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AUDIO VIDEO MAGAZINE

ARTE EM REPRODUÇÃO ELETRÔNICA

LISTEN TO REALITY IN THE FACE

DAC / TRANSPORT / CLOCK
DCS ROSSINI APEX

E MAIS

TESTES DE ÁUDIO

AMPLIFICADOR INTEGRADO LINE MAGNETIC 219IA

CAIXAS ACÚSTICAS MONITOR AUDIO GOLD 300 SÉRIE 5

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TESTE 1 AUDIO

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DAC / TRANSPORT / CLOCK DCS ROSSINI APEX

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We rarely receive the latest products from manufacturers all at once, let alone high-end products that cost thousands of dollars. We had that chance with Nagra, and now we have it again with the new dCS products.

Of course, the evaluation time must be shortened with this kind of product because the equipment is already sold, and the owners are counting the seconds until they receive it. Therefore, we had exactly three weeks to warm up and listen to the complete Rossini Apex setup consisting of Transport, DAC and Clock.

Inspired by the Vivaldi Apex series, the new Rossini has the same aesthetics and beauty as the top series, and its performance is infinitely superior to the previous model we tested. As with every dCS product, the construction and finishing details are impeccable. The box uses aerospace aluminium with proven acoustic properties, and the entire internal structure is acoustically damped to reduce mechanical vibration and magnetic interference.

The new Apex Ring DAC Project's hardware is, in fact, an all-new reconfigured circuit board. The architecture of a Ring DAC consists of an array of resistors, a voltage regulation bus, and a gain stage buffer.

The Ring DAC may look visually similar to a LadderDAC to many digital scholars. But, according to dCS, the main RingDAC distinction lies in its current sources of equal value, now designated as unitary-weighted DAC architecture.

Another crucial difference is that there are 48 current sources within the Ring DAC, all of which produce an equal amount of current. The FPGA developed and patented by the Ring DAC manufacturer allows the sources to be turned on and off in such a way that any component value errors are averaged out over time without loss. Consequently, the same bit in the Ring DAC might give one output slightly high, the next slightly low, and the next

somewhere in the middle, as opposed to a LadderDAC which has only two options: it outputs the sample slightly high, or slightly low every time.

The manufacturer says that this level of processing refinement has huge benefits because it almost eliminates the linear distortion in the signal we can hear.

Having done their homework of re-evaluating the entire Ring DAC, and the points that could be improved, first, the dCS engineers modified the reference supply that feeds the RingDAC. The second step was to improve the filters, and the third was to design an entirely new output stage that would buffer the analogue signals generated by the Ring DAC. The fourth step was to replace the individual transistors on the board with a compound pair, improving the symmetry and linearity of the components. Following these extensive modifications, the new Ring DAC APEX underwent a bench evaluation to ensure that the changes were consistent.

For this test, we used the Rossini setup in two ways: first, the analogue output of the Rossini DAC was connected directly to the Nagra HD power monoblocks, and then through our Nagra Classic line preamplifier.

Then we also evaluated the Rossini Apex DAC behaviour without its transport "mate," connecting it to our Nagra Transport with the AES/EBU Dynamique Apex cable (read Test 4 in this issue).

We used the Reference system with Dynamique Audio Apex interconnects, speaker and power cables, and Transparent Audio digital cables between the Clock and Rossini Transport and DAC to finish the test.

We also tested the Monitor Audio speakers with the Rossini Apex setup (see Test 3 in this issue).

If I recall well, we have tested all the products of this English manufacturer since the dCS Elgar in the 90s, and we had the Puccini CD-Player with an external Clock for more than a decade, then the Paganini, and finally, the Scarlatti setup (without the external upsampler). I am very familiar with dCS products, both in terms of reliability (they are made to last a lifetime if well cared for) and their performance level.

