

KEN KESSLER

Rotel RSX-965 A/V Receiver



Rotel's RSX-965 A/V receiver competes in the home theater end of audio—still a relatively new genre and therefore especially sensitive to price. The nonenthusiast shopping for an A/V receiver is not yet ready to automatically factor in the cost of three added channels of amplification, a surround-sound processor, and video inputs and switching. What was once a two-channel, \$500 purchase is now thrice as complex and twice as costly.

Keep this in mind as you marvel at how Rotel juggles the two sides of its own oft-conflicting image. On the one hand, it's an Asian manufacturer large enough that it must compete with the likes of Sony or Yamaha; on the other, global perception of Rotel is that it's a specialist-cum-audiophile company that must also compete with Denon, Lux, Marantz, and other audiophile-

friendly Far Eastern brands as well as mid-price U.S. and European makes such as Acurus, B&K, NAD, Arcam, and others. You can see where this might give Rotel a split personality.

Let's compound it even further. America is not awash with consumers spending

\$100k-plus on their own private cinemas; the real spread of home theater is *wa-a-a-y* down-market. You know the drill: 27-inch TVs with built-in surround sound and a quintet of nasty little speakers not worth having in one's car. This makes the Rotel RSX-965 receiver, at \$1,199, seem costly to the very (novice) customers who should be adding it to their lists.

But we know otherwise: A buck shy of \$1,200 is not a lot to pay for an AM/FM tuner, a preamp/control section with Dolby Digital and DTS, and five channels of amplification delivering a real 70 watts apiece. You want remote control? Rotel threw in a universal remote, pre-loaded with codes for even the competition: Pioneer DVD players, Panasonic TVs, Sony VCRs, and hundreds of other products from Mission, Arcam, Denon, Magnavox, Yamaha, Sears—the list is as long as you'd find with a One-For-All. Quite rightly, though, the only amplifiers this remote operates come from Rotel.

Big deal, you might be thinking, there are loads of Dolby Digital and DTS A/V receivers with 5 x 70 watts. But that would be forgetting something: Although its price tag and receiver topology put this all-in-one unit firmly in the camp of the casual buyer, Rotel has spiced it up with some serious audiophile and videophile touches that show careful, judicious compromise. Best of all, it actually *sounds* like something you'd want to own.

Take, for example, the video inputs. The RSX-965 has five of them; I can name more than one \$4,000-plus, stand-alone A/V processor that doesn't. Better still, each and every one of them has composite and S-video jacks. Another nicety is the inclusion of a DB-25 input to accommodate an outboard multichannel processor, thus future-proofing the Rotel against any forthcoming technologies its on-board D/A converters or surround decoders might not be able to handle. (There's also a DB-25 output, should you wish to use an outboard multichannel amp.) With four digital inputs (two optical, two coax), a preamp output for adding external amplifiers, and record/playback from two tape decks, its facilities should cause you to rethink the argument that receivers automatically limit your choices.

ROTEL

Rated Power: 75 watts per channel into 8 ohms, all five channels driven, 20 Hz to 20 kHz at 0.09% THD + N.

Dimensions: 17½ in. W x 6½ in. H x 15½ in. D (45 cm x 15.8 cm x 40 cm).

Weight: 33 lbs. (15 kg).

Price: \$1,199.

Company Address: 54 Concord St., North Reading, Mass. 01864; 978/664-3820; www.rotel.com.

Then we bump into the other half of Rotel's split personality. Although clearly aimed at burgeoning A/V enthusiasts, the RSX-965 lacks component-video inputs, because of cost considerations and because Rotel feels that component video is still rare and that customers who have \$30,000+ projectors with such inputs wouldn't pipe their video through a receiver anyway. It also lacks an RF input for accessing Dolby Digital from laserdiscs, another case of Rotel's product managers weighing image against reality: A videophile with an extensive laserdisc library is probably way beyond the A/V receiver stage.

