



RAD26

2-Channel Input and Output, with Controls and Amplifier for Halogen DSP

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. 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.

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

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, $R_s = 150 \Omega$, Gain = 30 dB
CMRR	-70	max.	dB	$R_s = 150 \Omega$, 1 kHz, Gain = 30 dB
Frequency Response	20-20k	typ.	Hz	+0, -0.5 dB, at all Gain settings
THD + Noise	0.008% typ.	@ 1 kHz, 20 kHz BW, $R_s = 150 \Omega$, Output = -6 dBFS, Gain = 30 dB		
Phantom Power	24	2%	V	10 mA Max, always on in Condenser 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- 20k	typ.	Hz	+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, $R_s = 150 \Omega$, 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	20-20k	typ.	Hz	+0, -0.5 dB, at all Gain settings
THD + Noise	0.008% typ.	@ 1 kHz, 20 kHz BW, $R_s = 150 \Omega$, 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 k Ω
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, $R_s = 150 \Omega$, Output = +4 dBu, RAD26 Input to Output			
Headphone Output (3.5 mm Stereo TRS Switching Connector)				
Maximum Output	130	typ.	mW	per channel, $R_{load} = 32 \Omega$
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	20-20 k	typ.	Hz	+0, -0.5 dB, at all Gain settings
THD + Noise	.02% typ.	@ 1 kHz, 20 kHz BW, Rload = 8 Ω , Output = 1W		

Logic Specs

Logic Inputs	3			Contact closure to ground (2.54 mm Euroblock Terminal)
Internal Pull-up	51.1 k	1%	Ω	5.0V
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	5.0V, 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 = 2.0V
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 CAT5e cable or better, RJ-45 connectors.
Data Output Port	To the RAD26	Shielded CAT5e cable or better, RJ-45 connectors.
Power	24V DC @ 550 mA maximum	
HAL to RAD26 Distance	100 meters / 325 feet total maximum. RPI can be anywhere in between	
Power Requirement	100 to 240V AC	50/60 Hz, 18W 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:	<ol style="list-style-type: none"> 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