

**Seeking Synergy With a Trio From Rotel:
RCD 951 CD Player; RB 981 Amplifier; RC 972 Stereo Control Amplifier**

Perhaps I'm giving away a trade secret here, but not every reviewer relishes the opportunity to evaluate three products from the stable of one manufacturer – particularly if they are, as in this case, contiguous links in the audio chain. For many reviewers and audiophiles alike, the matching and occasional mismatching of components is a large part of the audio experience, and it brings a continuing sense of discovery that can be addicting. These folks will also remind you that there is no guarantee that familial components will perform better together than when matched with competitors' offerings. All that is true. Yet there is another side to the quest.

I'm interested in system synergy: the proposition that

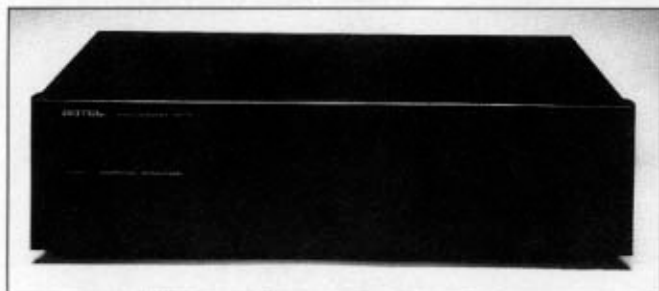
components can be developed, honed, and promoted as a system. And that such systems may possess certain strengths, convenience of set up and use and a "family sound" not being the least. Over the next few issues, I shall report on some companies who provide systems.

A stellar but sensible reputation makes Rotel a natural company with which to begin the pursuit. Rotel has always been more concerned with what you hear rather than what you see. They avoid trendy contrivances like brightly lit EQ displays and the kaleidoscope of buttons, toggles, sliders, and LEDs that grab attention in the showroom but add little to the audio experience. I was not familiar with the company's products, though I knew its reputation. I was curious. NG

**RB 981 Amplifier and the
RC 972 Stereo Control Center**

The RB 981 amplifier is a close cousin to the RB 980 launched five years ago for \$600. At 130 watts per channel, the 981 has more power, demonstrably more rugged construction, and has been designed to be a lower noise unit. Not bad for a buck less five years later! Lusting for more power? If you can find another \$400, Rotel will supply you with the RB 981's brawny, big brother, the 200wpc, THX-licensed RB 991 at \$999. With both unbalanced and balanced inputs.

The look of the 981 – like its cousins in this survey – is classic Rotel, which is to say a little like classic NAD. The austere black front panel has a single lighted power switch and indicators for protection and bridged mode. The back of the amp is similarly free of clutter, with unbalanced RCA inputs and 5-way terminals for a single pair of speakers. The power cord is captive. Like all Rotel audio components, the cabinets are steel.



The 981 can be easily configured for bridged (mono) operation by simply popping the hood and playing musical jumpers on the plainly marked PCB, one that is noteworthy for utilizing symmetrical circuit traces for the precise channel-to-channel timing of the music. The traditional Rotel oversized toroidal power supply takes up much of the interior space. And it is still built in-house. Also in evidence are top quality parts like metal film resistors and filter capacitors from a Dennis Morecroft Slit Foil design.

Rotel's RC 972 Stereo Control Amplifier – "pre-

amp" for the moniker-impaired – has been designed expressly to complement either the 981 amp or its half-pint sibling, the 971. Internal component quality is similar to that of the amplifier. It is a low profile design, slim, black, and purposeful – its quality belying its modest price. The front panel houses a power/standby switch on the far left followed by a headphone jack and defeatible tone controls. The large central volume knob illuminates when the user switches from standby to power, while the two smaller right-hand selectors handle tape monitor and input functions. An optional phono board connected internally to the AUX 1 input module can be installed by user or dealer.

The back panel allots plenty of room for the line-level sources: CD, tuner, two auxiliaries, video, and the tape monitor loop. Two sets of outputs are provided for bi-amplification or alternatively sending the signal to a powered subwoofer. The included RR-C91 remote control handles source, standby, mute, and volume parameters.

