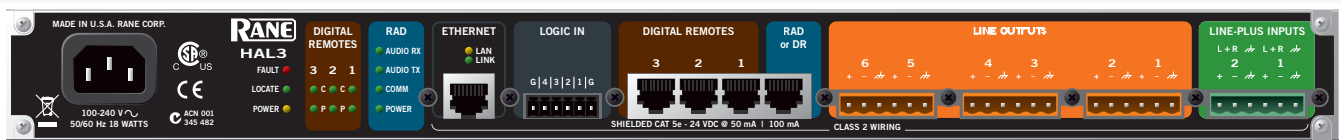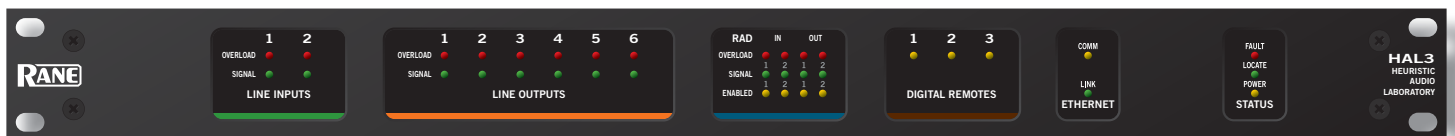
NEW! HAL4 Multiprocessor

- 2 Mic / Line-Plus inputs x 2 line outputs.
- One Digital Remote port.
- Inputs are configured in Halogen: Mic with or without +48V, "+4 dBu balanced" or "-10 dBV unbalanced Left/Right Monoed."

Inputs	Outputs
Analog Mic/Line-Plus Inputs **2**	**2** Analog Line Outputs
Total in the **HAL4** DSP Brain **2**	**2**
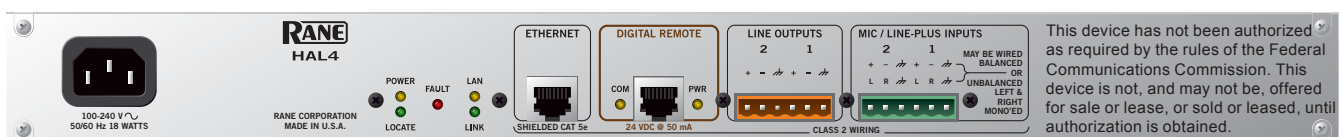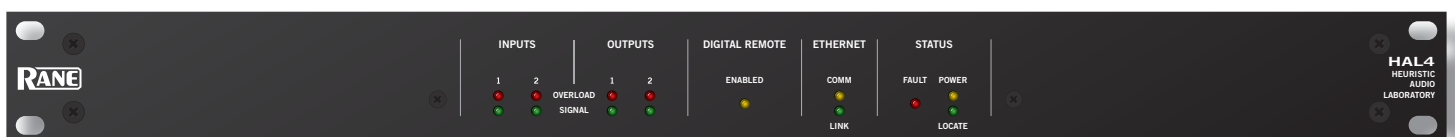
The HAL4 Multiprocessor will ship October 2013.

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HAL Remotes

RANE

Digital Remotes

Three Digital Remotes simplify end user control and eliminate installer brain fatigue. Use Digital Remotes for volume control, preset recall, source selection, or resetting or toggling system states. All offer customizable backlit LCD screens for intuitive end user labeling. Home run shielded CAT 5e (or better) connections to a HAL or EXP eliminate addressing, external power, and the need to test the cables, which can run up to 300 meters (1,000 feet).
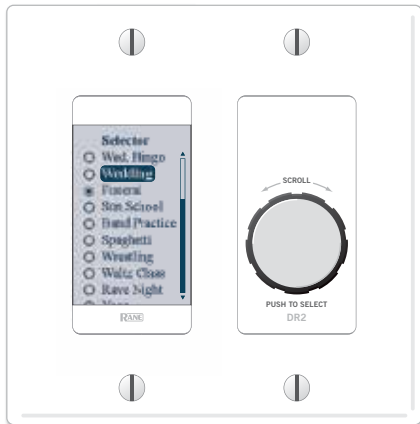
The DR1 supports Level Control.

The DR2 offers Single Selector or List of Toggles/ Commands behavior.

The DR3 has three behaviors: Single Level & List of Toggles/Commands, List of Levels for either multizone volume control or input source mixing, and Single Level plus Selector.

DR1 Digital Volume Remote
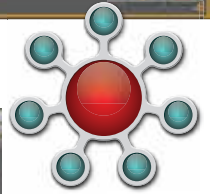
Level Control

DR2 Digital Selection Remote

Single Selector
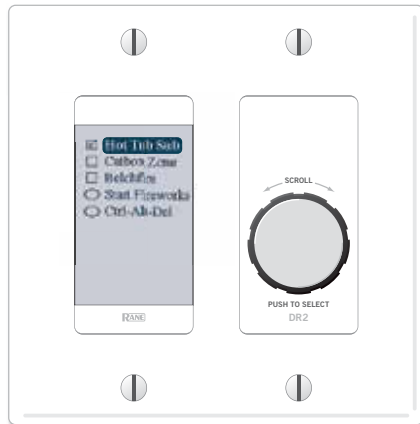
List of Toggles / Commands

Halogen Control Linking

Drag the purple control chain icons atop one another to create links. This screen shows linking a DR1 volume onto the Meeting Room Output Level control. Four Control Link types and behaviors are supported: Level, Select, Toggle or Command. Activation and Priorities work together for incredible flexibility. Link simple analog remote level controls, contact closures by adding a DR4 Logic I/O Remote.

DR3 Digital Volume and Selection Remote
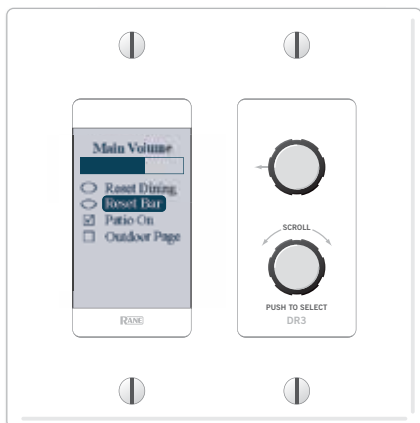
Single Level & List of Toggles / Commands
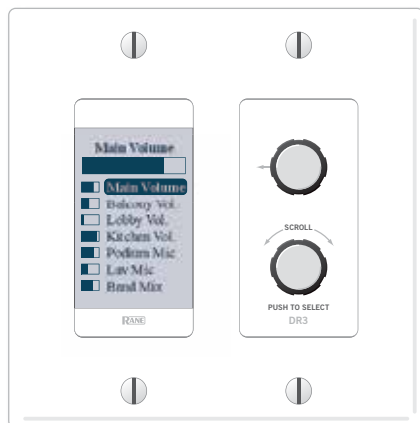
List of Levels
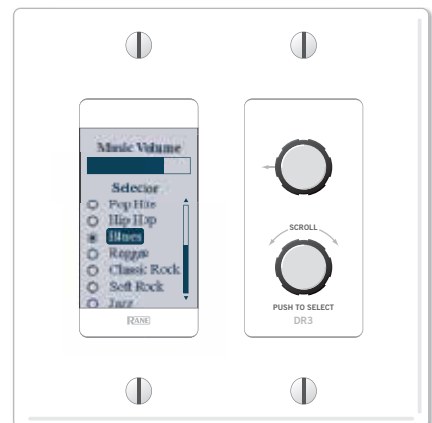
Single Level & Selector

DR4 Logic I/O Remote

The DR4 Digital Remote adds additional logic input and output ports to any HAL, enabling simple analog level and logic I/O controls plus IR2 remotes for wall sensing. The DR4 offers eight logic ins and outs, six IR ports and eight analog input ports for pot-on-a-wall level control. Multiple DR4's can connect to a HAL.

DR5 Switch Controller

The DR5 Digital Remote offers additional logic input and output ports, enabling the use of simple analog switch controls in any HAL system. Lighted switch panels for room combine applications are easily integrated into a system using the eight switch inputs and eight LED outp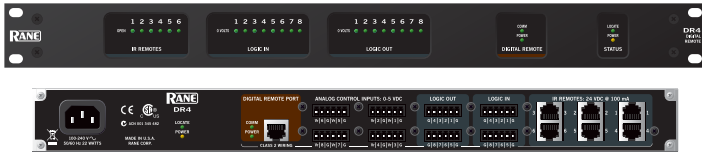uts on the DR5. Unlike the HAL and DR4 Logic I/O, the DR5 Logic Out is intended to drive the LED indicator on a room combine panel, and is a writable parameter. The DR5 is designed to fit in a standard US dual-gang electrical box, or mount directly near a room combine panel.

