

RAD26

DUAL INPUT / OUTPUT / LOGIC & REMOTE IN WALL-MOUNT BOX

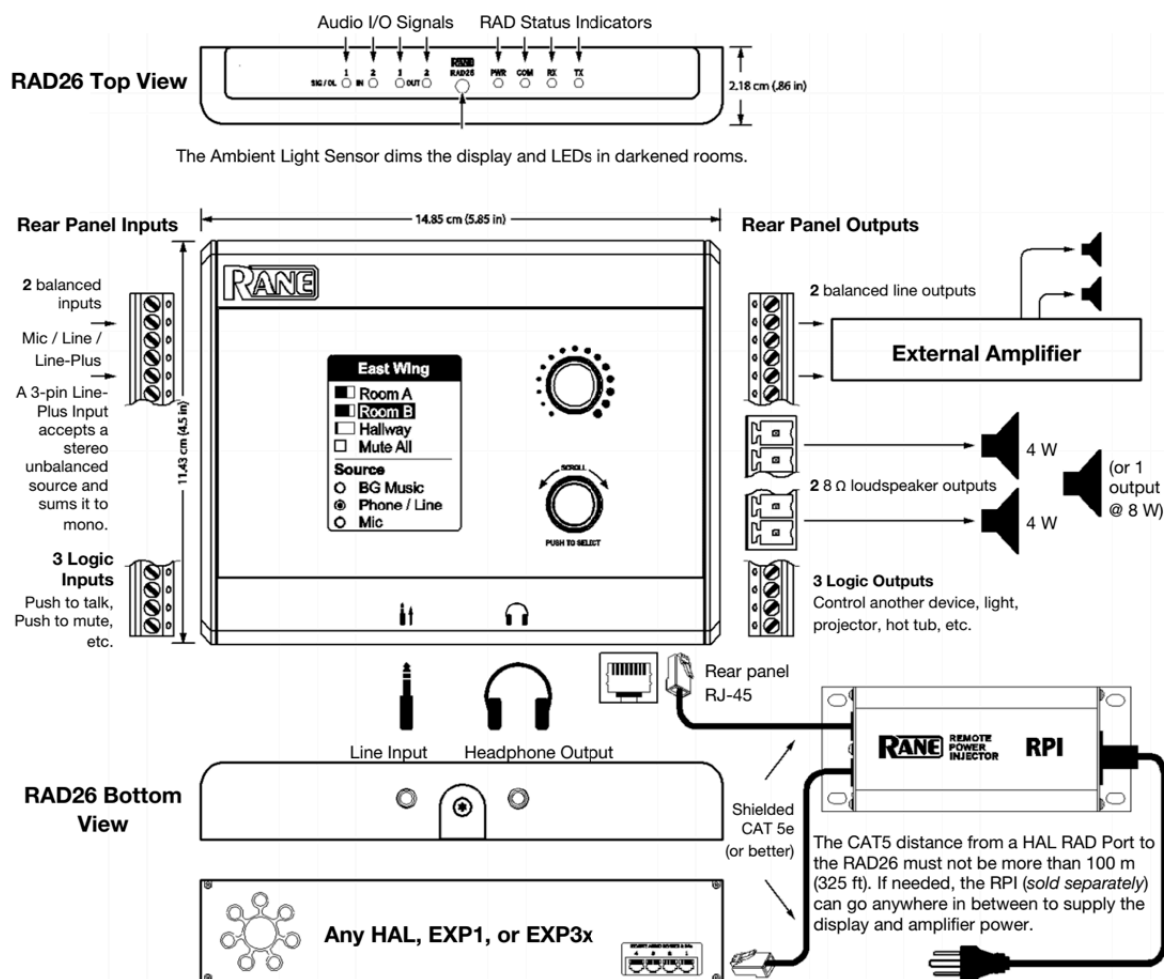
Using one shielded category cable drop, the RAD26 provides any room with a dual 4-watt amp, end user control via a color custom LCD display & encoders, a dual universal audio I/O interface, plus headphone output and line-level input jacks for local needs. Three logic closure inputs and three active-low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

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 room 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. The RAD26 fits with most decor in a matte white metal box. A programmable ambient light sensor automatically dims the display and status LEDs in darkened rooms.