It did not take an extravagant amount of listening time or countless recordings to gain the measure of the Rotel system. It was satisfying stone cold, right out of the boxes. The sound was warm, lush, and slightly Yin-like in shading. Not dry or brittle at all. It was a little more subdued in the treble for that, even at times suggesting that some KT-88s or 6550s might be burning deep within the amp's chassis. The emphasis was solidly midrange, a little forward in presentation, with natural though unremarkable extension at the frequency extremes. The system as a whole seemed comfortably in balance and certainly without any tendency to spotlight octaves for effect. From the opening guitar on Joni Mitchell's "Urge for Going" [Hits; Reprise 46326-2 HDCD], the amps made it clear that they were there to play nearly uncolored music. The guitar was dynamic yet full bodied in presentation, while Mitchell's voice had the characteristic air, effortless melodic expressiveness, and bell-like clarity that is so much her signature. Dynamics were impressive on barn-burners like

Mussorgsky's *Pictures at an Exhibition* [RR-79 HDCD] and in most cases will probably test the limits of most speakers before it gives out. One of my speaker references, the 83dB sensitive ATC SCM-20SL, no dynamic slouch, was nearly dancing on the Target R stands to keep up with the vivid and unrestrained bass drum slams and tam-tam crashes at the convulsive climax of this recording.

A little weakness crept into transient information. Dynamics of the micro variety seemed a bit pasteurized, removing a little of the spice from the performance. The flat-picking of an acoustic guitar like those on Rosanne Cash's *10 Song Demo* [Capitol CDP-7243-8-32390] lacked the unrestrained liveliness of the genuine article. Even her pristine vocal on the track "If I Were A Man" lost some immediacy and seemed slightly processed, which on this minimalist recording surprised me.

The position of artists across the soundstage was slightly forward, an attribute that was not unpleasant but had the effect of manifesting a shallower and narrower soundstage. This was clearly heard on the "Lux Aeterna" from Rutter's *Requiem* [Reference Recordings Sampler Vol. 2, RR-905 HDCD], where the expansive Dallas Women's Chorus seemed to move forward from the stage and reduce the ambient space they were performing in. It created a sense that the venue and the performers had decoupled slightly from one another. And while I didn't expect that the resolving nature of the Rotel amp and preamp would displace my Plinius 8150 reference or would have the

Rotel

Rotel began as a family-owned business in the 1950s and remains a father-and-son business today. Originally named Roland, the firm distributed US-manufactured televisions in the Far East. They eventually began manufacturing their own. When industry Goliaths like Sony and Toshiba ramped up their TV production, Roland reorganized to manufacture audio products. They soon became an OEM source for such American companies as Fisher and Harman Kardon. In 1969 they opened a new manufacturing facility in Taiwan. When they couldn't trademark the Roland name in the United States, they combined it with that of their US distributor Martel, and in 1971 incorporated as Rotel of America.

Rotel's RX-402 receiver and subsequent RX-404, 504, and 604 iterations consistently became a Consumer Reports Best Buy. This culminated in the true 100wpc 60-pound behemoth, the RX-1603 that is still prized today for its sound and quality. But it was the RA-820 integrated amplifier, a collaborative effort by Rotel UK and talented British circuit designer Tony Mills that cemented Rotel's position as a purveyor of high-quality yet affordable audio products.

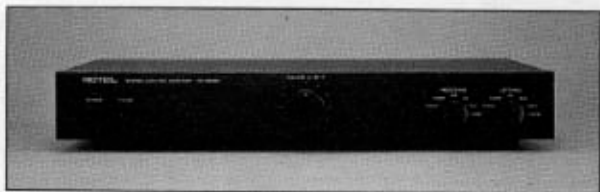
The American market was reluctant to embrace these stylish but low-powered components. But the American audiophile press stood up and took notice of the RCD 855 and 865 CD players, which reportedly sold well here.

Today Rotel has closed its Taiwan factory after 30 years, and consolidated its main factory – including production of their esteemed toroid transformers – in Baoan, China, roughly 50 miles north of Hong Kong in a development area set up by the People's Republic to encourage growth and manufacturing. Other than the turntable, no assembly is done in Japan and only custom products in the UK. Engineering, however, is still the province of the Tokyo and Rotel UK offices.

