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REVIEWED

Thorens TD160HD Turntable  
Ortofon Rondo Bronze Cartridge  
Marantz SA-7001KI SACD Player  
MJ Acoustics Pro 50Mk2 Subwoofer  
Eltax Monitor III Loudspeakers  
Boulder 865 Integrated Amplifier

Print post approved PP229104/0003

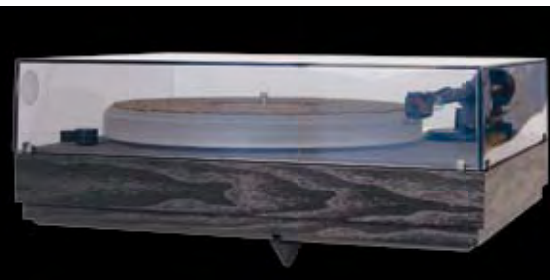


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**New Esoterica Section Inside!**



for it. This height adjustment appears to be the result of adding a base made in Germany, judging by the 'Designed by Clearlight Audio, Germany' that's engraved on it. The tonearm is a standard 'budget' design, with anti-skating force applied by a magnet and counterbalance by means of a weight on a thickly threaded tube. There are no markings on the counterweight. To calibrate tracking force, you need to 'count turns' with each half-turn of the counterweight along the threaded tube representing an increase (or decrease) of 1.0 gram of tracking force (which Thorens describes in the correct terminology of 'mN' in its excellent and lavishly-illustrated tri-lingual instruction manual).



### Ortofon Rondo Bronze

The Thorens TD160HD normally comes supplied without a cartridge, but for the purpose of this review Speakerbits supplied an Ortofon Rondo Bronze moving-coil cartridge, which retails separately for \$1,055 (RRP). Most audiophiles will be aware that the super-strong Neodymium magnets have revolutionised the speaker business, but many have not made the leap and realised that of late, they have also revolutionised the phono cartridge business, because manufacturers such as Ortofon have been able to use them to greatly increase the output voltage and the signal-to-noise ratio of their phono cartridges.



This new Neodymium-powered Rondo Bronze is the replacement for the old MC30. There are two other models in the Rondo range, the Blue and the Red. The names aren't just for show... well they are really, because the cartridge bodies are finished in extraordinarily beautiful mottled lacquer coatings whose highlights almost perfectly reflect the name of the cartridge, before gradating through darker shades of the same colour to end in a deep, almost black, finish. It turns out that not only is the use of Neodymium new: the material used to form the cartridge body is also a first. Some of the world's best cartridges have always been made of wood, but since this involved carefully carving the wood by hand, only limited numbers have ever been available, and at commensurately high cost. For the Rondo series, Ortofon uses a new material that mixes wood particles with plastic particles in a resin matrix that can be injection-moulded, enabling it to deliver the superior sound of wood along with the economies of mass production.



The cantilever is the tried and proven tapered aluminium shank (the Rondo Blue and Rondo Red use the more economical aluminium tubing) which is tipped by a Fritz Geiger-cut diamond with a 5/80µm profile. At the other end of the shank, the hand-wound

coil has a d.c. resistance of 6 ohms, for which Ortofon recommends a load impedance of 10–200 ohms, noting that '*higher load resistances will always tend to more liveliness and space in sound-image*'. Output voltage is stated at 500µV (1kHz, 5cm/sec) which looks like a large figure in print, but is of course exactly 0.5mV—and mV is the more usual form of expressing this specification. Frequency response is rated at 20Hz to 40kHz –3dB (20Hz to 20kHz ±0.5dB) and channel separation as 25dB (at 1kHz).

### Performance

Installing the cartridge is very straightforward, partly because the Rondo design uses captive nuts, so you don't have to fiddle around holding a screw in one hand, a nut in the other, and wondering what you're going to use to hold the screwdriver. With the Rondo Bronze, you just hold the cartridge underneath the headshell so the nut openings line up with the slots and turn the screws up tight enough to hold it in position, but are still loose enough to alter the orientation in the headshell when you commit to the final alignment dictated by your protractor. The Thorens ships with a single-point cartridge alignment protractor, though I noted that the hole on mine was not only not accurately punched, but also a little too small to fit over the turntable spindle. You should really be aligning the cartridge with a properly engineered alignment tool. My personal feeling is that any retailer who is in the business of selling turntables and/or cartridges should be either providing a proper alignment as a free service, or have a suitable alignment protractor available for loan to its customers. (And by 'suitable', I mean one of the Clearaudio, Feickert Analogue or Turntable Basics tools, not a cheap two-point plastic protractor.)