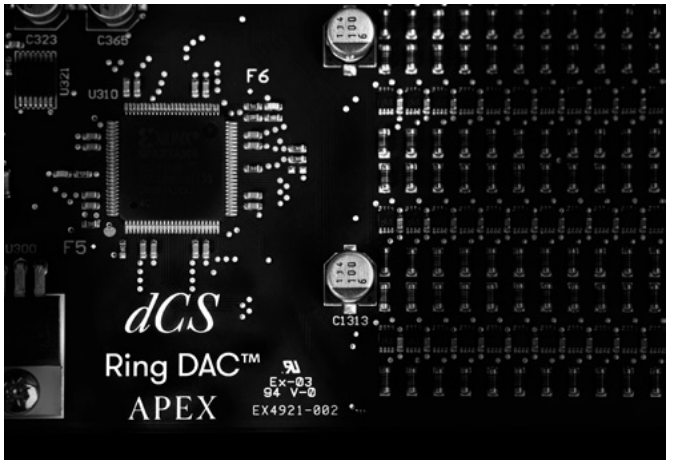
And when dCS does any new upgrades, it will put the company even more in the limelight of the high-end reference market.

I once again consulted my notebooks to refresh my memory on the most important things I noticed and the details that stood out in certain tracks I used in the previous Rossini DAC test. Some attentive readers have already asked me if there is any value in these notes, since the probability of upgrades in our Reference System is constant. And there is no such precise long-term auditory memory.

What I always use in these cases, where the whole setup is different, are our headphones—and only the Cavi Records recordings—in an attempt to simplify the understanding of the most significant changes. But it's much easier to find improvements when the changes are considerable, like in this case.

I dare to say that the new Rossini Apex resembles a Vivaldi more than ever before! And in the specific case of its streamer, it is on the same level since both models are the same.

I hereby state that dCS engineers were entirely assertive in re-evaluating the Ring DAC because the improvements are audible. And what struck me most was the degree of realism that now exists in all the demonstrations. No state-of-the-art DAC we have tested in the last three years has this degree of realism.

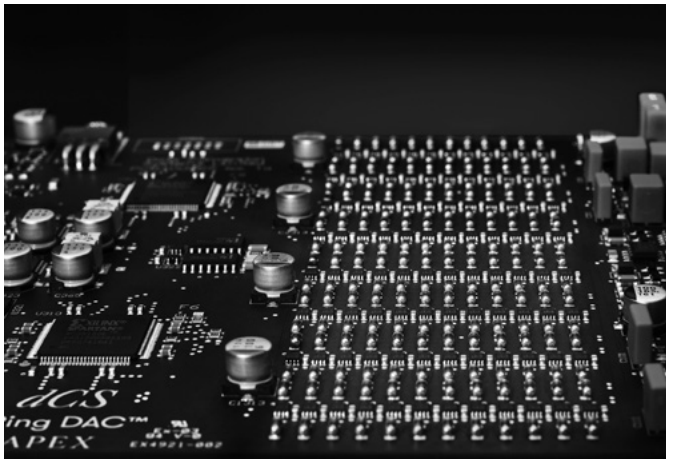


And there was only one way to advance in this area: by thoroughly refining all other technical-related issues! And that is precisely what the dCS engineers have achieved.

The "new" tonal balance is impressive, for it came about in a harmonious way, increasing extension at both ends without compromising the naturalness.

The bass seems more precise in the fundamentals and richer throughout the whole harmonic envelope, leading the listener to perceive with much greater richness the fingering details and the quality of the instruments and the musicians. The double-bass, bass drums, percussion, pipe organ, piano, contrabassoon, and baritone sax gain a disconcerting harmonic richness and, consequently, sound more "truthful."

