



Tight budget, tight design standards. The Reloop Turn 3 meets both criteria. Here's a modern turntable with fine sound and a low price.

Tight Loop

A digital turntable? Pass the smelling salts. But it turned out I didn't need them with Pro-Ject's Essential II Digital turntable (Hi-Fi World October 15 issue) that wowed me with its quality, ana-

logue as well as digital.

Now here's another digital LP spinner, the three-speed Reloop Turn 3 that offers USB connection to a computer and a whole host of other facilities including auto-start and stop – all for a measly £350 as a complete

package, including cartridge and hinged dust cover.

Wow! Competition is heating up in the turntable market as the world rediscovers vinyl. But is the Turn 3 any good?

I'll jump ahead and partly answer

that question straight away. Like Audio Technica's AT-LP5 (Hi-Fi World October 16 issue) the Reloop Turn 3 is made by Hanpin of Taiwan (www.hanpin.com.tw). As a major OEM, Hanpin know their stuff and produce a very good product: the Reloop Turn 3 reflected this by having some unusual strengths that I'll explain later. What Reloop do is specify the



A conventional bayonet fixing removable headshell that is rigid, fitted with Ortofon 2M Red budget MM cartridge.

product in Germany to come up with a unique and – I thought – interesting LP playing package.

The Turn 3 is a three-speed design no less: it features 78rpm in addition to 33 and 45rpm. If you are wondering, 78rpm is for playing old shellacs that were first spun on wind-up gramophones. The 78rpm market is for record collectors.

You don't find 78rpm on turntables with manual belt change (Pro-Ject Essential Digital II) because the pulley steps differ so much they overly stretch a belt.

The solution to this is to use a speed controlled d.c. motor – and that is what the Turn 3 hides inside. Benefit: speed change is simply a matter of turning a selector knob



Three speeds, selected by a rotary knob.

sitting at front left on the plinth; no need to manually move a belt on the motor pulley as is still common with budget turntables

Another benefit is that d.c. motors commonly have servo-feedback and better speed stability as

a result.

Reloop specify much more to make the Turn 3 a fine all-round package. I was amused to encounter both auto-start and optional auto-stop too (it can be switched out), reminding me of Garrards of yore. You don't as a result have to suffer the interminable end-of-side "click..click...click" as the cartridge tracks the locked inner groove – a call to leave the settee and do something – or go mad.

As I swung the arm over the manual lift/lower platform (damped) the platter spun up immediately. Why auto-stop is optional I do not know but the user manual refers to fully manual operation, including not using the lift/lower platform, so Reloop see fully manual as desirable I presume.

The Turn 3 comes with an Ortofon 2M Red budget moving magnet (MM) cartridge, a unit that tracks well at the 1.8gms downforce recommended (but I use 2gms), has plenty of output and also a flat frequency response giving a clear, forthright modern sound lacking the warmth of 1970s MM cartridges (get a Shure M97XE or Nagaoka MP110 if you want this).

Unlike UK turntables, the Turn 3 follows tried and trusted design paths perfected by Japan long ago that make set up easy. The arm has a calibrated counterweight, the headshell is removable to facilitate cartridge changing and bias is applied by a dial (not a weight and thread). The light alloy platter has to be placed onto the main bearing and the belt slipped over the motor's drive pulley but this is a simple procedure. It took me minutes to get the whole affair up and running – and you even get a nice, hinged acrylic dust cover as protection against the cat.

With dimensions of 450mm wide, 352mm deep and 42mm high the plinth is not large but you do always need a 14in deep minimum shelf for a turntable and extra allowance must be made for the dust cover when open. At 7kgs the Reloop isn't heavy but as always a firm, stable and level surface is needed, because the feet are fixed: height adjustment isn't possible

What Reloop don't specify or change in the Turn 3 from Hanpin's OEM package is its on-board phono stage. It is identically equipped to the Audio Technica AT-LP5 here, our measurements revealed. If this stage is switched in (optional) it provides an equalised output that can conveniently be fed to any amplifier; an external

phono stage is unnecessary.

This sounds like a good idea but the stage fitted isn't very good, having low gain and therefore low output plus a low overload margin of 10mV via USB (which has been set as digital peak level 0dB).

The reason? Inside is a cheap 16bit analogue-to-digital convertor (ADC) running at 44.1/48kHz sample rates. Setting the 0dB point low keeps 16bit ADC digital noise down. The Pro-Ject Essential II may not have three speeds, but it has a better hi-res (24/96) digital convertor.

So you have to weigh up the trade-offs here: the Turn 3 uses Hanpin's internal electronic twiddly bits, like the AT-LP5, and runs into exactly the same problems of occasional overload on loud music peaks as well as lacklustre digital quality.

Also, it hasn't got enough output to drive an insensitive amplifier loud – our McIntosh MC152 power amplifier not being usable except via a preamp with gain.

You can of course get around this by using the Direct Audio output, feeding it to an external phono stage,



A calibrated counterweight sets tracking force, and a dial bias force. The lever operated manual lift/lower platform is damped.

but a Furutech ADL Stratos, with 24/96 hi-res digital convertor offering better digital sound quality costs £1000.

What do you do with the digital output? Plug it into a computer – PC or Mac – and record LPs to digital files using a free music editor like Audacity (www.audacityteam.org), Reloop say.

I use Audacity a lot and making recordings with it isn't quite like pressing the red record button on a cassette deck but Audacity user

instructions are very good – if read, digested and followed.

Recording LPs from the Turn 3 using this programme, sound quality wasn't wonderful: think hard and barren sounding digital. Best to see this part of the Reeloc as a budget 'get you by', rather than anything serious in digital terms.

