VINYL NEWS AND REVIEWS SECTION SEE PAGE 80

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7 PAGES OF LETTERS - THE BEST WINS A QUADRAL BREEZE 2 PORTABLE LOUDSPEAKER! (UK ONLY)

welcome

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eaders have asked us to review the confusing new flood of budget record decks now hitting the market. That, I thought, could be a problem, if they damage both invaluable test records as well as the music LPs we use for review purposes. Happily, budget pickup cartridges in particular have improved over the years, to a point where they track well and don't damage records. This has allowed budget

decks from Pro-Ject, Audio Technica and Reloop we've tested to date to deliver

superb results. Now Lenco have pitched into the market

with their L-3808 Direct Drive turntable package we feature this month on p83. It shows just how competitive the vinyl market is becoming. Ironic that in its revival the LP is performing better than it ever has done in the past.

Music streaming is now eclipsing all else. You can hear as much as you want - and anything you want $-\$ for a small monthly fee. Yet listening like this is even more retro than playing LP. Before recorded sound (circa 1880) you'd throw a few coins at a traveling musician to hear his worth - and streaming is much the same. Hear it, pay for it – and then it is gone, only remaining in your memory, possibly to haunt you. You may be wanting to pay again then.

Such easy appreciation isn't now so simple. You have to get your network and comms sorted first, then get a streamer. When you've done this the world of music is yours to enjoy, providing you've got all your addresses right on the sub-net! No travelling musicians here; you're dealing with networks instead. Read about trials, tribulations and solutions to streaming in our Letters pages, starting p28.

Measuring the mains is a dangerous thing to do, but we have had to face this issue and what we are finding is interesting - perhaps alarming. The waveform is very distorted and this will find its way into the hi-fi through mains transformer leakage generating ground current noise. It suggests we will get

better sound from cleaner mains and that's exactly what the IsoTek Evo3 mains regenerator offers - see our review on p51. It's a fascinating adjunct to the hi-fi.

The world of hi-fi gets ever more complex and expansive as decades roll by, new technologies arrive whilst old ones remain and are honed. I hope you find our coverage of old and new interesting.

Noel Keywood **Editor**

amongst the best

testing (see www.hi-fiworld.co.uk for full explanations of all our tests)

To ensure the upmost accuracy in our product reviews, Hi-Fi World has extremely comprehensive in-house test facilities, and our test equipment - from big names like Rohde & Schwarz and Hewlett Packard - is amongst the most advanced in the world.

Loudspeakers are measured using a calibrated Bruel & Kjaer microphone feeding a Clio-based computer

analyser, using pulsed and gated sinewaves, in a large room to eliminate the room's influence. Pickup arm vibration is measured with a Bruel & Kjaer accelerometer.

No other UK hi-fi magazine has in-house testing, and none has access to such advanced tests across all types of equipment. That's why you can depend on Hi-Fi World reviews.

verdicts

🕽 🥘 🌑 🌑 OUTSTANDING

GOOD MEDIOCRE POOR

EXCELLENT extremely capable worth auditioning unremarkable flawed **VALUE** keenly priced

ELECTRONIC MAGAZINE

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Turn the table

Thought Direct Drive was expensive? Lenco turn the tables with their mew L-3808. Noel **Keywood finds.**

Direct Drive turntable for £200? Pass the smelling salts. This means it is made in China – by ing as machines. But whilst it is easy to sneer at

machines. Or people pos-

complexity reduced to junk status through Chinese factories it remains a sobering fact that a lot of it has been well designed and cleverly manufactured. Lenco's L-3808 uber-budget Direct Drive fits this description. Plasticy in places it might be, and a tad amateur too, but it turned in the figures and did the job.

With its strobe light, pop up cue light and slide control speed adjuster, the L-3808 is stylistically similar to the famous and revered Technics SL-1210 Mk2 Direct Drive from the 1970s. It also looks quite snazzy in action; ours sat on a rack above the Blue Aura

V3 reviewed in this issue

people in the office remarked they looked good together. For a peanuts price you

set at its centre detent the L-3808 offers a nicely accurate 33 or 45rpm, measurement showed, from an 8 pole, 2 phase motor. It isn't quartzlocked so there's a smidgeon of wander, but nothing compared to belt drives; this is a turntable that holds

correct pitch. And if you don't like that pitch you can adjust it with the slider - a trick aimed at DJs who get mention in the handbook.

