# TURNTABLE

Belt-driven turntable with electronic speed control Made by: Rega Research Ltd, Essex Supplied by: Rega Research Ltd Telephone: 01702 333071 Web: www.rega.co.uk



# Rega RP6 (£798)

More luxurious than the value-for-money RP3, Rega's RP6 turntable introduces a new platter concept and promises better sound as well as a new high-quality finish Review: **Steve Harris** Lab: **Paul Miller** 

I f you're launching a whole new range, it's usual to start at the top and work down. Untroubled by such strictures, Rega launched its RP3 turntable last year, and has only just now followed it with the next model up, the RP6 reviewed here. In fact, the RP6 was originally scheduled to precede the cheaper model, but because of Rega's interchangeability and upgrade options it hardly matters which came first.

What does matter is the intriguing design story, which goes right back to Rega's roots. Rega's owner and chief designer Roy Gandy was experimenting with turntables long before he started the company, and in line with the hi-fi ideas of the time, he'd tried beefing up turntables with concrete. But he quickly found that adding mass always gave disappointing results. From an engineering point of view, he realised that a more massive plinth would just make a turntable's problems worse, because it would be able to transfer more unwanted energy into the platter.

Ideally, he says, a plinth should have zero mass and infinite rigidity: obviously impossible. But from the beginning, Roy's Rega designs were based on a plinth as low-mass and yet as rigid as he could make it, using a light particle board faced on both sides with a hard phenolic resin skin.

In the 1990s, aiming to get closer to the ideal, Rega came up with a special construction in which much of the particle board core would be cut away, leaving merely a skeletal shape which provided strength where needed. It didn't look much different from the outside but it *was* very much lighter. First used in the Planar 9, and then the P9, this plinth design was also the basis of the P7 and P5.

More recently, experiments were made using a ceramic bracing piece to add rigidity to a plinth just in the all-important area between the main bearing and the arm mounting. From this came the idea

**RIGHT:** Seen through the two-piece glass platter is the upper of two 2mm phenolic brace pieces, this time with a metallic finish. The second brace is under the plinth of the Double Brace, where rigidity is provided by phenolic braces above and below. The plinth itself could now be made from very light furniture board, and the overall phenolic skin dispensed with.

#### **BONDED GLASS LAYERS**

Much cheaper to execute than the skeletal plinth, the Double Brace technique could be applied to a lower-cost model like the RP3. It also meant that the RP6 could show a big cost saving on the plinth compared with the P5, which it effectively replaced. This in turn meant that there was scope, within the price constraints, for another major innovation in the RP6.

'This is something we've wanted to do ever since we've been making glass platters,' says Roy Gandy. 'We wanted to make a glass platter with effectivelydistributed weight. I've always believed that glass is nearly if not exactly the ideal material for a platter. For a lowish-cost turntable, it's a good compromise to have a flat platter, which you can cut out of flat glass, so it's already accurate in one plane. The only problem then is making the centre and the outer periphery accurate, and we twigged how to do that in the 1970s.

'But machining or moulding, or whatever – getting glass so that it was structured with more of a flywheel around the outside – had eluded us for many years, really until modern CNC machinery had come into the forefront in glass cutting. And also, processes of glueing glass that were almost invisible had come along, and we realised that we could start glueing two pieces of glass together.

'But it's only literally in the last few months that we've managed to get the accuracy of the two bits. And that's meant that the RP6 was a bit later than the RP3.'

Now that it's here, we can see that the RP6 platter consists of a 10mm-thick 'flywheel' ring bonded to the underside of





the 6mm-thick top piece. This sits on a new aluminium hub adaptor, whose upper edge is castellated to give a six-point support to the glass, and which in turn sits on Rega's usual plastic sub-platter. In fact, the pointsupport idea has been extended to the sub-platter too, for all models. In the first modification of this part in more than 30 years, it is now moulded to give 12 support points around its periphery, instead of a smooth rim.

At just over 2kg, the two-piece 16mm platter weighs little more than the 12mmthick RP3 platter, but with the inertia of the heavy rim it takes a little longer to get up to speed, and the belt still gives out that familiar creaking sound in the process.

Even when the new platter is covered by its felt mat, the RP6 looks very different from the RP3, thanks to its beautiful pianolacquer finish. There are eight colours to choose from just as the upper plinth brace has been given a metallic finish. As with the RP3, the RB303 arm is included in the price, but this time its counterweight is in polished metal rather than black.

Of the other refinements, the most important is that the RP6 comes with the speed-switching TTPSU external power supply. RP3 owners can add a TTPSU as an upgrade, and in the future, the two-piece platter and hub adaptor may possibly become available as an upgrade for RP3 owners too.

Our RP6 came factory-fitted with the £255 Rega Exact cartridge, the package

price being £998. For this review, I was still able to lay hands on the RP3 [*HFN* Oct '11], which I also fitted with an Exact for listening comparisons.