Speaking of two points, there are certainly two points vinyl enthusiasts should note concerning the design of the Rondo. The first is that it's quite a heavy cartridge (10.5 grams) so depending on what arm you use, its counterweight may not be sufficiently heavy to allow you to set tracking force without having the counterweight too far from the pivot point. However, it wasn't an issue with the Thorens arm fitted to the TD160HD. The second point is that the Rondo's cantilever angle is a fraction steeper than average (25°), so if your tonearm's height is not adjustable, you may not be able to achieve the correct vertical tracking angle of 22°, though in my opinion, the difference between 22° and 25° would be completely inaudible. Again, because the Thorens arm's height is adjustable, this is not an issue with the TD160HD either. Which raises the inevitable question that if



neither of these issues arises for the purpose of this review, why have I mentioned them? I have done so to inform those readers who might, as a result of this review, consider purchasing an Ortofon Rondo to fit to their own turntable/tonearm combination: forewarned is forearmed!

It only took just one track into my first LP before I was mentally calculating whether I could afford to buy a Rondo this month or whether I'd have to wait until the next month. Note that I wasn't wondering 'if' I'd buy one, but 'when'... and no, I couldn't have just hung onto the review cartridge, because according to editor Greg Borrowman, who'd kindly dropped the review samples around to my place, after I'd set the pair up and finished all my the listening tests, he said that in order to meet deadline he'd have to come back and pick them up to move them on first to *Newport Test Labs* for testing and from there to John, the photographer, so if I wanted a Rondo any time soon, I was going to have to buy my own. And I really did want one right away.

I don't know if it's the new body, or the neodymium magnet, or maybe (and more likely) it's the combination of the two, but the sound that issues from Ortofon's Rondo Bronze is simply magnificent. It's so precise that the music comes through finely detailed

even during the most densely packed musical passages, yet when there are only a few instruments playing, or just a single voice, the detailing doesn't render the sound overly sharp, or crisp. Instead, you just get the same high level of detail, but with a greater sense of 'space' around the notes than during the more congested passages. Another reason for my enthusiasm for the Rondo Bronze is that it's one of the first moving-coil designs I have heard that doesn't seem to 'sag' across the midrange. I know that many of my friends like a dB or two of midrange sag, because it gives a very enjoyable musical effect, but I prefer my tonal balance to be completely linear, even if this makes the mids more revealing. The Rondo Bronze was certainly linear, delivering firm, solid bass, with the diamond never releasing its tenacious grip on the groove... even during the wildest drum solos. Indeed the Rondo Bronze's tracking ability was impeccable, easily navigating the cannon shots of Telarc's 1812 (the only time I ever play this disc is when evaluating new cartridges, so my original copy is still in pristine condition) and also delivering the incredible synth bass on Emerson Lake and Palmer's 'Lucky Man.' It was only when thumbing through my vinyl to find Lucky Man to check out the Rondo Bronze's bass that I remembered that ELP had a huge hit with a track of exactly the same name: Rondo, and was struck by the coincidence. (As an aside, ELP fans probably already know that there was a boxed set of six CDs released last year—titled 'The Beginning'—on Castle Records, that contains many of ELP's best-known tracks—though few of the best versions of them—which includes two versions of Rondo, neither of which, unfortunately, is the live Isle of Wight version. If you're not an ELP fan, I'd suggest starting with the remastered version of the original album, titled Emerson, Lake and Palmer, because if you don't like this, you won't like anything else they've ever done, and if you do, it's the best single album they've ever done with the possible exception of Tarkus. But enough of this talk of music... and back to the review proper...)


High-frequency performance is superb, with very little surface noise audible, even with quite worn LPs, yet with the 'air' surrounding higher-pitched instruments still clearly audible. You will be able to 'tweak' the delivery of highs quite subtly if your phono preamp has adjustable load resistance, but if you choose to do this, I would not recommend dropping it below 50 ohms or raising it above 100 ohms—at least not based on my listening sessions. Also, if you do tweak the highs, remember to cross-check against

dynamics, because they will also be affected, and given a choice of optimising for high-frequencies or dynamics, I'd lean towards the dynamics, because the ability of the Rondo Bronze in this area is phenomenally good and you really can't get too much of a good thing when it comes to dynamics... particularly off vinyl.

I couldn't help but wonder how the Rondo Bronze would perform in a better arm than the TP250, so I re-installed it in my own SME Series V. As expected, its performance improved quite perceptibly, although after playing half-a-dozen LPs, some with slightly mis-centred holes, I suspected the major advance was that the SME gave freer rein to the Ortofon's tracing ability. (Just for the record—so to speak—the TD160HD is also available with an SME tonearm fitted in place of the TP250 or—if you already have a perfectly good arm—without any arm at all.)