The shiny white plinth is a complex plastic moulding that resonated when I tapped it with a finger - not ideal. Hi-fi record decks need solid, non-resonant plinths but - hey ho - what can we expect at the price? The upside is an all-up weight of just 5.4kgs - very light. That includes a nice hinged acrylic dust cover - something you pay extra for elsewhere. This means the Lenco is easy to position and move, and does

get all this. With the speed adjustment slider



The bayonet fixing detachable headshell comes fitted with an Audio Technica AT3600 moving magnet (MM) cartridge that tracks at 2-2.5gms.

not need an especially strong shelf. Closing the cover hard will make the stylus jump; care must be used. The feet are non-adjustable.

I'm fairly impervious to foibles like pieces of bent wire and fishing line being used in European decks to apply bias and such like, but the limp arm of L-3808 was more jarring. In its rest, the arm slants alarmingly downward toward the plinth surface. Its rest is too low — no big deal, but inept design work, or expediency.

With arm on LP it still tilted down. Looking closely, part of this is genuine down-tilt of the arm tube, and part visual effect from a downward tilting upper face on the head shell. This needs sorting so the arm tube and head shell are truly parallel to the surface of the LP.

shelf OEM item, and not a dedicated design like the Dual MTR-75 I

reviewed recently

- that likely comes from the same factory. The Lenco's lift/lower mechanism worked well enough all the same, this being an all-manual turntable, so when an

LP finishes playing it must be manually cued up, or lifted using the headshell finger-lift for those dextrous enough.

The arm has a standard bayonet fixing detachable headshell, so it can be changed/ upgraded. It comes fitted with an unidentified Audio Technica cartridge (MM) that needs 2gms tracking force the manual says. It looks like the ubiquitous AT3600 to me, that comes with a conical stylus and tracks at up to 2.5gms.

An on-board

phono stage is fitted, so the turntable can be connected to any amplifier's line input (CD, Tuner, Aux etc); an external phono stage is unnecessary. It can be switched out to allow use of an external stage however. And as if all this was not

amplifiers. It matches MM cartridges only of course. The Analogue-to-Digital Convertor (ADC) inside is necessarily a budget chip that gives 16bit resolution at 44.1kHz (CD) or 48kHz sample rate – so you don't get hi-res at this price!

There is no external power supply, nor a mains earth, as the casework is plastic; earthing is through the phono leads; there is not even a separate earth connection — all clever and well worked out because it avoids earth loops, ensuring the turntable is hum free. A captive two core mains cable is



A stroboscope shines against platter markings to indicate speed. The marks appear stationary when speed is correct.

terminated in a UK 13A plug – no wall warts here.

Set up was simple and standard, even bias is applied by a dial, not a weight on thread.

SOUND QUALITY

Although the L-3808's Direct Drive motor, aluminium platter and bearings are all budget there was no rumble or drone: when the stylus hit the groove all I heard was vinyl noise.

Initially, I ran the deck connected directly through its phono stage to a Music First Audio magnetic preamplifier connected to our McIntosh MC-152 power amplifier driving Martin Logan ESL-X hybrid electrostatic loudspeakers and this set-up worked but lacked gain, as measurement had warned. The internal phono stage did drive our Icon Audio Stereo 30SE however and I used it like this for most of the time

The turntable has a very steady and assured quality and a certain form of simple purity to its sound: I was more than impressed to hear Kate Bush 'King of the Mountain' (180gm) glide past with a steady confidence absent with belt drives.



The rear carries analogue phono socket outputs, that can be switched from direct (Phono) to Line output, using a small slide switch. Digital output (16bit, 44.1 or 48kHz) is via USB.

All the same, technically it is no big disaster, raising Vertical Tracking Angle a little, which adds a tad to distortion.

More irritating was the close proximity of the arm lift/lower lever to the arm holder's securing clip. China has no history of LP usage and it showed here. But then again Lenco could have intervened to improve the whole arm rest structure, but I suspect the L-3808 is an off-the-

enough, there is a USB digital output, together with a CD carrying Audacity, the free music editing software, to enable the digital recording process.

