

STABIL VINYL - mellanhjulet snurrar igen

STABLE VINYL

- the idler wheel is spinning again



The tone arm is firmly mounted on a massive brass cylinder and a mounting plate of thick aluminium, everything with damping inside cork layer.

The Japanese look after their idler drive turntables. So do Swedish building enthusiasts as well, because a more exciting sound one must look long for. Text: Meyer-Lie Illustration: H&M

Isn't it funny how some can be provoked by turntables and vinyl. Very provoked. We have heard about hand-to-hand fighting about the vinyl and that it is only a technology hostility nostalgia to continue with that crackling stone age sound. It is in particular the somewhat elderly sound enthusiasts who use chest notes and insist on that the vinyl was finished already during the 1980's when the CD was introduced. Not to speak about today when we have 24-bites HD-sound. Of course, LP covers are more captivating than paltry CD-covers or all impatient page skimming on a touch screen, but then it is not about sound reproduction.

No, in the eyes of the criticizers today's vinyl-passion is fed by hipsters with DJ-complex wanting retro cool interior decoration odds and ends. So they say. But believe us, one doesn't need to be a backwards striver to realize the qualities that vinyl still is offering. Therefore it is so nice that today's hifi-scene is so splendidly paradox and very impudently allows us to switch between digitally streamed internet music and in the next second go all-in analog and play same music on LP on a discarded idler wheel from the 1960's. Maybe via a tube amplifier from the 1930's or a high-tech class D-amplifier to horn speakers from the 1950's or digital active and DSP corrected mini monitors. Surely one gets very happy!

As happy and surprised one also gets, when as I did start to botanize in the vinyl after many totally digital years. I admit a little late, but personally I have been of the opinion that all the vinyl disadvantages have stood in the way for the sound experience. You know, sparks, crackling, platter rumble, mistracking and poor engraving.

But I really got something to think about during an engaging demo by **Vertere Acoustics** at the Stockholm shop HiFi Art, when the founder Touraj Moghaddam demonstrated the new tone arm SG-1 TPA. That was a

giddy experience which showed the vinyl with a seldom heard combination of finesse and brutally explosive power. I so to say did not hear any crackling, sparks or mistracking at all.

But that was only the start. Next chock was sitting in the editorial office: a newly serviced and radically stripped **GARRARD 401** signed **Alan Ericsson**, a faithful reader who most willingly offered to lend his treasure with tone arms and everything. Oh yes, we know what a cult status idler drive turntables, especially the predecessor **Garrard 301** from 1954, have among obstinate vinyl enthusiasts. Not the least in Japan where Garrard and **LENCO** not to speak about the German **EMT**, the turntables' Holy Graal, have fanatic supporters willing to pay generously also for players which have served their time.

Idler drive turntables came long before the belt drive and are based upon a rubber wheel driven by a powerful motor and which is pressed towards the platter's outer edge. The technology was very common in connection with radio broadcasting because the firm coupling between the platter and the powerful motor gave to short start up time. During the 1970's the idler drives where outrivaled by the even faster direct drive turntables where the platter is a part the actual motor. But in spite of many technical advantages the direct drives never have competed sound wise with the idler drives among the enthusiasts, mainly because the speed servo typically was suffering from a fast wow called "flutter" or cogging.

By coincidence Alan came in to the idler drive turntable idea and originally it was not about Garrard but Lenco. One of Alan's friends had asked if he could help him with his old **Lenco L75** which didn't work anymore. The friend had contacted several service shops but all of them had condemned the turntable and said it could not be repaired. Alan's friend therefore instead

had purchased a cheap Sony player, but the sound was miserable and he missed his old Lenco.

Only a few days later Alan by coincidence found a **Lenco L78** in a garbage container at his home street. It was in bad shape but maybe it was possible to pick spare parts out of it for his friend's defective L75:er? Coming home he disassembles the player, threw away the wooden box, cover, tone arm etc. but looking at the chassis with the powerful motor, the bearing and the platter Alan gets the impulse to try to build something better than the original.

I had read that old idler drive turntables are far better than their reputation. It is true that the idler drives where outrivaled by the belt drives but if one can eliminate old weaknesses such as rumble and vibrations they are said to be as good as the belt drives. Often much better. More musical.



Here is the large rubber idler wheel which runs the platter from the inside. The idler wheel is fed by a powerful motor of which the motor spindle is shown left to the idler wheel.



The arm tube on the massive Origin Live Illustrious combines five different materials in order to eliminate resonances and micro vibrations. Ball bearing in horizontal plane, but a double uni-pivot bearing in the vertical plane for minimal friction. Note the extra low positioned counter weight.

Especially the musicality is something that many is pointing out and reason should be a more direct and steady driving of the platter compared with the often slightly viscous doughy belt drive. If one can master the interference levels, the idler drive with its considerably stronger motor and higher torque and totally different stability preventing that the platter is slowed down by the cartridge needle's movements during strong music passages. Exactly this is what many mean is the reason for the idler drive's testified musicality.

In parallel with the Lenco-player Alan decided to try to find a Garrard 401, a player he long time ago owned and always regretted that he had replaced by a Linn LP12. So finding a Garrard 401 on UK eBay the renovation work started for real. Motor, platter and chassis were generally in good condition, but the platter bearing was improved with the German **Analogue Tube Audio** new bearing kit for Garrard 401.

