

# Rotel

## RSX-1065 Digital Surround Receiver



**R**otel's top-of-the-line A/V receiver, the RSX-1065, is an imposing device in several ways. At 7½ inches in height, it's taller than most other receivers we've tested recently, and the strong vertical impression is reinforced by the heat-sink fins at either side of the control panel. Inside, the design is equally striking. Through the top-panel vents you can see the centrally mounted power transformer, a toroidal device that provides several benefits, not least of which is reduced size and weight without compromises in output power. Despite its overall size, the Rotel isn't as heavy or as difficult to move around as other receivers of its power rating.

The ample power rating doesn't tell the whole story, however. Although it has only five amplified channels, the RSX-1065 does perform 6.1-channel decoding of

Dolby Digital Surround EX and DTS-ES Matrix and Discrete soundtracks — the decoded back surround signal goes to two line-level outputs on the rear panel. For 6.1-channel playback, you'll need to connect these outputs to an external power amplifier, or the power-amplifier stage of a stereo integrated amp or receiver, feeding one (6.1-channel) or two ("7.1-channel") back surround speakers.

Other surround sound features include DTS Neo:6 and Dolby Pro Logic II (DPL II) processing as well as four digital signal processing (DSP) ambience modes, labeled simply Music 1 through Music 4 (what? no Stadium?). Rotel recommends leaving DPL II on for everything except 5.1/6.1-channel programs.

When you start hooking up the receiver, you'll run into a side benefit of its unusual height — the rear panel is relatively spa-

acious, with no crowding of the connectors. Especially noteworthy: the speaker binding posts get their own strip of space along the bottom of the panel instead of being crammed into the usual finger-pinching, short-circuit-promoting cluster. This makes speaker hookup extremely easy if you use anything but banana plugs. Unfortunately,

### fast facts

**RATED POWER** 100 W x 5 into 8 ohms from 20 Hz to 20 kHz with less than 0.05% THD, all channels driven

**DIMENSIONS** 17½ inches wide, 7½ inches high, 15¾ inches deep

**WEIGHT** 48 pounds

**PRICE** \$1,999

**MANUFACTURER** Rotel of America, Dept. S&V, 54 Concord St., North Reading, MA 01864-2699; www.rotel.com; 978-664-3820



the posts don't have perpendicular holes to accept bare wires or pin connectors, making these less reliable than other types of connections.

Setting up the receiver's adjustable parameters was as simple as hooking it up to source components and speakers. You have the normal choice of speaker "size" for all channels, even for the back surround(s), which participate fully in any bass management. You also get a nice selection of subwoofer-output crossover frequencies (40, 60, 80, 100, or 120 Hz) and the option of turning off the low-pass filter on the subwoofer output altogether so it supplies a full-bandwidth signal (the main-channel high-pass filters are set to 100 Hz if you choose this option). Depending on your room, where you put your subwoofer, and the characteristics of the subwoofer's own low-pass filter, this option may make it easier to get a smooth blend between the subwoofer and the main-channel speakers.

The setup task was immeasurably aided by the well-designed onscreen menus, Rotel's unusually well-written user's manual,

and the universal programmable remote control, which features backlighting and hides controls for other components behind a slide-down panel. The manual takes pains to explain how the receiver works and why certain options should (or should not) be chosen. There are two paragraphs on the power switch alone! It fails, however, to mention the fine details of Dolby Pro Logic II operation (the receiver provides Cinema, Music, and Emulation modes, with the Music mode getting three adjustable parameters: Panorama, Dimension, and Center Width). And there was no mention at all of DTS Neo:6 (this feature was apparently added at the last minute). The manual also tends to over use the phrase "as a general rule."

As a general rule, then, I liked the RSX-1065. Its decoding of Dolby Digital and DTS soundtracks was excellent, and it cleanly and clearly delivered complex power punches, as in the last half hour of the first disc of *Pearl Harbor* or, for a completely different kind of cinematic frenzy, the first half hour or so of *Moulin Rouge*. The RSX-1065 had deeper power reserves than we usually find with 100-watt-per-channel A/V receivers, and it could deliver the full rated power, and then some, to all five channels at once, which is very unusual. Even the faded dialogue from the nicely remastered *Star Trek: The Motion Picture* ("Dammit Bones, I need you, badly!") was robust, while the sound effects and Jerry Goldsmith's outstanding musical score came across with nearly recorded-yesterday impact and clarity.