When you get to the analog side of things, you hit more delicious confusion. Here we have a receiver very much of the late 1990s, as digital/home theater-y as it gets, and yet Rotel saw fit to include a phono stage. The RSX-965 accepts moving-magnet and high-output moving-coil cartridges, worked just fine with a Thorens TD-160 and an Audio-Technica MC cartridge, and should do justice to all manner of phono setups in the \$300-to-\$1,000 bracket. But, you ask, doesn't a phono section suggest a user of a certain age or type? It seems that Rotel is fully prepared to embrace the MTV generation without *dissing* that generation's forebears or the audiophiles-on-a-budget who helped to establish the brand's enviable credibility in the 1980s.

The RSX-965's wattage is more than adequate for driving serious, power-hungry speakers. But how many receiver buyers invest in speakers like that? I suspect that most RSX-965s will wind up driving high-efficiency, midpriced speakers. So I assessed the Rotel both with budget speakers and with the kind of speakers not usually sold with receivers, picking source components (an entry-level Pioneer DV-414 DVD player and its more illustrious sibling, the DVL-919 LD/DVD combi player) to match each scenario. My speaker choices included those delicious but inexpensive Optimus PRO LX5s and Tannoy's R1s, as well as Sonus Faber Concertinos and a quintet of Apogee Ribbon Monitors and LCRs, with and without Ruark's hot new Log-Rhythm sub-

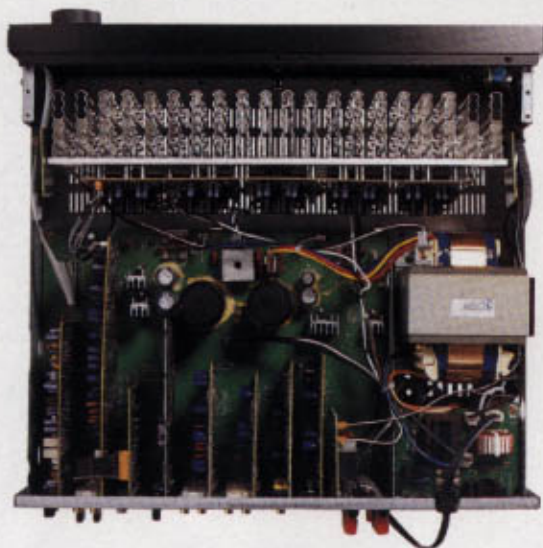
woofer. Cables throughout were Kimber, but I eschewed costly accessories. In these tests, I tried to think like a dealer, creating systems for the arbitrary price points that are so important in price-sensitive markets like home theater. So the RSX could serve as the heart of a starter package, with a low-end DVD player for a source and five cheapish speakers, for just under \$2,000—but its natural environment would be a system costing closer to \$4,000 (with, say, a

justable defaults for certain surround modes (e.g., you can't set it for a phantom center channel in DTS mode) and that you can enter a tuner frequency directly off the numeric key pad, assign names to the sources, and perform a host of other secondary operations. Learning all this required expending a small amount of patience on reading the manual. (Try that yourself; it may save your dealer's sanity.)

All the controls on the remote are duplicated on the Rotel's front panel, which (typically for this kind of beast) is filled right out to its edges. (Also typically for A/V receivers, the RSX-965 is massive, and you'll need a shelf able to support its 33 pounds.) The factory-default settings covered my installation perfectly, but I did have to use the on-screen menus when I changed from "Large" to "Small" speakers, when I removed the subwoofer, and when I tried the system without a center-channel speaker to assess the Rotel's phantom-center performance. (That phantom channel, by the way, was better than it had any right to be. So, if you are on a tight budget and will not be needing DTS for a while, use the Rotel with just four speakers and save the cost of a center speaker until your funds allow.)

I encountered few surprises with the tuner section, its direct access and 30 presets making it an ideal device for those who can suffer radio. Once I'd checked the FM sound with a few live broadcasts and decided that it was as good as I'd ever need, I concentrated on two-channel music CDs and video via DVD.