Setup / Connectivity



Applications

Hotels with small meeting rooms and spa rooms require local inputs and control, but must also receive paging or music from elsewhere in the building. Many offices and campuses provide meeting and conference rooms for small groups with in-room A/V presentations, but must also receive emergency announcements. Other RADs and DRs can provide these functions, but require more than one shielded CAT 5 cable. The RAD26 provides all the features required in a single RAD. Additional Usage scenarios include:

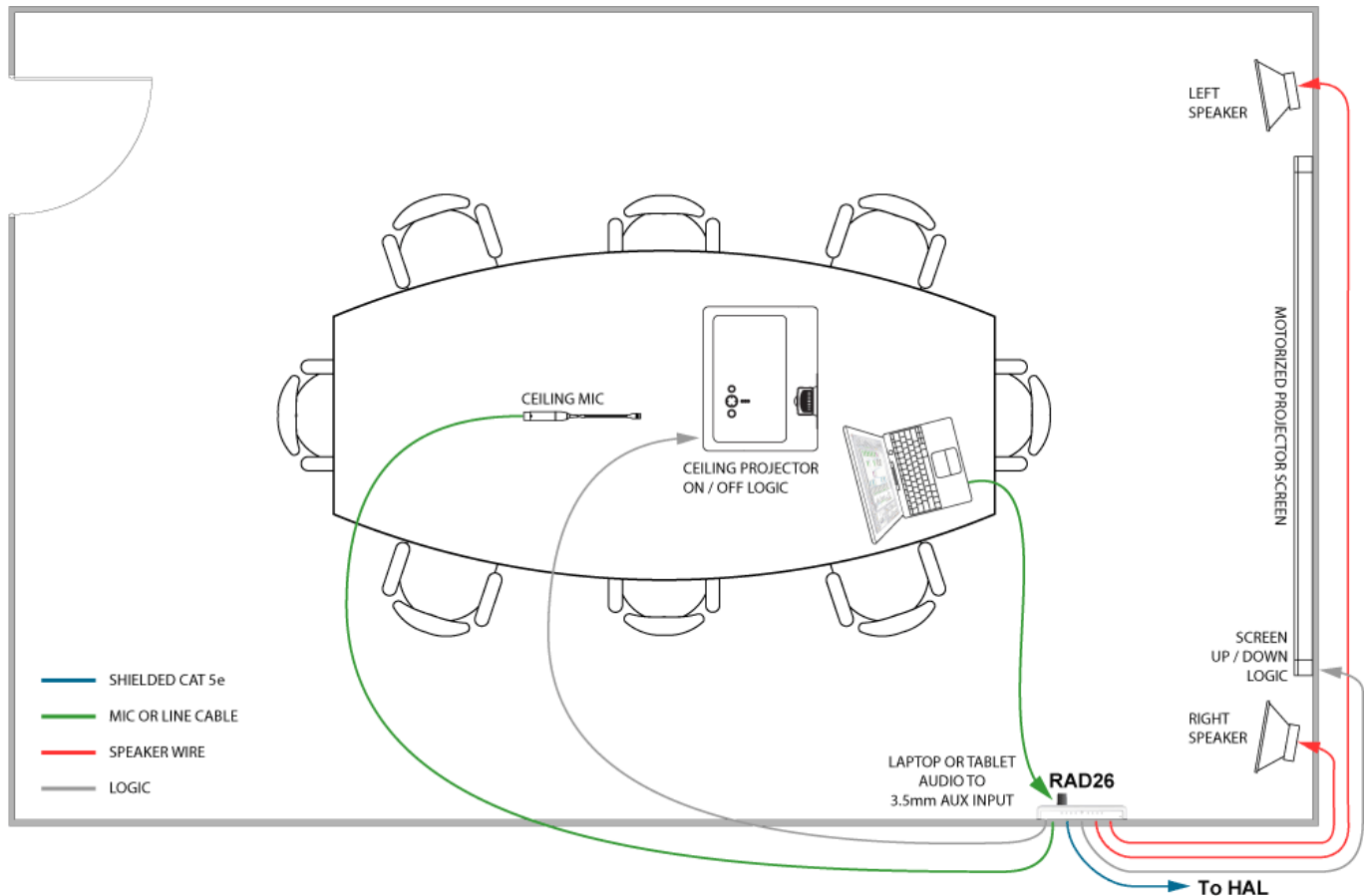
- Presentation source and volume, projector and screen control
- Meeting room with A/V teleconferencing and speakers
- Spa with BGM, local music input and stereo ceiling speakers
- Hotel or cruise ship room TV and local input sound system