Multichannel recordings on the new high-resolution media, Super Audio CD (SACD) and DVD-Audio, also sounded fine — the receiver's ample power capabil-



The Rotel faithfully decoded the faded dialogue of the Enterprise crew from the DVD of *Star Trek: The Motion Picture*.

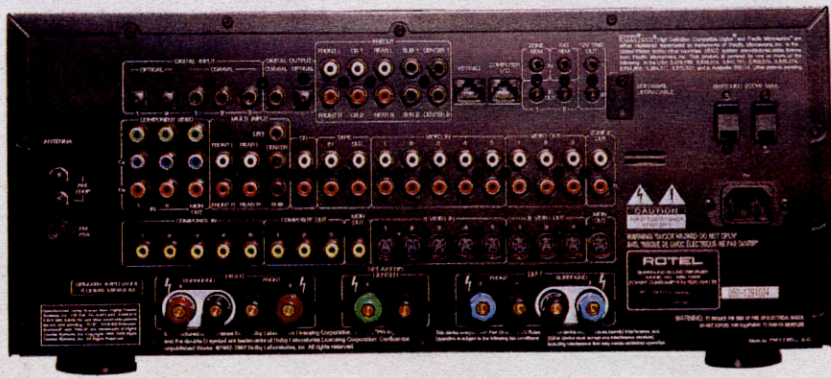
ities again proved their worth — except for a slight touch of added noise in the very quietest passages (see "in the lab"). Noise was also the limiting factor with so-called 20-bit CDs, which can, in theory, have background noise almost as low as SACD or DVD-Audio discs. For most listeners, who'll use volume-control settings lower than we do in our stress tests, and with almost all program material, the noise won't be noticeable. Like most current receivers, the RSX-1065 provides no bass management for its multichannel analog input, which could be a problem with some discs if you have small main-channel speakers.

Once I turned down the surround speakers a bit from their calibrated multichannel-balance settings — which you can do easily from the remote without having to turn on a TV to access the setup menus — the Music 1 through 4 ambience modes proved to be somewhat tame, which is good since they are otherwise not adjustable. DPL II was more useful than any of these modes, however, and it also scored over DTS Neo:6 by not producing any strange distortion effects on simple musical signals (a problem with Neo:6 that we've also noticed in previous tests of receivers offering both types of processing).

If the receiver had to be "stuck" in one

## key features

- Dolby Digital Surround EX and DTS-ES Matrix/Discrete decoding for 5.1/6.1-channel soundtracks
- Dolby Pro Logic II and DTS Neo:6 processing for 5.1-channel playback from stereo and Dolby Surround sources
- 2 optical, 3 coaxial digital audio inputs; 1 optical, 1 coaxial output
- 2 wideband component-video inputs, 1 output
- 5 A/V inputs and 4 outputs, all with S-video
- 2 analog audio-only inputs; 1 record output
- 7-channel analog audio input and preamp-out jacks
- Banana-plug-compatible, multiway binding posts for all speaker outputs
- 2 line-level outputs for back surround signal(s)
- AM/FM tuner with 30 presets
- Multiroom stereo audio output
- Universal/programmable backlit infrared system remote control can operate up to 9 components
- RJ-45 serial ports to operate receiver via computer or Rotel AV keypad