Nothing, not even orders from on high, will force me to listen to bogus DSP modes. Alas, even a mildly purist firm like Rotel was forced to follow the customary path of including synthetic ambience modes for customers who demand it, so the company opted for a Crystal 4926 processor to endow this receiver with "enhancements." Listen up, guys: Whether you're playing a CD recorded in Carnegie Hall or enjoying a taxi careering across Times Square, *the correct ambience is in the recording*. And if you're listening to a disc recorded entirely in a studio, rest assured that the artist and the pro-



The Rotel's facilities should make you stop thinking receivers limit your choices.

\$500-to-\$700 DVD player and \$2,000+ for five speakers).

Connecting the associated hardware was a breeze, but setting up the receiver wasn't: Rotel clearly chose to distance itself from no-brainer A/V by making the RSX-965's settings wholly customizable. Again, that strange dichotomy: A receiver, by its very nature, is aimed at those who'd rather not tweak, tune, fiddle, or potchke around, yet the RSX-965 positively encourages it. As with most home theater gear above the level of surround sound TVs, the Rotel demands a thorough study of its owner's manual. I found out that there are nonad-

TEST RESULTS

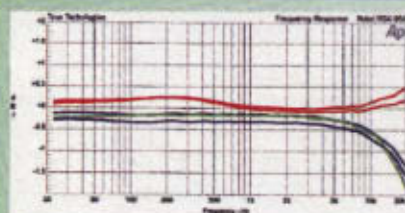


Fig. 1—Frequency response of five main channels (red, left and right front; green, center; blue, left and right surround).

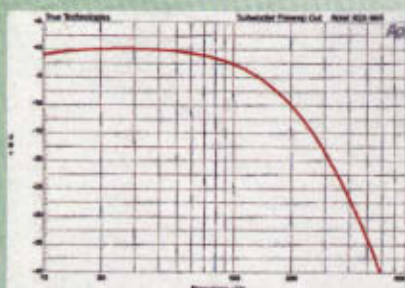
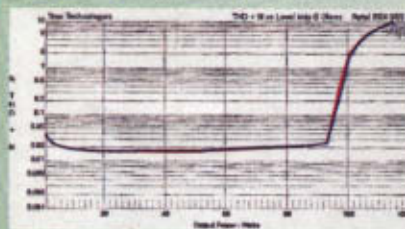


Fig. 2—Subwoofer output response.



A

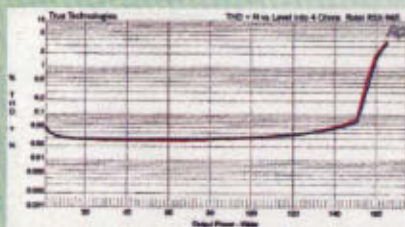


Fig. 3—THD + N vs. level, left (red) and right (blue) front channels, into 8 ohms (A) and 4 ohms (B).

True Technologies' tests of the RSX-965 demonstrate consistently fine performance. Frequency response of the five main channels (Fig. 1) is mostly quite flat. The front left and right channels (red) are within ± 0.3 dB, although the approximately 0.3-dB depression of the three octaves in the low and mid-treble relative to the lower-midrange and bass might make the Rotel's sound a touch mellower

than that of an amp or receiver with perfectly flat response. From the shape of those curves, and their difference from the surround- and center-channel responses (blue and green, respectively), I'd guess that the deviation is caused by the tone-control circuit, which applies only to the front left and right.

The center- and surround-channel responses are extremely flat up to about 3 kHz, rolling off gently from there to a little more than -1 dB at 20 kHz. The rolloff looks sharper than it really is because of the graph's expanded vertical scale and, since it is restricted almost entirely to the top two octaves, will probably be inaudible on most material (especially in the surrounds). In the center channel, it might actually be somewhat beneficial with typically aggressive movie soundtracks. The low-pass characteristic of the subwoofer crossover (Fig. 2) should work quite well in most systems; its steep, 24-dB/octave filter slope is particularly noteworthy in a receiver.