Even now the market for integrated amplifiers from Rotel thrives in Europe (though interestingly until this year that market had been resistant to remote control units). Rotel reports that the American market thrives on their power amplifiers; the company will introduce a 400wpc two-channel and a five-channel 200wpc amp this fall.

sheer effortless drive and resolution of the Celeste P-5003 preamp/John Curl designed Parasound 350wpc HCA-3500, I knew it was time to substitute other components and thereby attempt to isolate the Rotel's particular attributes and deficiencies.

And here things got *very* interesting. Replacing the RC 972 preamp with the Placette Remote Volume Control enlivened proceedings markedly. The virtues of the RB 981 began standing out in greater relief. The noise floor was distinctly lowered. Gone was the lack of image specificity – that ten-



dency to blur the line between one instrument and another. Gone was the softness of transient attack and the gentling of micro-dynamics. Indeed, I had the sense that a window had been thrown open and a fresh blast of high-frequency air was wafting around the music. The remastered Jackson Browne classic *For Everyman* [Asylum SD-5067-2] suddenly showed layers of guitar detail and piano ambience that was attenuated with the Rotel preamp in the system. The gradations of drum dynamics and extension at the close of "Colors of the Sun" was far more potent, as was the clarity of Don Henley's reedy harmony. Driving the Rotel amp with the preamp section of

the Plinius 8150 Integrated added some air and crispness to the lower treble that had kept an artificial ceiling over orchestral music. Now the Dallas Woman's Chorus and soloist sounded as if they had stepped into the first light of spring. The prodigious strengths of the Rotel RB 981 amp were a joy to experience, even as it placed the game but over-matched RC 972 distinctly in its shadow.

RCD 951 CD Player

Within the first ten minutes of listening to the RCD 951, my initial enthusiasm began turning to suspicion. Five hundred bucks for this much performance? Can you say "ringer?" As in a non-production one-off – a highly tuned, razor-honed variant produced in a corporation's "skunk works" and designed covertly and exclusively to thrash the competition in head-to-head testing, as the automotive industry famously did it in the Sixties. But seriously, this 951 was dead stock and street legal. It is the star that makes this Rotel system shine.

The RCD 951 is also Rotel's least expensive HDCD player. It uses an 18-bit Burr Brown PCM-69 D/A converter coupled with the HDCD-capable PMD-100 digital filter/decoder. The pricier Rotel players, the RCD 971 (\$700) and the RCD 991 (\$1,300) have adjustable dither and utilize the more exotic PCM-63P D/A, a 20-bit collinear device.

The back panel is spare, with the requisite pair of analog outputs and an RCA 75ohm-coax digital out. The 951 is fully remote controlled via the RR-D91, which offers direct access buttons and is pro-

grammable for up to 20 tracks on a disc. Other features include a scan button that plays the first ten seconds of a track before moving on and the more conventional, random, repeat, and time display buttons. Missing are multi-speed search and the ability to access indexed tracks.

It became clear that the addition of the RCD 951 to my reference system contributed the least change to the character of the music than either the RB 981 or RC 972. It is only in comparison with music itself that its sonic signature can be placed in perspective. Its character, like the RB 981, is potently and richly midrange, with a solid but not overemphasized top or bottom. Still, it would lean closer to the whiter end of the color spectrum, decidedly more Yang to the RB 981's Yin. I'm not sure that it will leave mortar-shell craters in your living room with its lower octave bass extension. It's a trifle lean at the bottom. Still its mid-bass is smoking with energy and toe-tappingly accurate in microdynamics.