RAD26S Features

- Remote Audio Device with audio and logic I/O and on-board 2-ch 4W amplifier
- Local audio line input (smartphone, laptop, MP3, DVD)
- Two balanced Euroblock inputs MIC / LINE / LINE+

- Amplifier outputs for speakers
- Level control
- Source selection

Usage Scenario Example – Presentations for a meeting room, board room or classroom



The mic connects to the rear of the RAD26. It can be from a ceiling mic, or from a handheld or lavalier wireless mic, with 24V phantom power available for condenser mics.

A presenter can easily plug a laptop, tablet or smartphone into the sound system. A regular consumer cable with stereo 3.5 mm line plugs will work.

When no plug is present, background music or noise masking is available, sent from a HAL multiprocessor elsewhere in the building. A RAD26 selection decides which source, and how loud. The amplifier is set to dual 4-watt mode to drive the left and right speakers.

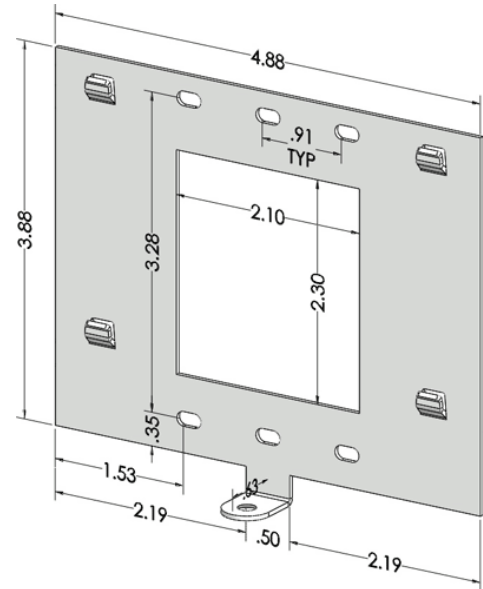
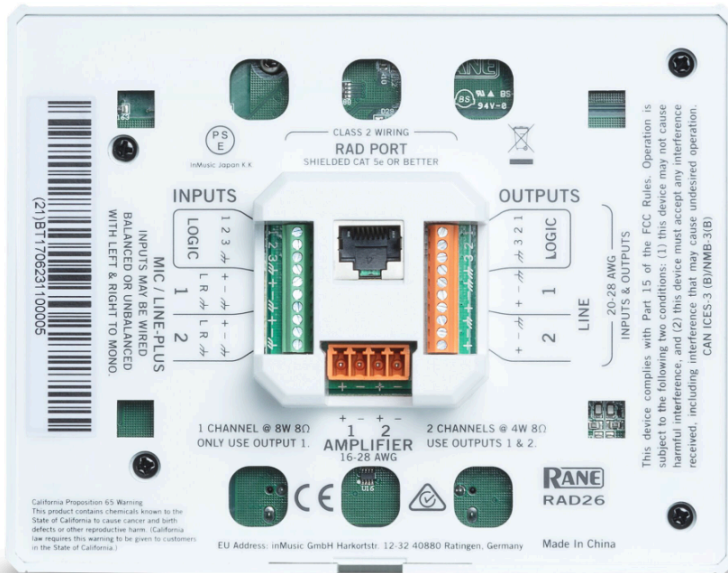
The logic outputs can be configured as toggle controls to move the motorized screen up and down, and turn the projector on and off. HAL lets you page into this room, ducking the local audio, or overriding it -- automatically.