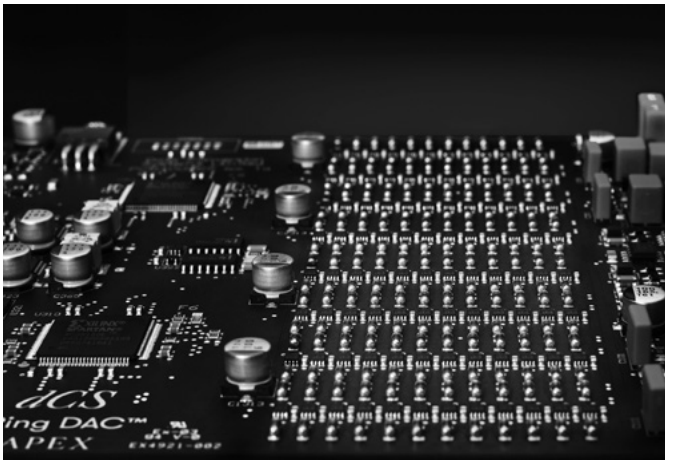
The middle registers, for all their impressive background silence, spring up with greater intensity without, however, becoming more evident than the rest, raising the degree of materialisation of the soloists, with an "aura" of background silence around them that makes us feel their physical presence in a more "realistic" way.



And the highs have such a correct decay that on the famous track 13 of Shirley Horn's CD—commented here hundreds of times in both verse and prose—they are even more intelligible, making the response more "accurate."

I guess the reader has already figured out what distinguishes the new dCS Apex line, right? It so happens that the improvements go far beyond the exceptional tonal balance because the soundstage was also immensely favoured by the implemented modifications. And with that, audiophile "freaks" will be ecstatic to hear what the Rossini DAC and its partners can do in terms of soundstage, focus, detail, and ambience reproduction.

Finally, listening to symphonic works in this setup allows one to let go and accept that digital and high-level analogue have definitely paired up. You will hear everything organised into its specific planes without the inconvenience of brass macro



passages jumping over the basses or the choir taking the place of the woodwinds and violas. The soloists literally occupy their physical space without any sense of blurring or the accompaniment covering up the solo.

Listening to Igor Stravinsky's A Soldier's Story with the Rossini Apex is memorable. The textures can only be described as precise, refined, and, at the same time, disconcerting.

If like me, my friend, you favour string quartets to analyse this performance issue, you are in for a big surprise because the colour palette will have an intoxicating richness and the interpretations will gain an air of refinement not often seen in digital music.

The textures are literally "palpable" and accessible to our eyes as well as our hearing. This effect is due mainly to the exuberance of its focus and edge detail.

But to be sure of this, I needed to have spent much more time with this setup to understand how the Rossini Apex makes this "trick" so "real."

The transients could also, in this case, be described as having "intense" realism. In no recording will there ever be a feeling of something lethargic or out of time. I have listened to a dozen drummers from different schools and periods to appreciate the technique and how the Rossini Apex involves you and keeps you attentive to every detail.

In our Auditory Perception Courses, I often remind you that our brain quickly loses interest in what we hear when the transients are not correct and accurate. With the Rossini Apex, this opportunity will never present itself because rhythm and pace are too "realistic" for us to miss any detail.

And then we arrive at macro-dynamics, the Achilles' heel of all systems. I have been saying for many years that I can clearly see a change of direction in the high-end audio market. It spent the late 20th century looking for the best macro dynamics in high-end electronics reproduction, which was often confused with pro-audio in the power of its amplifiers and the design of its speakers. In this century, it seems to have come to 'reason' again, and it is now seeking improvements in refinement and musicality.

I once wrote that some amplifiers and digital setups gave me the impression of always having a knife between my teeth, even when the music did not require that stance. And having a high-level system that never 'relaxes' triggers permanent auditory fatigue. Fortunately, some designers have already understood that this "knife between the teeth" path would be a dead end and started to invest in refinement with ease.

And I can tell by listening to the new dCS Bartok and Rossini Apex that they are surfing this new wave too. But this doesn't mean you should stop trying to get the best macrodynamic reproduction you can with the speakers you have. Instead, you should save this energy for when the score calls for it.

This new 'culture' has led many audiophiles who are used to more "edgy" high-end systems to listen to their macro-dynamic reference recordings in the latest systems and think something is missing. They fail to realise that the apparent effortlessness has left these passages with much greater intelligibility and listening comfort. Because, in their minds, they are still expecting that startling impact that blurs the details. And they will only understand the advantages when they observe that macro-dynamics do not need to harden the signal, blur the information, and make us lose the "whole" while anticipating the "scary" impact.