It's in the uppermost octaves that the 951 lacks the shimmering iridescent extension that we constantly rediscover in a concert hall. I've heard some expensive designs like the ones from Burmester, Theta, and Spectral glimpse this phenomenon, but never bottle it correctly. Recorded piano reveals the cooler sonic nature of this Rotel player. I think it's more a question of the upper harmonic resolution that defines this CD player's signature. There are two piano-with-acoustic-guitar introductions, one on Lyle Lovett's "North Dakota" [*Joshua Judges Ruth*; MCA-10475] the other on Jackson Browne's "I Thought I Was A Child" [*For Everyman*; Asylum SD5067-2]. The piano sounds a bit hard, lacking the underlying softness that defines any acoustic instrument made predominantly of wood. In some ways, I thought the unit was incredibly dynamic and ultra-fast on transient information, but I've concluded that there is a greater perception of those features because of small subtractions of the finest resolving elements. These thoughts were in part corroborated when, near the end of this piece, I was able to insert the Anthem CD-1 20-bit HDCD player into the system. To a noticeable extent, the piano and guitars became more definably acoustic and warm. Ambience and soundstage achieved a greater sense of dimensionality, harmonics greater complexity. These differences were distinguishable predominately with HDCD material and hardly at all with conventional CDs.

Again, remember that I am referring to the absolute and that at this stage of the review I was listening through equipment vastly more expensive than this superb player would normally be paired with. It's a tribute to the Rotel that I had to challenge it to that extent to determine its limitations. But the RCD 951 relishes a challenge and clearly demands the best peripherals to bring out its best. It shines, depending on the company it keeps.

Coincidentally for some but synergistically for me, the RCD 951 and RB 981 coupling produced a near-perfect marriage. Their midrange honesty in both male and female vocal ranges was spot-on. The

breathy, close-miked vocal of Angie Hart [*Marvin the Album*; Mammoth 92390-2] was rich with nuance. The harmonics seemed balanced across the octaves. No sense of this octave or that jumping out of position and destroying the continuity of the performance. Still, I found that the middle to upper bass performance on demonstration-quality discs like Ralph Vaughan Williams' *Sinfonia antartica* [Naxos 8.550737] seemed to possess just a little

MANUFACTURER INFORMATION

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ASSOCIATED COMPONENTS

Front End, Analog: Sota Cosmos Series II; SME V tonearm; Audio Technica ML170; Lyra Lydian cartridges; Front End, Digital: Pioneer 414 DVD Player; Anthem CD-1
Preamp: Placette Audio Dual Mono Line Stage; Sim Audio Celeste P-5003
Amplifier: NAD T770 AVR; Sim Audio Celeste W-4070se; Parasound HCA-3500
Integrated Amplifier: Plinius 8150; Sim Audio Celeste PW-5000; Anthem Integrated 2
Loudspeakers: ATC-SCM20SL; Sound Dynamics RTS-3; Meadowlark Shearwater; BKS Hybrid II; Infinity HPS-1; Dynaudio Audience 40; Sunfire True Subwoofer Mk II
Cables & Interconnects: Wireworld Equinox III; Nordost Flatline Blue Heaven; Kimber BiFocal XL; Kimber Hero interconnects; Accessories: Mana Acoustics Sound Frame; Polycrystal Stands and Footers; Bright Star Audio Big Rock platforms

SPECIFICATIONS

RCD 951 CD Player

Frequency Response	20-20k Hz (± 0.5 dB)
Amplitude Linearity	± 0.8 dB
Phase Linearity	$\pm 0.5^\circ$
Signal/Noise	100dB
Dynamic Range	99dB
Channel Separation	100dB at 1kHz
THD + noise (1kHz)	0.005%
IM distortion	0.005%
Max Audio line Output	2VRMS
Digital Output Level	0.5Vpp (coax)
Digital Output Impedance	75 Ohms
Power consumption	72 watts
Price:	\$499

RC 972 Preamplifier

THD(20-20kHz)	0.004%
IM Distortion	0.004% at 1v out
Line Level inputs	150mV/24K ohms
Output Sens./Impedance	1V/100ohms
Frequency Response	4-100k Hz (± 3 dB) line level
Bass	± 6 dB (100Hz)
Treble	± 6 dB (10kHz)
Line Level input	95dB
Power Consumption	10 watts
Price:	\$399

RB 981 Power amplifier

Power (20-20k Hz)	130 watts per channel into 8 ohms
Bridged	360 watts mono into 8 ohms
Frequency Response	4-100kHz (+0.5,-3dB)
THD (20-20k Hz)	0.03%, maximum at continuous rate power
IM distortion	0.03%, maximum
Damping factor	500 (8 ohms)
Input Sens./Impedance	1.0V/33 k/ohms
Input overload level	5V
S/N ratio (1HF A)	120dB
Power Consumption	400 watts
Price:	\$599

thickness or bloom that subtly stalled the momentum and snap in the performance. Especially during the Lento of this symphony, where organ and orchestra join in a cacophony of orchestral hell-raising that will make you scurry for your winter coat.

