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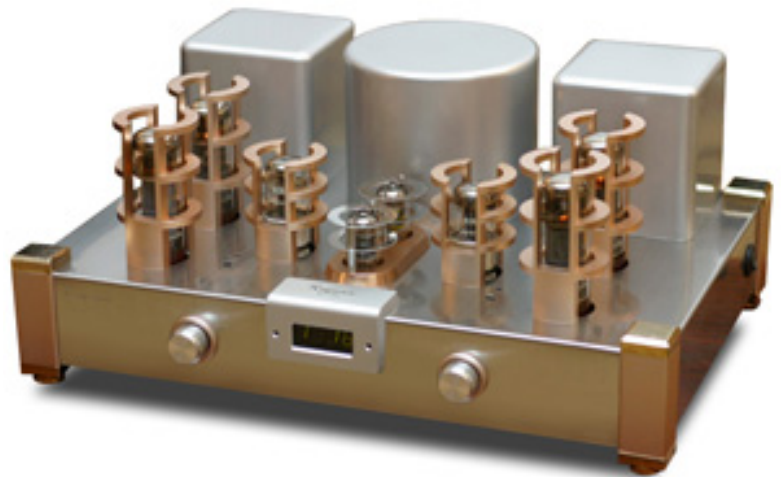
Raysonic SP-100 Integrated Amplifier

by Michael Galvin

Like a growing number of audiophiles, I am partial to the simplicity, as well as the cost and space savings, associated with integrated amps. Over the past several years, various integrations, including solid-state models from Arcam, Audio Refinement, McIntosh, and Musical Fidelity; all-tube units from Rogue Audio, Anthem, and JoLida; and hybrid units from DK Design and JoLida have anchored my audio system. The Raysonic SP-100, therefore, was truly a plug-and-play component for me.

Raysonic is a Toronto-based corporation with manufacturing facilities located in China. The company was founded in 2000, but up until the point I was notified that I would be reviewing the SP-100, I had never heard of the Raysonic brand. This is not to say that I don't keep abreast of industry news, but it is attributable, I think, to the relatively recent influx into North America of a great variety of electronics made in China. There seem to be new Chinese audio products on the market every day.

The specifications of the SP-100 are typical of an integrated in its under-\$2000 price class. The amplifier is an ultralinear, class-AB tube design with a rated output of 40Wpc into a 4- or 8-ohm load. It uses a total of eight tubes: four



Review Summary

Sound "Quiet" and "very natural." "What I presumed would be strengths of an all-tube design, overall coherency and balance, are there, just not as consistently as I expected." The sound "lacked some focus.... Everything was sort of lumped into the middle." "A lot of the immediacy of the music was missing."

EL34s for power output, two 6SN7s as drivers, and two 12AT7 for voltage gain.

The SP-100's manual states that tube biasing can only be performed by a qualified technician and can be done once every 12 months if necessary. My interpretation is that the tubes *should* be biased every 12 months (or, obviously, if you replace a tube) because how would you know it was necessary unless you actually did it? The manual is clearly a translation, and not a great one at that. It is a scant three pages stapled together, which includes a cover page, a specification page, and one page of text. Something more substantial doesn't seem to be too much to ask for the SP-100's \$1799 USD price.

Features "An ultralinear, class-AB tube design with a rated output of 40Wpc into a 4- or 8-ohm load. It uses a total of eight tubes: four EL34s for power output, two 6SN7s as drivers, and two 12AT7 for voltage gain." "The SP-100 features four pairs of unbalanced inputs" and "no line/subwoofer output."

Use "The SP-100's manual states that tube biasing can only be performed by a qualified technician and can be done once every 12 months if necessary. My interpretation is that the tubes *should* be biased every 12 months."

Value "While it may be unfair to compare the \$2995, 150Wpc DK Design VS.1 Reference Mk II to the \$1799, 40Wpc SP-100, the comparison was valuable and revealing. There just wasn't enough about the Raysonic SP-100's sound to encourage me to listen to music with it -- or recommend it."