The RSX-965 easily met its 8-ohm power rating, and as can be seen from Fig. 3A, total harmonic distortion plus noise (THD + N) is very low from under a milliwatt right up to clipping. Same is true for 4-ohm loads (Fig. 3B), the only appreciable difference being that the overload point moves up about 2 dB (55 watts). Many separate power amps don't do as

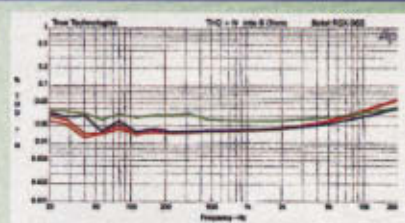
MEASURED DATA

Output at Clipping, 1 kHz into 8 Ohms: 79 watts (19 dBW)/channel, all channels driven; 119 watts (20.8 dBW), one channel driven.

Dynamic Power at 1 kHz, Stereo Mode: 117 watts (20.7 dBW)/channel into 8 ohms and 184 watts (22.6 dBW)/channel into 4 ohms.

Noise, A-Weighted, Dolby Digital Mode: -68.7 dBW.

Subwoofer Output Response: 10 to 65 Hz, +1, -0 dB, -3 dB at 110 Hz, 24-dB/octave slope above 200 Hz.



A

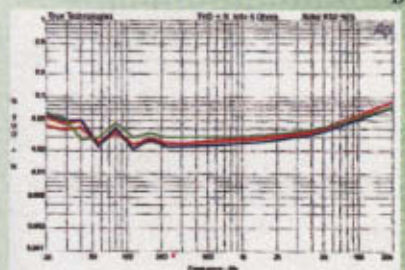


Fig. 4—THD + N vs. frequency at 10 watts (red), 50 watts (blue), and 89 watts (green) into 8 ohms (A) and at 10 watts (red), 50 watts (blue), and 105 watts (green) into 4 ohms (B).

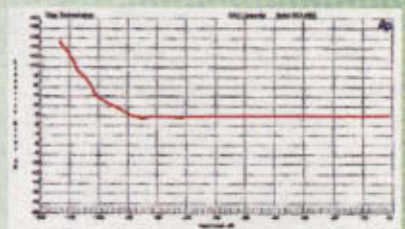


Fig. 5—D/A converter linearity.

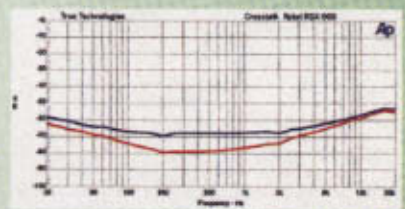


Fig. 6—Crosstalk vs. frequency, stereo mode.

well. And as Fig. 4 shows, distortion is low across the full audio band, not just at 1 kHz. All in all, you couldn't ask for better behavior from an amplifier.

D/A converter linearity (Fig. 5) is good, though not exceptional in any way. There is, in fact, no measurement one could quibble much about. A nice, clean, conservatively rated A/V receiver in the modern Rotel tradition.—Michael Riggs

ducer would have added any effects if they wanted them. (End of rant.)

Still, there was much to assess. Despite the inclusion of all that A/V-related circuitry, Rotel somehow managed to make the receiver sound—when used in two-channel mode—like one of the company's "modern classic" integrated amps. I'm currently on a rural blues binge, everything from Charley Patton to Eric Bibb, crackly mono on 78s to cutting-edge audiophilia, so I was concerned primarily with how the Rotel handled voice. (Note for my tombstone: It should read, "He Lived for the Midrange.")

Few would argue that there's much variance between one smoky vocal and another, or that there's a whole lot to work with when listening to a session recorded 63 years ago in a Texas hotel room. But the ability to retain small details, to keep alive those nuances, is precisely what enables you to hear the difference between Robert Johnson and Tommy Johnson. Rotel adhered to the high-end gospel by opting for warmth and naturalness—quite a trick when a lust for detail can often strip a sound of the harmonics that add humanity.