Measurement showed the Lenco phono module is almost identical to that in Audio Technica, Reloop and Dual turntables I have reviewed; it is a specialised module being bought in. Gain is low so volume will have to be turned up on accompanying



The platter sits on a tapered motor spindle, so it is easily removed.

Yet again I noticed that the warp filter of the phono module gave tight, fast bass, totally lacking softness or wallow. In total, the L-3808 offered quite extraordinary results; I was almost depressed that a £200 plastic special could sound so good!

OK, when I put on finely recorded LPs like Mozart Symphonies No25 & 35 (Decca, Pro-Ject rerelease on 180gm vinyl), violins were soft and a bit blurred by the conical stylus of the AT3600, but this is easily upgraded, the arm being good enough to take better.

With meaty rock like Billy Ocean's 12in, 45rpm single Get Outta My Dreams, Get into my Car the



The cue lever is too close to the arm rest clip.

turntable had superb grip on timing, the synth beat and sound effects delivered with metronomic precision and total, dynamic assurity - I just wanted to turn the volume up!

The Audio Technica AT3600 cartridge may be super-cheap but it is still well honed in its sound, delivering vinyl smoothness in bucket loads. It doesn't have the analysis or bite of more expensive designs, nor fine high-end detail, but it has dynamic contrasts any CD player would die for, plus a silky smoothness that makes listening a delight.

I did in the end switch out the internal phono stage, hook up an Icon Audio PS3 valve phono stage and insert a headshell fitted with a Goldring 1012GX and suddenly there was more insight, detail and greater stage depth - as you might expect. All the same, the internal stage is very good, even if it is low on gain and needing a preamp.

Recording via USB inevitably gave a slightly coarsened sound with the peculiar mechanical hardness of mediocre 16bit but I suspect few people would notice. You don't get hi-res at this price.

CONCLUSION

For just £200 the Lenco L-3808 turntable package gave superb results. It could be forgiven small sins, but



A pop up cue light is for DJs working in low light.

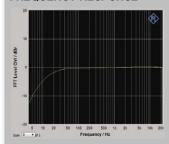
there really weren't any. The arm and its rest need better alignment, but this little affects sound quality. It's a dynamite starter package for anyone wanting to get back into vinyl.

MEASURED PERFORMANCE

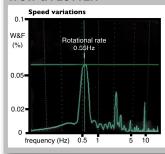
The L-3808 held steady and correct speed under test, the needle of our Wow & Flutter meter (Kenwood FL-180A) staying closely to a low 0.15% wow (DIN, unweighted) value, without the large swings seen in belt drive turntables. Our spectrum analysis shows variation lay at basic rotational frequency 0.55Hz (33rpm) as usual, accompanied by a few small motor cogging components seen as peaks at 2.2Hz and 8.8Hz.

With DIN weighting total wow and flutter measured 0.08% - a low value, if

FREQUENCY RESPONSE



WOW & FLUTTER



not quite a match for Technics Direct Drives (0.06%). In use the L-3808 will have correct and steady pitch, sounding less 'watery' than belt drives, but this is quite a subtle effect.

The internal phono stage that provides Line output had a low gain of x60 (35dB) at 1kHz, giving 600mV from 10mV input. This is just enough to drive insensitive amplifiers (400mV) to full output, with volume turned up. The overload ceiling was sufficient at 38mV.

Frequency response (equalisation accuracy) was correct, our analysis shows, a warp filter rolling off gain below 50 Hz. This suppresses cone flap caused by LP warps, but it removes deep bass. Noise measured a low -71dB IEC A weighted, a respectable figure.

The USB digital output reached digital maximum (0dB) at the limit of the Audio Technica AT3600 cartridge's tracking ability, equivalent to 17mV in.

The L-3808 had superb speed accuracy and stability. The internal phono stage and USB digital convertor were also very good, as budget items. The L-3808 measured well in all areas and was impressive by any standard - especially so at the price. NK

+0.1% Speed error Wow 0.15% 0.05% Total W&F weighted 0.08%

LENCO L-3808 £199.99







OUTSTANDING - amongst the best.

VALUE - keenly priced.

VERDICT

Top quality results at a ridiculously low price from a budget Direct Drive that works like

FOR

- easy to set up and use
- accurate and rock steady
- relaxing yet dynamic sound

AGAINST

- resonant plinth
- poor arm rest
- arm droop

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