The SP-100 features four pairs of unbalanced inputs labeled CD, Line, Tuner, and Aux from left to right across the rear. Unfortunately, this naming convention is not carried over to the front of the unit. The selector knob corresponds to the display window, which simply cycles through the numbers 1, 2, 3, and 4. I had three sources connected throughout the review period, and I sometimes forgot which input was which. The remote control helps a little bit because it uses the names instead of the numbers, but the input buttons on the remote are spaced out to form the corners of a square and, from left to right, top to bottom, they read CD, Tuner, Line, and Aux. This may sound like minor stuff, but in the aggregate the inconsistency required me to think a bit more than I wanted to when switching between inputs. The unit has no line/subwoofer out.

The binding posts are the now thankfully ubiquitous clear-plastic WBT-style five-ways. There is a choice of either 4- or 8-ohm connections. They are positioned on the outer edges of the rear panel with the inputs and IEC socket between them. I wish all manufacturers positioned the binding posts in this way. It makes for a much-less-tangled web of cables at the rear. A standard detachable power cord is supplied with the unit.

The appearance of the SP-100 is unique, attributable mostly to the stylized, copper-colored tube protectors. The chassis is stainless steel, which is quite good-looking, having only the slightest sheen to it. There are touches of gold on the unit as well. The combination of silver and gold reminds me of Musical Fidelity gear, a look that never grew on me personally, but this is purely personal taste. The addition of the copper color seems an odd choice to me, especially when it is positioned underneath the gold caps on the squared, column-like edges of the unit. The three large transformers achieve a nice visual symmetry and are housed in an attractive silver metal. The unit weighs in at a substantial 43 pounds and measures 17"L x 13"W x 7 1/2"H.

It is indeed a luxury to have remote-control capability over both volume and input selection for an all-tube integrated amplifier. The remote is a very basic silver plastic affair with very small, rectangular glow-in-the-dark buttons for the individual inputs and volume. The mute button is round and positioned in the center. The unit was not very sensitive to the remote commands and would only read if pointed directly at the amplifier. As the remote did not come with batteries, the batteries I inserted were new, so I know that battery strength was not an issue.

I have a few quibbles with the controls. Even at its lowest, the volume was sometimes louder than I wanted to listen. Similarly, I was a bit frustrated by how coarse the volume levels were; if the display read 3 and I wanted it louder, 4 was too loud. Once, when I answered my phone and attempted to quickly turn the volume down by hand, the control sputtered; if I tried to turn it too fast, it ended up either not reading the rotation at all, reading less than I thought I was turning it, or worst of all, the opposite -- the volume could actually get louder! The input knob responds the same way. Finally, there is somewhat of a delay in the response of the volume control so, for example, after you make a volume adjustment, there is a noticeable, several-second lag before the unit actually reaches that volume level. I had the experience of walking over to the unit, turning the volume up and walking away only to have to walk back and turn it down after the volume reached its level.

The knobs have no beginning and no end, they simply turn round and round so when the unit is off, you neither know how loudly it is turned nor the input selected. This is certainly not unique to Raysonic products, but as the volume control does not return to zero after shutdown, it is something worth remembering. For both volume and input information, you need the green LED display. As there is no control over luminosity, I am happy to report that I found the brightness of the display perfect in both a dark and light room. The control knobs are identical, and their labels are discreetly etched onto the faceplate. The volume is on the left (I actually needed to verify this and, yes, I had it wrong at first) and the input selector is on the right.

Review system

My system consists of a pair of Revel Concerta F12 loudspeakers, a DK Design VS.1 Reference Mk II integrated amplifier, a JoLida JD-100 CD player, a Denon DVD-910 DVD player, and a Shunyata Hydra Model-6 power conditioner. Cables were Shunyata Diamondback power cords, along with Analysis Plus Oval 9 speaker cables and both Solo Crystal Oval and Oval One interconnects.

I knew the Raysonic SP-100 had some big shoes to fill as I lifted the DK Design VS.1 Reference Mk II from the top position of my rack. I connected the SP-100 and flipped on the power. The tubes came to life, and I started to play Arcade Fire's *Funeral* [Merge Records MRG255]. I walked away to go read in another room. I was assured that the amplifier had already been broken in, but I thought it wise to let it play for a bit before listening.

