

TABLE 2: MEASURED PERFORMANCE.

Parameter	Manufacturer's Rating	Measured Results
Continuous Power Output:	45W RMS $\times$ 2, 20Hz - 20kHz, 8 Ω , both channels driven	39.4W 20Hz, 43.4W 1kHz, 42.9W 20kHz
	60W RMS $\times$ 2, 20Hz - 20kHz, 4 Ω , both channels driven	55W 1kHz
	90W RMS $\times$ 1, 20Hz - 20kHz, 8 Ω (minimum impedance)	98.9W 1kHz
		all at 1% THD
Frequency Response:	5Hz to 100kHz, +0/-3dB	5Hz to 72kHz, -3dB
Total Harmonic Distortion:	<0.07%, 8 Ω full output	0.07% at 43W 8 Ω
	<0.10%, 4 Ω full output	0.10% at 49W 4 Ω
	<0.02% average levels	0.011% maximum at 2W
IMD - CCIF (19 + 20kHz):	<0.05%	0.010% CCIF
MIM (9 + 10.05 + 20kHz):	No spec	0.012% MIM
Dynamic headroom:	1.5dB	-0.58dBW 20Hz 8 Ω
Inter-channel crosstalk:	80dB at 1kHz	-79dB A-wtg
	60dB at 20kHz	-60dB (R-L)
Input Impedance:	33k Ω	20k Ω
Input sensitivity:	600mV	7W 8 Ω at 600mV
	1.5V for full output	45W 8 Ω 2.7% THD
Gain:	N/S	22dBv
Signal to Noise Ratio:	116dB, input shorted, IHF A weighted	Not tested
Power Requirements:	220W at full output, 1W Standby	Not tested
Output Impedance:	N/S	0.11 Ω 1kHz
		0.31 Ω 20kHz

with the frequency peaking in Fig. 1.

A comparison of the measured results and the manufacturer's ratings is shown in Table 2. *aX Reference*

1. "FM Tuners: NAD and Parasound," *audioXpress* 6/02, p. 60.

Manufacturer's Response:

1: In the discussion about the temperature protection tripping with higher-level test signals, this seems at odds with the subjective review's frequent comments about the amp running cool. Perhaps there should be a comment in the objective section about the temperatures when playing real program materials instead of test signals. I'm sure

readers will understand this, but someone viewing a reprint might not be all that sophisticated about audio and electronics.—Gordon Sell, PR for Parasound.

2: It's true the amp will get warm with high power sine wave testing, owing to the heat dissipation limitations of such a small chassis (and the fact that is fully occupied with parts). But it won't overheat with music under 99% of the applications in which it's used.

By the way, with a Zbreeze stacked on it running silently (actually about 27dB), on its lowest speed the Zamp v.3 will output its full rated 4 Ω power 24/7 without a wimper.—Richard Schram, Parasound.

Parasound Zamp V.3 Amplifier

LISTENING CRITIQUE

Reviewed by Duncan, Nancy, and Colin MacArthur

We first played the Parasound Zamp on Colin's computer-based sound system. A few days later when we tried to get the Zamp back, we realized we'd goofed. Returning it wasn't on Colin's agenda.

"Do you have to take it back?" he asked.

"Yes," said Nancy. "Unless you want to write the whole review."

A heavy sigh from the 16-year-old slouched at the breakfast table. "If you insist," he said.

We each reacted differently to the Zamp's plain appearance and tiny size. Colin thought it was small, sleek, and elegant. I thought it was inconspicuous. Nancy insisted that it looked like a component a car thief had pried out of a

dashboard.

In any event, the Zamp is small—very small. It's one thing to read the dimensions on paper and another to unpack this amplifier and hold it in your hands (or hand). Given its size and cool operation, you can tuck it away and not worry about it. Once you've hidden the Zamp, its looks (whether you like them or not) become irrelevant.