The Thorens TD160HD proved to be an excellent platform with which to evaluate the Rondo Bronze, because its pitch stability was not only spot-on, revolving at exactly 33.33—at least according to my aluminium strobe disc—but also staying rock-solid right on this speed. Certainly I never once heard any audible wow or flutter creeping in, even when I specifically auditioned the turntable with super-slow piano music and with sustained violin notes. Neither could I hear any rumble creeping through into the background from either the motor or the bearing. In other words, the Thorens did exactly what a turntable is supposed to do: no more and no less than spinning the LPs at the correct speed.

## Conclusion

I was hugely impressed by the performance of Ortofon's Rondo Bronze cartridge and equally by that of this latest—and best yet!—incarnation of Thorens' famous TD160. 

Chris Croft

## LAB REPORT

Readers interested in a full technical appraisal of the performance of the Thorens TD160HD Turntable and Ortofon Rondo Bronze Phono Cartridge should continue on and read the LABORATORY REPORT published on the following pages. All readers should note that the results mentioned in the report, tabulated in performance charts and/or displayed using graphs and/or photographs should be construed as applying only to the specific sample tested.


**Test Results**

The frequency response of Ortofon’s Rondo Bronze was extraordinarily flat and extended, as you can see from *Graph 1*. It extends from 20Hz to 20kHz  $\pm 1.5$ dB. (Ignore the small section between 20Hz and 24Hz, which is an artefact of the lag in the time it took the analyser to properly acquire the test signals.) The trace starts a little higher than reference, at +1.0dB, then slowly drops to reference at 200Hz, then falls to -1.0dB at 1kHz, where it holds steady for a while before rising to reference again at 8kHz then gradually rises to be +2.0dB at 20kHz. It is by normalising (by adding -1dB to +2dB then dividing by two) this response that the 20Hz to 20kHz  $\pm 1.5$ dB overall response is derived. Channel separation (not graphed) was measured as 24dB at 1kHz.

The Ortofon’s harmonic distortion was also very low, as you can see in *Graph 2* which shows the cartridge’s output when tracing a 1kHz signal with a recorded velocity of 8cm/second. The second harmonic component is at -34dB (1.9%), the third is sitting down at -53dB (0.2%) and the fourth is at -60dB (0.1%). Overall THD+N comes in at just 2.5%, which is excellent. It’s certainly educational to look at the noise floor of the graph, which is actually the surface noise of the test disc, because it measures at greater than 70dB down from 2kHz to 8kHz, and greater than 80dB down above 8kHz! In the Thorens TP250 arm the Ortofon Rondo’s lateral resonance came in centred at 8Hz, and its vertical resonance centred at 10Hz, both well-damped, indicating that its compliance is a good match with the arm.

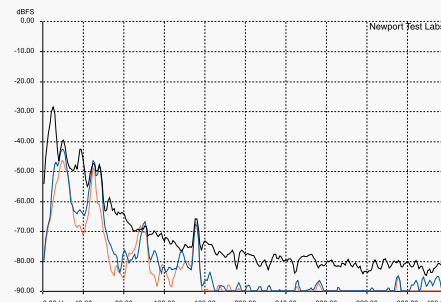
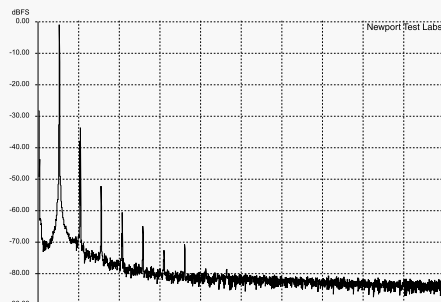
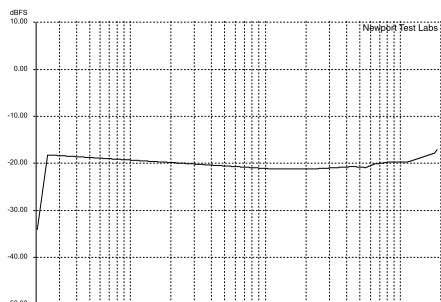
Platter rotation was fractionally fast, to the tune of 2.6% at 33.33rpm, increasing to 3.0% at 45rpm. While I would have preferred to see both figures down around the 1.0% mark, the slight difference will increase the pitch only by about one-third of a semitone, so even those cursed with perfect pitch would have difficulty picking the difference and the rest of us no chance at all—and that’s assuming that LPs are cut at the correct speed, which most aren’t in any case. More importantly, wow and flutter was spectacularly low, coming in at just 0.045% RMS unweighted or 0.04% measured according to the German DIN standard.