## MORE POWER AND CLARITY

To start with, I just gave myself a refreshing blast of Cream's immortal live 'Crossroads', not from an audiophile reissue but a cheapo 1978 compilation, *Cream Vol 2* [Polydor 2479 701]. Even so, Clapton's *tour de force* was as exciting as ever, while the RP6 combination gave a strikingly vivid presentation of Jack Bruce's unbelievable bass playing, clarifying the dense textures really well.

Coming up to date, and bringing in one of today's great bass players, I put on *Folk Art* by Joe Lovano's Us Five, issued on CD by Blue Note in 2009 but extended to a 180g double album by Pure Pleasure [PPAN BST91528]. It was a joy to hear Esperanza Spalding soloing amid some truly more powerful of more air rou of a "ring" to it and a feeling of cleaner attack'

amazing percussion sounds, including gongs that sounded wonderfully real – at least, they did on the RP6.

But how did the RP6 compare with the RP3? I started my shootout with Rega's own recording of Christine Collister, *Love* [ENS 002]. Immediately, on the opening 'Time In A Bottle', Gary Bennett's guitar sound had more of a 'ring' to it, and also

**EXACT INFORMATION** 

Supplied as an option with the RP6, the Exact is Rega's top moving-magnet cartridge. It uses the Namiki Vital stylus, first seen in the 1970s on the Supex 900 moving-coil and arguably one of the most successful line-contact types. When mounted in a Rega arm, it benefits from the rigid three-bolt fixing pioneered long ago by Linn with the Troika. In the early days, Rega sourced its cartridges from Goldring, but then quickly started making its own, to become the UK's only other significant cartridge builder. Today the entry-level RP1 deck comes with an Ortofon OM-5, but all Rega-branded cartridges are designed and handmade in-house. It naturally takes some very special training to build the Apheta moving-coils, and only a few can be built in a working week, but moving-magnet cartridges can be made at a rate of up to 50 per day if necessary. **ABOVE:** Seen in red lacquer here, the RP6 can also be ordered in green, orange, blue, yellow, black, white or pink. Fitted optionally with an Exact cartridge, the arm is a selected RB303

a greater feeling of clean attack. The sometimes-problematic cello bass line was even better conveyed, the notes formed clearly and cleanly. And Collister's unmistakable vocal sound took on further subtleties, particularly in her deep and dark lower register on 'Mad, Mad Me.'

With *Tracy Chapman* [Elektra EKT 44] from 1988 and 'Fast Car', the RP6 sound seemed bigger, warmer and richer than the RP3's. Bass was subjectively heavier and more powerful, and there was a feeling of more air round the voice. Pulling out

Blondie's *Parallel Lines* [Chrysalis CDL 1192 – see p74] gave a fresh reminder of the essential clarity and rhythmic integrity that the RP3 delivers. But moving on to the RP6, the same LP seemed to evince more

character. Once again the bass seemed deeper and more powerful, while the percussion and synth had more punch, so you could groove to the wonderfully tight rhythms of 'Sunday Girl' or 'Heart Of Glass'. Debbie Harry's always half-buried vocals came to life – though even the RP6 couldn't dig them out completely.

On the often-remastered *Muddy Waters: Folk Singer* [in this case on Discovery Records HDR 1001] the RP6 certainly gave a bigger and deeper soundstage than its sibling. Here the bigger, weightier bass tended to give more presence to Clifton James's drums, while Muddy's excellentlycaptured vocals gained in impact.

Eric Clapton's 1978 album *Backless* also saw the RP6 delivering a meatier – and even a beatier – sound than the RP3. It certainly gave you an explicit view of Carl Radle's masterly bass playing on 'Walk Out In The Rain' and even more so on the rocking 'Watch Out For Lucy.' On this track the RP6 offered a little more insight into  $\bigcirc$ 

# **TURNTABLE**



**ABOVE:** On the underside is the housing for Rega's phase-tuning anti-vibration motor circuitry, with a four-pin socket for the speed-switching outboard power supply

Clapton's vocals, while giving clarity and sense to Marcy Levy's backing vocals and also to her faintly-heard harmonica playing.

With bated breath, I plonked on *Dire Straits* [Vertigo 9102 021] to see how the 'Sultans Of Swing' would sound on the RP6. And the track seemed fast now, driven by the bass, but rocking unstoppably. You could tune in to tiny details, or appreciate the great drumming; but then you were captivated as Knopfler's vocal swam over it all so effortlessly, and his guitar shimmered, flashed and snaked.

Stacey Kent's Dreamsville [Candid CJS 9775] was originally released in 2000, but was immaculately remastered by Ray Staff for Pure Pleasure in 2007. It was breathtaking to hear Colin Oxley's beautifully-recorded guitar behind Stacey at the start of 'When Your Lover Has Gone,' and the way the other musicians steal in so seamlessly to join him. Here it seemed that the RP6 really did extract a little more detail and give the singer a little more tangibility and presence.