More examples can be found at Rane.com.

Installation

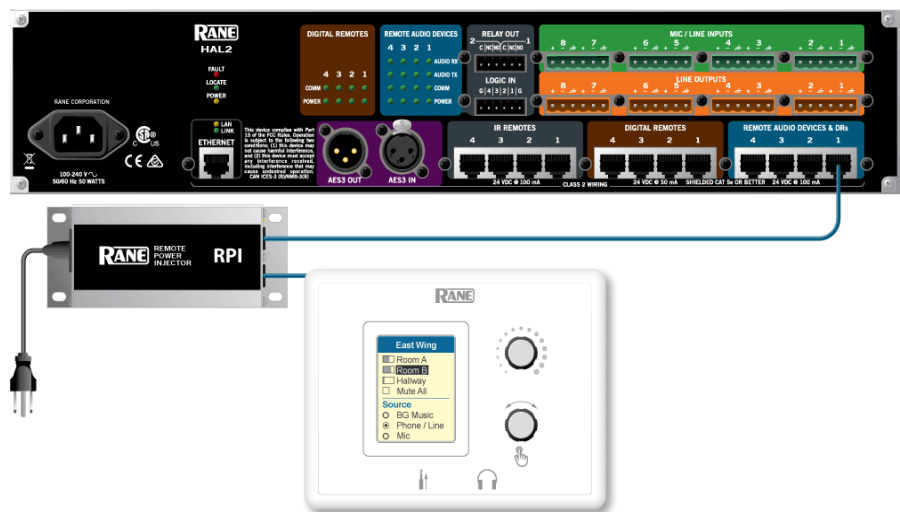
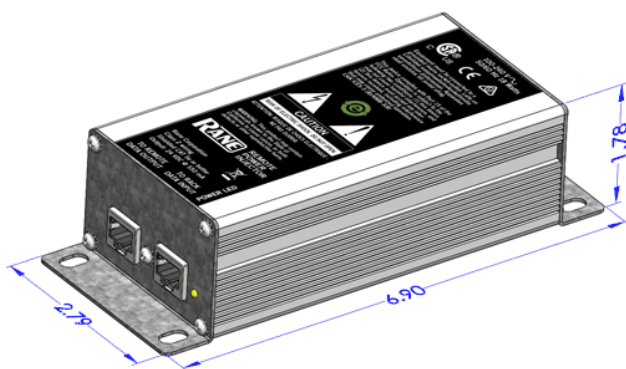
Wall Mounting

Each RAD26 may be installed onto a standard US 2-gang electrical box, 1-gang electrical box, or flush-mounted to a wall surface. A wall bracket is included with each RAD26.



Includes RPI (Remote Power Injector)

The included mid-span power injector (not PoE) connects shielded CAT 5e (or better) cables between any HAL and the RAD26 to deliver communications and the extra power needed for the display and amplifiers. The RPI is inserted anywhere between the HAL and the RAD26, which can be up to 100 meters (325 feet) apart. An IEC power cable is included.