Signal-to-noise—or rumble, if you prefer—was also very low, as you can see from *Graph 3*, which shows the rumble spectra. This graph actually shows three different measurements. At the top, represented by the black trace, is the spectrum obtained when the stylus is actually tracing an unmodulated groove on a standard test pressing. The second, somewhat lower, blue trace shows the turntable’s inherent ‘rumble’ this time measured using a special tool that isolates the stylus from the record surface while still mechanically coupling it to the revolving platter. The lowest trace shows the background environmental rumble present at the stylus when it’s in contact with a non-revolving platter. As you’ve probably guessed, the ‘spikes’ at 50Hz, 100Hz and 150Hz are mains hum com-

ponents that have crept into the measurement apparatus and should be ignored, while the peak in the black trace at around 10Hz is the tonearm/cartridge resonance and so should also be ignored. What we can see is that the Thorens’ own rotational noise is barely 5dB above the background environmental noise up to about 80Hz, after which the traces are virtually indistinguishable. The effective ‘rumble’ figure is 64dB at 40Hz. This is an excellent result and, as you can see from the graph, is at least 15–20dB below the test record’s own inherent surface noise at this frequency. Overall, you can see the Thorens’ operating noise is generally at least 10dB lower than LP surface noise. Above 200Hz, it’s 90dB down. 

Steve Holding

Test Results		
<b>Ortofon Rondo Bronze Cartridge</b>		
Test	Result	Units/Comment
Output Voltage	0.65mV	@ 1kHz re 5cm/sec
Frequency Response:	20Hz–20kHz	+/- 1.5dB
Channel Separation:	24	dB @ 1kHz
THD+N:	2.5%	@ 1kHz re 5cm/sec
Channel Balance:	0.5dB	@ 1kHz
HDL2	-34dB/1.9%	@ 1kHz re 5cm/sec
HDL3	-53dB/0.22%	@ 1kHz re 5cm/sec
HDL4	-60dB/0.10%	@ 1kHz re 5cm/sec
<b>Thorens TD 160 HD Turntable</b>		
Test	Result	Units/Comment
Signal-To-Noise Ratio at 40Hz	64dB	re 315Hz at 3.54cm/sec
Speed Accuracy @ 33.33 rpm	2.6%	fast
Speed Accuracy @ 45 rpm	3.0%	fast
Wow & Flutter @ 33.33 rpm (1)	0.045%	RMS unweighted
Wow & Flutter @ 33.33 rpm (2)	0.050%	CCIR weighted
Wow & Flutter @ 33.33 rpm (3)	0.04%	DIN weighted
Spindle Diameter	7.14mm	
Power Consumption	6.3 watts	On
Mains Voltage During Test	239–254 volts	Min–Max
<b>Thorens TP250 Tonearm</b>		
Test	Result	Units/Comment
Lateral Tonearm Resonance	8Hz	with Ortofon Rondo Bronze
Vertical Tonearm Resonance	10Hz	with Ortofon Rondo Bronze



# Dancing King

**The Rondo Bronze is one of the funkiest sounding Ortofon moving coil cartridges yet made, says Noel Keywood...**

One of hi-fi's more awkward questions is how much should you spend on a moving coil (MC) cartridge to get the sort of performance they are famous for? Budget models are usually a let down, sounding either sterile or uncouth. Since a good modern moving magnet cartridge can give a great sound, there's no point in taking on the difficulties of an MC unless there's a clear advantage. In the past I felt Ortofon's Supremes - the MC10, 20 and 30 - were a suitable entry point. Well, they've been replaced by the Rondo Red, Blue and Bronze, the latter which you see here...

When the Supremes were introduced many years ago I listened to all three. The least expensive MC10 was a little edgy, but energetic and sufficiently open sounding to be worth having. The top MC30 was arguably over-smooth, whilst the MC20 was a good compromise between the two. The new £499 Rondo Bronze replaces the MC30 and is top of the new trio. The Blue is around £100 less and the Red £200 less, being available for £299 or thereabouts. The questions I had for the Bronze were many. Would it be faster and more grippy than its predecessor, and would it convey the advantages of the breed clearly? As I use a Kontrapunkt b I was also interested to know how close the Rondo Bronze would get.

At a practical level the Rondos are easy enough to fit, but note the Bronze weighs in at 10.5gms - and this is heavy. I put it into a Michel TecnoArm and had to use the larger of its two weights. Otherwise, with conventional body dimensions it will fit any arm, although the rear pins are a tight fit in my SME 312 headshell. Also, the body as two blind tapped holes for the fixing screws and they accept only short screws, so if you have a preferred type, like stainless steel hex bolts, test your hacksaw for sharpness.