The basic idea was to delete the plinth-box and replace it with an open but heavy "skeletal chassis" and mechanically separate the motor part and the tone arm from each other.

Accordingly the idea is to eliminate vibrations and resonances as much as possible and therefore the chassis with motor and platter is mounted on a 30mm thick granite plinth and under that a massive, 40mm thick wooden plinth with massive brass tone arm bases. Why not make two tone arm bases once the work had started?

After some labwork with different solutions Alan decided to go for a totally stiff solution with 3 steady brass feet from US **Mapleshade Audio**. Furthermore the totally resonance free feet have small, tapered contact surfaces in order to minimize the mechanical transmission. This type of mechanically totally separated solution allows you to reach very far in eliminating the old idler drive turntable's major disadvantage, the rumble.

Ortofon Per Windfeld, one of the Danish firm's finest MC-cartridges. Body in steel alloy, boron needle arm, Replicant 100 Diamond needle and coils with gold-plated monocrystalline (8N) copper wire.



But there is one snag in it: totally butt constructions get very sensitive against carcass transmitted vibrations. After discussions with and good advises by the Swedish **Solid Tech** Alan choose to place the whole player on four springing **Discs of Silence** with double set of springs.

In same spirit of mechanical stability Alan choose robust ball bearing tone arms from **Origin Live**. A cheaper (oh well) 10.000-SEK model, **Zephyr**, was mounted together with OL's **Aladdin** cartridge, a moving iron cartridge manufactured for Origin Live by **SoundSmith**, a hybrid of three different cartridge models. Moving iron has the advantage of an output signal level same as a MM-cartridge, but with equivalently low moving mass (needle/needle arm) as a MC-cartridge. In other words the best of two worlds.

The second arm selected is the double priced **Illustrious MK.3C** with an even more expensive cartridge: **Ortofon Per Windfeld**, a refined MC-cartridge at around 30.000 SEK. Speak of an analogue "smorgasbord" with extra everything!

The reason for the extravagant arm/cartridge combination was that Alan has a Linn LP12 with **Illustrious** and **Ortofon**

Rohmann as reference. In spite of this counter fire he normally prefers the idler drive turntable. Especially the **Zephyr** arm and **Aladdin** cartridge which according to his opinion beats the LP12 even with its more expensive arm and cartridge.

Not exactly unaware of all objections there are about having a rotating rubber wheel rigidly connected to the platter as on the Garrard, I was more than allowed skeptical about Alan's creation. Wasn't it a grotesque mispriority to combine a luxurious sophisticated MC-cartridge in a fine mechanical precision arm with an old threshing machine from the middle 1960's? The driver would ruin the whole idea with precision reading? Yes, that was what I believed! I can say it right away: to listen to vinyl with Alan's 401 is a remarkable experience. Already the cheap arm/cartridge combination gives the music stability, physical weight and a musical drive giving you goose pimples and you must pinch yourself hard in the arm!

Oh yes, I have listened to a whole lot of turntables during the years but last time I heard something equally steady "ondriving", it were players priced at 6 digit amounts, with massive platters and fly-wheels.

With Alan's stripped 401 the music does not release the grip around you at any time and the LP's suddenly seem ready to burst out with intensity! What an energy! What a presence! Ordinary sleepy 33-wheelers suddenly sounded like half speed engraved 45:ers!

Why hadn't anyone told me this before? Okay, maybe I have listened too much at streamed computer music lately and the chock and difference therefore was more striking, but even compared to the 24/192-music which we usually have as testing material, there wasn't the slightest doubt about that the Garrard and Origin Live do something absolutely extra with the presence in the music. Yes, there was some noise, but it mainly came from the LP's and not so much from the player. And, there is a subduing calmness in Alan's modified Garrard against which you cannot do anything else than surrender.

Then, what about the tone arm combinations? Yes, the Ortofon-combination is without any doubt more refined and gives a larger, more three dimensional depth perspective (not the least with Bremen 3D8-speakers!) of which the cheaper duo isn't capable. But the blackness, the dynamics and the exciting playing delight contributes you to willingly return to **Zephyr** and **Aladdin**.

So now we understand why the Japanese pay so much for a Garrard! And why the players are handed down!

H&M

Equipment

Turntable Garrard 401 from the 1960's

Tone arms Origin Live **Illustrious** and **Zephyr**

Cartridges Origin Live **Aladdin** (MI) and **Ortofon PW** (MC)

Platter mat Origin Live

Plinth feet Mapleshade **Triplepoints** (brass)

Spring feet Solid Tech **Feet of Silence**

Phono amplifier ASR **Mini Basis Mk3**

Pre amplifier Audionet **MAP V2**

Power amplifier Burmester **956 Mk.2**

Speakers Focal **Aria 926**, Bremen **3D8**

Info

Anyone with interest in this player (Garrard / Lenco) can contact Alan Ericsson at the electronic testing and certification company

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The granite stone plinth is resting on three proper and heavy brass columns. To minimize the contact surface and to act as a mechanical diode the columns have one taper on upper side and three on bottom side. Right picture showing the ingeniously springing "Discs of Silence".