Mobile Fidelity's gilded transfer of Sonny Terry and Brownie McGhee's classic *Sonny & Brownie* (UDCD 01-00641) allowed me to thrill to Terry's whoops, to the sound of every reed in his Hohner, underscored by McGhee's near-Darth Vader intonation. Better still was the rolling piano—can we agree that this is probably the toughest instrument to reproduce?—on "You Bring Out the Boogie in Me." I was tapping to it even when the speakers I'd hooked up were just the tiny PRO LX5s, minus the help of a subwoofer.

Then, as Hyde to the two-channel Jekyll, I spun my current DVD raves, each possessing some magic moment that provides instant insights. Fave flames and explosions? No question: *Vampires*, that underrated John Carpenter masterpiece. In Dolby Digital mode, the Rotel exhibited no breakup down below and excelled in reproducing the sonic trails of debris flying across the room in one spoof-horror scene.

Bass-buster? Cruddy film, but *Godzilla* matches *Jurassic Park* for footfalls, and the latter is yet to reach DVD. This was especially handy for assessing the transition



from main speakers to sub; once I figured out the Ruark subwoofer's settings, it was smooth and seamless. Stinker though it is, *Godzilla* (in the scene where the good guys shoot their own submarine) features an explosion that's my runner-up to those in *Vampires*.

Although I have but five DTS DVDs, one is *Dante's Peak*, ideal for challenging the lower registers and stretching an amp's dynamic constraints. While 70 watts x 5 might not seem a lot, it more than satisfied me in a 14- x 22-foot room, the film's major volcanic eruption giving the Ruark a workout. Impressive, too, was the seamless DTS decoding, the RSX-965 never suffering a single glitch.

**The transition was
faultless, impressing
through subtlety
rather than
sheer force.**

But, as luck and Rotel would have it, the two most revealing DVDs were *not* 5.1 offerings per se. Although remastered as a 5.1 disc, the new edition of *Fiddler on the Roof* is so subtle in its use of surround that I ran the Rotel's on-board test tones twice to make sure all was well. I A/B'd the DVD with the soundtrack CD, and the former stomped it. Topol's voice, Stern's fiddling, the cackles of the numerous hens—it's as if they were *in the room*. Topol's sigh of an "oy" in "If I Were a Rich Man" crossed way down into the sub without a hiccup; at the other end, the violin soared while never screeching.

But for me, the Rotel experience was clinched by—of all things—a DVD in Dolby Surround, not 5.1. Then again, *Big Night* is the greatest film ever made, so its two channels are better than any one else's 5.1. At least, it is if you love Italians, Italian food, Louis Prima's voice, '50s style, Minnie Driver, Stanley Tucci, and—best for last—Isabella Rossellini. Sure, that's my recipe for heaven, but the Rotel did something that convinced me of its greatness. In the scene where a small record player is spinning a Prima 78 of "Buona Sera," the sound moves from the limited bandwidth and stage-right placement of a 78-rpm record player to the full sound of the original master tape as the camera moves back to take in the whole room and that tape becomes the soundtrack. The transition was faultless, dazzling in a way that impresses through subtlety rather than by sheer force. And that, for me, says it all.

What's more, the RSX-965 managed all this for far less than I had expected in a home theater market that deems \$2,000+ as the minimum you must spend for a decent-sounding A/V receiver. Rotel has cooked up a receiver far more worthy than its price suggests; its one or two minor omissions, such as its lack of component video, worry me not a lot. If anything about the sound reveals the RSX-965's "receiverness," it has to be a slight lack of punch, related more to power than dynamic capability. But then, this Rotel isn't aimed at headbangers: It's designed for those who want to marry the A with the V. Feed it some visuals, and it's good enough for all but those blessed with a room measured in acres. Switch off the TV, and it's one hell of a purist audio amplifier.

If this is split personality, then call me "satisfied." Both of me. **A**