Sound

I returned to my living room after an hour or so and the Arcade Fire CD had already finished playing. I

was going to restart it, but instead I put on *Ray!: Original Motion Picture Soundtrack* [Atlantic/WEA 76540]. One of my favorite scenes from the film is the recording session for "Night Time Is the Right Time," in which the woman Ray was having an affair with sings her solo with surprising intensity. I was eager to hear it again, so I immediately jumped to that track. The female soloist appears about 90 seconds into the song. Via the SP-100, her entrance lacked most of the ferocity portrayed in the film. The piano and percussion are up-front on this track, to the point that the backing vocal is suggested rather than articulated. Ray's vocals are much more natural-sounding, as, at times, they find the right balance with the rest of the mix. The song as a whole lacked some focus, as I could not place instruments or the location of Ray. Everything was sort of lumped into the middle.

Most noticeably, the SP-100 did not portray depth on this track. "Georgia On My Mind" fares better, as some of the quiet passages in the song reveal how quiet the SP-100 is. The presence of the quiet background is apparent when Ray Charles holds the word "mind" toward the end of the song. It is nice to hear his voice fill the room. In addition, what I presumed would be strengths of an all-tube design, overall coherency and balance, are there, just not as consistently as I expected.

I returned to the Arcade Fire album and jumped to "Crown of Love." This song features a prominent bass line throughout. The SP-100 was a bit reticent, allowing me to hear the bass but not *feel* it. This is not to say that the SP-100 does not have decent low-frequency ability; in fact, it very much does. It is better than what you might expect for its design and power specification. Luckily, bass is not all there is to the song. There are also some strings, which are nicely layered into the background. There is not much dimension or precision to them through the SP-100, however, but they sound very natural. Later on, there is a background vocal that is similarly pleasant. The focus of the track is the lead vocal, which builds as the track continues and the pace quickens. Later,

A second system, a second opinion

Sweet, spacious, and silent describe the sound of the gorgeous Raysonic SP-100. Using EL34 tubes in an ultralinear output stage, the SP-100 was a decidedly synergistic match for my 102dB-sensitive Second ReTHM speakers. The speakers' high sensitivity makes them a great noise detector, but the SP-100 rose to the challenge, proving to be as silent as interstellar space. It's easily the quietest integrated amp, tube or solid state, I've used. The music emerged from an eerily silent background. I like that.

EL34 tubes are prized for their sweet midrange, and with the SP-100, they more than lived up to their reputation. Voices and instruments exhibited superb timbral accuracy, sounding spookily realistic. When I cued up Eva Cassidy's CD *Songbird* [Blix Street Records G2-10045], I intended to play only a couple of tracks. But I couldn't bring myself to bypass any of them, and wound up listening to the whole CD. Other CDs showed a similar phenomenon -- extreme reluctance to skip a single track. Raysonic's promotional literature describes the SP-100's bass as "powerful yet tame." While that choice of words may be amusing, it's not totally goofy. The bass is very powerful, yet well controlled. The SP-100 doesn't go as low as some integrations I've auditioned (or the Manley Mahi power amps), but there is a lot of bass weight and impact. Highs sounded a little subdued, but replacing the rather ordinary-looking stock power cord with an aftermarket cord from Blue Marble Audio restored some of the missing treble energy.

Although it doesn't present music with the same sort of soundstaging as a SET amplifier, the SP-100 depicted the spatial aspects of the recording environment

the strings become more prominent and at that point, they do have some dimension. As the song races to the end, there is a bit of congestion; the SP-100 is not very successful at sorting through all the different instruments. The sound does not fill the room, and the rapidity of the strings again lacks definition, as the sound bunches up in the middle of the stage.

One of my favorites of the past several years is Blonde Redhead's *Misery Is a Butterfly* [4AD CAD2409CD]. Although the band's earlier albums were compared to Sonic Youth's, their sound has evolved to the point that *Misery Is a Butterfly* is unlike any record of recent memory.

"Elephant Woman" features some bongo drum, and the Raysonic SP-100 portrayed its sound as very flat and almost dry, very much like what my experience has been hearing the instrument live. The band alternates between both a male and female vocalist, depending upon the song, and both voices are very distinctive. The brush work on the cymbals of "Messenger" is very distinct, but through the SP-100, the sound was a bit muted. The Raysonic integrated also exhibited its limited control over the speakers when the production got particularly dense, such as with many of the later songs on the album. This was frustrating because when there were a vocal and some strings, such as on "Doll Is Mine" and "Fallen Man," the SP-100 was very easy to listen to, even if not especially riveting. The vocals lacked focus and were less room-filling, the instruments lacked incisiveness, and the transitions, stops, and starts of guitar, snare drum, and synthesizer were all less pronounced. As a result, a lot of the immediacy of the music was missing.

