

# CH Precision

A certain idea of perfection

**Luxman L-507Z**

*Green class A*

**Heed Abacus S**

*High End for all?*

EXCLUSIVE INTERVIEW

**Víkingur Ólafsson**

*The Sound of Piano*



CD/SACD PLAYER

# CH PRECISION D1.5

*Laurent Thorin*

This is the first time that VUmetre has tested a CH Precision component. It is generally wiser to start from the beginning, so let's dive into the universe of the Swiss manufacturer with the CD player/transport. Successor of the famous D1, the D1.5 looks like its twin at first glance. But don't be fooled by the identical exterior. Inside, the organs have evolved significantly. After a dozen years of good and faithful service, it was part necessity and part opportunity that persuaded CH Precision to make such a complete revision. But as a result, this could well be the ultimate digital audio player in our opinion!

A close-up photograph of the CH Precision D1.5 CD player. The device is a dark, metallic grey with a brushed finish. A large, cylindrical volume knob is prominent in the foreground. To the left, a portion of the CD tray is visible, showing a red disc. Below the tray, the model number 'D1.5' is printed in a blue, sans-serif font. The background is a plain, light grey surface.  
D1.5





In any disc spinner whose mission is to play digital audio discs, the fundamental organ is obviously the transport mechanism. In the D1, the first-generation player, CH Precision used a model from the Esoteric catalog.

However, for the last five years, the Japanese manufacturer has been increasingly reluctant to supply other manufacturers on an OEM basis. Like many others, the Swiss company was forced to consider its alternatives. Never stronger and more inventive than when stimulated by circumstance, it made a comparative study of the different CD/SACD models available and finally settled on a unit from the Denon/Marantz group, manufactured in the Shirakawa factory. We had the opportunity to visit this factory in 2018 during a trip to Japan, and we can testify that these production lines guarantee high quality manufacturing, and above all, true durability and a guarantee of reliability and longevity for the consumer. Thanks to the excellence of this laser sub-assembly, CH Precision was able to design its own proprietary MORSe mechanism (Mechanically Optimized Reading System) fully compatible with SACD, CD and MQA-CD.

Let's start with the elements that are retained from the original unit. First of all, the data decoding card. CH Precision point out that it is impossible to design this «in house», simply because the SACD standards are not public.

From the purely mechanical parts, the Swiss manufacturer only kept the drawer itself. The entire reading block that supports the head, the motor and the small servos that control the alignment of the laser diode is an original construct created by their engineers.

Florian Cossy, CEO of CH Precision, explains the context: *“What we have noticed, and this is also true for the Esoteric mechanism, is that the generalist manufacturers always use light mounting blocks weighing 100 to 150 grams maximum (including the motor), with suspensions that are neither soft nor rigid. We realized that the excitation frequency of the block on its suspension is always between 200 and 600 hertz. In other words, not only right in the middle of the audio band, but right where its influence on the sound is the most critical, between the upper*

*bass and the midrange. Therefore, we have made this part far heavier and more rigid. Our proprietary machined brass block weighs about 1.5 kg, so ten times heavier than the original part. We mounted it on alphasgel suspension, like the ones we use for the circuitry of our T1 clock. Thanks to this approach, we managed to lower the resonant frequency of the mechanism too between 25 and 30 hertz. So of course it's not totally perfect, because we're above 20 hertz, but we're really in the lowest part of the audio spectrum, which allows us to minimize the impact of this mechanical resonance."*

As a result, vibrations generated by the rotation of the disc do not reach the sensitive electronic boards, and low-frequency vibrations from the power supply or chassis do not interfere with the precise tracking of the lazer mechanism. To provide the ideal mechanical mounting between the Morse mechanism and the chassis, the engineers developed a massive, ultra-rigid support frame, constructed from nearly 2 kg of machined aluminium and directly coupled to the chassis base plate.

Coupling the disc itself to the mechanism, a lightweight puck machined from PEEK polymer, provides optimal grip and dimensional stability, ensuring slip-free transmission of the direct drive motor to the disc.

The floating isolation provided by the transport mechanism's suspension is ensured by the improved four-point mechanical grounding and levelling system. Decoupling spikes (adjustable from above) are screwed into the stainless steel tubes placed at each corner of the unit. These spikes both lift and precisely level the entire chassis.

Three years ago, CH Precision also modified the levelling spikes themselves. The shaft is now made of POM and only the tips are made of hardened aluminum, unlike the previous generation, which was solid steel. The designers noted that the metal rod within the stainless steel tube produced a coloration, which disappears completely when using a composite material like POM.