**Authorized Dealers**

- AK- Alaska A/V, Juneau • Shimek's Audio, Anchorage.
- AL- Cohen's Electronics, Montgomery • Hooper's, Birmingham • Kincaid's TV, Tuscaloosa.
- AR- Custom Audio Video, Little Rock.
- AZ- Jerry's Audio Video, Phoenix, Scottsdale • The Specialists, Tucson • Ultimate Electronics, Glendale, Phoenix Metro Area.
- CA- Access to Music, San Rafael • Accurate A/V, S. Lake Tahoe • Ahead Stereo, Los Angeles • Audio Concepts, Long Beach, San Gabriel • Audio Video City, San Luis Obispo, Santa Maria • Boots Camera, Fresno • Century TV, Garden Grove • CH Automation & Theater, West LA • Convoy A/V, San Diego • Creative Stereo, Santa Barbara • David Rutledge Audio, Palm Desert • Digital Ear, Justin • Discount Sales, Ontario • Magnolia HiFi, Santa Clara, San Ramon • Paradyme, Sacramento • Performance Audio, San Francisco • Shelley's Stereo Video, Woodland Hills • Systems Design, Redondo Beach • CD Soundtrack, Denver & Suburbs, Boulder, Ft. Collins, Colorado Springs • Advantage Sight & Sound, Monterey • Pro Home Systems, Grand Junction • Summit Electronics, Frisco.
- CT- Audio Etc., Orange • Carstons Stereo/Video, Danbury • Roberts Audio Video, New London • The Sound Room, Westport • Stereo Shop, Hartford • Westfair TV, Fairfield.
- DC & Washington Suburbs- Myer-Emco.
- DE- Hi Fi House, Wilmington.
- FL- Absolute Sound, Winter Park • Audio Center, Deerfield Beach • The Audiohouse, Vero Beach • A/V in Paradise, Key West • AVC Home Theater, Clearwater • Bob's TV, Ocala area • Hoyt Stereo, Jacksonville • Sound Components, Coral Gables • Seagull Electronics, Juno Beach • Sound Ideas, Gainesville • Sound Insights, Ft. Pierce • Stereotypes, Daytona Beach.
- GA- Georgia Home Theater, Atlanta • Audio Warehouse, Savannah • Evolution Home Theater, Atlanta • Ken's Stereo, Macon • Merit TV, Columbus • Stereo Connections, Valdosta • Stereo Shop, Martinez.
- HI- Honolulu Home Theater, Honolulu.
- IA- Ultimate Electronics, Cedar Rapids, Davenport, Des Moines • Archer Audio Video, Ft. Dodge • Audio Visions, Sioux City • Hawkeye Audio, Iowa City, Cedar Falls • Renier's, Dubuque • Sound World, Mason City.
- ID- Ultimate Electronics, Boise.
- IL- Barretts Home Theater, Bloomington, W. Dundee, Aurora • Good Vibes, Bloomington, Champaign • Jon's Home Ctr., Quincy • Music in Motion, Chicago Heights & Crestwood • Sound Forum, Crystal Lake • State Line Satellite, Rockford • Sterling Electronics, Sterling • Sundown A/V, Springfield • The Shoppe, Bradley.
- IN- Classic Stereo, Ft. Wayne, Mishawaka • Kings Great Buys, Evansville • Ovation Audio, Clarksville, Indianapolis, Lafayette.
- KS- Accent Sound, Overland Park • Advance Audio, Wichita • Audio Junction, Manhattan.
- KY- King's Great Buys, Owensboro • Ovation Audio, Lexington, Louisville • LA- Absolute Audio Video, Lafayette • Alterman Audio, Metairie • Home Theater Concepts, Slidell • Mike's Audio, Baton Rouge • Wright's Sound Gallery, Shreveport.
- MA- Nantucket Sound, Hyannis • Percy's, Worcester • Pittsfield Radio, Pittsfield.
- MD- Gramophone, Baltimore, Columbia • Myer-Emco, Frederick, Gaithersburg, Beltsville, Rockville • Soundscape, Baltimore.
- ME- New England HiFi, Scarborough.
- MI- Contemporary Audio, Okemos • Pecar's, (Detroit) Troy • Classical Jazz, Holland • Court St. Listening Room, Saginaw • Home Entertainment Store, Kalamazoo • Paragon Sound, Ann Arbor • Superior Sound, Grand Rapids • Today's Audio, Flint.
- MN- Audio King, Minneapolis & Suburbs, Rochester, St. Cloud • Audio Designs, Winona.
- MO- Independence A/V, Independence • Sound Central, St. Louis • Ultimate Electronics, Ballwin, Brentwood, Bridgeton, Fenton.