Aside from an updated new motor unit, what really sets the Rondos apart from the previous Supremes is the 'resin' body. Gone is the resonant, ringing metal body and in its place comes a rather attractive and certainly distinctive looking compound plastic shell. This can surely only be a good thing, as the best cartridge body is no body at all (but this is impractical, for most people, as it becomes a terrible dust trap), and the second best is surely a non-metallic, non-resonant affair such as that fitted to the Rondos.

Where they do follow in the footsteps of the Supremes is in the choice of cantilevers and styli. The Bronze uses a tapered aluminium cantilever, where the Blue and Red have to settle for non-tapered types. At the sharp end is a Fritz Geiger profile diamond stylus with an 80µm major radius, hence the FG80 designation. Our measurements show quite clearly that it suffers almost no inner groove tracing loss and

"you get a presentation that is technically near perfect..."

the Rondo's measured frequency response is comparable to that of CD, staying within 0.5dB limits across the audio band - but it reaches far higher than 20kHz, unlike CD of course. Cartridges like this then effectively match or surpass CD in performance, so it is no surprise that their sound can be dramatic at times - or it should be if the cartridge is a good one.

## SOUND QUALITY

There are no tracking issues with the Bronze; it always sounds secure, having that confident air of a cartridge not about to lose its grip.



Like any good Ortofon the Bronze provides a carefully structured and almost academically correct sense of basic tonal balance. This is not a cartridge that's particularly characterful, and in this sense it is not unlike the Kontrapunkt b I use. Old hands may prefer something with a bit more character, which is not to say colouration. However, I quite liked its sense of correctness; I am not a fan of cartridges with conspicuous

frequency extremes or euphonic colour. The Bronze is comes over as incredibly well ordered and tidy in the way it arranges and portrays instruments across the sound stage. Add in a strong dynamic that is, at the same time, very well controlled and you get a presentation that is technically near perfect.

Like any good moving coil you get a broad, open sound stage with a delicious sense of see through clarity and here the Bronze is streets ahead moving magnet designs. It thrusts singers and instruments forward with an almost stark clarity; there was more presence than ever with

## SECOND THOUGHTS

Having met Ortofon's charming designer Per Winfield at the company's Danish factory a couple of years ago, and heard a pre-production Rondo Bronze (then, provisionally called an 'MC30 Wood'), my first comment to him was that it was too good. At the time I was running a Kontrapunkt b (£750), and hearing that the Bronze was going to be sub-£500 I thought, "oh dear, how are they going to sell any Kontrapunkts, then?" What then happened was that I took one back and lived with it, and in many ways I still feel the same – the Bronze is a little too close to the Kontra b for comfort in many areas, but the one redeeming factor that the more expensive MC has is its, as Noel puts it, "joie de vivre". The Rondo Bronze is a tad more matter of fact than its more expensive, more emotive and more engaging stablemate. By comparison, it sounds a little tidy, but when you put it against the old MC30 Supreme (some £200 pricier, five years ago), the Rondo is a veritable boogie wonderland. That's the brilliance of this thing: it is so darned good as an all rounder that it almost suffers from the accusation of being characterless. It isn't, actually, and really lets you get into the music without drawing attention to itself.

The ultimate accolade is perhaps this – after I unbolted the Rondo Bronze to send off for Measured Performance, I moved directly to a Koetsu Rosewood Signature, reputedly one of the best cartridges in the world (with some justification). Well, the interesting thing is that in some ways, the Ortofon embarrassed the Koetsu. It certainly is a better tracker, and has better fine detailing and an almost mastertape-like stability. The Koetsu is more gushingly emotional, but so it damn well should be for an extra £1,100! The great thing about the Rondo Bronze is that it's just about attainable for those who'd otherwise go for a Denon DL103R (cough!), yet it is good enough to substitute for a £1,500 cartridge, to permit the buyer to allocate funds elsewhere (i.e. SME IV instead of Michell TecnoArm). It really is a brilliant do-it-all cartridge, and I'd be surprised if it didn't win the Awards 2007 gong. The downside is that it makes the Rondo Blue and Red look a little redundant – effectively, if you spend £200 more than the Rondo Red you're getting an affordable audiophile moving coil, instead of just a very good budget one. Not difficult to justify the extra expense, in my opinion! DP