Listening to complex classical works is the best way to understand this concept change in macrodynamics reproduction. You can also hear it in other types of music, like rock, pop, and blues, though not with as much detail as in a drum roll with a brass fortissimo.

Believe me. There's no going back the moment audiophiles realise that instead of an undefined mass of sound, they can now hear the brass section, the perfect tuning of the timpani, and the crescendo of the dynamic scale.

I have been doing this experiment with our visitors, and they often ask us the same question: "Andrette, this is the volume you always listen to"? And I answer: "I always listen at the volume each recording requires, never louder." Then I watch their reactions to the dynamic crescendos as well as how they react to the ease with which these passages are played. However, you do not need to shout to communicate in the room during the fortissimi.

And after two hours, I ask them if they feel fatigued from listening. The answer is always a reasonably consistent "no".

The Rossini Apex belongs to a new lineage of digital components in which effortlessness predominates over tension, even more so than the new Bartok. As a result, listening becomes even more pleasurable and "realistic".

Hats off to micro-dynamics as well! I heard details in all recordings that I had never heard with any other state-of-the Art digital system so far!

The harmonic body of the new Rossini is the closest I have heard to analogue. Did it nail it? Almost. Little is missing for analogue-like harmonic body reproduction. But if you have long since abandoned analogue, I can assure you that when you live with the Rossini Apex for a while, you will find the body of other digital components as weird and skeletal.

Now we arrive at the issue of "Organicity", which is nothing more than the physical materialisation of the musical event in our listening room. And many of you may be asking yourselves: "Isn't Realism the same as Organicity?"

Yes and no. In our Methodology, Organicity describes the degree of materialisation that good recordings achieve. In other words, it is more the merit of the recording engineer than it is system dependent. Those who have attended our Courses will remember that from Diamond systems onward, the materialisation of the musical event in well-made recordings already occurs, leading our brain to relax and almost believe in having been transported to the event.

Of course, this feeling will increase as we evolve towards the state of the Art. But the realism emphatically described here in the new Rossini Apex goes beyond the Organicity issue because it also achieves this "effect" with technically average recordings. And it does so by refining the signal to the point that competitors will have to run after it if they don't want to be left behind eating dust. Regardless of the technical level of the recording, everything about it sounds more accurate, consistent, immersive, and coherent. It makes digitally reproduced music leap to the next level.

Interestingly, when using the Rossini Apex also as a preamplifier, this degree of realism was not as evident, so I advise future suitors of this impressive DAC not to give up on any excellent line preamp. If I had only tested the Rossini Apex setup, my conclusions would not be so blatant, and its final score would be at least 4 points less.

And I cannot end this test without mentioning the other big surprise: the quality of its internal streamer. If I was already impressed by the quality of the Bartok 2.0 streamer, I lack the adjectives to describe how impressed I was with this Rossini. I will sum up by saying it was the first time the streamer came perilously close to the CD, as I had never heard it before!

CONCLUSION

Of course, a setup like this is absolutely prohibitive for 99% of mortals.

But for the 1% with a solid financial situation who are looking for their definitive digital setup, not listening to this setup will be a serious mistake (every Rossini and Vivaldi line is upgradable to the new generation Apex and, of course, for future post-Apex upgrades).

And suppose you are one of those audiophiles that needs purely rational arguments to define your upgrades. I can tell you that this is a package with no contraindications whatsoever — if you can afford it and if it is financially within your reach, of course.

Thoroughly recommended!