Technical Specifications

PARAMETER	SPECIFICATION	LIMIT	UNITS	CONDITIONS/COMMENTS
Signal Indicators	-50	typ.	dBFS	Unbalanced / balanced output, green LED, peak-reading
Overload Indicators	-0.5	typ.	dBFS	Unbalanced / balanced output, red LED, peak-reading
Microphone Input Specs (level set in software) (2.54mm Euroblock Terminal)				
Input Impedance	2.16 k	typ.	Ω	Balanced, 1.08 k + 1.08 k
Gain Range (dynamic mic mode)	30 to 50	typ.	dB	In 1 dB Steps
Gain Range (condenser mic mode)	18 to 38	typ.	dB	In 1 dB Steps
Max. Input (dynamic mic mode)	-16	typ.	dBu	-18 dBV, Balanced, Gain = 30 dB
Max. Input (condenser mic mode)	-4	typ.	dBu	-6 dBV, Balanced, Gain = 18 dB
Equivalent Input Noise	-126	typ.	dBu	20 kHz BW, Rs = 150 Ω , Gain = 30 dB
CMRR	-70	max.	dB	Rs = 150 Ω , 1 kHz, Gain = 30 dB
Frequency Response	20 to 20 k	typ.	Hz	+0, -0.5 dB, at all Gain settings
THD + Noise	0.008% typ.	@ 1 kHz, 20 kHz BW, Rs = 150 Ω , Output = -6 dBFS, Gain = 30 dB		
Phantom Power	24	2%	V	10 mA Max, always on in Condensor Mic Mode
Balanced Line-Level Input Specs (2.54mm Euroblock Terminal)				
Input Impedance	10 k	1%	Ω	Balanced
Gain Range	0 to 20	typ.	dB	In 1 dB Steps
Max. Input Level	14	max.	dBu	12 dBV
Frequency Response	20 to 20 k	typ.	dB	+0, -0.5 dB
Dynamic Range (input)	103	typ.	dB	re: 0 dBFS, 20 kHz BW, A-weighted
THD + Noise	0.008% typ.	@ 1 kHz, 20 kHz BW, Rs = 150 Ω , Output = -6 dBFS, Gain = 0 dB		
Line+ Mode	Active Summer			Left ("+") and Right ("-") signals summed to mono
Max. Input Level L+R	14	max	dBu	12 dBV
Auxiliary Input (3.5 mm Stereo TRS Switching Connector)				
Gain	0 to 20	typ.	dB	In 1 dB Steps
Max. Input Level	12	max.	dBu	10 dBV
Dynamic Range (input)	101	typ.	dB	re: 0 dBFS, 20 kHz BW, A-weighted
Frequency Response	20 to 20 k	typ.	dB	+0, -0.5 dB, at all Gain settings
THD + Noise	0.008% typ.	@ 1 kHz, 20 kHz BW, Rs = 150 Ω , Output = -6 dBFS, Gain = 0 dB		
Balanced Line-Level Output Specs (Active Balanced) (2.54mm Euroblock Terminal)				
Output Impedance	200	1%	Ω	Each Leg
Max. Output Level	14	min.	dBu	< 1% THD, Load = 10 kΩ
Dynamic Range	104	typ.	dB	re: 0 dBFS, 20 kHz BW, A-weighted
Frequency Response	20 to 20 k	typ.	Hz	+0, -0.5 dB, at all Gain settings
THD+Noise	0.01% typ. @ 1 kHz, 20 kHz BW, Rs = 150 Ω , Output = +4 dBu, RAD26 Input to Output			