Nit-picks aside, these Rotel performers are a great tandem. So much so that the RC 972 preamp, though highly capable and musical, just gets dusted by its siblings. And if you ever needed concrete evidence of a "technology dividend," you can find it in the RCD 951 CD player and the RB 981 amplifier. They're 97-98 percent there, and you're going to pay dearly for the other 2 or 3 percent. But that's the nature of passion. Making rational choices doesn't always drive this hobby, not when you're trying to bridge the gap between recordings and reality.

As this piece began, I jokingly referred to the RCD-951 as a ringer. That it isn't makes the product all the more significant – anybody can get one. That we have already entered a digital harvest of musical and affordable components is the unassailable truth. And as they further commingle with computer architecture, the prices of these digital components will surely continue to fall, even as they bolt on more features. Already you can scan the Internet, magazines and newspapers and find DVD players for under \$300 that play CDs quite well. Hey, Rotel, how about a DVD player with an HDCD chip for under \$600? I'd bet there would be takers.

Score this review a win, place, and show for Rotel.

NEIL GADER

Paul Seydor Comments on the RCD 951 CD Player

Its personality is Apollonian rather than Dionysian, its strengths and virtues those of grace, precision, classical restraint, and at all times a sense of decorum. Its sound is in some sense reflective of its appearance: sleek, elegant, understated. Intrinsically smooth, neutral, and musical, the RCD 951 never produced a harsh sound that I could attribute to the player itself. It does not hold a magnifying glass up to the music, preferring to observe from a discreet distance – row M, say, or the front balcony. It lacks that last degree or three of air and spaciousness I hear from the reference setup, does not let me listen quite as deeply into the presentation (inner detail and all that), and does not have the dynamic authority or projection of some of the more expensive players. That said, I must point out that my two-tiered reference system (Thorens player, Musical Design DAC) costs over *eight times* Rotel's paltry \$450 suggested retail and that I have heard the RCD 951 trounce players costing three times its price. In any case, the superiority of the reference is at best about 10 percent on some sources, typically three or four on most.

If I had written this commentary three weeks ago, I would have declared the Rotel the hands-down choice in under \$500 CD players, so good it can easily hold its own, as NG indicates, in systems of far greater cost and complexity. But then I bought a Pioneer DV-414 DVD player (retail \$499, street price \$299-350). This product deserves a full review, but it is too exciting not to preview here, as it is

already gaining a reputation as a giant killer. Its personality truly *is* Dionysian. I first fired it up in the presence of an audiophile neophyte but plainly someone who has everything it takes to succumb to the illness – and we were astonished. The sound was big, bold, vigorous, with a huge soundstage and a real bear-hug of an embrace. Not much more detailed, I would guess, than the RCD 951, but unquestionably more immediate and dynamic. Put on something like Roy Gaines' tribute to T-Bone Walker [Groove Note GRV2002-2] and the RCD 951 remains unperturbed, quietly sipping its white wine, while the DV-414 pours itself a boilemaker and starts taking up the rugs.

So which is it, the lady or the tiger? I can't make that decision for you, but I can say that these two players are certainly a study in contrasts. If prominent features persuade, the Rotel has an HDCD chip, and there are thousands of HDCD discs out there; the Pioneer can play the new 96k/24-bit discs, of which there are few, *and* DVDs, of which they are also thousands. Another friend, who believes that all audiophiles are seriously delusional, said, "Why don't you just tell your readers that these pieces are so cheap they could buy *both* and still save themselves a pile of money over Wadia, Levinson, Audio Research, and all that stuff." It's a thought... 