- MS- Ideal Acoustics, Starkville • McLelland TV, Hattiesburg • RRS A/V, Hidelberg.
- MT- Rocky Hill, Ft. Great Falls • Vann's Inc., Missoula, Helena, Bozeman, Hamilton, Kalispell, Billings, Butte.
- NC- Audio Unlimited, Jonesville • Audio Visions, Wilmington • Now Audio Video, Durham, Greensboro, Raleigh, Winston Salem • Sound Systems, Charlotte, Fayetteville • Tri City Electronics, Conover.
- NE- Custom Electronics, Omaha, Lincoln.
- NH- State Street Disc., Portsmouth.
- NJ- 6<sup>th</sup> Avenue Electronics, Springfield, Livingston, East Brunswick, Woodbridge, Paramus, West Longbranch, West Paterson • Camera and TV Stop, Medford • Monmouth Stereo, Shrewsbury • Woodbridge Stereo, West Caldwell, Woodbridge.
- NM- Ultimate Elect., Albuquerque • Sound Ideas, Albuquerque.
- NV- Ultimate Elect., Las Vegas.
- NY- Audio Breakthroughs, Manhasset • Audio Den, Lake Grove • Clark Music, Albany, Syracuse • Stereo Exchange, Manhattan • Hart Elect., Vestal • Listening Room, Scarsdale • Media Room, Bedford Hills • Park Ave. Audio, Manhattan • Rowe Camera, Rochester • Speaker Shop, Amherst.
- OH- Absolute Theater, Powell • Audio Arts, Youngstown • Audio Craft, Akron, Cleveland, Mayfield Hts, Westlake • Audio Etc., Dayton • Belden Audio, Canton • Classic Stereo, Lima • Ohio Valley Audio, Cincinnati • Stereo Visions, Columbus • Threshold Audio, Heath • Unique Home System, Cincinnati.
- OK- Ultimate Electronics, Oklahoma City, Tulsa.
- OR- Kelly's Home Ctr., Salem • Magnolia HiFi, (Portland) Beaverton, Clackamas, Tigard.
- PA- Audio Junction, Pittsburgh • Audio Lab, Fairless Hills • Audio Video Experience, E. Petersburg (Lancaster) • Ed's TV, Hatfield • Hart Elect., Blakely • Hi Fi House, Abington, Broomall • Listening Post, Pittsburgh • Palmer Audio, Allentown • Stereo Barn, Wyomissing (Reading) • Stereo Shoppe, Selinsgrove, Williamsport • Stereoland, Natrona Heights • Studio One, Erie.
- RI- Stereo Discount Ctr., Providence.
- SC- Audio Warehouse, Beaufort • Custom Theater & Audio, Murrells Inlet • Upstairs Audio, Columbia.
- SD- Audio King, Sioux Falls • Sound Pro, Rapid City.
- TN- Collene HiFi, Chattanooga • Good Vibrations, Cookeville • Hi Fi Buys, Nashville • Now Audio Video, Knoxville • Modera Music, Memphis • Sound Room, Johnson City.
- TX- Audio Video, College Station • Bunkley's Sound Systems, Abilene • Bjorn's, San Antonio • High Fidelity, Austin • Home Theater Store, Arlington, Austin, Houston, Dallas • Krystal Clear, Dallas • Marvin Electronics, Ft. Worth • Matt Pantler Home Theater, Waco • Mike Massey, Inc., Odessa • Sound Quest, El Paso.
- UT- Crazy Bob's, St. George, Cedar City • Ultimate Elect., Layton, Murray, Orem, Salt Lake City.
- VA- Myer-Emco, Fairfax, Falls Church, Sterling, Tyson's Corner • Audio Connection, Virginia Beach • Audiotronics, Roanoke • Home Media Store, Richmond.
- WA- Bunch-Finnegan TV, Kennewick • Magnolia HiFi, Seattle & Suburbs, Tacoma, Silverdale, Spokane • Pacific Sight & Sound, Wenatchee • WI- Audio Video Pros, Olataska • Flanner's A/V, Milwaukee • Hi-Fi Heaven, Green Bay • Sound World, Muskegon • Team Electronics, Manitowish, Puerto Rico- Precision Audio, San Juan.
- Canada- Advance Electronics, Winnipeg • Air Waves Radio & TV, Moosejaw, SK • Audio Express, Saskatoon, SK • Bay Bloor Radio, Toronto • Canadian Sound, Brampton, Ont. • Digital Dynamics, Abbotsford, B.C. • Environment Electronique, Westmount, Que. • K&W Audio, Calgary • Kebeson, Montreal • La Boutique Electronique, Montreal • Lipton's Elect., Newmarket, Ont. • Stereo Plus, Ottawa, Ont. • Stereoland, Windsor, Ont. • Mexico- Contact Grupo Volumen, Mexico City.