Headphone Output (3.5 mm Stereo TRS Switching Connector)				
Maximum Output	130	typ.	mW	per channel, Rload = 32 Ω
Minimum Load	32		Ω	
Amplifier Outputs (Full Bridge Class D Power Amplifier)				
Max. Output Power (Dual Mode)	4	max.	W	8 Ω load, < 0.1% THD, both channels
Max. Output Power (Single Mode)	8	max.	W	8 Ω load, < 0.1% THD, Ch. 1 only, Ch. 2 disabled
Dynamic Range	99	typ.	dB	re: 0 dBFS, 20 kHz BW, A-weighted, Dual 4W Mode
Frequency Response	20 to 20 k	typ.	Hz	+0, -0.5 dB, at all Gain settings
THD + Noise	.02% typ.	@ 1 kHz, 20 kHz BW, Rload = 8 Ω , Output = 1 W		
Logic Specs				
Logic Inputs	3			Contact closure to ground (2.54 mm Euroblock Terminal)
Internal Pull-up	51.1 k	1%	Ω	5.0 V
Logic High Input Level	> 2.0	min.	V	Normal State
Logic Low Input Level	< 0.9	max.	V	External circuit must sink > 80uA to assert
Logic Outputs	2	Relay drive, LED or logic level output (2.54 mm Euroblock Terminal)		
Internal Pull-up	1.0 kΩ	1%	Ω	5.0 V, Protected to 30 V, reverse polarity protected
Sink Current	200	max.	mA	Output FET on
LED Drive Current	2		mA	Output FET off , driving an LED with Vf = 2.0 V
Logic High Input Level	4.7	min.	V	Output FET off , Output Current = 0 mA
Logic Low Input Level	0.1	max.		Output FET on, Sink Current < 200 mA
Color Display				
Size	49.8 x 37.5 mm / 1.96" x 1.48"			
Resolution	320 x 240	n/a	Pixels	n/a
Color Depth	16-bit	n/a	n/a	131,071 colors
Backlight Brightness	320 cd/m2	typ.	n/a	Adjustable in software from maximum to off in 10 steps
Ambient Light Sensitivity	Software configurable to adjust how sensitive the RAD26 screen is to changes in ambient light			
RPI Unit (Remote Power Injector) included with each RAD26				
Data Input Port	To a RAD Port on a HAL		Shielded CAT 5e cable or better, RJ-45 connectors.	
Data Output Port	To the RAD26		Shielded CAT 5e cable or better, RJ-45 connectors.	
Power	24 VDC 24 VDC @ 550 mA maximum.			
HAL to RAD26 Distance	100 meters / 325 feet total maximum. RPI can be anywhere in between.			
Power Requirement	100 to 240 VAC		50/60 Hz, 18 W max	
Size	4.6 x 17.6 x 7 cm		1.78" x 6.9" x 2.79"	
Weight	400 g		14.1 oz	

Included Mounting Hardware with each RAD26		
Wall Bracket Size	124 x 76.2 mm	4.875" x 3.875"
Mounting Screw	#6-32x1/4" Torx T10 (qty 1) secures the RAD26 to the wall bracket.	
Box / Wall Screws	#6-20x1-1/4" (qty 4) Drywall / cement anchors are also included.	
RB2 Rack Bracket Accessory (optional)		
Size: 3U, black painted steel	13.2 x 48.3 x 1 cm	5.2'H x 19'W x .4'D
Speaker Mounting Bolt Circle Diameter	120 mm (4.7" inches) ±0.05"	EIA 4" loudspeaker "standard"
Mechanically compatible speakers according to their data sheets:	1. Atlas FC-104 (tested and known to fit)	
	2. Lowell JR410 (untested but holes are properly placed)	
	3. Electro-Voice 205 (untested but holes are properly placed)	
Weight	613 g	1 lb 6 oz
Shipping Weight	1020 g	2 lb 4 oz
RAD26 Unit		
Wiring	Class 2	
Conformity	CE, FCC	
Ambient Room Temperature	40 °C / 104 °F	Maximum external loading
Size	149 x 115 x 22.5 mm	5.87 x 4.53 x .87 inches
Depth Including the Knobs	40 mm	1.58 inches
Weight	617 g	1.36 lb
Shipping Size	12.4" x 10.25" x 2.75"	32 x 26 x 7 cm
Weight (RAD26 with RPI)	1597 g	3.52 lb

Shipping Information

Case Dimension (Master Pack Dimensions in Pounds/Inches)	Case Qty	6
	Gross Height	16.02
	Gross Depth	15.52
	Gross Width	13.22
	Gross Weight	20.79
Giftbox Dimension (in Pound/Inches)	Gross Height	7.72
	Gross Depth	3.66
	Gross Width	6.34
	Gross Weight	1.1
Individual Product (in Pounds/Inches)	Height	5.87
	Depth	2.124
	Width	4.57
	Weight	0.82
Miscellaneous	What's in the box?	RAD26, Mounting Screws, Installation Tool, User Guide, Safety and Warranty Manual
	Country Of Origin	China
	EAN Code	0694318023112
	SAP SKU	RAD26IMXUK / RAD26IMXEU
	Web URL	http://www.rane.com/hal/rad26.html