PAGER1 Paging Station

The PAGER1 is a RAD with a mic preamp, paging zone(s) [Scenario] selector and an integrated push-to-talk switch. It sits on or can fasten to a tabletop, and accepts any gooseneck microphone (not included).
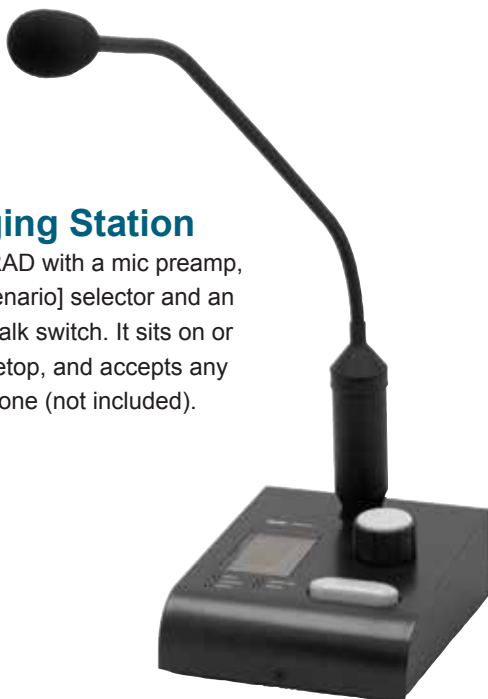
IR2 Infrared Wall Sensors

The Rane IR2 provides an automatic way to sense the position of a movable wall or door. Mounting brackets and screws are included. A single CAT 5e cable for each door connects the IR2 pair to a dedicated IR Remote port on the rear of a HAL2 or a DR4.

Halogen's Room Combine Processor supports custom wall layouts and auto-activation of independent room processors for each possible physical room as walls open and close. Control links to Digital Remotes also combine and separate automatically as wall states change. No presets required.
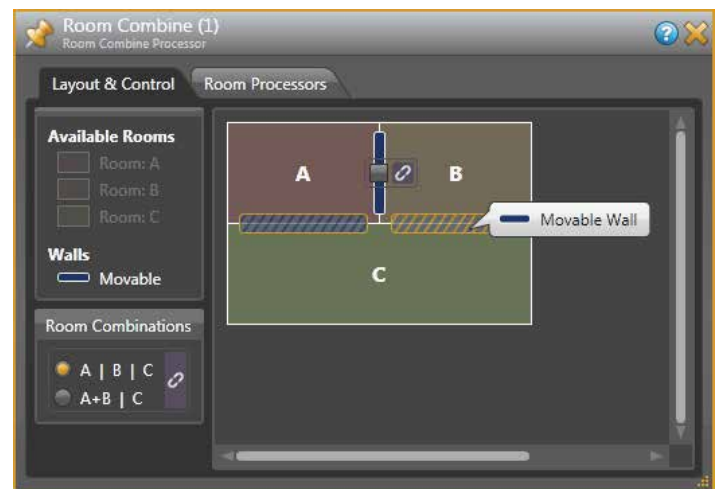
RADs

A family of RAD models perform remote A/D and D/A on CAT 5 cable for HAL and Mongoose systems. Each converts analog audio to and/or from 24-bit, 48 kHz digital audio. Shielded CAT 5e cable (or better) and termination transport four digital audio channels – two channels each direction – as well as power, ground and a communications channel, with status indicators at each RAD, HAL, EXP or Mongoose, and in Halogen or Mongoose Tracker software. Runs may be up to 150 meters (500 feet). Light sensors dim the RAD indicators in dark rooms. Most RADs mount in standard US electrical gang boxes, and are available in white, ivory, or black, including a matching Decora ® plate cover.

RAD NETWORK SHIELDED CAT 5e CABLE CONTENTS

Data communications (COMM)
2 digital audio channels (Rx)
2 digital audio channels (Tx)
Power: 24 VDC & ground
Shield

RADs
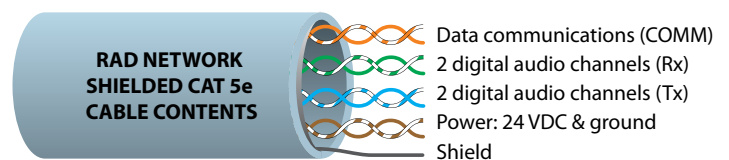
RAD1 Dual XLR Mic Inputs

RAD2 XLR Mic Input / Mini & RCA Mono'ed Line Input

RAD3 Dual XLR Line Inputs

RAD4 Dual XLR Line Outputs

RAD5 AES3 Input / AES3 Output

RAD6 Mini & RCA Stereo Line Input / Stereo Line Output

RAD7 XLR Mic Input / XLR Line Input

RAD8 XLR Mic Input / Mini & RCA Stereo Line Output

RAD9 XLR Mic Input / XLR Line Output

RADX RAD Port Extension (CAT 5 jack)

RAD11 XLR Mic Input / Mini & RCA Mono'ed Line Input / Mini & RCA Stereo Line Output

RAD12 Dual XLR Mic Inputs / Dual XLR Line Outputs

RAD14 XLR Mic Input / Mini & RCA Mono'ed Line Input / Dual XLR Line Outputs

RAD15 Dual XLR Line Inputs / Dual XLR Line Outputs

Suitable for use in air-handling spaces.

C (UL) US LISTED

RAD16 Dual Mic-Line Input / Dual Line Out Euroblocks in plenum rated metal box.

RAD17 Omni Boundary Microphone — use with Halogen Ambient Noise Compensator Block

RAD18 XLR Mic Input / 1/4" Balanced Line Input

RAD23 XLR Line Input / XLR Line Output

RAD24 One-watt Plenum-rated Speaker Amplifier

NEW! **RAD27** USB Audio Sound Card

All white RADs are also available in ivory or black.

AM1 and **AM2** Automixers include RAD ports. Features are on the next page.

Automixers

AM1 Four-Channel GainSharing Automixer

- Automixer with four gain-sharing XLR line/mic/phantom switchable Inputs, RCA and 3.5 mm Aux Line Inputs, USB audio Input.
- XLR mic/line switchable Mix Output, RCA Record Output, USB audio Output.
- Cue mics or any input with Headphones from 1/4" or 3.5 mm jacks.
- Add more gain-sharing mic/line inputs with up to seven Rane AM2 Automixers for a total of 60 gain-sharing mics.
- RAD Port connects to a Rane Mongoose or HAL system.

AM2 Eight-Channel GainSharing Cascadable Automixer

- Automixer with eight gain-sharing XLR line/mic/phantom switchable Inputs; XLR mic/line switchable Mix Output.
- Add more gain-sharing mic/line inputs with up to seven more AM2 Automixers for a total of 64 gain-sharing mics.
- RAD Port connects to a Rane Mongoose or HAL system (that's 64 gain-shared mics on one RAD port).

DVD Player

MP3 Player

Wireless Receiver

Powered Speaker

Simultaneously record to or playback from your computer on USB.

AM1 Automixer

To (optional) Rane Mongoose or HAL System.

