



RANE

Audio Products
for Professionals



2016 EU Contractor Product Catalog

HAL System	2-13	Graphic Equalizers	18
Automixers	14	Compressor & Gate	19
Paging Processors	15-16	Audio Delay	19
Distribution Amplifier	16	Headphone Amplifier	19
Mic & Line Mixers	17		

HAL System

Introduction

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 solution in any industry. 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 is required to distribute pages and background music to multiple, even hundreds of zones.

Seamlessly interface HAL to your application with web controls and/or a broad variety of peripheral devices including smart Digital Remotes, a 7-inch programmable touchscreen, Remote Audio Devices (RADs), portable or rack automixers, audio I/O, Dante, and logic expansion devices, wall sensors, ambient sensing mics, and an advanced Paging Station. Control HAL functions from a web browser in any smartphone, computer or tablet – including iPads, iPhones, Androids, Samsung, etc.

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. Does your DSP troubleshoot the cable install for you and offer a “Get on the Plane” indicator that shows you that the installers have truly finished their job? It should.

Halogen software includes Ethernet control support for third-party control systems such as AMX®, Crestron® and Stardraw Control™, including well-documented examples. Standard TCP/IP set and get ASCII text messages control levels, selectors, presets and toggle software actions. 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 for complete system design and validation. Buy the hardware only when the install date arrives and completely skip needing it early solely for control system programming verification.

Analog audio has always offered “plug it in, it works!” functionality. With HAL’s modern DSP system, finally digital audio offers “plug it in, it works”. Without IP anything, without DHCP servers, without unblocking ports, without firmware mismatches, without hours (or days?) of bad cable termination or swapped cable-pull troubleshooting, and other troubles caused by Ethernet and other supposedly modern digital audio and control transports.

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

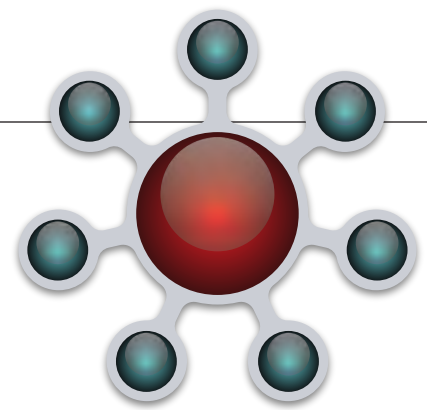
- HAL1x supports 16 in x 16 out audio, which may be increased up to 528 in x 528 out by adding up to 32 daisy-chained Expanders to a single HAL1x. Add a few to hundreds of more mic inputs with AM Automixers.
- HAL2 supports 18 in x 18 out audio, of which 2 x 2 are via AES3 on XLR connections.
- HAL3s supports 6 in x 10 out audio. The 2 “Mic/Line-Plus” Inputs accept balanced, or unbalanced left/right monoed.
- HAL4 supports 2 in x 2 out audio. The 2 “Mic/Line-Plus” Inputs accept balanced, or unbalanced left/right monoed.

Download Halogen and design a system now!

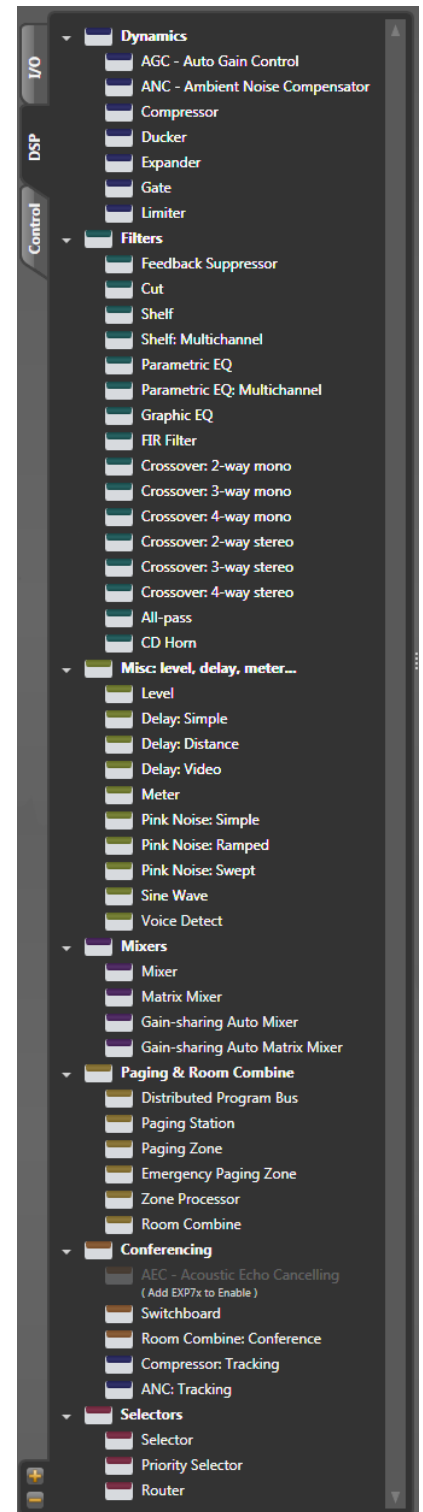
rane.com/hal

Applications, installations and solutions are at

blog.rane.com



HALOGEN



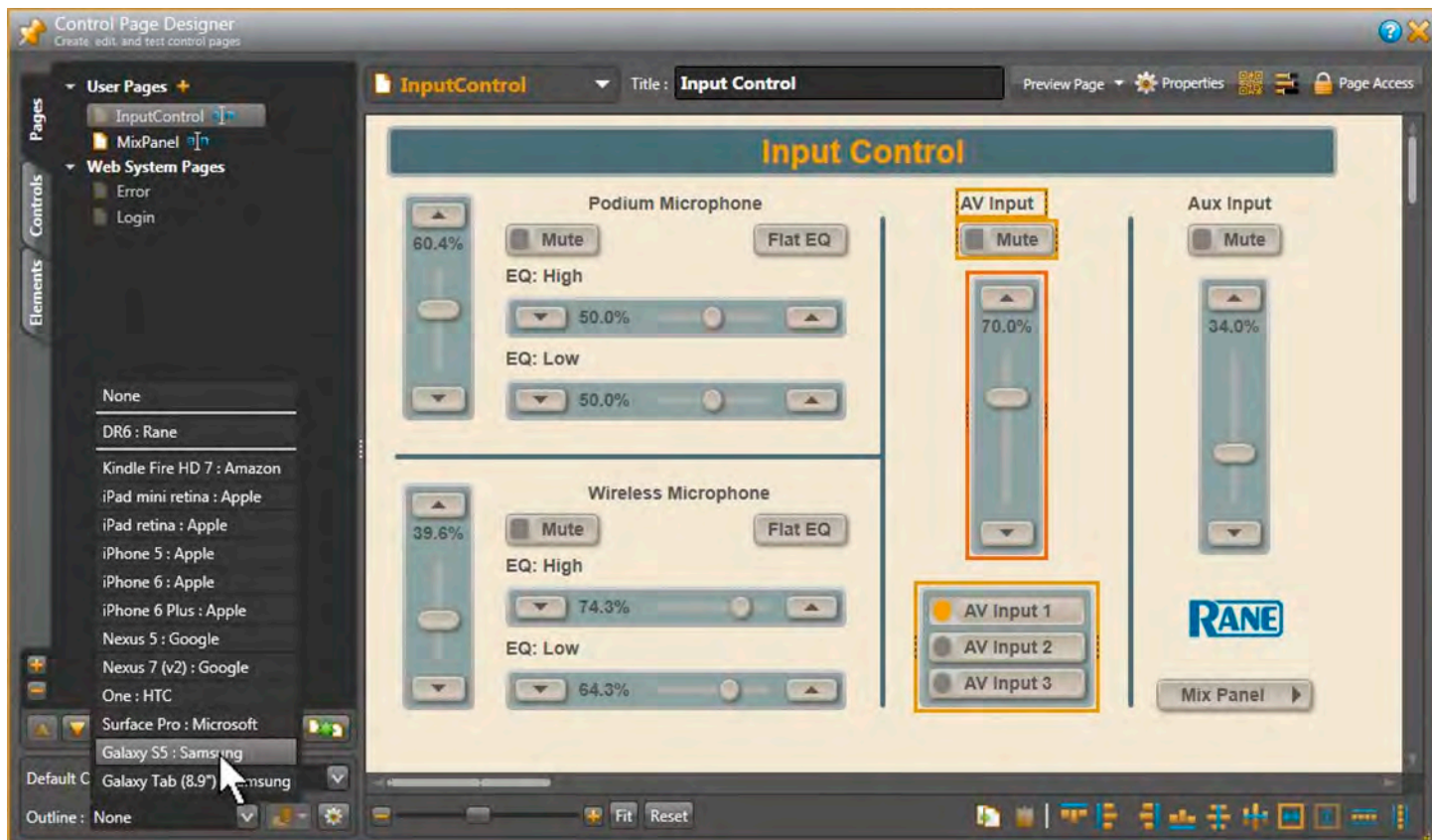
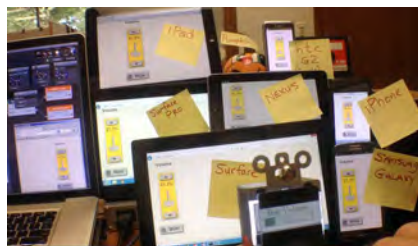
Halogen Web Controls