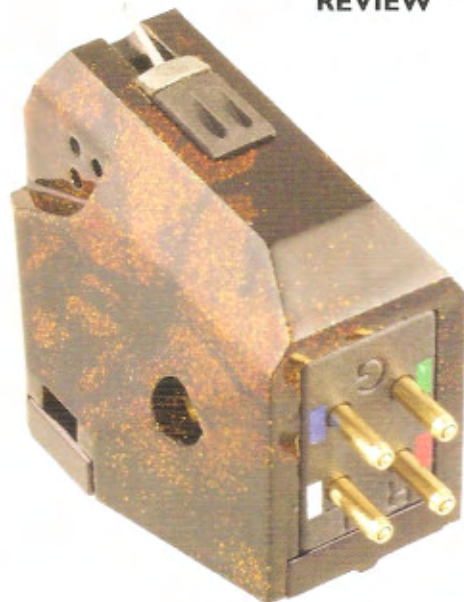
Phil Collins singing 'I Don't Care Any More'. His voice was strongly etched and full bodied, so forward as to be almost frightening. The Bronze delivers an 'in your lap' sound that I suspect will have many listeners gasping. The strength of projection behind Goldfrapp's 'Lovely To CU' shaded what I get from the CD version and here the Bronze showed just how advanced it is as a transducer: sixteen-bit PCM from the 1970s isn't in this league at all. It also displayed enormous ability to extract the huge low frequency content from the synth, on this track, keeping a firm grip on the beat whilst highlighting its sinuous progression. Ortofon has no problem with delivering strong bass dynamics, albeit with more grip and control than rivals, and in this area the Bronze was no different.

The stylus showed its mettle constantly, cymbals always having a gentle but clear presence in the Zuton's 'Valerie'. There's a small tendency for the upper midrange and treble to sound a little hard edged and mechanical at times, against the Kontrapunkt at least, although some of this came from the Michell TecnoArm, as the cartridge sounded darker and smoother, if less forceful, through my twelve-inch SME312 arm and the M2-10 I review in

this issue. The Kontrapunkt B gives finer inner detailing too, but then it costs considerably more.

## CONCLUSION

The new Rondo Bronze is more than an entry-level moving coil cartridge, I found. In terms of sophistication it



is quite a height up the evolutionary tree as MCs go. It offers a tightly ordered and impressively dynamic sound that can be breathtaking. The only reservation some may have is that it is short of *joie de vivre*, or emotion, a criticism that came up from Adam and is echoed by David. Arguing against perfection because it is too perfect is always a little difficult though. What you get is a near-perfect picture, if one a little short of the finest details; what you don't get is a Degas. Fantastic at the price in every way I feel, but of course you do need a decent arm, turntable and - especially - preamp if you are to get the most from it, as always with top quality moving coils.

## MEASURED PERFORMANCE

Frequency response of the Bronze was even flatter than usual from Ortofon, running from 40Hz up to 20kHz within tight 1dB limits. On outer grooves the cartridge was only -0.4dB down at 20kHz, meaning it is accurate as a CD, insofar as LP measurements can ever be so tightly controlled of course. All the same, you can see here a cartridge that is almost ruler-flat across the most important parts of the audio band, quite an achievement by Ortofon, but in line with what you get nowadays from modern generators. Inner groove losses were minimal too, so the sound balance will remain consistent across a disc, from outer to inner grooves.

Tracking ability was first class. The Bronze cleared all low frequency cuts and just got through the highest midband level of 25cms/sec.

Vertical tracking angle measured 25 degrees, close to the ideal of 22 degrees. Distortion levels were low, but separation was also low at 23dB, as is common with Ortofon. Luckily, this doesn't adversely affect sound.

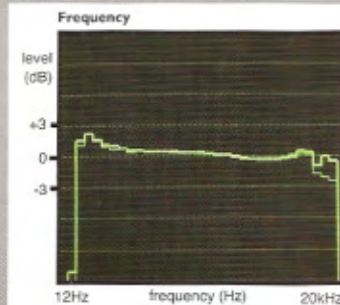
Output was reasonable at 0.5mV from 3.54cms/sec, or 0.7mV at 5cms/sec rms - quite a healthy level. Ortofon moving coils usually have plenty of

output, making hiss less noticeable.

The Rondo Bronze, like all Ortofon, measures superbly. It is 'CD accurate'. NK

Tracking force	2.2gms
Weight	10.5gms
Vertical tracking angle	25degrees
Frequency response	40Hz - 20kHz
Channel separation	23dB
Tracking ability (300Hz)	
lateral	90µm
vertical	45µm
lateral (1kHz)	25cms/sec.
Distortion (45µm)	
lateral	1.1%
vertical	3.5%
Output (5cms/sec rms)	0.7mV

## FREQUENCY RESPONSE



## VERDICT

Superlative performance at the price, thanks to superb detail, insight and poise. A landmark moving coil bargain.