AM2 Automixer

Up to seven more AM2 Automixers   All additional mics are gain-sharing

USB cable
Ethernet (shielded CAT 5)
Audio cable

9
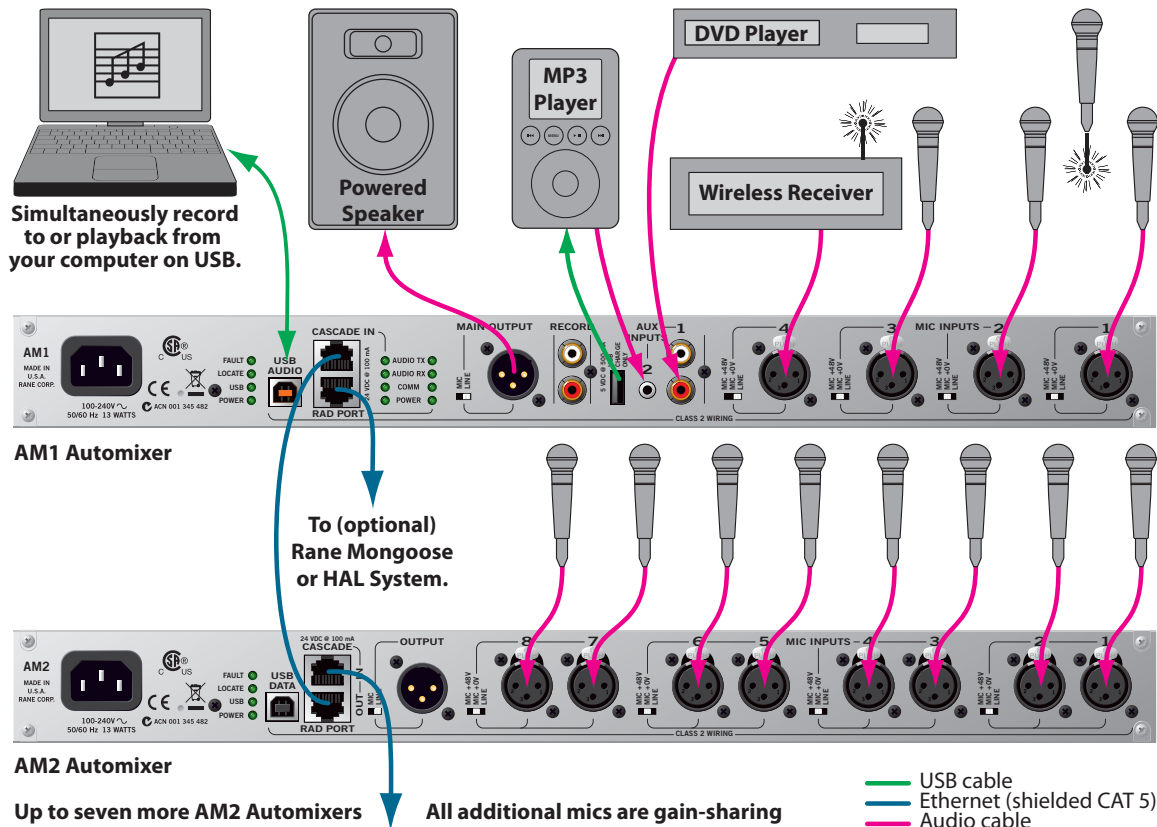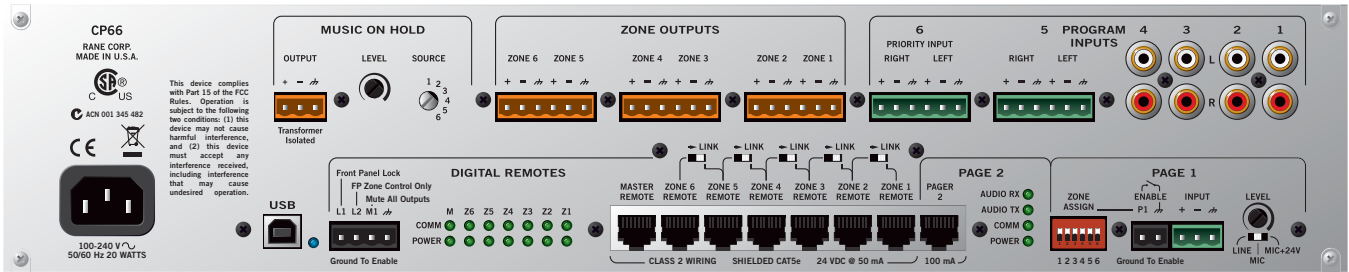
Paging Processors

CP66 Commercial Processor

- Six Program Inputs assignable to Six independent and linkable Zones; One gated Priority Input.
- Paging Inputs with Priority assign; Recommend the optional PAGER2 Smart Paging Station with Mic input.
- Independent 3-Band EQ, Limiter, Ducker depth, Filter Cutoff, Priority Enable and Page Level per Zone.
- Music-on-Hold Output (Transformer isolated); Front Panel lockout switch; Includes PC software for easy naming and setup.
- Optional Remote Controls connect via shielded CAT 5e cable (see below).

PAGER2 Paging Station

Specific to the CP66, this unit lets you decide which combination of the six Zones to Page into. The unit accepts any gooseneck mic (not included) and has selectable 24 V Phantom Power. It normally sits on a desk or table with lockdown capability. It connects to and is powered by the CP66 via shielded CAT 5e cable up to 150 meters (500 feet) in length. Labels for custom Zone and Group names may be inserted into the protective faceplate.


DR1 Remote Level Control

The LCD display shows the name of the Zone or Group that it is connected to, customizable in the CP66 Software to anything you like. The Level value is also shown, and updated dynamically when it is changed elsewhere, such as in a linked group with multiple Remotes connected. The display has a backlight for readability that turns on when used, then dims after a short time period. The DR1 may be installed in a standard electrical box with a minimum depth of 5.7 cm (2.25"). Connection to the CP66 is via shielded CAT 5e cable up to 300 meters (1,000 feet) in length. Available in white, ivory and black, the DR1 includes a matching Decora® plate cover.
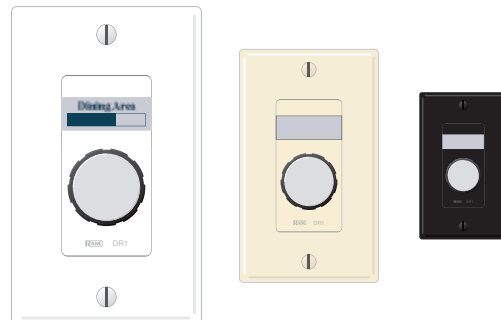
DR3 Selection & Level Control

The DR3 provides Level control with added Input Source selection. This lets you select the audio source for a room from within the room itself, or anywhere else you need remote control. The DR3 can also be used as the Master Remote for the CP66, displaying the Volume Level for all Zones and Groups and allowing you to change each of them dynamically from a single location. The DR3 may be installed in a standard 2-gang electrical box with a minimum depth of 5.7 cm (2.25"). Connection to the CP66 is via shielded CAT 5e cable up to 300 meters (1,000 feet) in length. Available in white, ivory and black, the DR3 includes a matching Decora® plate cover.
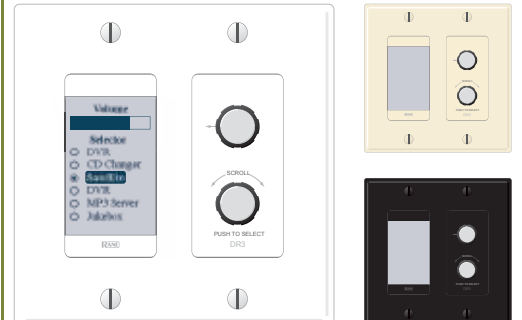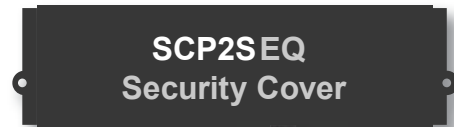
Paging Processors

CP64S Commercial Processor

- 4 Stereo line inputs with priority and adjustable page ducking depth.
- 4-level priority; 2 expand outputs can select page-only, program-only or zone.
- 2 Mic/line page inputs independently assignable to 1 mono & 1 mono/stereo zone.
- Each Zone has independent 7-band EQ; Optional EQ-only security cover (SCP2S).
- Optional Remotes: for page assign (PR 2); for source selection & volume (ZR 1)

SCP2S EQ Security Cover

PR 2 Paging Remote

ZR 1 Zone Remote

CP52S Commercial Processor

- Mic/line page input assignable to 1 stereo (with mono switch) zone with 7-band EQ.
- 4 Stereo line inputs with priority and adjustable page ducking depth.
- 3-level priority; Expand output selectable as page-only, program-only or zone.
- Optional Remote: for source selection & volume (ZR 1); Optional EQ-only security cover (SCP1S).

SCP1S EQ Security Cover
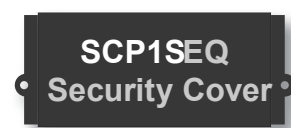
ZR 1 Zone Remote

All Remotes fit in standard US electrical boxes, and may be finished with a Decora™ plate cover (not included).
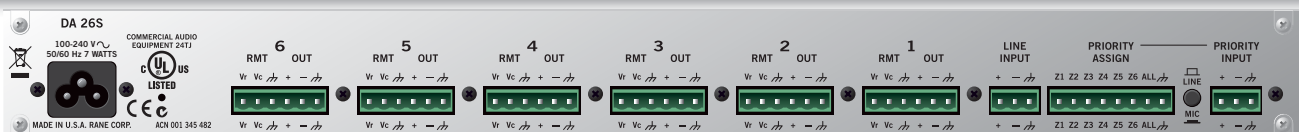
DA 26S Distribution Processor with Paging

- Balanced line input, Priority mic/line paging input with adjustable Gating and Ducking.
- 6 outputs with automatic gain control; 24 dB Crossover assignable to any output.
- Balanced Euroblock connectors for audio and remote connections.
- Optional Remotes: for volume presets (LRS 4) or volume control (VR 1).