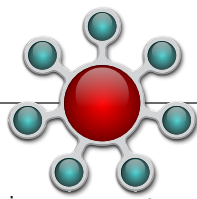
Control the Levels, Selectors, Toggles and Commands in any HAL System from **any device with a web browser**. Halogen's Web Controls feature allows creation of custom HTML GUI control screens. Define the quantity of control pages, and the layout, labeling and size of each control, and completely test them using your default web browser from within Halogen.

Access any control page from any browser-enabled device on the network with a HAL device. Just open a browser and type in the customizable IP/webpage address for the HTML page – and bookmark it for easy access. Type in an optional User Access code, and voilà, the trick, she is done! Control your HAL system wirelessly from one or more tablets, smart phones, laptops or desktop computers. The HAL web server is multi-client, allowing control across many devices and many rooms.

You can link Rane's wired DR remote controls (DR1, DR2 & DR3) and wireless devices and they'll automatically track each other.

Customers from almost every audio application ask for "iPad control" and Halogen's Web Controls is the solution. It is not Apple®-centric — no iTunes® store or app installs required. We'll save a lot of ink on this page by not listing all the possible devices that support web browsers and wireless Ethernet. Besides, the list will change before the ink dries.





Halogen Software


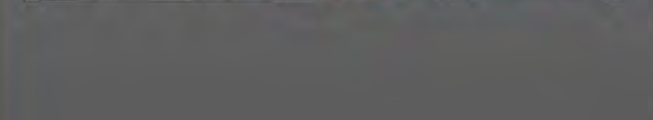
The Halogen software application is your home for designing, configuring, and controlling your HAL audio system. Halogen's easy-to-use graphic user interface simplifies the design and configuration process so much that your only concern will be deciding how to use the extra time you have! The Halogen

software manages global tasks such as discovering, connecting to, and applying configurations to HAL devices. The interface is divided into two main sections: the Hardware Workspace and the Processing Workspace. Halogen helps you choose the best HAL Model to start a new configuration.

Choose HAL Model for new configuration

HAL Model	Inputs	Outputs	Ports
HAL1x	8 Mic/Line	8 Line	4 RAD, 8 DR, 4 Logic In, 2 Relay Out, 1 EXP (RJ-45)
HAL2	8 Mic/Line, 2 AES3	8 Line, 2 AES3	4 RAD, 4 DR, 4 IR, 4 Logic In, 2 Relay Out
HAL3	2 Line-Plus	6 Line	1 RAD, 3 DR, 4 Logic In
HAL3s	2 Mic/Line-Plus	6 Line	2 RAD, 2 DR, 4 Logic In
HAL4	2 Mic/Line-Plus	2 Line	1 DR

HAL3s

Input(s): Two - Mic/Line-Plus, selectable from software between:
 Dynamic mic (Euro)
 Condenser mic with 48 V phantom power (Euro)
 Two consumer unbalanced L & R monoed (Euro)
 One balanced line-level (Euro)

Output(s): Six - balanced line-level (Euro)

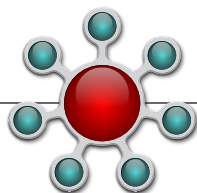
Ports: Two - Remote Audio Device (RJ-45)
 Two - Digital Remote (RJ-45)
 Four - Logic In (Euro)

Form Factor: 1U rack mount

Hardware Workspace

Specify and configure the physical hardware components of your audio system. Troubleshooting messages specify any problems.





Processing Workspace

Wire together the audio processing components of your system, adding and configuring standard processing blocks such as equalizers, matrix mixers, compressors, limiters, and so on. Manage and configure control links and presets here. Halogen also provides innovative processing blocks that simplify complex multizone background music, paging and room combine scenarios.

Notice that Halogen separates the hardware view from the processing view of your audio system. A key benefit of this separation is the flexibility it provides when configuring the system's various inputs and outputs. For example, suppose you have a RAD2 in your audio system. You drag the RAD2 device into the Hardware Workspace but then go to the Processing Workspace to configure the RAD2's line input and mic input. This separation of hardware from processing allows you to work with each input and output individually instead of having to work with the hardware device as a single entity. It also allows you to focus on hardware in one place and audio flow and processing in another place—simplifying your job as a result. Brilliant!

Workspace Layout

As you may have noticed, the Hardware Workspace and the Processing Workspace have similar layouts. On the right is the actual workspace itself in which you create your system. Associated with each workspace is a palette of objects on the left, and at the top a toolbar specific to the workspace. To add an entity to your audio system, you drag one or more objects from the palette to the workspace.

A simple way to think of the Halogen workspaces is that you use the Hardware Workspace to create, connect and troubleshoot all of your physical hardware, while you use the Processing Workspace to select, configure, and connect the processing blocks and controls.

Wire Management

- Distributed Program Bus
- Paging Manager
- Orthogonal Wires
- Wire Tags
- Highlight Wires

The screenshot displays the Halogen software interface with a detailed audio system configuration. The interface is divided into several sections:

- Top Toolbar:** Includes standard file operations (New, Open, Save, Save As), editing tools (Cut, Copy, Paste, Notes, Settings), and application-specific controls (Mute, Unmute, Manage, Settings, Help).
- Left Panel (I/O and DSP):** Lists various input and output ports, such as 'Analog Input Ports (Mic/Line)' and 'Analog Output Ports (Line)'. It also includes workspace management options like 'Workspace Label', 'Source Wire Tag', and 'Destination Wire Tag'.
- Main Workspace:** Shows a hierarchical audio system layout. At the top, a text box states: "Eight AEC blocks are Available in each EXP7x expansion device. AEC includes AGC, PEQ and Ambient Noise Suppression." Below this, two rooms are configured:
 - Room A:** Features a 'Reference-A' block, a 'HALTx: Mic/Line' input, an 'AEC (1)' block, and a 'Conf Room Combine' block. The 'Conf Room Combine' block includes a 'Distributed Program Bus', 'Far End Auto Mixer', 'Local Auto Mixer', and 'Local AV Mixer'.
 - Room B:** Features a 'Reference-B' block, a 'HALTx: Mic/Line' input, an 'AEC (2)' block, and a 'Conf Room Combine' block with similar internal components.
- Right Panel:** Contains 'HALTx: Line' output blocks for each room, with text explaining: "The block supports unique mixes for Record and Room outputs. An independent Reference is provided for each room to accommodate various microphone locations and unique room processing outside the Conference Room Combine block."
- Bottom Panel:** A text box explains: "Halogen provides a highly integrated Conference Room Combine block that greatly simplifies conferencing in a room combine configuration. The block combines room sources, selects a proper reference and sends audio to appropriate locations as rooms combine. It also provides support for maintaining a proper Reference with local Voice Lift. For More details on how this works, see an Introduction to Halogen Conferencing."