## ORTOFON RONDO

BRONZE £500

Henley Designs

+ 44 (0)1235 511166

www.henleydesigns.co.uk

## FOR

- superb tracking
- exemplary detail retrieval
- vivid dynamics

## AGAINST

- nothing at the price



# hardware NEWS

## ortofon

### Rondo Bronze cartridge

as reviewed by Larry Cox



Ortofon is one of the grandfathers of high-end audio. The company traces its origins to the end of World War I, when it pioneered the synchronization of sound to films. Ortofon didn't end up in the cartridge business until it re-organized to create record cutting and reproducing equipment. They made their first moving-coil cutter head (which may have been the first such), as early as 1945, which gives it about sixty years in the cartridge business. That's a long time, given that many consider Audio Research, Mark Levinson, and Krell to be the founders of high-end audio—by comparison, they are toddlers. While these companies have a cachet that suggests they are the gold standard of the industry, some audiophiles entertain conspiracy theories that suggest that breakthroughs in price and performance almost always come from ultra-small specialist companies, and dismiss the work of larger companies. They believe that established companies are so caught up in status quo, problem-solving thinking that they tend to put old solutions in new dresses instead of starting from the ground up.

While Ortofon has been around for ages, it remains a vital company, producing excellent products at more than reasonable prices. Their Jubilee and Kontrapunkt models have received raves from reviewers and from people who've owned many cartridges. One of the latter was the person whose recommendation was the basis for my requesting the Rondo Bronze for review. My interest in Ortofon grew out of an industry friend's glowing recommendation of the Kontrapunkt B. I was surprised. Although I'd never actually heard an Ortofon cartridge, the company seemed to me to be stuck in its ways.

My friend's recommendation was not trivial. Though my friend is not the unbalanced type, he is as discerning as the most nutty audiophile. In fact, he has a keen nose for the good stuff. His endorsement of the Kontrapunkt encouraged me to contact Ortofon to see what they had to offer. Anker Haldan of Ortofon suggested I try something from the new Rondo line, so I bit. Though the Rondo cartridges are new, they do not have the short and slim shapes that Ortofon introduced with the Kontrapunkts and the Jubilee. There are three Rondos: the Bronze (\$849), the Blue (\$699), and the Red (\$499), each name describing the color of the cartridge body. The Rondos are a little more expensive than entry-level products, but they are easier to afford than an exotic cartridge like the Allaerts, or even Ortofon's top-of-the-line offerings.

Although all of the Rondo cartridges are constructed of a ground wood and resin composite and weigh about the same, each differs slightly from the others. Channel balance at 1k improves by 0.5dB as you go up the line to arrive at the Bronze's 1.5dB. The Bronze and the Blue share a channel separation of 25dB at 1k, improving on the Red's 22dB, and treble response increases in 5000-Hz increments from the Red's 30k to the Bronze's 40K response. All good numbers. The Bronze separates itself most clearly from the Red and Blue by moving from a nude aluminum cantilever to the Bronze's tapered FG80 aluminum cantilever (FG stands for Fritz Geiger)

All of the Rondos track at fairly heavy forces compared to other cartridges I've used, and a bit more than the industry average. Whereas my previous cartridges tracked well and sounded best between 1.5 and 1.8 grams, Ortofon suggests that the best performance of the Rondos is achieved between 2.0 and 2.5 grams, with an optimal tracking force of 2.3 grams. My listening supported this contention. I experimented with the lighter and heavier ends of the recommended tracking force. With a force of 2.0 grams, the bass was more amorphous and bloomy and a bit lighter in weight. At 2.5 grams, the bass was a bit overblown. The recommended force sounded best. Maybe these guys have been in business for sixty years because they know something.

I compared the Rondo Bronze to my Koetsu Rosewood, recently re-tipped by Van den Hul for a mere \$287. For that price, I received a cartridge with a much finer tip than the Koetsu's original one. The finer stylus provided a much more detailed sound than I had been getting. The bass is now amazingly tight. The whole range is more detailed and precise. This cartridge doesn't sound so much like my old Koetsu, though it does retain a relatively rich sound, and while it still sounds very engaging, it doesn't have as much of the romance and sweetness of the original. With the excellent Audiopath 4 tonearm wire, I get an excellent sense of bloom and reasonably tight bass when it's on the recording.

When the Rondo Bronze arrived, I was really struck by the quality of the packaging. Ortofon seems to attend to all the details, large and small. Yes, I know that one doesn't listen to the packaging, but I was very impressed with how well thought out it was, and I presume that the same attention has been given to the design and execution of the cartridge. The Rondo Bronze is clearly not a product out of someone's garage. The pod not only allows the cartridge a protected storage place, but it looks good enough to place on a shelf to show off to your audiophile friends. The instructions were very complete, and you even get a handy little tracking force gauge.