LRS 4 Level Recall Switch

VR 1 Volume Remote

11

Distribution Amplifier

DA216S Distribution Amplifier

- 2 balanced mic/line inputs, 16 balanced outputs individually assignable to A, B, or both.
- Broad gain range with mic or line inputs.
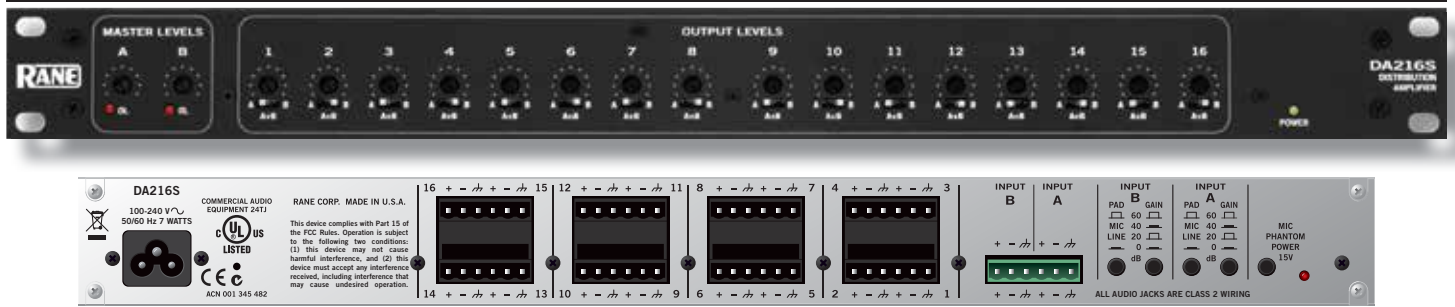- Switchable 15V phantom power works with most common condenser mics.
- Balanced Euroblock connectors; Internal universal power supply (100-240 VAC).

Stereo Line Mixers

SM26S Line Splitter / Mixer

- Combination 6 x 2 line mixer, 2 x 6 line splitter, or 6 x 6 line driver.
- Capable of 4-pair stereo line splitting or mixing.
- Mix, pan and level controls with 12 dB gain for level matching.
- Balanced 1/4" TRS connectors; Internal universal power supply (100-240 VAC).

SM82S Stereo Line Mixer

- 8 stereo (16 mono) line inputs in a single rack space. Can accept up to 10 stereo inputs using Expand In and Effects Return.
- Level, stereo balance (mono pan) and stereo send controls for each input.
- Stereo Expand in and Expand out to additional mixers. Stereo effects loop included with return level and balance controls.
- Unbalanced 1/4" TS inputs, balanced 1/4" TRS outputs.   Internal universal power supply (100-240 VAC).

Mic / Line Mixers



MLM42S Mic / Line Mixer

- 4 inputs with automatic recognition of mic or line level signals
- 3-band Accelerated Slope™ (off to +6 dB) tone controls, gain trims and selectable phantom power on each input.
- Post-mix 1/4" Effects loop with Wet/Dry pan control.
- RCA unbalanced outputs; XLR and TRS balanced outputs are mic or line level selectable; Internal universal power supply.

MLM82S Mic / Line Mixer

- 8 inputs, 2 outputs – 4 balanced mic/line inputs, 4 balanced/unbalanced stereo or mono line inputs.
- Mic inputs have switchable phantom power, mic/line level, and output assignable.
- Outputs individually switchable to mic-level, line-level, stereo or mono.
- Balanced XLR mic/line inputs, 1/4" TRS line stereo/mono inputs, XLR outputs.   Internal universal power supply (100-240 VAC).

Mic Preamplifier
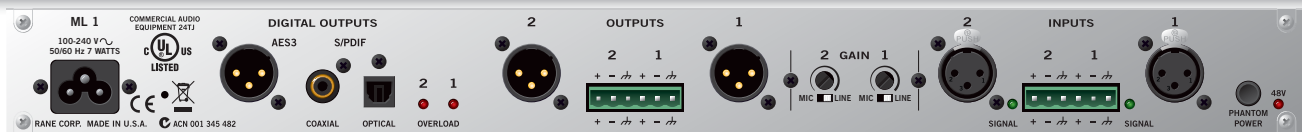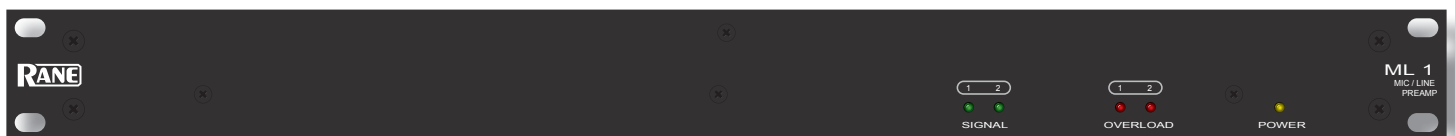
ML 1 Mic / Line Preamp

- Two separate mic / line inputs; Balanced analog outputs on XLR and Euroblocks; AES3, S/PDIF coaxial and optical digital outputs.
- Rear panel gain trims with included security cover; Extremely low noise; Internal universal power supply (100-240 VAC).

The AM1 and AM2 Automixers also mix mic and line inputs in expandable configurations. See them on page 6.
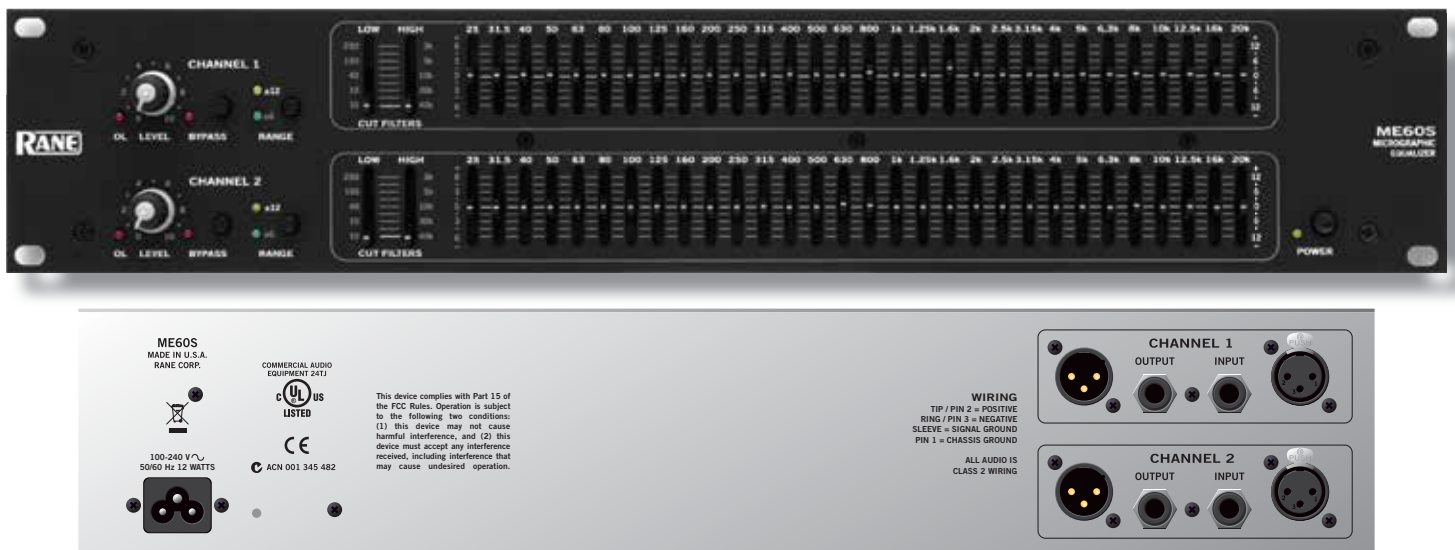
Graphic Equalizers

ME15S Stereo ⅔-Octave microGraphic Equalizer

- Proven constant-Q filters for precise feedback control and reduced interaction.
- ±6 or ±12 dB boost/cut range switchable; 20 mm sliders with grounded center detents and dust dams.
- Input level controls; Overload indicators; Bypass switches.
- Balanced XLR and 1/4" TRS connectors; Internal universal power supply (100-240 VAC).

ME30S Mono ⅓-Octave microGraphic Equalizer

- Proven constant-Q filters for precise feedback control and reduced interaction.
- ±6 or ±12 dB boost/cut range switchable; 20 mm sliders with grounded center detents and dust dams.
- Input level control; Overload indicator; Bypass switch.
- Balanced XLR and 1/4" TRS connectors; Internal universal power supply (100-240 VAC).

ME60S Stereo ⅓-Octave microGraphic Equalizer

- 2 channels x 30 bands of constant-Q filters; Sweepable high-cut and low-cut filters.
- ±6 or ±12 dB boost/cut range switchable; 20 mm sliders with grounded center detents and dust dams.
- Input level controls; Overload indicators; Bypass switches.
- Balanced XLR and 1/4" TRS connectors; Internal universal power supply (100-240 VAC).