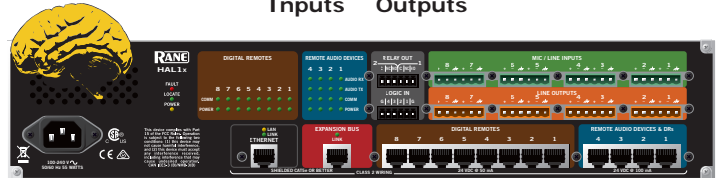
HAL1x Expansion Bus Supports 32 Daisy-chained EXPs in Any Combination

- 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).

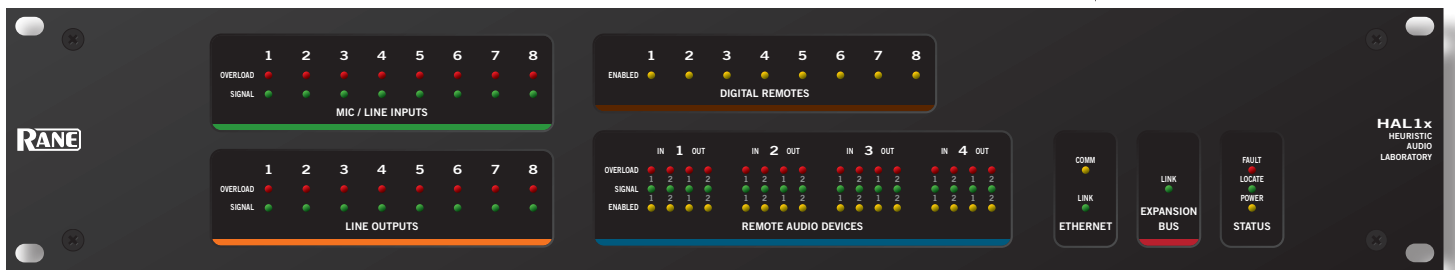
HAL1x Multiprocessor

- 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).

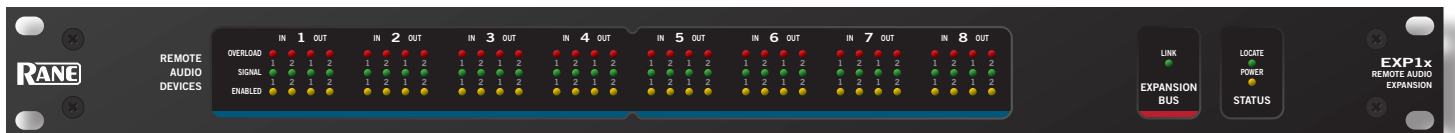
Analog Mic / Line Inputs 8	8 Analog Line Outputs
Digital RAD Port Inputs 8	8 Digital RAD Port Outputs
Digital Expansion into HAL1x 512	512 Digital Expansion from HAL1x
Total in the HAL1x DSP Brain 528	528
Inputs	Outputs



Daisy-chain up to 32 Expanders

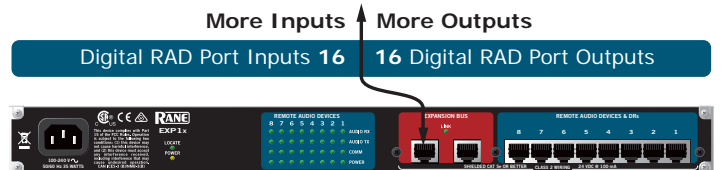


Daisy-chain up to 32 Expanders with the Expansion Bus (in red).



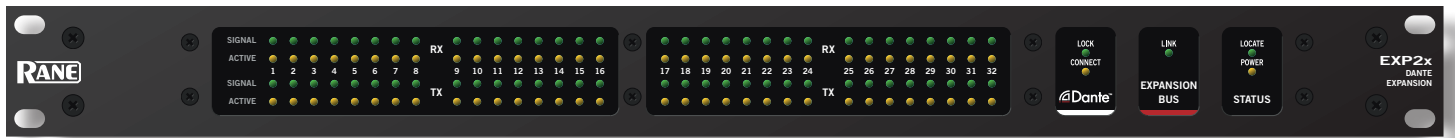
EXP1x RAD Expander for HAL1x

- 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.



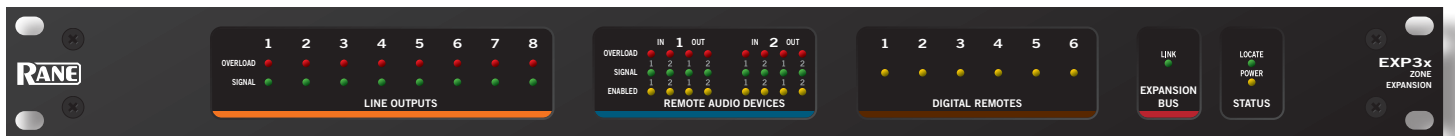
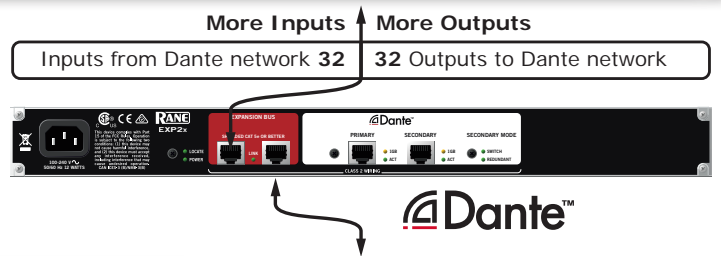
More Inputs More Outputs

Digital RAD Port Inputs 16	16 Digital RAD Port Outputs
----------------------------	-----------------------------



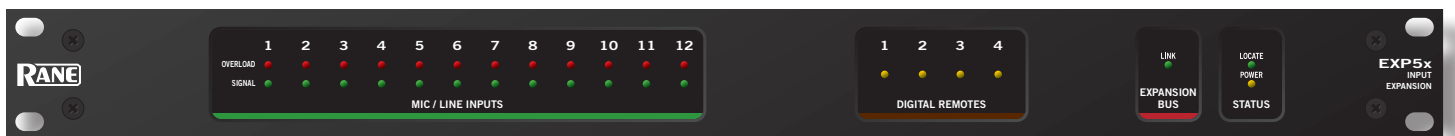
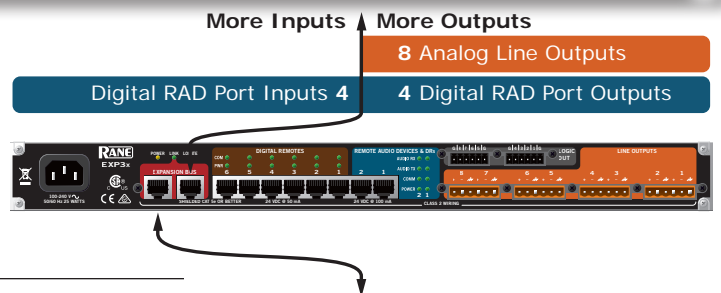
EXP2x Dante Expander for HAL1x

- Lets a HAL1x send and receive 32 channels to a Dante network.
- Supports 44.1, 48, 88.2 or 96 kHz Dante network sample rates.
- Chain up to 16 EXP2x units to a HAL1x for 512 in x 512 out.



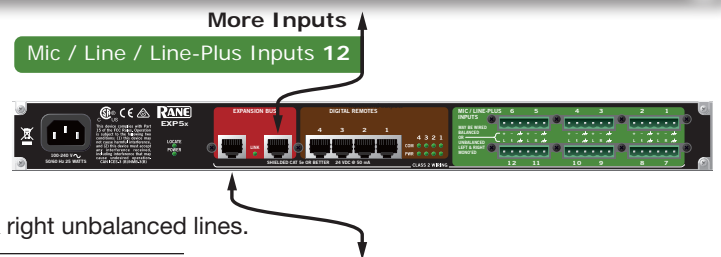
EXP3x Zone Output Expander for HAL1x

- 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.



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.