USER EXPERIENCE

Parasound packs plenty of features into the half-rack-width Zamp. The front panel, with power switch, indicator lights, and headphone jack, is clean and uncluttered. The same can't be said of the rear panel, which squeezes in six jacks (four RCA for inputs and outputs and a pair of mini-jacks for remote turn-on), three small switches (mono, ground lift, and signal sensing), three variable controls (R and L input level and signal sensing sensitivity), two pairs of "5-way" speaker connections, a fuse holder, and an IEC AC connector (phew). An AC voltage selector switch on the bottom of the Zamp

rounds out the feature set.

While we can see the utility of most of these features for video applications, we used only a few for audio testing. All the features we tested (inputs, outputs, volume controls) worked flawlessly with two minor exceptions. The Zamp ran cool to the touch, didn't exhibit any mechanical noise, and didn't require any particular care or feeding.

To fit all those jacks and controls onto the rear panel, Parasound mounted the output binding posts diagonally very close to the AC input connector. Thus, of the "5-ways," banana plugs work very well, bare wires will work if you're careful (if you have large fingers, try using a 1/2" nut driver), and large spade lugs won't fit. If you plan to change speakers often and will be working in a tight space, we recommend the bananas.

Our only other caution concerns the volume controls, which work perfectly for matching gains between channels and with other amplifiers (as the manufacturer intended). However, their location and small size would cause difficulties if the Zamp were driven

directly from a source with no volume control of its own.

DETAILED LISTENING RESULTS

We auditioned the Zamp using Genesis 400 and Speaker City EFE (reviewed in *aX* 3/06) speaker systems. Following our standard 50-hour break-in period with the EFE speakers, we did most of our serious listening with the Genesis speakers. We compared the Zamp directly with our reference tube integrated amplifier, the Manley Stingray, as well as with an older solid-state Audio Source AMP-1. The Zamp's sound was surprisingly close to that of the Manley. The Zamp was better than the aging AMP-1 in all respects and probably will replace it driving the EFEs in Colin's room.

We auditioned the Zamp using a number of tracks from the *Hi-Fi News and Record Review Disk III* (track 2: Parry's "Jerusalem"; track 4: Vivaldi's trumpet concerto; tracks 5 and 6: excerpts from Prokofiev's "Peter and the Wolf"; track 7: Purcell's "Welcome, Welcome Glorious Morn"; track 10: a Corkhill percussion piece; and track 14: Rio Napo RSS demo), as well as a wide variety of other CDs listed in the appendix. (The CD list was long because we enjoyed every CD we listened to with the Zamp.)

The smoothness and naturalness of the Zamp's midrange was exceptional: clean, sweet, realistic, and musical. These characteristics were especially evident on vocal music of all genres—folk (The Highwaymen, Bob Dylan), country (Charlie Daniels, The Cowboy Junkies), bluegrass (Old and in the Way), blues (Doc and Merle Watson), rock (Jethro Tull), and Romantic (Dvorak). The Zamp also performed admirably with piano (Beethoven) and instrumental music (Prokofiev, Vivaldi, Purcell, Strauss, Tchaikovsky, Old and in the Way, and The Modern Jazz Quartet).

With certain other amplifiers we've auditioned, the horns on the Vivaldi concerto have occasionally made us cringe. With the Zamp, listening to the Vivaldi trumpets was a pleasure.

Another strong feature of the Zamp was its imaging ability. The individual instruments in the Prokofiev and Rio Napo pieces were well defined and spaced precisely across the stage. The

choir in the Parry piece was distributed evenly across the entire back of the stage. The vocals on the Highwaymen and Charlie Daniels recordings were stable, firmly located, and distinct from the instruments (and each other). Note: the Zamp didn't extend the image beyond the speakers on the Rio Napo piece, although between the two speakers it produced an image with good width, depth, and height, as demonstrated by the choir on "Jerusalem" and by the drum kit of the two BROTHER tracks.

Transients, dynamics, and "drive" were the Zamp's third strong suit. The transients on the Corkhill, Rio Napo, and Charlie Daniels pieces sounded crisp and alive. The dynamic range of the massed instruments on the Prokofiev and drums and didgeridoo on the BROTHER selections was impressive. On the faster pieces the rhythm produced by the Zamp could best be described as *toe-tapping*. Two minor caveats: we tend to listen at below-rock-concert levels, and both sets of speakers we used are reasonably efficient [89dB (2.83V, 1M)]. If you listen at louder levels or own a less efficient speaker system, your results may vary.