Build quality and finish were good. I could not find anything to complain about at the price – and Turn 3 was super-easy to use because of those automatic start and stop functions. I prefer to hand cue than use a shaky lift/lower platform but the damped action of the Turn 3's platform worked better than many and was acceptable. At run out the platter spins on for a minute or so before silently coming to a halt.

Ortofon's 2M Red cartridge is a solid budget slogger with diamond stylus mounted on a rondel to ride through the fluff that finds its way onto LPs. It gives a modern sound balance lacking in analogue warmth. That helped make the Turn 3 sound less laid back and more forthright than turntables of old.

SOUND QUALITY

There are three ways to use the Turn 3: from its Line output, its direct phono output, and its digital output. Initially, I hooked up the Line output to a Music First Audio passive magnetic preamp feeding Quad QMP monoblock power amplifiers and Martin Logan Electromotion ESL-X loudspeakers. Whilst this isn't the sort of system you would likely use with a budget turntable, it is analytical for review purposes, allowing me to accurately assess the Turn 3.

Spinning a new copy of Led Zeppelin I I soon started to hear this turntable's strengths. Jon Bonham's prodigious drumming was firmly timed – there wasn't the slight temporal vagueness common to budget belt drives. And his kick drum had good impact yet was spry – and this was almost certainly down to the subsonic filter that cuts off hard below 30Hz to prevent loudspeaker cone flap. It also eliminates deep bass waffle from LP and 'speeds' bass. It helped give this package fast, punchy bass from the outset with the 2M Red cartridge.

Because the analogue phono stage moves progressively into overload above 15mV, pegging out at 30mV (1% distortion), I did not detect distortion on music peaks from the Ortofon 2M Red cartridge, even though it is there. What I did hear was a nice, clear open



The rear panel with analogue phono output, preamp switch, USB B connector and 12V d.c. input from an external supply.

sound, not warm but not sharp either.

I know the Red quite well and it does a great job, whilst being not overly detailed or insightful. I soon fitted a Goldring 1012GX though (1.8gms VTF), that brought more focus and insight, and even more impactful bass. With this the whole set-up absolutely shone and was a tribute to the qualities of LP; it was thoroughly enjoyable.

Connecting the analogue output direct into an external phono stage by switching the internal preamp off predictably brought a greater sense of clarity and stage depth to the sound.

From USB most LPs hovered under serious overload and distortion, but with high volume 45rpm 12in singles like Billy Ocean's 'Get Outta My Dreams, Get Into My Car', overload distortion started to hurt at times and the sound became hard and coarse. The 0dB level needs to be moved 6dB higher (20mV) to avoid this. The record level meters in Audacity stayed in the red with 12in 45rpm singles and hovered close to it

from many other LPs. The USB digital output isn't as good either as analogue playback or the 24/96 digital available from the Pro-Ject Essential II Digital turntable.

CONCLUSION

The Reeloc 3 was easy to set up and a delight to use. The German company have specified it well in this respect, auto-start and stop being worthwhile conveniences, even to me – a die hard all-manual Garrard 401 with SME arm man.

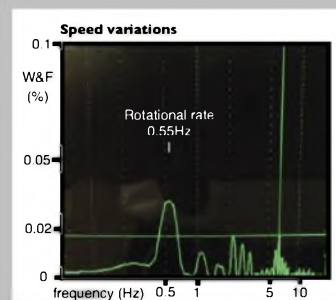
Whilst the on-board phonostage overloads early it still sounds good, as overload occurs only on occasional music peaks and is difficult to detect as a result. With accurate RIAA equalisation and a warp filter, a good arm and great speed stability the Turn 3 came over as clear, firmly timed and punchy. It can be used as-is or upgraded over time, since the arm is good enough to accept a top Audio Technica or Ortofon MM cartridge. A fine product then, worthy of five Globes at the price.

MEASURED PERFORMANCE

As belt drives go, the Reeloc Turn 3 was speed stable; where most belt drives are erratic, producing 0.2% wow or more due to large random variations, the Turn 3 measured a steady 0.1%.

Our analysis shows the main speed variation component at 0.55Hz (33rpm) was low, meaning the platter varies little about mean speed – and mean speed was set accurately to exactly 33rpm.

The built-in phono stage moved into overload at a low value of 10mV, where 40mV is common, distortion reaching 1% at 30mV. The Ortofon Red MM cartridge **WOW & FLUTTER**



fitted delivered an easy 10mV on Band 4 of CBS STR-112 test disc, although this is quite a high level cut

Gain was a modest x55, 10mV in giving 550mV out. Frequency response measured flat and a warp filter has been included.

The digital section overloaded hard at 10mV (0dB) so the USB digital output will generate distortion on occasional loud music peaks. Noise measured a low -70dB IEC A weighted, a respectable figure. The ADC is 16bit resolution offering sampling rates of 44.1kHz and 48kHz.

The turntable and Ortofon 2M Red cartridge measured well, but the internal phono stage and digital convertor did not, being in effect 'starter items' best upgraded with external units. **NK**

Speed error	0%
Wow	0.1%
Flutter	0.04%
Total W&F weighted	0.07%

RELOOP TURN 3 £350



OUTSTANDING - amongst the best

VALUE - keenly priced

VERDICT

A great turntable package at a low price, complete with digital and dust cover.

FOR

- three speeds
- auto-start and stop
- hinged dust cover

AGAINST

- mediocre digital quality
- low output phono stage
- external power supply

Henley Designs
+44(0)1235 511 166
www.henleydesigns.co.uk