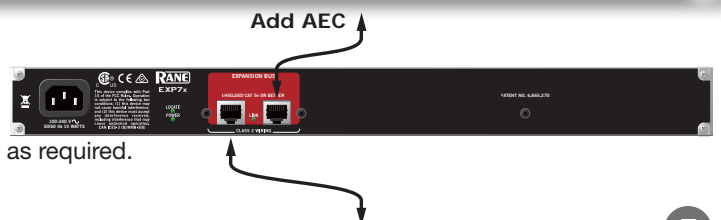


*"Mic / Line-Plus" Inputs accept a mic, balanced line, or mono left & right unbalanced lines.



EXP7x AEC Expander for HAL1x

- Adds 8 channels of Acoustic Echo Cancelling DSP to a HAL1x.
- Chain up to 32 EXP7x units to a HAL1x for 256 AEC channels.
- Preset recall can re-assign an AEC resource across inputs / rooms as required.



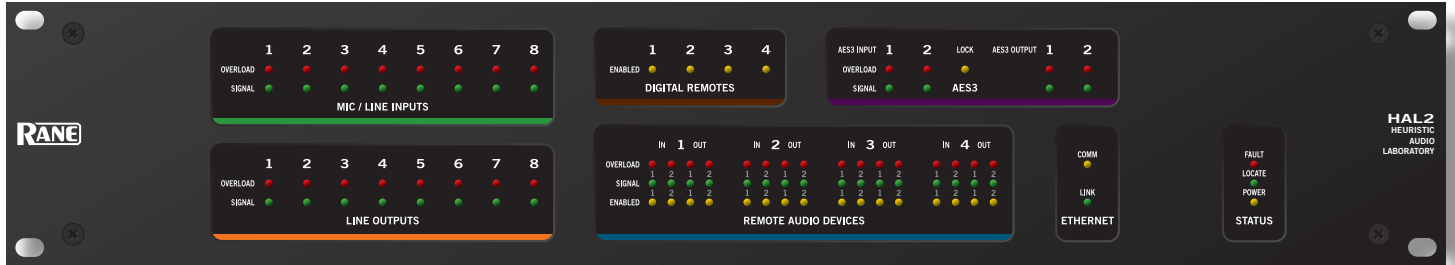
HAL Comparison



HAL2 Multiprocessor

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

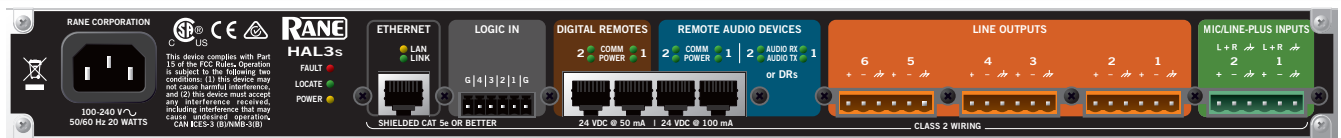
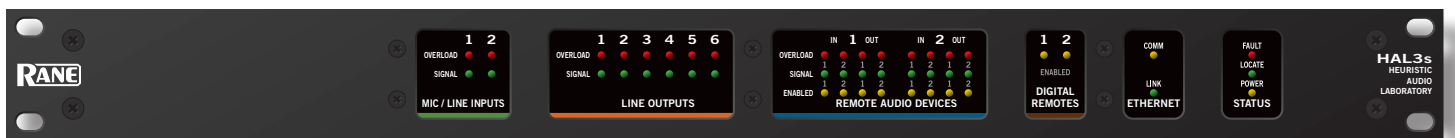
Analog Mic / Line Inputs	8	8 Analog Line Outputs
Digital RAD Port Inputs	8	8 Digital RAD Port Outputs
(AES3) Input Channels	2	2 (AES3) Output Channels
Total in the HAL2 DSP Brain	18	18
Inputs		Outputs



HAL3s Multiprocessor

- 6 line in x 10 line out - 2x6 analog & 4x4 digital (2 RAD ports).
- Up to four Digital Remotes (plus Halogen web controls).
- Four logic inputs (closure).
- Mic / Line-Plus inputs can be configured: Mic with or without +48V, “+4 dBu balanced” or “-10 dBV unbalanced Left/Right Monoed.”

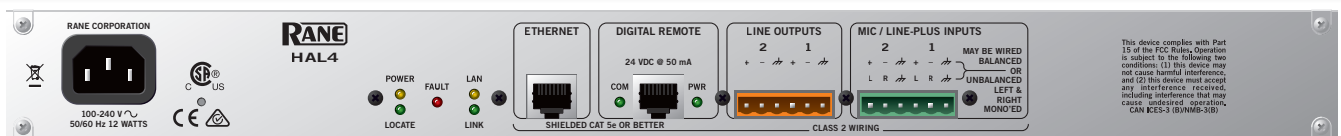
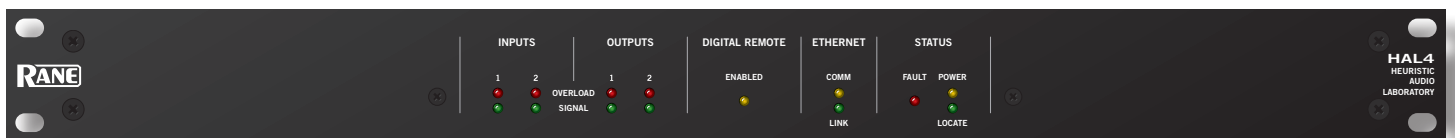
Analog Line-Plus Inputs	2	6 Analog Line Outputs
Digital RAD Port Inputs	4	4 Digital RAD Port Outputs
Total in the HAL3s DSP Brain	6	10
Inputs		Outputs



HAL4 Multiprocessor

- 2 Mic / Line-Plus inputs x 2 line outputs (see description in HAL3s).
- One Digital Remote port (plus Halogen web controls).
- The HAL4 delivers more bang for the buck than any other drag-and-drop DSP on the market.

Analog Mic/Line-Plus Inputs	2	2 Analog Line Outputs
Total in the HAL4 DSP Brain	2	2
Inputs		Outputs



DR1 Digital Volume Remote



Level Control

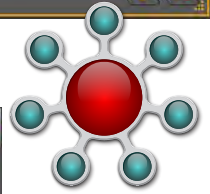
Digital Remotes

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.

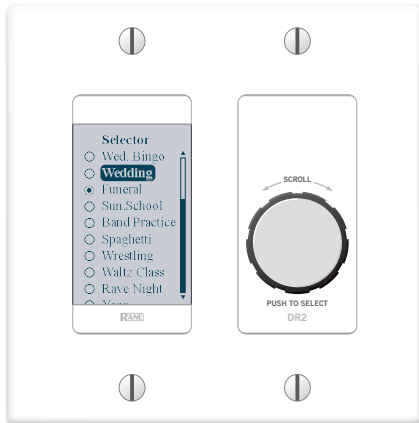
The DR3 has three behaviors: Single Level & List of Toggles/Commands, List of Levels for either multizone volume control or input source mixing, and Single Level plus Selector.



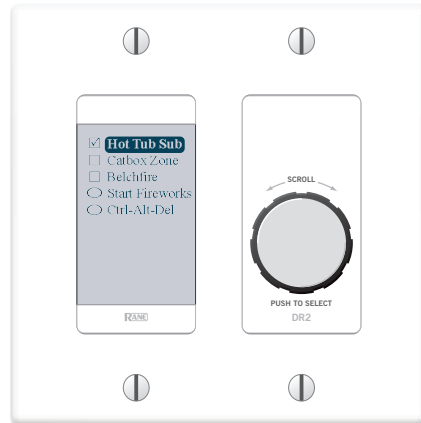
Halogen Control Linking

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.