#### A CLEAR WINDOW VIEW

With the famous Barbirolli recording of *English String Music* [EMI ASD 521] it was great to find a sense of clarity that extended right down to the lower reaches of the doublebasses, really helping to convey the atmosphere of the recording venue (the old Kingsway Hall). In Elgar's *Introduction and Allegro* the strings sang out with verve from a deep and convincing soundstage.

Then I tried other cartridges. Switching from the Exact to the Roksan Corus Silver showed the latter's general refinement, with a sound that was smoothed out a little by comparison. With a low-cost Grado moving-magnet, the Prestige Red, it seemed that the RP6 and RB303 arm really helped let this cartridge do its thing, catching the ear with its alluring sense of ease and apparent depth. An affordable moving-coil cartridge, the sweetsounding and well-balanced Benz Micro Glider SL, brought bass with had power and control, great soundstaging and treble delicacy.

Back with the Exact, I delved back to the 1950s and glorious mono, putting on the celebrated Klemperer Beethoven Symphony 7 [Columbia 33CX 1379], the subject of our 'Vinyl Icon' in February. And it was truly uplifting. As with many other discs, and many kinds of music, I had the feeling that the RP6 was able to present a convincing musical performance cleanly and simply, unfazed by the limitations of a particular record.

Subjectively, it was just as if the combination avoided emphasising apparent faults or introducing its own problems, and instead, without exaggeration or added drama, gave you a clear window on the sound you wanted to hear.

## **HI-FI NEWS VERDICT**

Confidently offering a sonic uplift over the RP3, the RP6 seems to tread sure-footedly through the most difficult recorded territory, unencumbered by any audible baggage of its own. It makes an excellent platform for suitablypriced MCs from Benz or Ortofon, for example, but otherwise there's no reason not to go for the package with Rega's own Exact. It comes recommended as great value either way.

#### Sound Quality: 84%

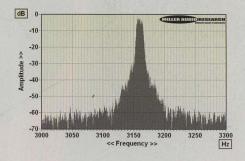
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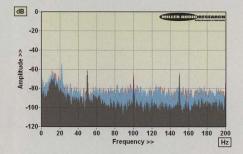
## **REGA RP6** (£798)

Falling between the entry-level RP1 and top-end P9 [HFN Aug '08], this new RP6 model owes its inspiration to Rega's RP3 [HFN Oct '11] and shares a derivative lightweight, 'stressed beam' chassis design. The laminated glass platter is heavier, especially at the periphery, and this improves stability once up-and-running, as evidenced in the lower peak wow figure of 0.07% [see Graph 1, below]. All Rega's decks show a very similar W&F plot that's free of a principal wow tone (or two) but trades this, instead, for a broader, almost noise-like low-rate speed variation. It's the reason why the Rega TT's sound crisper than might otherwise be anticipated from peak wow figures in the 0.07-0.1% range. Rega's outboard crystal-locked 24V sine generator feeds a familiar twin-phase synchronous motor, augmented in the RP6 by its 'anti-vibration' circuit mounted under the plinth. Perhaps this is another reason why the RP6 has the lowest W&F of all Rega's decks so far. Incidentally, the heavier glass platter takes about 1.5 seconds longer than the RP3 to get up to speed just as overall power consumption has increased from 4W to 7W.

In another interesting twist, through-groove rumble is *lower* from LPs placed directly on the new laminated glass platter (-70.5dB) than via the air-filled felt mat (-69.2dB), which is the opposite of that observed with the RP3 with its thinner, one-piece vitreous platter [see Graph 2, below]. Through-bearing rumble is almost identical at -71.6dB, however. Readers are invited to view a full QC Suite report for the Rega RP6 turntable and RB303 tonearm by navigating to *www.hifinews.co.uk* and clicking on the red 'download' button. PM



ABOVE: Wow and flutter re. 3150Hz tone at 5cm/sec (plotted  $\pm 150$ Hz, 5Hz per minor division). This new deck was running  $\pm 0.3\%$  fast, as per Rega practice



ABOVE: Unweighted bearing rumble from DC-200Hz (black infill) versus silent LP groove on glass platter (blue infill) and on mat (red infill) re. 1kHz at 5cm/sec

### **HI-FI NEWS SPECIFICATIONS**

Turntable speed error at 33.33rpm	33.43rpm (+0.27%)
Time to audible stabilisation	4sec
Peak Wow/Flutter	0.07% / 0.02%
Rumble (silent groove, DIN B wtd)	-70.5dB
Rumble (through bearing, DIN B wtd)	-71.6dB
Hum & Noise (unwtd, rel. to 5cm/sec)	-61.3dB
Power Consumption	7W
Dimensions (WHD)	446x105x363mm