Crossovers

AC 22S Active Crossover

- Stereo 2-way or Mono 3-way configurable; Master input level and individual driver output level controls with mute switches.
- 24 dB per octave Linkwitz-Riley filters with adjustable driver alignment delays guarantee in-phase outputs.
- Balanced XLR connectors; Internal universal power supply (100-240 VAC).

AC 23S Active Crossover

- Stereo 2-way or 3-way or mono 4-way or 5-way configurable; Master input level; Driver output level controls with mute switches.
- 24 dB per octave Linkwitz-Riley filters with adjustable driver alignment delays guarantee in-phase outputs.
- Balanced XLR connectors; Internal universal power supply (100-240 VAC).

Delay
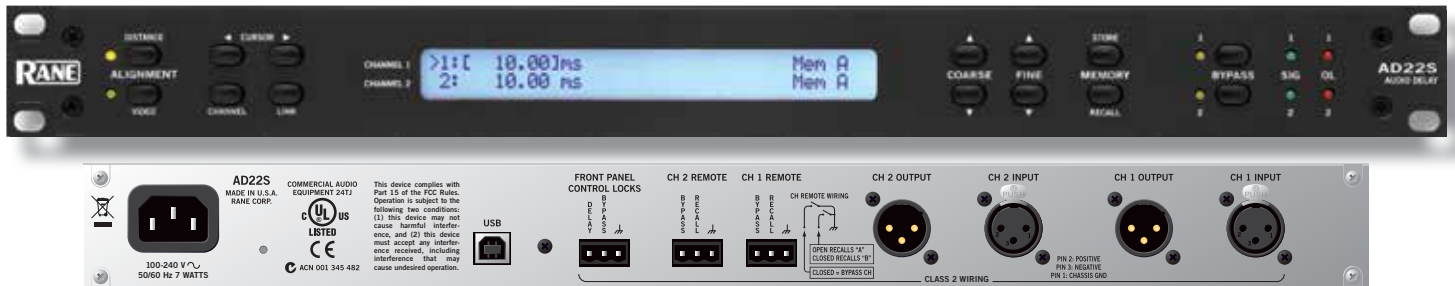
AD22S Dual Channel Audio Delay for Distance or Video

- Distance Mode: 2 to 999.99 ms delay range, converts between milliseconds / feet / meters with temperature compensation.
- Video Mode: up to 1 second delay in .5 frame increments in frames or milliseconds in all NTSC and PAL / SECAM frame rates.
- 2 memories; Remote contact closure memory recall with switchable front panel lockout; Fail-safe bypass for each channel.
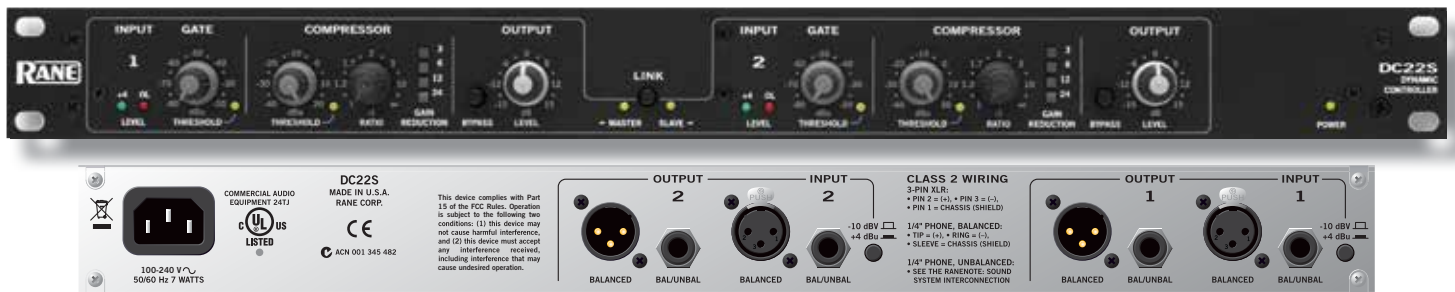
Headphone Amplifier

HC6S Six Channel Headphone Console

- Six stereo amplifiers with both master and individual level controls.
- Each stage can be driven from the master stereo input or individual channel inputs: All inputs are b alanced 1/4" TRS.
- Stereo 1/4" headphone outputs on both front and rear panels: Internal universal power supply (100-240 VAC).

Dynamic Control

DC22S Stereo Gate / Compressor

- Two independent gates and compressors with output level controls; Gate acts as a downward expander, so quiet parts get quieter.
- True master/slave operation in Link mode for stereo program compression without image shifts.
- Balanced 1/4˝ TRS & XLR connectors; Internal universal power supply (100-240 VAC).

Isolation & Balancing Transformers

BB 44X Balance Buddy

- 2 channels: +4 dBu balanced to -10 dBV unbalanced (XLR to RCA).
- 2 channels: -10 dBV unbalanced to +4 dBu balanced (RCA to XLR).
- No front panel controls; Nickel-core transformers; Expandable to 8 channels with Option 88 Accessory (above).

BB 22 Balance Buddy

- 2 channels: -10 dBV (RCA) to +4 dBu (XLR) conversion.
- Nickel core transformers
- No power supply required.
- Wide bandwidth; Low distortion.

LT 22 Line Transformers

- 2 channels 1:1; Balanced Euroblock connectors.
- Nickel core transformers
- No power supply required.
- Wide bandwidth; Low distortion.

Club DJ Mixers

MP 2016S Rotary Mixer

- 6 stereo input buses with 4 phono preamps, 2 mic/line preamps and 5 aux line inputs.
- Each bus includes initial input gain controls and individual cue switches. The headphone amplifier features split master/cueing.
- The Booth output is switchable master or cue. The Mic Engage switches can duck the Booth outputs 12 dB (internally defeatable).
- The Master (House) output features Accelerated Slope ™ 3-band full-cut tone controls with a range of +6 dB to off.
- Switchable stereo effects loop; Pre- & post-effects tape outs; RCA ins, XLR mic/line ins, 1/4" effects loop, XLR and RCA outs.

optional XP 2016S Processor

- Adds Active Crossfader™ with full-range Contour control; Individual Crossfader assign switches.
- Adds Accelerated Slope™ 3-band tone controls to each input bus.
- Master/cue meters follow the headphone split cue selection.
- Single ribbon cable connects XP 2016S to MP 2016S (included).
- Internal universal power supplies work anywhere in the world (100-240 VAC).
- Size (each unit): 5.25" [3U] H x 19"W x 5.3"D (13.3 cm x 48.3 cm x 13.5 cm).

17
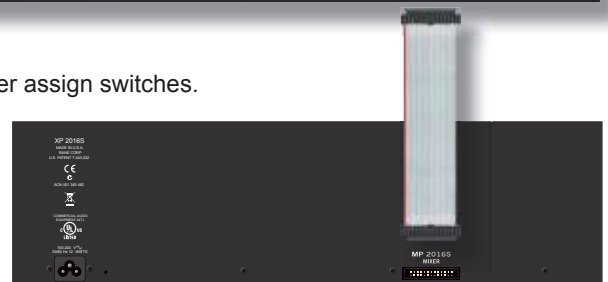
TTM 56S Performance Mixer

Rane takes performance mixer design as seriously as performing DJs take their art form. The TTM 56S is flexible, durable, and feature packed. The audio quality qualifies it for use in the most demanding live venue, recording studio or live broadcast applications.

• Mic input with EQ and mic effects loop.
• Faders and Crossfader have Contour and Reverse controls.
• Stereo Aux Input for session mix, iPod ® or keyboard.
• Stereo Aux Output for session mix, booth or recording.
• Post-fader FlexFX™ allows external reverb and echo decay effects to respond to fader action without cutting off reverb tails.
• High, Mid & Low Accelerated Slope™ tone controls react from +6 dB to off — full bass and treble cut.