DR2 Digital Selection Remote

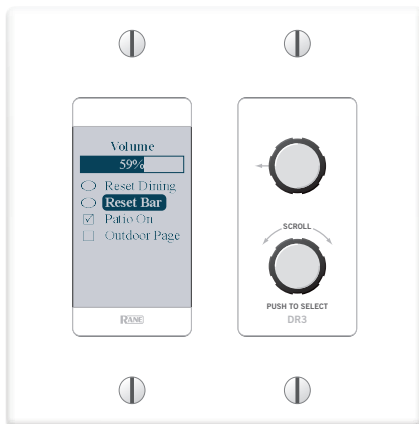


Single Selector

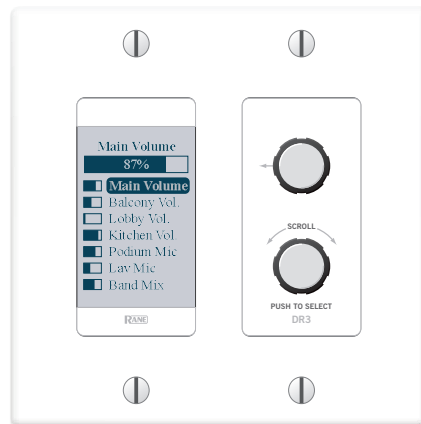


List of Toggles / Commands

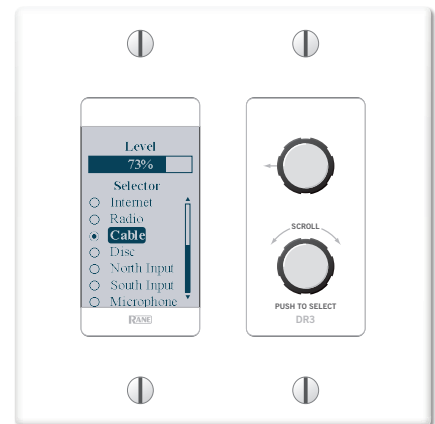
DR3 Digital Volume and Selection Remote



Single Level & List of Toggles / Commands



List of Levels



Single Level & Selector

DR4 Logic I/O Expander

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 Digital Remote Ports on any HAL, up to 300 meters (1000 feet) away.



DR6 Touchscreen Remote Control

The DR6 is a fully customizable touchscreen remote for the HAL family. It supports multiple pages or tabs and any set of levels, toggles, selectors and/or commands. Drag, drop and resize controls any way that's desired. Use custom background images and logins in full-color on the 7-inch LC display.

Screw the included wall-mount bracket over U.S. or international electrical boxes, or flush mount the 2 cm thick DR6 with a 5 cm square hole in the wall to accommodate the cable. The optional DS1 desk stand accessory (shown) allows the DR6 to rest or mount on a horizontal surface. The optional RB2 rack bracket securely installs a DR6 into a 19" equipment rack, with room to mount a round 4-inch speaker.

The included midspan power injector (not PoE) connects shielded CAT 5e (or better) cables between any HAL and the DR6 to deliver communications and the extra power needed for the display.

Optional, on-screen User Access logins secure management pages from public or staff use, and a programmable ambient light sensor automatically dims the backlight.

The Control Page Designer in Halogen allows you to create one set of pages and use them in a web control design, DR6 display or both.



DR6 with optional DS1 Desk Stand



DR6 with optional RB2 Rack Bracket (3U)

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).

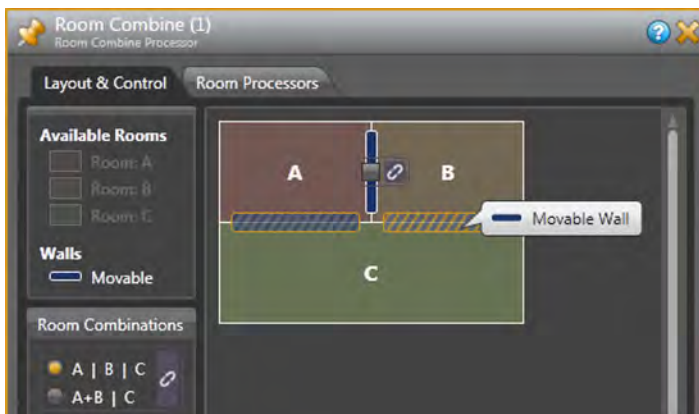


IR2 Infrared Wall Sensors

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.



Logic Inputs

These inputs are found on the **HAL1x**, **HAL2** and **HAL3s**. More can be added with the **DR4** or **DR5** connectable to any HAL. You can configure each of the Logic Input ports in one of three ways: toggle, command, or selector.

- The **Toggle** configuration allows a Toggle command with an on/off switch. You can configure each port type to be either **Momentary** or **Latching**.
- The **Command** configuration allows triggering a Command control from an on/off switch, which can link to one or more Command controls such as a Command preset or a linkable button in a processing block property dialog.
- The **Selector** configuration uses either a multi-position switch or a binary switch. You can connect a physical device to any or all of the Logic In ports and configure the ports in Halogen so they make the desired selection according to the state of the physical device. Wiring details are in the Halogen Software Help. The Selector configuration is not supported by the DR5.

Analog Control Inputs

These inputs are found on the **DR4** that can connect to any HAL. Each port allows an analog voltage source to control the value of a Level control in the Halogen Control palette. The input range for the port is from 0 V to 5 V, where 0 V corresponds to 0% on the associated Level control and 5 V corresponds to 100%. Connect a physical linear-taper potentiometer, like the Rane VR2 Volume Remote. The Vc wiper provides the control voltage to the DR4. As you adjust the pot the voltage changes, which in turn changes any linked Level control in Halogen.

Logic Outputs

These outputs are found on the **EXP3x** Output Expander for the **HAL1x**, or on a **DR4** that can connect to any HAL. You can configure each of the 8 output ports in one of 2 ways:

- **Toggle:** When a toggle control in the Halogen Control palette is unchecked, HAL sets the corresponding DR4 Logic Out port to logic high (5 V), and when the toggle is checked, it sets the port to logic low (0 V).
- **Selector:** When a selector control in the Halogen Control palette is set to the first selection, HAL sets the corresponding DR4 Logic Out port to logic high (5 V). Conversely, when the selector control is in the second position, HAL sets the port to logic low (0 V).

Relay Outputs

These reed relay ports are found on the **HAL1x** and **HAL2** to signal other devices. A common implementation is to link a relay port to a Toggle control so an end user can change its value. Halogen software contains a checkbox for each relay port. Its value can be included in a preset or link to another control, making it possible to use a preset or control to turn the relay port on or off.

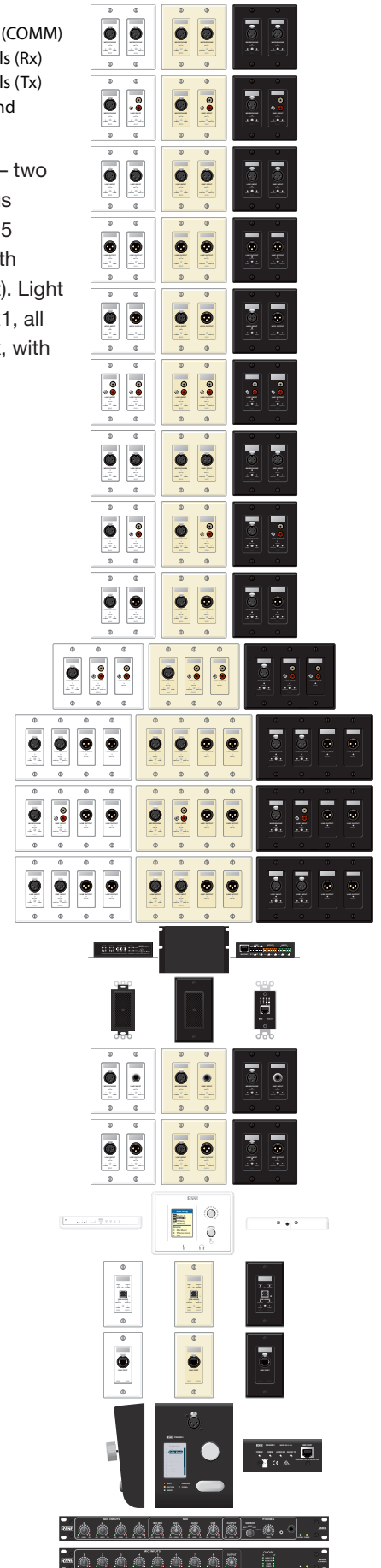
The entire family of RAD models interface with HAL, for digital conversion at the wall. Each converts analog audio to and/or from 24-bit, 48 kHz digital



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

audio. Shielded CAT 5e (or better) cable 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 or EXP unit, and in Halogen software. HAL auto-checks the CAT 5 crimp and verifies audio. All RADs (and DRs) are both “location-aware” and hot-swappable with 150-meter homerun connections, 66% farther than Ethernet (the RAD26 has a 100-meter limit). Light sensors dim the RAD indicators in dark rooms. Except for the RAD16, AM1, AM2, and PAGER1, all RADs mount in standard US electrical boxes. Most RADs are available in white, ivory, or black, with a matched Decora® plate cover included.