**test report**

multichannel ambience-generating mode, I'd agree with Rotel that it should be one of the DPL II settings. Even though the Dolby processing doesn't seem able to produce the extreme, and often exciting, redistribution of the sonic image among the front and surround speakers that Neo:6 can sometimes accomplish, at least it never sounds bad. Unfortunately, selecting the type of ambience processing employed, as well as fine-tuning DPL II's Music mode, requires turning on a monitor to see the onscreen display, which may be inconvenient.

Because it has relatively few "extra" features, the RSX-1065 was mostly easy to use. With power reserves suitable for producing cinematic sound levels even in large home listening rooms, this receiver

**HIGH POINTS**  
Impressive power reserves.  
Excellent multichannel playback.  
Easy to connect and set up.  
Excellent manual.

**LOW POINTS**  
Slightly elevated noise.  
Requires external amplifier for 6.1-channel playback.  
No bass management for multichannel analog input.

can be counted on to deliver solid performance—and it'll look the part, too, in your equipment rack. **SM**

**in the lab**

**DOLBY DIGITAL PERFORMANCE**

All data were obtained using computer-generated test signals containing dither, which sets limits on measured distortion and noise performance. Reference input level is -20 dBFS, and reference output is 1 watt into 8 ohms, obtained with the volume control set at 68. Dialogue normalization in test signals was -27 dB. Except for subwoofer-related tests, all speakers were set to "large," subwoofer on. Subwoofer-output crossover was set to 100 Hz. All are worst-case figures where applicable.

**Output at clipping (1 kHz into 8/4 ohms)**  
1 channel driven.....129/228 W (21.0/23.5 dBW)  
5 channels driven (8 ohms)....106 W (20.25 dBW)

**Distortion at 1 watt**  
(THD+N, 1 kHz, 8 ohms).....0.03%

**Noise level (A-wtd, 16-bit signal)**.....-71.1 dB

**Excess noise (with sine tone)**  
16-bit (EN16).....+4.85 dB

**Frequency response**  
20 Hz to 20 kHz +0.58, -0 dB

**Subwoofer-output frequency response**  
24 dB/octave above -3-dB point of 100 Hz

**High-pass-filter frequency response**  
12 dB/octave below -3-dB point of 100 Hz

**Maximum unclipped subwoofer output**  
(at reference volume setting).....5.4 volts

**Subwoofer distortion (from 6-channel, 30-Hz, 0-dBFS signal played at reference level; all trims at 0 dB)**.....0.08%

The best results I got out of the Rotel RSX-1065 on the test bench were for output power, which showed impressive reserves. I also noticed that the line voltage didn't sag as rapidly in the clipping tests as it has with other receivers.

In other areas performance was very good, if not absolutely top-class. Noise levels in all operating modes were a bit higher than I've seen from other top-of-the-line receivers. This

**STEREO PERFORMANCE, DIGITAL INPUTS**

Test signals incorporated dither. Volume setting for reference output level was 68. All measurements were made in stereo mode with tone controls centered, speakers set to "large," subwoofer off.

**Output at clipping (1 kHz)**  
8 ohms.....120 W (20.75 dBW)  
4 ohms.....195 W (23.0 dBW)

**Distortion at 1 watt (THD+N, 1 kHz)**  
8/4 ohms.....0.023/0.03%

**Linearity error (at -90 dBFS)**.....-0.4 dB

**Noise level (16-bit signals, A-wtd)**.....-73.4 dB

**Excess noise (with/without sine tone)**  
16-bit (EN16).....+3.95/+3.95 dB  
quasi-20-bit (EN20).....+21.3/+21.3 dB

**Noise modulation**.....0.4 dB

**Frequency response**  
20 Hz to 20 kHz +0.54, -0.01 dB

**MULTICHANNEL ANALOG INPUT PERFORMANCE**

The reference input level is 200 millivolts. The reference output level is 1 watt into 8 ohms, obtained with the volume set to 68.

**Noise level (A-wtd)**.....-77.8 dB

**Frequency response**  
20 Hz to 100 kHz +0.6, -2.65 dB

noise may be slightly audible in ultracritical conditions and is surprising in the case of the multichannel analog input. To preserve the potential dynamic range provided by present-day DVD-Audio and SACD players, I prefer to see a noise reading of -85 dB or lower, even though today's multichannel music recordings themselves are rarely this quiet. The subwoofer output was clean when the receiver was playing worst-case test signals. —D.R.