Four CD Players, Four Turntables or Two of Each.
Any Stereo Effects Device
Stereo Amplifier or Powered Speakers
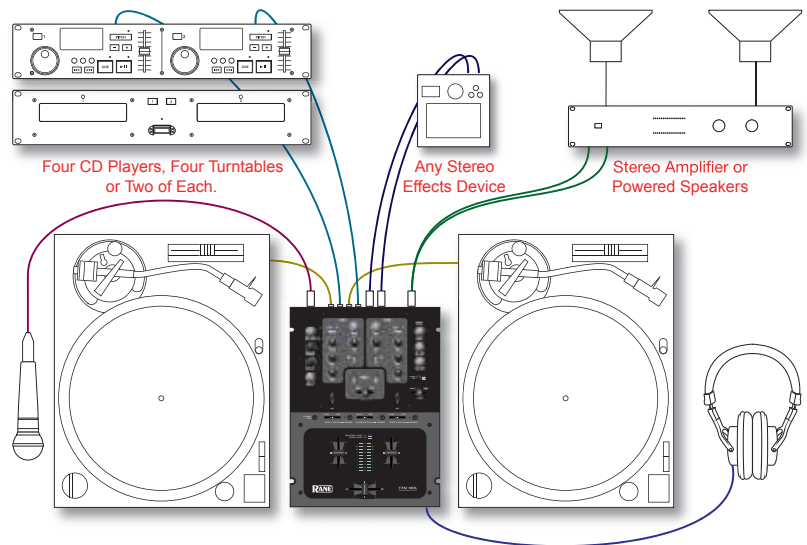
NON-CONTACT CROSSFADER AND CHANNEL FADERS

Rane's proprietary magnetic fader is the fastest, most accurate, and longest lasting on the planet. The design uses non-contact magnetic position sensor technology previously reserved for aerospace and industrial applications. Unlike optical non-contact faders, the magnetic fader is impervious to smoke, moisture, temperature and age. The electrical performance is unaffected by use. No noise, no bleed — ever!

3-BAND ACCELERATED-SLOPE™ FULL-CUT TONE CONTROLS

High, Mid & Low tone controls react from +6 dB to off: full bass and treble cut on each channel. Engage switches allow A/B comparison and the ability to quickly cut or add tone effects.

TTM 56 TO TTM 56S IMPROVEMENTS

The world's most popular battle mixer is even better:
• Internal power supply works anywhere (100-240 VAC).
• All four inputs are Phono/Line switchable, letting you connect any combination of 4 turntables or CD players.
• Both 1/4" and 3.5 mm headphone jacks are on the front.
• Operation is simplified with all the controls on top.
• Unit size: 13.3"H x 10"W x 3"D (33.8 cm x 25.4 cm x 7.7 cm)

Sixty-One Performance Mixer for Serato Scratch Live

- The USB 2.0 port supports 6 stereo record and 4 stereo playback channels.
- Great-sounding 32-bit floating-point audio processing sampled at 48 kHz.
- PGM controls include:
  - Gain trim, 3-band full-cut EQ, Left/Right Pan, High/Low-pass sweep Filter.
  - FlexFx assign, Headphone Cue assign, Q-peak meter.
- Mic/line input on XLR/TRS jack with trim, two-band EQ, and FlexFx assign.
- External analog insert for analog effects processor.
- USB Insert for software effects such as DJ-FX in Serato Scratch Live.
- USB Aux Input for SP-6 sample playback with Headphone Cue and FlexFx.
- Magnetic crossfader and channel faders with reverse and contour controls.
- All controls are MIDI-mappable.
- Unit Size: 13.3″ x 10″ x 4″ (33.8 cm x 25.4 cm x 10.2 cm).

Includes Serato Scratch Live with 2 Serato Control Vinyl and 2 Serato Control CDs.

Includes ASIO and Core Audio drivers to use with other software and effects.

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Sixty-Two Performance Mixer for Serato Scratch Live

The Sixty-Two Mixer is Rane's very best performance mixer. It includes all the great features of the Sixty-One, plus these additional features:

- Control Library, Cues, Loops and Samples on two computers.
  - Direct control of more than 40 software parameters.
- Each of the 2 USB ports support 6 stereo record and 4 stereo playback channels. Two laptops may be connected at once for easy DJ handover.
- Internal Effects Engine with Filter, Flanger, Phaser, Echo, Robot and Reverb:
  - MIDI beat clock send and receive allows effects to sync.
  - BPM sync effects with Serato Scratch Live.
  - TAP engine with time encoder and beat multiplier control.
- USB Aux Input for SP-6 sample playback includes a High/Low-pass Filter.
- Unit Size: 14.25″ x 10.5″ x 4″ (36.2 cm x 26.7 cm x 10.2 cm)

Includes Serato Scratch Live with 2 Serato Control Vinyl and 2 Serato Control CDs.

Includes ASIO and Core Audio drivers to use with other software and effects.

serato

SCRATCH LIVE

RANE

Selected by the Red Bull Music Academy

Z-Trip Edition Sixty-Two Z Mixer for Serato Scratch Live

Functionally identical to Rane's Sixty-Two with added bonuses:
- **Face plate design by Shepard Fairey.**
- **Purple and yellow accents.**
- **Includes high-end purple RCA and USB cables.**

Sixty-Eight Mixer for Serato Scratch Live

Two computers, two USB ports, four decks and a range of effects make the Sixty-Eight the ultimate house / mobile / studio mixer.

Includes Serato Scratch Live with 4 Serato Control Vinyl and 4 Serato Control CDs.

Includes ASIO and Core Audio drivers to use with other software and effects.

Using two USB ports, the Sixty-Eight lets two DJs use their laptops at the same time, allowing seamless handover between DJs. You can also control up to four decks with a single laptop.

Armed with studio-grade phono preamps, USB and S/PDIF inputs, the Sixty-Eight allows a blend of analog and digital audio sources like never before. It features easy internal digital effects with on-beat effect switching, external analog inserts for hardware effects, and USB insert support for software effects.

- Input Channels:
  - Four stereo inputs, each switch to Phono, Line or S/PDIF.
  - Four stereo Auxiliary Line inputs.
  - Four stereo USB playback options.
- Two independent USB 2.0 high speed ports:
  - Each supports twenty-two 32-bit audio channels at 48 kHz.
- Direct control of over 30 Library, Cue and Loop functions.
- Support for two, three or four Virtual Decks in Serato Scratch Live.
- Flexible USB recording from any input or output.
- 3-band, full-cut EQ with a sweepable High / Low pass Filter.
- Unique FlexFX bus with six internal effects, plus analog effects insert and USB support for software-based effects.
- Two independent mic inputs:
  - One has +48 volt phantom power
  - One has a line-level input switch for wireless.
- Unit size: 14.3″H x 12″W x 4″D (36.4 x 30.5 x 10.2 cm)

RANE SL2

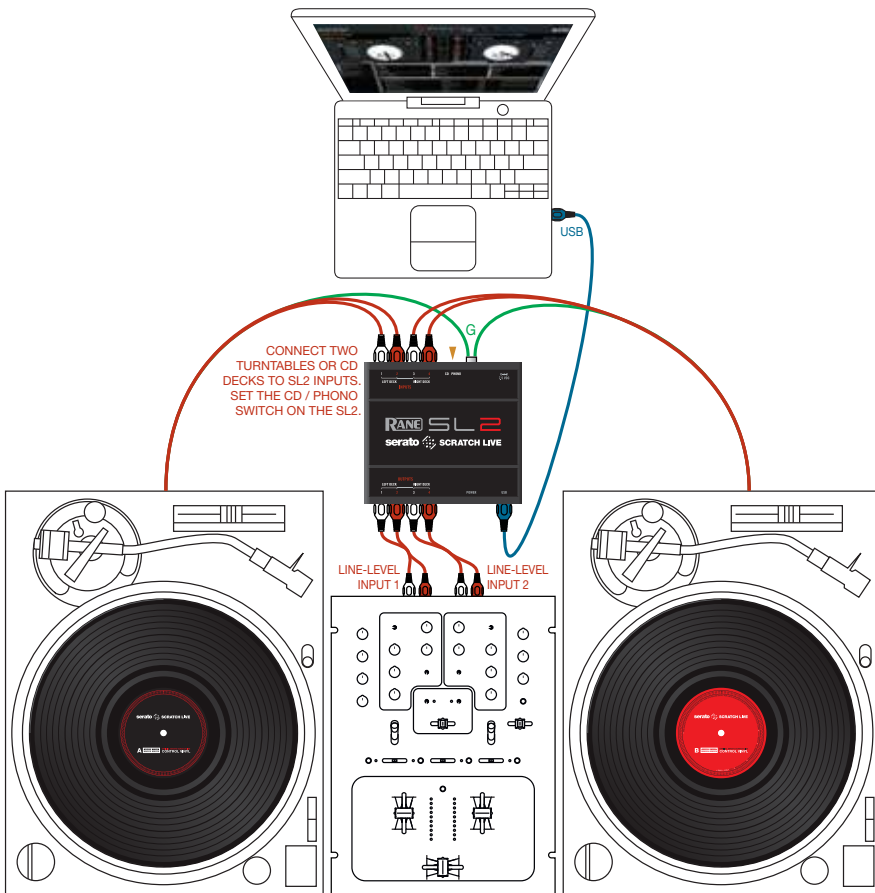## The new standard for professional DJs

The Rane SL series of interfaces with Serato Scratch Live set the standard for vinyl emulation. You have the freedom to take your entire digital music collection in your laptop on the road. Rane and Serato give you advanced features that add extra creativity to your DJing. This intuitive system replicates the traditional DJing experience for "real feel" usability. Low latency means the response time from touching the decks to hearing an audio signal is extremely fast. Serato engineers developed system level audio drivers that allow accurate and reliable operation at faster speeds than any other similar package.