After hearing about the Zamp's three major strengths, you're probably waiting for the other shoe to drop. Except there wasn't another shoe—perhaps a lightweight slipper or two. The Zamp's low-frequency response was very strong on Prokofiev's drums and tympanis—maybe a bit too strong, as we heard a slight wooliness on instruments such as the bassoon in "Peter and the Wolf." The drums on both BROTHER cuts sounded realistic enough to make us fear for our woofers.

Although our listening room, with its multiple hard surfaces, is unforgiving of any hint of high-end harshness, all recordings sounded clean and natural. Only in comparison with a much more expensive amplifier did the Zamp's highs exhibit a little solid-state graininess. Again, this characteristic was particularly evident at high levels. In addition, the cymbals on the Prokofiev and MJQ pieces lacked that last bit of shimmer.

The ambience recovery of the Zamp was another area in which we disagreed. I thought the hall sound in both the



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Parry and Henry V pieces was exceptional and the sense of air around the instruments and vocals on the Highwaymen recordings was very natural. Nancy thought the ambience recovery was good but said she'd heard better, particularly on the Parry piece.

FINAL THOUGHTS

NM: We seldom write rave reviews. At times manufacturers have accused us of being, er, too picky. Unkind. Less than enthusiastic.

After listening to the Zamp for a few hours, I wanted to jump up and down and shriek "Three hundred bucks? Are you kidding?" If you're in the market for an inexpensive amplifier, run—do not walk—to check out the Parasound Zamp. It's a fabulous value for the money.

CM: None of my friends think of a quality stereo system as a high priority: a \$90 boombox is considered "high-end." In my mind, the Zamp represents the gold standard for a teenager's amplifier. It sounds great and has a form factor acceptable for almost any space. For

me it has become a must have. And the price tag makes it feasible financially. The Zamp's great sound and price make it a steal not only for a teenager but also for anyone in the market for a reasonably priced amplifier.

DM: This part is easy—buy this amplifier.

Of course, I have some caveats. The Zamp is an incredible bargain at \$300, but it isn't perfect. We won't be getting rid of our reference amplifier anytime soon. However, if you're thinking of purchasing a sub-\$1000 amplifier, you should listen to the Zamp. ■

REFERENCE DISCS

Beethoven, Ludwig van. *Piano Sonatas*. Alfred Brendel. Philips 411 470-2.

Beethoven, Ludwig van. *Tripelkonzert. Triple Concerto*. Berliner Philharmoniker. Herbert von Karajan. Deutsche Grammophon 415 276-2.

BROTHER. *This Way Up*. Rhubarb Records RR07CD.

The Charlie Daniels Band. *Fiddle Fire*. Blue Hat Records BLH-9703-2.

Dylan, Bob. *Highway 61 Revisited*. DCC GZS-1021.

Cowboy Junkies. *The Trinity Session*. BMG 8568-2-R.

Dvorak, Antonin. *Stabat Mater*. Prague Philharmonic Choir, Bambini di Praga, Prague Symphony Orchestra. Jiri Belohlavek. Supraphon SU 3311-2 231.

Hi-Fi News and Record Review Disk III. HFN020.

Jethro Tull. *Thick as a Brick*. Mobile Fidelity Sound Lab UDCD 510.

The Highwaymen. *Michael Row the Boat Ashore: The Best of the Highwaymen*. EMI Records 0777-7-96334-2 5.

The Modern Jazz Quartet. *Blues on Bach*. Atlantic 1652-2.

Old and In the Way. *Old and in the Way*. Grateful Dead Productions GDCD40222.

Strauss, Richard. *Also Sprach Zarathustra*. Wiener Philharmoniker. Andre Previn. Telarc CD-80167.

Tchaikovsky, Peter Ilyich. "1812" *Overture*. Cincinnati Symphony Orchestra. Erich Kunzel. Telarc CD-0041.

Watson, Doc and Merle. *Pickin' the Blues*. Analogue Productions CAFPG 026.

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