



Acoustic Signature

Double X turntable

TA-2000 tonearm and

MCX 2 MC cartridge

Solid Foundation · Yielding very fine musical images

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Uncountable experiments and listening experience spur me to believe that, the choice of turntable dictates the performance of vinyl playback. It seems too assertive to say that turntable is the single most important component in the playback as tone arm, cartridge, phono cable and phono stage are undeniably very crucial as well. However, if you look at turntable as the foundation of the entire setup, and that tone arm with cartridges are elements mounted on this foundation, you can imagine the acoustic performance you could possibly get out of it if the foundation is not solid enough, not to mention whether you could use to discriminate between good recordings and the less ideal ones or not.

State of the art

The turntable I'm trying to test this time is a mid-range priced product from Acoustic Signature called Double X. The distributor of HK bundle it with their 9 inch tonearm and MCX 2 MC cartridge as a combo. If I compare it with other products on the same price level, I would say this combo has very solid materials and perform up to my expectation reliably. Moreover, if you look at the footprint - 440mm wide, 354mm deep and 155mm high (including the platter), Double X is very ideal for audiophiles in HK because a normal hi fi rack can easily accommodate it and it is not high for any home-based setup. When I placed it on top of the Vibrato aluminium hi fi rack, the height is just right for me to lift or lower the cartridge. In addition, the surface of the base

is grinded and polished by Italian carpenters who make cabinet of Italian Sonus Faber speakers. As such, Double X looks very elegant.

Flashy

The most impressive part of Double X is the 3 layer construction of the base. It is composed of steel, aluminium alloy and MDF. The thickness of the base is 64mm. The top layer is 19mm thick MDF. 90% of the remaining is made of aluminium alloy. The rest is made of steel. According to the official data, these three layers are precisely cut by laser. In the past, I have come across many sandwiched designs like this. Their common purpose is



DoubleX Technical specification

■ Drive system: 1 DC motor, electronic speed control with fine adjustment function ■ Speed: 33 rpm / 45 rpm ■ Dimensions (W x H x D) : 440 x 155 x 354mm ■ Weight: 24kg

TA-2000 tonearm specifications

■ Length: 9 inch ■ Internal wiring: OFC copper

MCX 2 moving coil cartridge specifications

■ Output voltage: 0.55mV ■ Channel separation: > 21dB ■ Stylus: Elliptical ■ Tracking bias: 2.1g - 2.5g ■ Frequency response: 20Hz - 25kHz ■ DC impedance: 7 Ω ■ Weight: 12.2g