The Rane SL2 interface connects one or two standard vinyl turntables or CD decks to your computer using a single USB cable and audio connections to line inputs on any DJ mixer. This system includes Serato Scratch Live software with two 12″ Serato Control Vinyl records, two Serato Control CDs, USB cable, and RCA audio cables to your mixer. Galvanic isolation guarantees audio is actively isolated from USB and power. Several MIDI controllers are supported in Scratch Live, with a current list at serato.com.

The SL2 advances the technology from the original SL1 with these improvements:
- CD / Phono input switch on the box.
- Superior sounding 24-bit converters.
- Hotter 3 Vrms input and output.
- 44.1 or 48 kHz selectable sample rate.
- Smaller and more compact cast design.
- ASIO / Core Audio drivers for 3rd-party software.
- Kensington Security Slots.

The SL2 interface box is 5.5″ x 5″ x 1.3″ (14.1 x 12.5 x 3.3 cm). See the "Serato Scratch Live Minimum System Requirements" on page 27.

Includes Serato Scratch Live with 2 Serato Control Vinyl and 2 Serato Control CDs.

USB

CONNECT TWO TURNTABLES OR CD DECKS TO SL2 INPUTS. SET THE CD / PHONO SWITCH ON THE SL2.

LINE-LEVEL INPUT 1

LINE-LEVEL INPUT 2

3-deck interface for professional DJs

The SL3 connects one, two or three standard vinyl or CD turntables to your computer and the mixer of your choice. This intuitive system replicates the traditional DJing experience for "real feel" usability. With unparalleled performance and stability, you'll soon see why thousands of DJs worldwide choose Rane with Serato Scratch Live.

The auxiliary input provides a live input feed for creative sampling, recording your set or using a third vinyl turntable or CD deck. The auxiliary output delivers a third deck or the SP-6 sample player output to a dedicated input on your mixer. Studio-grade phono preamps and 24-bit audio processing deliver exceptional sound.

The SL3 includes two 12″ Control Vinyl records and two Control CDs, USB cable, and RCA audio cables to your mixer. An international power supply with country adaptors is included to insure optimum performance and easy transfer when unplugging USB between DJs. A soft zippered carrying case for the SL3 is also included.

SL3 feature enhancement summary:
- Supports up to three turntables or CD decks switchable in any combination.
- Aux Input for Live Mix Recording, LiveFeed or a third deck.
- Aux Output can be assigned to the Scratch Live SP-6 Sample Player or a third deck.
- 6-in 6-out sound card with any software supporting ASIO or Core Audio.
- Software and driver-switchable Direct Thru connections for regular vinyl or CD.
- External power supply included to provide Direct Thrus without a computer.

The SL3 interface box is 6.8″ x 5″ x 1.3″ (17.3 x 12.6 x 3.3 cm). See the "Serato Scratch Live Minimum System Requirements" on page 27.
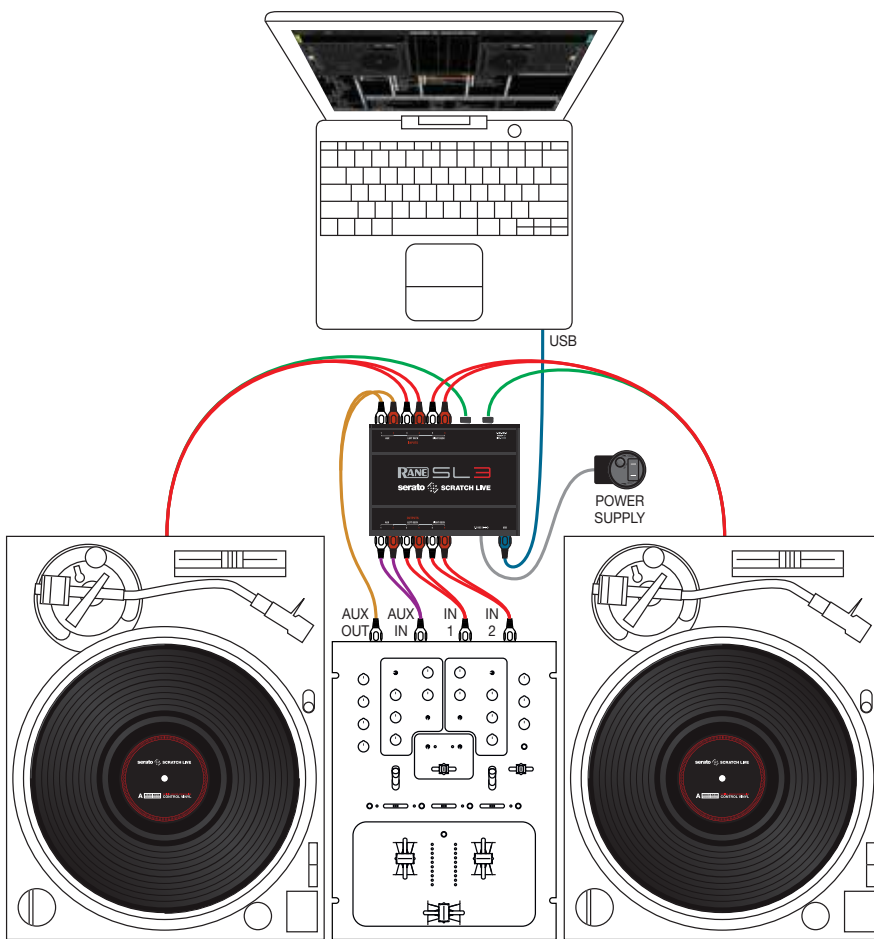
Includes Serato Scratch Live with 2 Serato Control Vinyl and 2 Serato Control CDs.

RANE SL4

4 decks and 2 computers with your favorite mixer

The SL4 connects four vinyl turntables or CD players to your computer and the mixer of your choice.

The SL4 is the first standalone DJ interface with two USB ports for seamless DJ changeover and back-to-back performances. Get superior sound with high quality 96 kHz, 24-bit audio. Built-in galvanic isolation between USB and audio, with turn on/off muting, ensures that only the purest interference-free audio signal is heard. Low-latency ASIO and Core Audio drivers allow using the SL4 as a studio production tool with multiple third-party software applications.

The SL4 includes four 12″ Control Vinyl records and four Control CDs, two USB cables, and RCA audio cables to your mixer. An international power supply with country adaptors is included to insure continuous performance between DJs. A soft zippered carrying case for the SL4 is included.
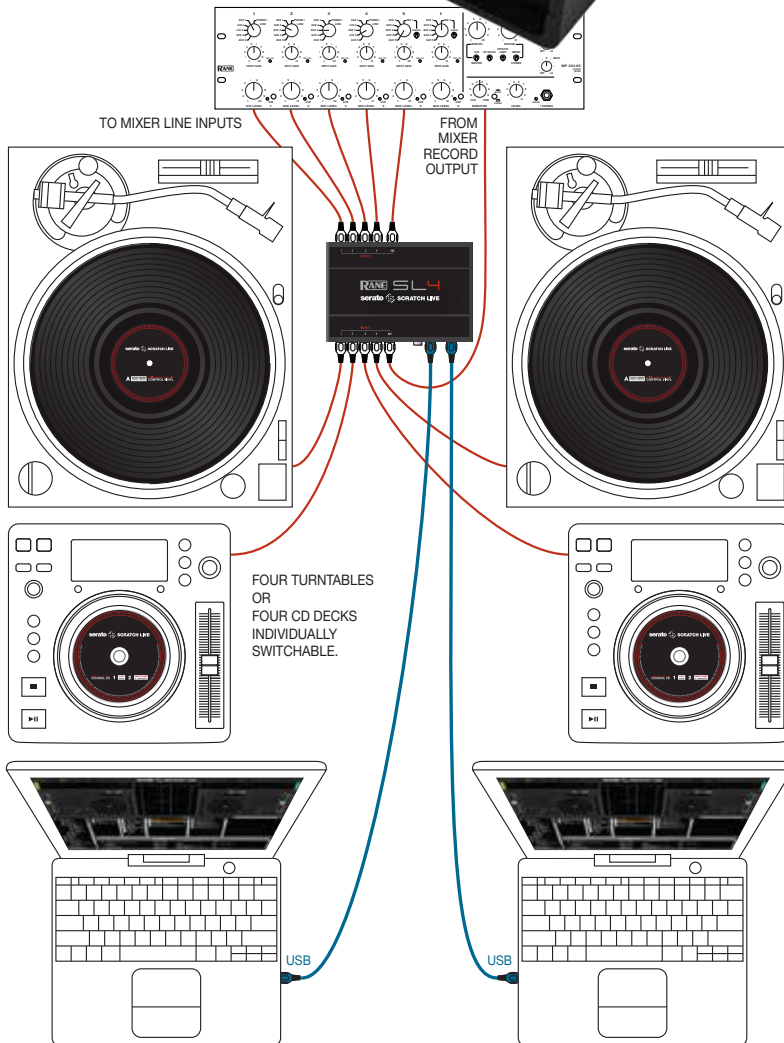
SL4 feature enhancement summary:
• Supports up to four turntables or CD decks switchable in any combination.
• Two high-speed USB ports for two DJs for uninterrupted performances.
• Fifth Aux Input for session recording or LiveFeed in Scratch Live.
• Fifth Aux Output assignable to the Scratch Live SP-6 Sample Player.
• 48 kHz and 96 kHz sample rate switch on the SL4 rear.
• 10-in 10-out USB sound card with any software supporting ASIO or Core Audio.
• Bus power from either USB port or the included external power supply.