- 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**
- RAD11** **XLR Mic In / Mini & RCA Mono'ed Line In / Mini & RCA Stereo Line Out**
- RAD12** **Dual XLR Mic Inputs / Dual XLR Line Outputs**
- RAD14** **XLR Mic In / Mini & RCA Mono'ed Line In / Dual XLR Line Out**
- RAD15** **Dual XLR Line Inputs / Dual XLR Line Outputs**
- RAD16z** **Dual Mic-Line-Plus Inputs / Dual Line Outputs / Dual Logic / Euroblocks**
- RAD17** **Omnidirectional Boundary Layer Mic**
- RAD18** **XLR Mic Input / 1/4" Balanced Line Input**
- RAD23** **XLR Line Input / XLR Line Output**
- RAD26** **Dual Input / Output / Logic with Level and Source Selection**
- RAD27** **USB Audio Sound Card**
- RADX** **RAD Port Extension (CAT 5 wall jack for portable RADs)**
- PAGER1** **Mic Preamp with Push-to-Talk and Page Zone Selection**
- AM1** **Four-Channel Gain-Sharing Automixer with extra Line & USB Inputs**
- AM2** **Eight-Channel Gain-Sharing Cascadable Automixer**



NEW! RAD26 One Room RAD Remote

Using one shielded category cable drop, the RAD26 provides any room with a dual 4-watt amp, end user control via a color custom LCD display & encoders, a dual universal audio I/O interface, plus headphone output and line-level input jacks for local needs. Three logic closure inputs and three active-low outputs add to the control capabilities. The amplifier permits a single channel option at 8 watts into 8Ω. Applications include:

- Presentation source & volume, projector & screen control.
- Meeting room with A/V teleconferencing and speakers.
- Spa with BGM, local music input and stereo speakers.
- Hotel or cruise ship room TV and local input sound system.

A RAD26 provides enough I/O and control to support one room in a HAL audio system which may require these features:

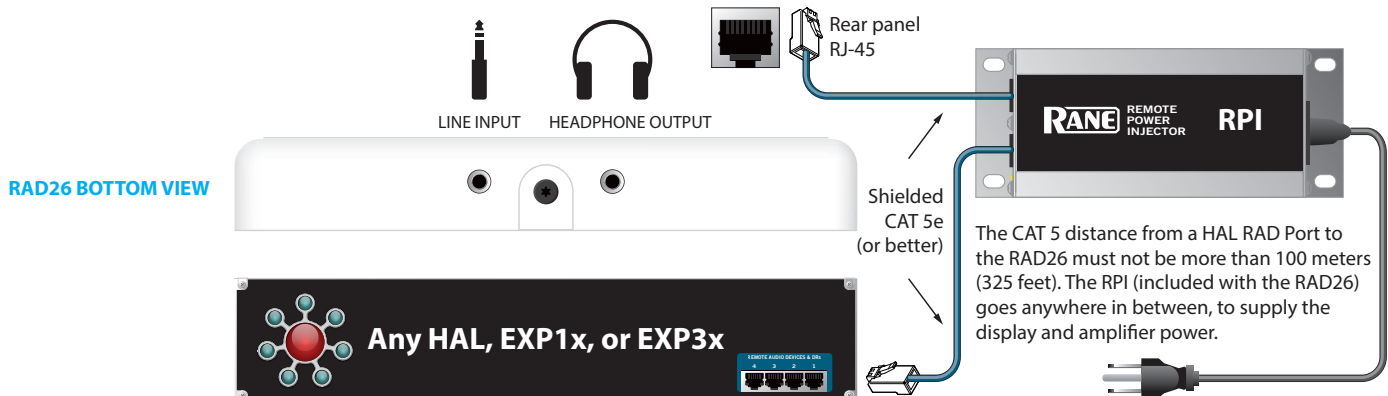
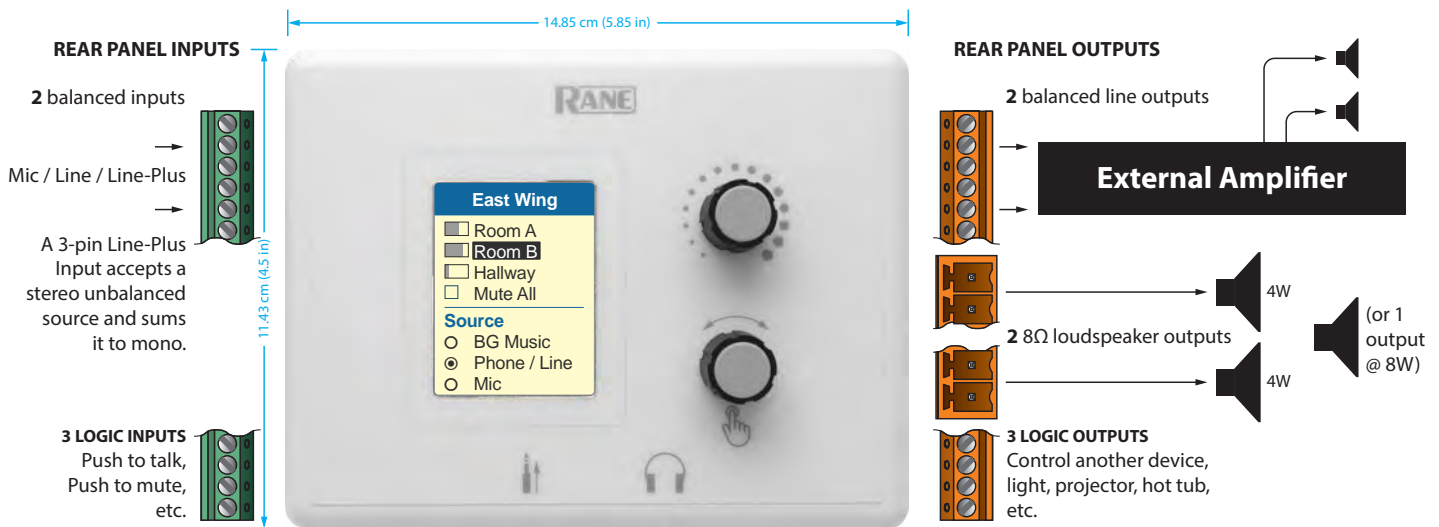
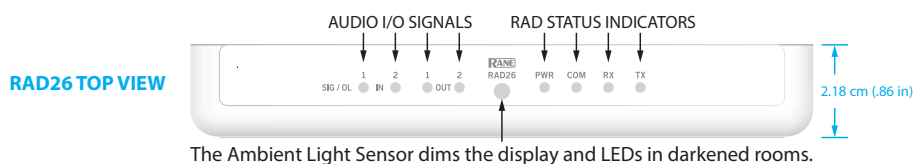
- Local audio line input (smartphone, laptop, MP3, DVD).
- One or two microphone or line-level inputs.
- Amplifier outputs for ceiling speakers.
- Level control and source selection.

Each RAD26 may be installed onto a standard US 2-gang electrical box, 1-gang electrical box, or flush-mounted to a wall surface. The exterior finish is matte white.

Source and level behave like a DR3 remote, but with any combination of Levels, Toggles, Selections or Commands. On the back there are 2 balanced Euroblock Mic / Line / Line-Plus audio inputs with the mode set in Halogen software. The Line-Plus inputs accept unbalanced left and right signals and sums them to mono. 24V phantom power is available for condenser mics. For end users, there is a 3.5 mm Aux input on the underside of the front, accepting the output of a smartphone, laptop or other consumer device.