Writing about cartridges is difficult because they are the last leg of a three-legged race. How far you get in the race to sonic satisfaction is determined by all three legs, but there is no way to tell how far the first two legs (the turntable and tonearm) have gotten you. You also cannot assess how well the cartridge will perform with other turntable/tonearm combinations. I also believe that cartridge comparisons on the same turntable and tonearm are inconclusive, because you don't know how well a particular cartridge is interacting with the rest of your LP playback system. The combination will either be serendipitous or not. Inserting a different cartridge merely tells you how well that pairing (actually tripling) works. It doesn't tell you anything conclusive about the characteristics of the individual components of the playback system.

While I can only generalize, I think it's safe to say that the Rondo Bronze will please music lovers, perhaps even tortured audiophiles. Why? It is a relative bargain, and it sounds nearly as rich as my three-times-as-costly Koetsu. Usually, when you get rich tonal color in a lower-priced cartridge (think under-\$500 Grados), you get it at the cost of a lack of inner detail. Low-cost cartridges that give detail (think Blue Point Special) tend to have a lean sound that I do not find musical. The Rondo Bronze is sufficiently detailed that you'll not think you've been shortchanged.

The Bronze delivered many of those moments that audiophiles live for—the tiny details that conjure up a sense of the real event. On Artur Rubenstein's rendering of Edvard Grieg's *Piano Concerto No. 1 in A Minor*, I could perceive that the soundboard was the closely-situated source of the resonance of the hammered strings. Willie Nelson's Stardust was a real pleasure through the Rondo Bronze. Although the Koetsu gave a more immediate, yet relaxed sound, the Rondo gave a very good sense of the intimacy of the acoustic guitar and Willie's wan vocals.

The Rosewood's way with fine detail was simply more engaging, in indefinable ways. It was most obvious on smaller-scale music, less so on larger-scale music. A case in point was Linda Ronstadt's *What's New*, which was a bit more ripe, but less real, with the Bronze. With the Koetsu, Ronstadt's vibrato was more obvious, and more emotionally relevant to the recording, perhaps because the cartridge was more refined. The Rondo's treble was very satisfying, particularly the cymbals on Ry Cooder's *Chicken Skin Music* and *On the Border*. And while I didn't hear whole new vistas of top-end detail, I did hear everything about cymbals that I should have. In short, the top end sounded pretty darned good.

The dynamics of the Rondo Bronze are part of what make this cartridge special. Although I prefer my Koetsu for what I fear are audiophile reasons, the Ortofon proved more dynamic. In the opening of "Palomita" on Ry Cooder's soundtrack for the film *On the Border*, there's a high-pitched whoop. Through the Bronze, the whoop popped, and the person whooping sounded exuberant. With the Koetsu, the whoop sounded constipated. The same thing happened when the Mormon Tabernacle Choir entered after the solo voice in the chorale of Eugene Ormandy's Beethoven's *Ninth* with the Philadelphia Orchestra. With the Koetsu, it was just another sound entering the mix, but with the Rondo Bronze, the voices jumped in, as they should.

The Rondo's dynamic expression helped it provide a good sense of the pace and bounce of Van Halen's "Jamie's Crying," especially in the bass region. This is a fun track, and I loved how the Bronze played it in my system. The elastic quality of the bass line was a pleasure to hear, with no sense of dynamic constraint. The same was true of Ry Cooder's "Crazy 'Bout an Automobile," where the bass line perfectly complemented the amusing story of life without a car. The Rondo's bass was neither a weakness nor something I was jumping up and down about. It was there, it did its job, and the music was served. Maybe that's how it should be.

The Rondo Bronze images quite well, with better three-dimensionality than the Rosewood. It had particularly good front-to-back layering. My system, which is in our living room, is set up to balance convenience and music, so there may be more to squeeze out of the Bronze, but someone else will have to do it.

Although I can and would happily live with either cartridge, my preference is for the Koetsu. Though it is less dynamic, its fine inner detailing makes music that much more intimate, immediate, and riveting. The improbably full-sounding Rondo allows detail to shine through and provides more dynamic engagement. Loud, raucous music is better served than it is by the Koetsu. If you value tonal richness and dynamics, do not have a taste for hyped-up detail, but do have a taste for musicality, the Rondo Bronze is a terrific cartridge. Although Ortofon has been a part of the audio firmament for years and years, they still make excellent products. I, for one, am interested in sampling other cartridges in the line. The Rondo Bronze is built for musical satisfaction. **Larry Cox**