Perhaps if my musical tastes were more akin to stripped-down arrangements instead of the more densely produced material I tend to listen to, I might have enjoyed the SP-100 more. A CD that worked well with the Raysonic integrated was Bright Eyes' *Lifted or The Story Is in the Soil, Keep Your Ear to the Ground* [Saddle Creek LBJ-46]. Much of this CD is centered on the lead vocal and has mostly simple guitar and percussion arrangements, and the SP-100 conveyed the music well.

Comparison

particularly well. On the title work from The Tallis Scholars' *Allegrì Miserere* [Gimell 454 939-2], the separate solo choral group was clearly located some distance behind the main choir. The voices sounded especially pure, as though a layer of grunge had been removed. Dynamics, both macro and micro, were excellent; as a result, the SP-100 infused music with excitement and life.

A nit to pick: The EL34 tubes are not self-biasing nor can the user adjust the bias. That means a trip to the dealer or a technician when you want the tubes replaced, or just checked. Tube rolling (trying tubes from different manufacturers), a favorite pastime of tube enthusiasts, would therefore be expensive.

In my system, the Raysonic SP-100 sounded as musical as any integrated amp I've tried. Everything I played through it sounded engrossing and exciting. During most listening sessions, my head was bobbing and my body was swaying in time to the music, making it hard to write notes! I can't fully explain why, but the Raysonic SP-100 was, for me, a very emotionally involving component. It just made listening to music a meaningful activity -- and fun.

...Vade Forrester
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The DK Design VS.1 Reference Mk II (\$2995), a hybrid integrated amplifier featuring a tube preamp stage and a solid-state power amp, is the current integrated in my system. It is also a *SoundStage! Reviewers' Choice*. I greatly prefer the control and precision of the VS.1 Reference Mk II to the overall pleasantness and limited dynamic abilities of the SP-100. The presentation of the two units is very different, the VS.1 Reference Mk II offering soundstage width and depth that the SP-100 cannot match as well as a uniquely bold, room-filling sound. The VS.1 Reference Mk II anchors both instrument and voice with a degree of precision and specificity that the SP-100 consistently lacks. Most significantly, the SP-100 just can't match the high-frequency clarity or extension of the VS.1 Reference Mk II, and this was a recurring theme throughout the review. As a result, the music just didn't involve me to the degree to which I have grown accustomed.

When the smaller details of the music are glossed over, the music fades into the background for me. Thus, I had to make a conscious decision to sit on my couch and just listen with the SP-100 in my system. Had I not been reviewing the unit, I doubt I would have spent much time in front of it. In the end, it just didn't captivate me and even when listening to some of my favorite music, I was easily distracted by other things, which rarely happens when listening to the VS.1 Reference Mk II. While the SP-100 did not exhibit the stranglehold control over my speakers that the VS.1 Reference Mk II did, the SP-100 had no trouble driving my 90.5dB, 6-ohm speakers to loud levels, so power output was not an issue.

Conclusion

The Raysonic SP-100 offers a degree of convenience that most all-tube integrations still lack with the inclusion of a full-function remote control. It makes a unique visual statement, and is a very nice surprise both in the amount and quality of the bass response it reproduces. However, if only the SP-100 did not lose its ability to portray nuance when the music grew more complicated, I think I would have enjoyed it more.

As it was, I had a difficult time finding the SP-100's strengths, at least in terms of the music I played. While it may be unfair to compare the \$2995, 150Wpc DK Design VS.1 Reference Mk II to the \$1799, 40Wpc SP-100, the comparison was valuable and revealing. There just wasn't enough about the Raysonic SP-100's sound to encourage me to listen to music with it -- or recommend it.

...*Michael Galvin*

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Raysonic SP-100 Integrated Amplifier

Price: \$1799 USD.

Warranty: Two years parts and labor, 60 days on tubes.

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