A built-in 4-watt stereo amplifier powers a small stereo pair of speakers, or this amp can be switched in software to power a single 8-watt speaker. Balanced line outputs can drive an external amplifier or powered subwoofer for more output.

Software logic senses an inserted connector at the Aux In or Headphone jacks to optionally override the rear connections.





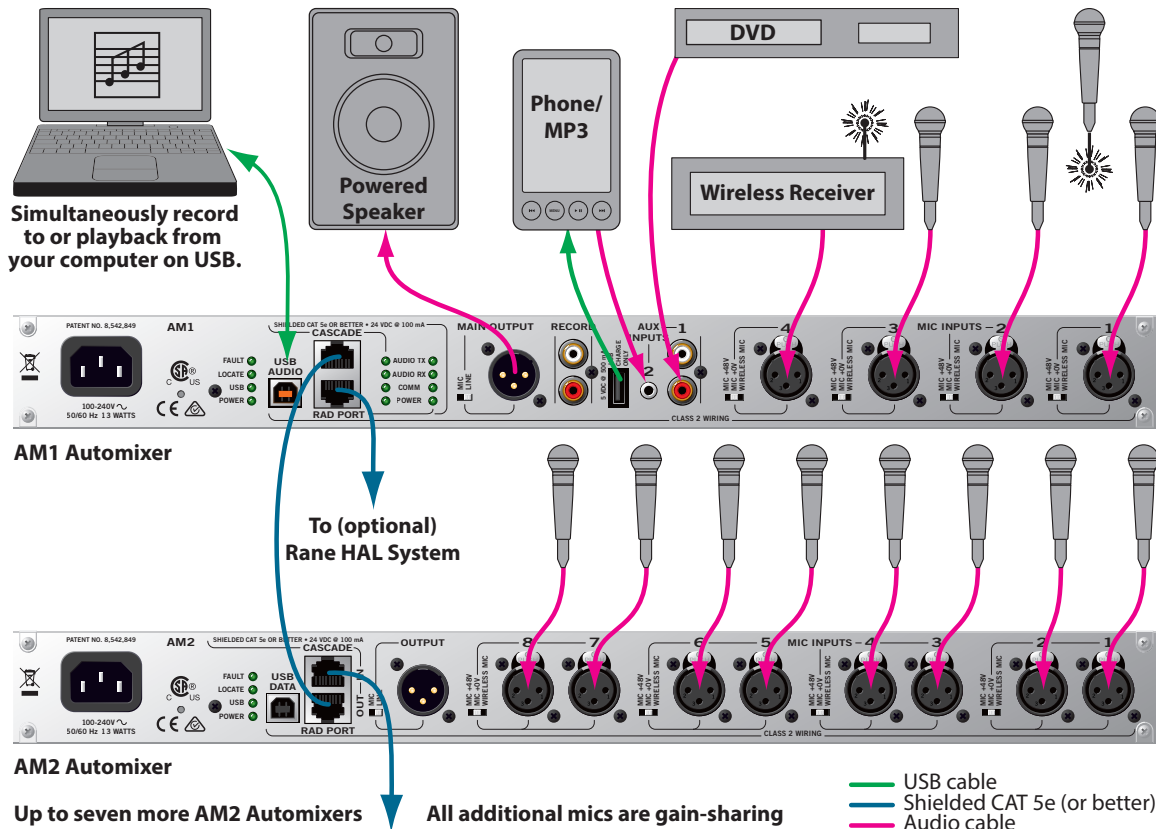
AM1 Four-Channel Gain-Sharing Automixer

- 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.

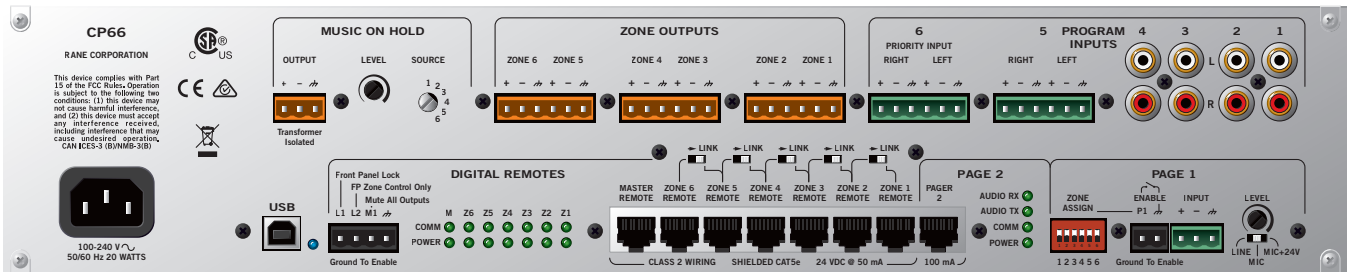


AM2 Eight-Channel Gain-Sharing Cascadable Automixer

- 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).



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 (see below).

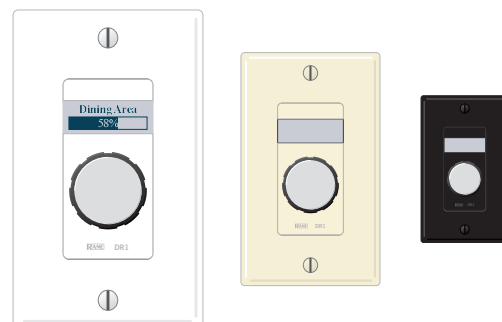
PAGER2 Paging Station

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.

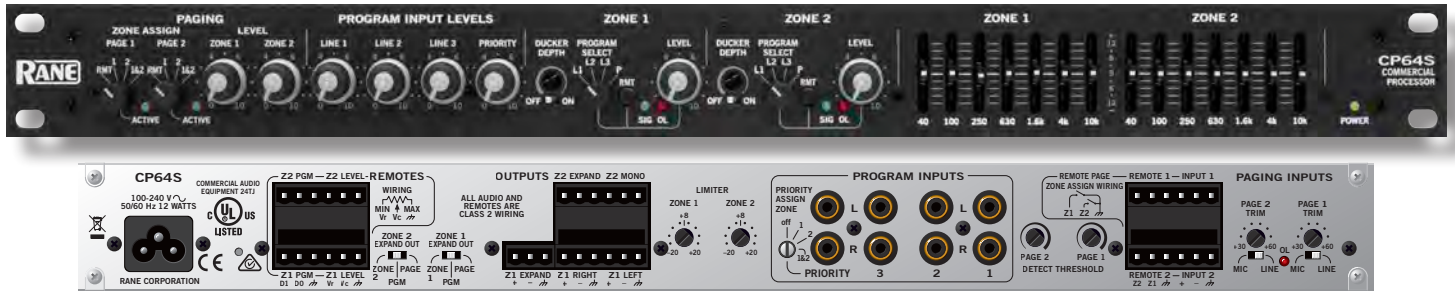


DR3 Selection & Level Control

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

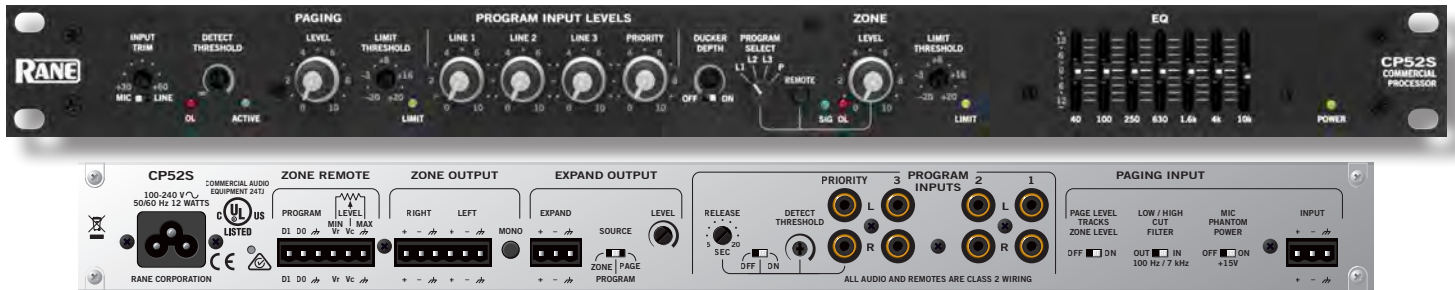


CP64S Commercial Processor

- 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 ZR1 Remote for source selection & volume.