■ Hong Kong and Macao distributor: Absolute High-End Ltd. · 2321 3336

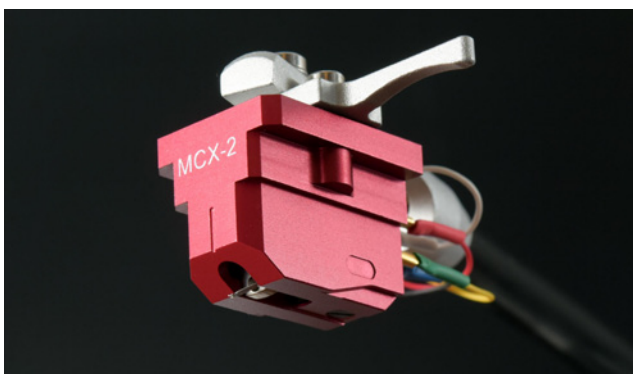


to reduce resonances. However, it's often easier to say than do. It often takes very long time to strike the right balance because the resonant frequencies are not limited to a particular range only. The environment could be a major contributor and it is inevitable. Each material work best for a particular frequency range. Although microphony is too difficult to get picked up by the measurement equipments, human ears can easily tell the difference. It has significant impact to the musical details. For example, when playing violin music, details such as horse tail hair rubbing the string and vibrato will be very coarse. The treble will also be less airy. Typically, these interferences come from the resonance in the vinyl which in turn gets picked up by the stylus and then transmitted to the phono amplifier and downstream. In order to minimise these interferences, one would adopt special vibration absorbing materials. In Acoustic Signature's case, the designer adopted silencer, which is essentially a vibration absorbing cylinder. From the appearance of the platter, you can only see many flashy circles. These circles are in fact silencers. The platter of Double X has 8 silencers. Silencer is a brass cylinder. Each cylinder is inserted into the platter using plastic hammer. The manufacturer avoided using machines to automate this step. They explained that the force of insertion has to be very carefully controlled. Only when you slowly hammer the cylinders into the platter could one achieve the flawless smoothness. The challenge is how we make sure all the 8 cylinders are inserted into the platter in a consistent manner. Not only does silencer was inserted into the platter seamlessly, but there is also absolutely no gap that can be found between the platter and the spindle. When I installed the platter, I virtually felt that there is some suction force that firmly holds the platter on top of the spindle. When I tried to pull out the platter, I needed to apply a lot of force. The situation is very similar to the case of Invictus Jr turntable from the same manufacturer. It leaves no gap for any dust or hair around the spindle. Honestly speaking, such level of precision is not something easily achievable from

the products I have seen on the market. With such meticulous attention to details, I have a lot of respect to this brand.

User Friendly Installation

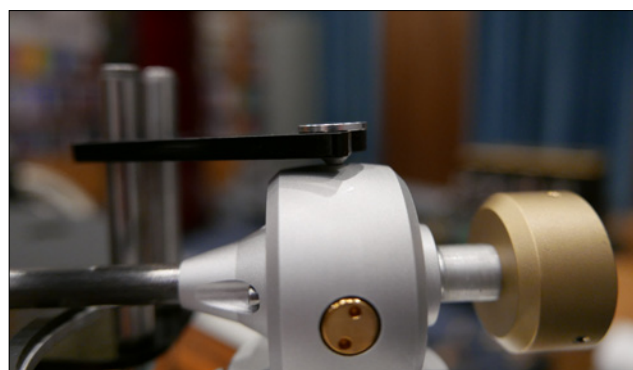
Mounted on the turntable is a 9 inch tone arm, TA-2000, which adopts gimbal bearing and double arm tubes. Simply speaking, two carbon fibre pipes of equal mass are joined together using connecting elements. Relative to the conventional single wand tonearm, double tube construction does not only enhance the strength of the tone arm but also greatly improve its ability to suppress resonance. TA-2000 adopts SME arm base which contains two grooves to facilitate linear adjustment. On the other hand, there are 2 small screws in the arm tube near the bearing. They are used for adjusting the Azimuth. In my testing, I found the Azimuth was just right so there was no need to adjust it further. The cartridge we used, MCX2, is an MC cartridge made by the manufacturer after they have upgraded their factories and machinery. They used 3D Computer Assisted Design (CAD) and CNC technologies to produce super low resonant head shell. The internal wiring is all 4N Oxygen Free Copper. The stylus style is Nude Elliptical. Although the overall design is similar to the previous model, they have made a number of small enhancements that help improve resonance control and the improvement is very significant.



Solid Foundation

Throughout the testing, I performed the cartridge alignment twice. At the first time I used the tool come with the turntable. Then I adopted Acoustical Systems SMARTractor. The former provides a quick and simple way to get everything set up. It leaves almost no room for mistakes. The reason is that it allows the user to fix the overhang easily. TA-2000 has a small hole on the top as a guide. If the tonearm is off the spindle for too much, one will not be able to fix the tool on the hole. On the other hand, the tool has clear grid lines. If the stylus lands on the grid lines horizontally and stylus tip points at the centre, then you are good to go to the next step. Overall there are only two simple steps: First, get the overhang fixed. Second, align the cartridge. Upon completion, Double X was once tested with Marantz PM-KI Ruby amplifier with built-in phono stage and a pair of Q Acoustics Concept 300 loudspeakers.