The SL4 interface box is 7.25″ x 5″ x 1.7″ (18.4 x 12.6 x 4.3 cm). See the "Serato Scratch Live Minimum System Requirements" on page 27.

Includes Serato Scratch Live with 4 Serato Control Vinyl and 4 Serato Control CDs.

TO MIXER LINE INPUTS

FROM MIXER RECORD OUTPUT

FOUR TURNTABLES OR FOUR CD DECKS INDIVIDUALLY SWITCHABLE.

USB   USB

Serato Scratch Live combined with Rane hardware is the ultimate solution for professional DJs, giving you the freedom to take your entire digital music collection on the road and equipping you with advanced features that add extra creativity to your DJing.

This intuitive system replicates the traditional DJing experience for "real feel" usability. With unparalleled performance, sound quality and stability, you'll soon see why thousands of DJs worldwide choose Serato Scratch Live.

- Load music files onto Virtual Decks for playback.
- Browse your music collection by custom categories and album art.
- Prepare audio files for playback with auto-gain and BPM calculation.
- Organise music with crates, subcrates and smart crates.
- Choose from multiple play and display modes to suit your performance style.
- Use visual aids, cues and loops to perfect your mixing.
- Add extra creativity to your sets with DJ-FX, the SP-6 Sample Player and other Scratch Live plug-ins.

VIRTUAL DECKS

Music files are loaded onto the Virtual Decks, which rotate as the music plays, much like regular turntables or CDJ decks.

The Virtual Deck shows everything about the speed and position of a track. As the vinyl rotates, so does the line on the label. The circular progress bar around the edge is a visual representation of the position within the song. The Virtual Decks display pitched BPM information, with current time and remaining time displayed in minutes and seconds.

Classic Vertical Mode

Stack Mode with the SL4 or Sixty-Eight

SUPPORTED FILE FORMATS

Scratch Live supports multiple file formats: fixed and variable bit-rate MP3, MP4, Ogg Vorbis, AAC, ALAC, FLAC, AIFF, WAV and Whitelabel (WL.MP3) file types*. M3U playlists are also supported.

*Visit whitelabel.net for WL.MP3 file info.

NOTE: Older iTunes Music Store DRM files cannot be played back by Scratch Live. iTunes Plus files are DRM-free.

IMPORTING MUSIC

Importing music is done simply by navigating to your hard drive(s) via Scratch Live's File pane. You can also drag and drop files directly from Explorer (Windows) or Finder (Mac). iTunes users have the option to integrate existing iTunes libraries and playlists into their Scratch live library.

Importing audio files to your computer is highly recommended, however you can play files directly from CD and CD-ROM.

FILE PREPARATION

Build waveform overviews, check for file corruption and use Scratch Live's optional auto-gain and BPM calculation with the Analyze Files button.

Use the Offline Player to prepare crates, audition tracks, and set cue and loop points, without needing to have the Rane hardware connected.

KEYLOCK

When Key Lock is on, the key or pitch of the song stays locked at what it would be if the track was playing at normal speed, regardless of the platter speed of the turntable or CD player.

CRATES AND SMART CRATES

Create Crates and Subcrates to group tracks within for quick recall and simple organisation. You can also merge these crates onto an external drive for simple migration to another laptop.

Smart Crates allow you to set rules and keywords for crates, which automatically update when relevant tracks are added or removed from your library.

HISTORY

The history button opens a complete log of all the tracks you have played and allows you to export Scratch Live session information as a data file for future reference.

Serato Playlists export track play information to your user profile on **serato.com**. This can be done using the History export function post-set, or you can choose to live update during your set.

PLAY MODES

Scratch Live has three different play modes which you assign to each Virtual Deck.

Absolute Mode most closely resembles the properties of regular vinyl; needle dropping, scratching, rubbing and other turntablist techniques are most faithfully reproduced in this mode. Absolute Mode is the recommended mode when using standard hardware functions on CDJs.

Relative Mode allows for skip free scratching and the use of Scratch Live's cueing, looping and censor controls.

Internal Mode lets you play and mix files without external vinyl or CD control. Internal mode contains a start/stop function, a pitch slider and pitch nudge controls. It is also the emergency mode Scratch Live defaults to when the end of a control record or CD is reached.

VISUAL AIDS

When a track is playing several waveforms and visual aids are displayed.

Tempo Display provides a helpful tool for beat matching - each peak represents the beats within a track. As you change the pitch of a song, these peaks shift position. When track tempos are in-time, these peaks will be aligned.

Beat Matching Display emphasizes the position of beats within a track alongside the waveform display, for quick beat matching.

Track Overview Display shows an overview of the track waveform, which is useful for finding transitions in a track and for jumping quickly to any part of the song.

Colored Waveforms are by frequency for visual identification of instruments and vocals.

CUES AND LOOPS

Create up to five Cue Points with labels for each track to mark and trigger key parts of your songs.

Create and save up to nine Loops per track, either manually or using the Auto-Loop function.

SCRATCH LIVE PLUG-INS

Optional plug-ins can be switched on and off, allowing you to choose which extra features you would like to use when DJing.

SP-6 Sample Player allows triggering up to six additional audio sources (e.g. sound effects, drops). Store samples in multiple sample bank slots, and choose output options for each slot.

DJ-FX give you control of two FX units, each with three chained effects slots per unit. Customize and save preferred effect parameter settings for quick recall.

serato VIDEO

Serato Video is an optional software plug-in for Scratch Live which adds the ability to play and mix video files. Manage a variety of video clips from within the Scratch Live library and load them onto a virtual deck for control with either vinyl or CD. Mix clips with a variety of transitions, as well as apply exciting effects to each clip. The mixed output is sent to your laptop's second display output, connecting to external monitors or projectors. Serato Video is supported and available only from serato.com.

serato THE BRIDGE

The Bridge allows you to combine elements of Ableton Live with Serato Scratch Live to create unique performances. The Bridge is free-of-charge for users of Ableton Live/Suite 8.2 or above. Visit serato.com/thebridge.

serato WHITELABEL.NET

Scratch Live users get free access to the Serato Whitelabel Delivery Network, allowing you to receive fresh releases at no charge and play them to crowds within moments of downloading, bringing back the meaning "for promotional use only". Visit serato.com/whitelabel.

SERATO SCRATCH LIVE MINIMUM SYSTEM REQUIREMENTS

• Available 2.0 USB port.
• 1280 x 720 screen resolution.
• 5400 RPM hard drive. 7200 RPM for high-resolution audio playback.
• 2 GB RAM (more RAM for a big library).

MAC

• Intel 1.83 GHz Core Duo or better.
• OSX 10.5.8 or higher.

WINDOWS

• Intel processor, 2.2 GHz Core Duo or better.
• Windows XP with Service Pack 3.
• Windows Vista with Service Pack 2.
• Windows 7, recommended over Vista.

NOTE: These are the **minimum** requirements to run Scratch Live. For best performance and for use in professional situations we recommend you buy a higher spec computer. We also recommend Intel processors.

NOTE: Before buying a new computer, read the FAQs at serato.com.

NOTE: If you are using Scratch Live's more system-intensive features like the DJ-FX plug-in, you may need a higher spec computer or an optimized system. Read the Computer Optimization Guide at serato.com.

Contents

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Web: rane.com

Rane 2+ Year Limited Warranty

Rane's standard warranty covers parts and labor for 2 years from the date of purchase. Completion of the Rane Warranty Form (mail or online) entitles the owner to a 1 year extended warranty (for a total of 3 years [valid in U.S.A. only]).

Trademarks