The ZR1 Remote fits in a standard US electrical box, and may be finished with a Decora™ plate cover (not included).

ZR1 Zone Remote



CP52S Commercial Processor

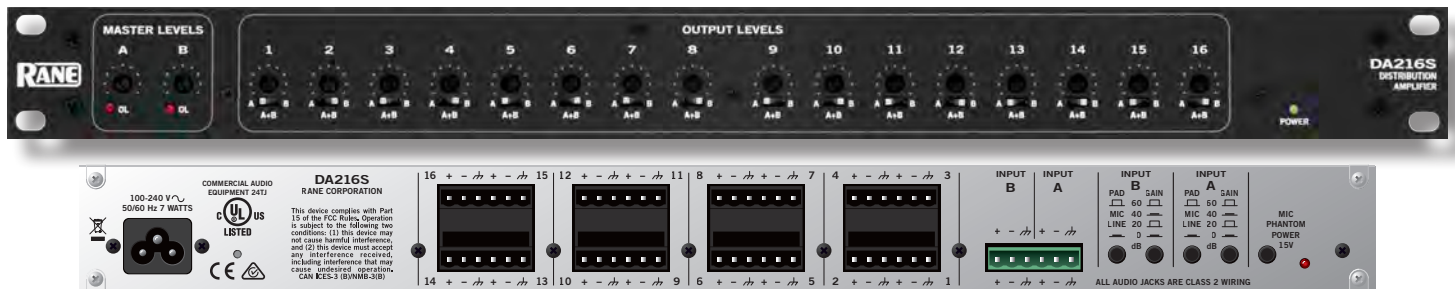
- Mic/line page input assignable to 1 stereo (with mono switch) zone with 7-band EQ.
- 4 Stereo line inputs with priority and adjustable page ducking depth.
- 3-level priority; Expand output selectable as page-only, program-only or zone.
- Optional ZR1 Remote for source selection & volume; Optional SCP1S EQ-only security cover.

SCP1S EQ Security Cover

ZR1 Zone Remote



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. May be configured as a 16-zone paging / background music system.
- Switchable 15V phantom power works with most common condenser mics.
- Balanced Euroblock connectors; 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).

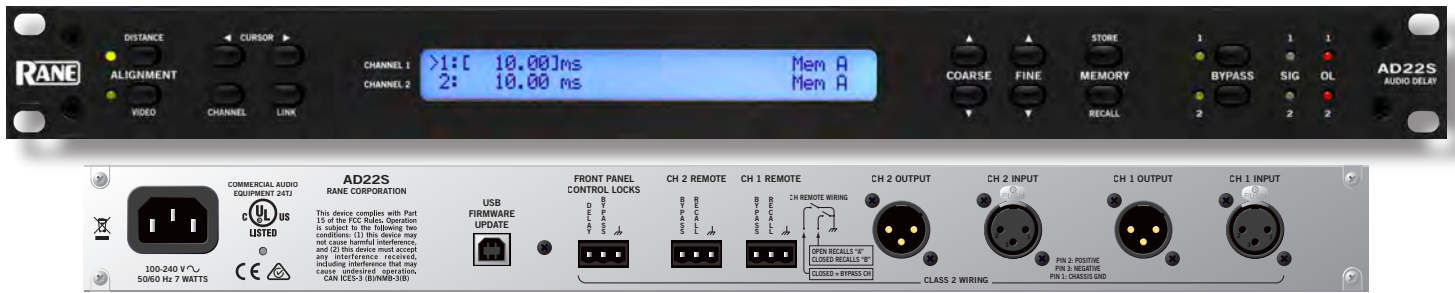
Line Splitter / Mixer



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).

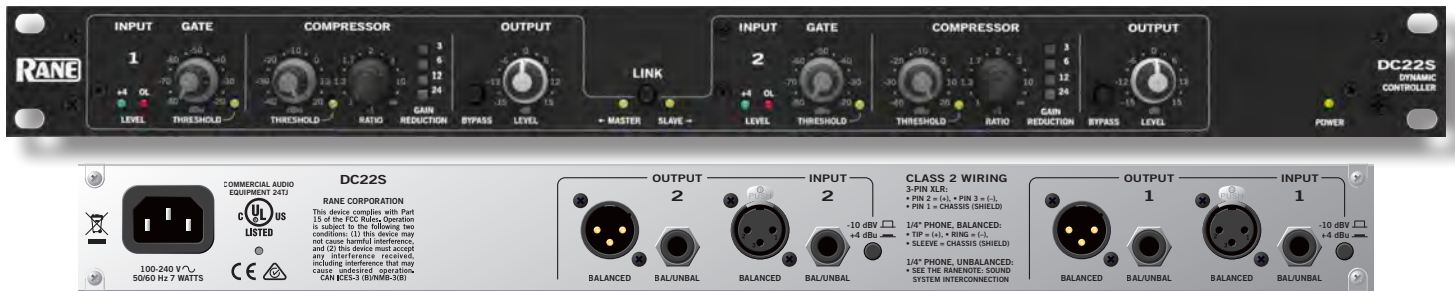
The AM1 and AM2 Automixers also mix mic and line inputs in expandable configurations. See them on page 6.



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.

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).

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.
- Drives stereo 1/4" headphone outputs on both front and rear panels.
- Balanced 1/4" TRS inputs; Internal universal power supply (100-240 VAC)

Contents

AD22S Dual Channel Audio Delay for Distance or Video	18
AM1 Four-Channel Gain-Sharing Automixer	14
AM2 Eight-Channel Gain-Sharing Cascadable Automixer	14
CP52S Commercial Processor	16
CP64S Commercial Processor	16
CP66 Commercial Processor	15
DA216S Distribution Amplifier	16
DC22S Stereo Gate / Compressor	18
DR1 Digital Volume Remote	9
DR2 Digital Selection Remote	9
DR3 Digital Volume and Selection Remote	9
DR4 Logic I/O Expander	10
DR6 Touchscreen Remote Control	10
EXP1x RAD Expander for HAL1x	6
EXP2x Dante Expander for HAL1x	7
EXP3x Zone Output Expander for HAL1x	7
EXP5x Input Expander for HAL1x	7
EXP7x AEC Expander for HAL1x	7
HAL1x Multiprocessor	6
HAL2 Multiprocessor	8
HAL3s Multiprocessor	8
HAL4 Multiprocessor	8
Halogen Software	4
Halogen Web Controls	3
HC6S Six Channel Headphone Console	18
IR2 Infrared Wall Sensors	11
MLM42S Mic & Line Mixer	17
MLM82S Mic & Line Mixer	17
PAGER1 Paging Station	11
RADs (Remote Audio Devices)	12
RAD26 One Room RAD Remote	13
SM26S Line Splitter / Mixer	17

Rane Corporation

**10802 47th Avenue West
Mukilteo WA 98275-5000 USA**

Phone: 425-355-6000

Fax: 425-347-7757

Email: info@rane.com

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

• Heuristic Audio Laboratory (HAL)® • HAL, Halogen, Accelerated-Slope, Perfect-Q, FlexFX, and Active Crossfader are trademarks of Rane Corporation • AMX® and the AMX logo are registered trademarks of AMX • Stardraw Control is a trademark of Stardraw.com Ltd. • Crestron® is a registered trademark of Crestron Electronics, Inc. • Decora® is a registered trademark of Leviton • CobraNet is a trademark of Cirrus Logic, Inc. • Lexan® is a registered trademark of General Electric. • Windows® is a registered trademark of Microsoft Corporation in the United States and other countries • Apple, Mac, Macintosh, iTunes, Safari, QuickTime, GarageBand, and OS X are registered trademarks of Apple Inc., registered in the U.S. and other countries.