After then, I tested Double X with a bigger system: McIntosh 70th anniversary edition C70 preamp, MC 70 stereo power



amplifier and Sonus Faber Amati Gold Special Edition floor standing loudspeakers. I used the MC phono stage built in the preamplifier. Between these two systems, the performance of Double X was very solid and stable. The mid bass frequencies were rich. The bass sounded very calm. When I played the 45rpm version of "the heart in Florence" from the famous Hong Kong singer, Roman Tam, his confident performance in front of orchestra was completely reproduced with no loss of detail. I could deeply feel the power of his voice. The sense of rhythm was as strong as a troop of marching army. The accompanying bass went extremely deep. I can tell from my listening experience that Double X did a very good job in suppressing resonance. It is able to pick up strong and weak signals equally well. As a matter of fact, these two systems are quite different in terms of the amount of details they are able to reveal, but they work equally well in stability.



cartridge alignment tool from Acoustical Signature works up to a precision so close to SMARTractor, you can tell how good it is.

Earthquaking rock music

As it is such a rare opportunity to test the turntable in a very high end setup, I want to seize the opportunity to listen as much music as possible. In a grand system, DoubleX demonstrated arguably better performance than in a small setup. The performance is surprisingly better if Grid-S record stabiliser is used. I suspect it's due to the 5 silencers mounted on the top. When tightened Double X, the record will be highly coupled with the platter, making it possible for the 8 silencers on the platter to absorb the vibration of the record. The acoustical image has a much clearer outline. When playing rock music, the bass was very punchy. When I played "Money for Nothing" from the 45rpm version of "Brothers in Arms" by Dire Straits, the electric



Precise alignment

The cartridge alignment tool come from Acoustic Signature works pretty well and up to my expectation. When I performed the alignment once again using my favourite Acoustical Systems SMARTractor, the outcome was almost the same. As some of audiophiles may already know, I used SMARTractor for comparison because it has been my reference toolset of cartridge alignment and how much it can do reflects how much potential I could unleash from the tonearm and cartridge. As the



guitar at the beginning and the speedy drum sound had clear separation. The explosive energy of the drum sound caught me by surprise! From my past experience, not many cartridges can offer such a spicy rock music experience. I came across cartridges that sound too soft or too pedantic. In such a situation, I can only change the cartridge to deal with this issue. However, this time I did not need to change the cartridge. The music was fierce. The wild guitar sound stroke my ears like thunder. Waves of sound seemed never end. Meanwhile, the drum's sound was urging and coercive, creating very strong rhythm. The drum sounded very ruthless. I couldn't believe my ears that the music actually came from a pair of highly civilised Sonus Faber speakers driven by McIntosh amplifiers.



Intoxicating

Grip-S record stabiliser is very impressive. It enhances the presence of instruments and their positions,. You can even “see” the artists' movements and their vertical positions. For example, when I played “Friday Night in San Francisco”, the first song “Mediterranean Sundance” performed by Al Di Meola has a rapid movement. I virtually could tell how his fingers danced between strings on the guitar and how the strength of his fingers was transformed into brilliant sounds. The music was so pleasing to my ears. After then, I played the “Four Seasons” by Vivaldi, a version that has not been compressed in the mastering process. This record was published by Berlin Classics. The music was performed by Concerto Köln and Japanese violinist, Shunsuke Sato. Most importantly, it was recorded in one take. This orchestra employ period instruments which sound “ancient”. The vertical positions of violins were very vivid and the acoustical images were very three dimensional and had very strong presence. I can deeply feel the dense texture of the catgut. The harmonics of every note seemed to last very long. The music was very moving and I was simply intoxicated. From my experience, the stabiliser should never be tightened too hard, otherwise the treble would be suppressed.



Conclusion

In the later stage of the audition, I suddenly had a thought: What if I remove the damping sheet on the platter and let the disc directly contact the silencer in the platter? Will the turntable sound better? After I did so and adjusted the VTA of the tonearm again, the treble sounded 20% more transparent, the bass went deeper. Overall, the sound seemed to be more direct. Although I know that this is not the recommended way of playback by the manufacturer, I found the sound much more attractive than before and spurred me to listen to the records once more. 🎧