PRO

Digital at its apex

AGAINST

Price and the number of cables needed to connect all three components

SPECIFICATIONS

Type	Upsampling Network Player
Converter Type	dCS proprietary Ring DACTM topology. Operates at 6MHz (Map 1 or 3) or 3MHz (Map 2)
Digital Inputs	Ethernet network port on RJ45 connector, accepts 24-bit 44.1 – 384kS/s PCM, DSD/64 & DSD128 in DFF/DSF format; USB 2.0 interface on B-type connector, accepts 24-bit 44.1 – 384kS/s PCM, DSD/64 & DSD128 in DoP format; USB On-The-Go interface on A-type connector, accepts 24-bit 44.1 – 384kS/s PCM, DSD/64 & DSD128 in DFF/DSF format; 2 x AES/EBU inputs on 3-pin female XLR connectors, accepts 24-bit 44.1 – 192kS/s PCM, DSD/64 & DSD/128 in DoP format; 1x Dual AES pair, accepts 24-bit 88.2 – 384kS/s PCM, DSD/64 & DSD/128 in DoP format; 1 x SPDIF on RCA Phono connector, accepts 24-bit 44.1 – 192kS/s PCM & DSD/64 in DoP format; 1x SPDIF on BNC connector, accepts 24-bit 44.1 – 192kS/s PCM & DSD/64 in DoP format; 1 x SPDIF optical on TOSLINK connector, accepts 24-bit 44.1 – 96kS/s PCM
Mechanism	Stream Unlimited JPL-2800 SilverStrike with aluminium try
Analogue Outputs	1 x pair balanced outputs on 2 x XLR connectors. Output levels: 0.2V, 0.6V, 2V, 6V rms for a full-scale input, set in the menu. Output impedance: 3Ω. Maximum load: 600Ω (10k-100kΩ is recommended); 1 x pair unbalanced outputs on 2 x RCA connectors. Output levels: 0.2V, 0.6V, 2V, 6V rms for a full-scale input, set in the menu. Output impedance: 52Ω. Maximum load: 600Ω (10k-100kΩ is recommended)
Wordclock I/O	2 x Word Clock Inputs on 2 x BNC connectors, accept standard Word Clock at 44.1, 48, 88.2, 96, 176.4 or 192kHz.
MQA	Full decoding and rendering of MQA data from the Network and USB2 inputs. Final rendering of unfolded MQA data only from the other inputs

SPECIFICATIONS

Residual Noise	24-bit data: Better than –113dB0, 20Hz - 20kHz unweighted. (6V output setting)
L R Crosstalk	Better than -115dB0 (20Hz – 20kHz)
Spurious Responses	Better than -105dB0 (20Hz – 20kHz)
Filters	PCM MODE: up to 6 filters give different trade-off between the Nyquist image rejection and the phase response. DSD mode: 4 filters progressively reduce out-of-audio band noise level
Conversations	User selectable PCM upsampling to DXD, DSD or DSDx2
Software Updates	Loaded from CD-R via PCM digital inputs or PC via USB input. Download and update functionality available via dCS Mosaic App.
Local Control	DCS Mosaic App for Unit Configuration and Music Playback. RS232 interface (controlled by a 3rd party automation system). IR remote control – dCS Universal Remote available as an optional extra
Power Supply	Factory set to either 100, 115/120, 220 or 230/240V AC, 50-60Hz
Power Consumption	26 Watts (típico) / 35 Watts (maximum)
Operating Systems	Windows Vista / 7 / 8.1 / 10, Mac OSX 10.10. dCS USB driver is required for Windows in Audio Class 2 Mode
Colour	Silver or Black
Dimensions	444 x 435 x 151mm
Weight	17.4kg

DCS ROSSINI APEX (COMO STREAMER)	
Tonal Balance	13,0
Sounstage	13,0
Texture	13,0
Transients	13,0
Dynamics	12,0
Harmonic Body	13,0
Organicity	13,0
Musicality	13,0
Total	**102,0**

DCS ROSSINI APEX (DAC, TRANSPORTE & CLOCK)	
Tonal Balance	14,0
Soundstage	14,0
Texture	14,0
Transients	14,0
Dynamic	13,0
Harmonic Body	13,0
Organicity	14,0
Musicality	14,0
Total	**110,0**

VOCALS
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JAZZ . BLUES
CHAMBER MUSIC
SYMPHONIC

RTT (Transport CD/SACD)
US$ 42,400
RDC Apex (Streamer/DAC)
US$ 52,400
RCK (Dual Clock)
US$ 16,400

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ESTADO DA ARTE
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