**ORIGIN**

Switzerland

**PRICE**

€34,300 (shipping)  
€39,000 (player/transport)

**DIMENSIONS**

440 x 133 x 440 mm

**WEIGHT**

22 kg

**FREQUENCY RESPONSE**

20 kHz for CD  
50 kHz for SACD

**ANALOG OUTPUT LEVEL**

4V RMS in balanced mode  
2V RMS in unbalanced mode

**DYNAMIC RANGE**

>96 dB for CD  
> 120 dB for SACD

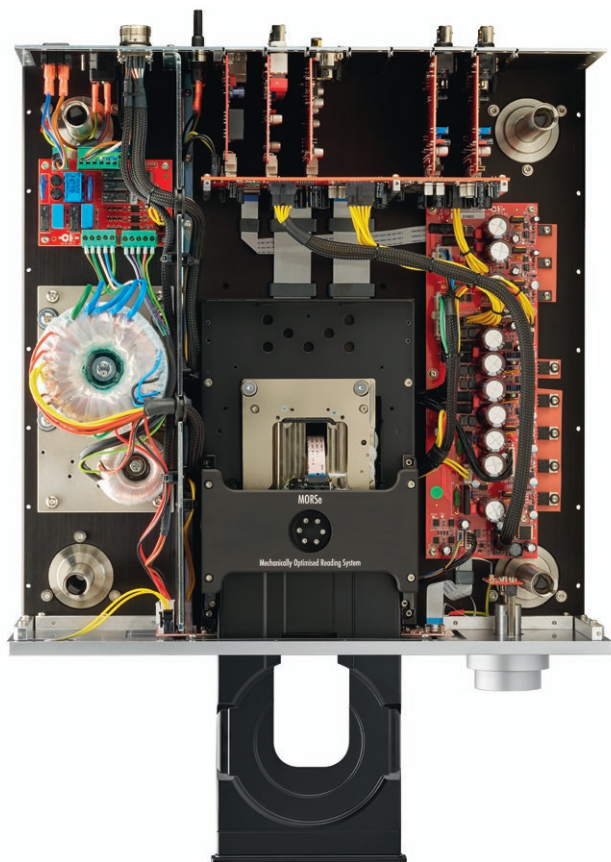
**SIGNAL-TO-NOISE RATIO**

&gt; 120 dB for CD and SACD

**TOTAL HARMONIC DISTORTION + NOISE**

< 0.002% for CD  
< 0.0015% for SACD





The manufacturer specifies that it is always better to install each device on an independent furniture shelf. Nevertheless, they also provide an elegant system for stacking multiple units on top of each other. Sets of two or three stacked devices will still deliver excellent results.

Concerning the digital processing, Florian Cosy points out that the D1 used no DSP in the signal path when playing a CD or SACD. It was the DAC of the optional cards which acted as interpolator. On the D1.5, by implementing a DSP-based interface, they were able to employ both CH Precision's sophisticated PE-TER algorithms and decode MQA. All the data

processing is done upstream of the DACs with proprietary interpolation. The DACs themselves are Wolfson chips, driven in DXD, i.e. at eight times the base frequency.

Why Wolfson? The CEO of CH Precision gives us another little anecdote: *"We tested the AKM, the Sabre... these are very complex chips. We couldn't really figure out what they do. On the Sabre in particular, there is SRC (Sampling Rate Conversion), which is a feature we are not interested in unless we do it ourselves. As our philosophy is to keep absolute control of all the parameters that go into the operation of the machine, the choice of chip was made on the basis of the ability to totally manage the environment of the integrated circuit element within a wider proprietary circuit topology."*

Aesthetically speaking, the player remains both imposing and elegant. Despite a significant footprint, the D1.5 maintains a discreet presence in your rack. Its elegant façade features a discrete curve which is the Swiss company's visual signature. The simple minimalism extends to the beautifully integrated AMOLED screen and loading drawer, flanked on the right side, by the dual-concentric control familiar from the manufacturer's other products.

The division of the rear panel into a row of vertical elements reveals the professional roots in this machine's design. It also helps explain the clever system of options that makes a CH Precision product infinitely more adaptable than the average audio component. CH Link HD, AES/EBU, S/PDIF and TosLink digital outputs are

fitted as standard. The ability to add dual mono DACs and an optional Sync IO card at any point, allows users to specify or adapt the unit for use as a transport or player, with or without an external clock.

Our review machine was delivered «fully loaded», which means that two of the rear slots are filled with dual mono analog output cards, one with the digital outputs and one for the external clock connection. In this case, careful observation may well mislead you. There's also an RJ45 port and a USB A-type socket present on the rear panel. However, these don't offer a network or file replay facility. Instead, they provide remote connectivity and an update capability. Once connected to your Wi-Fi network switch, and thanks to the CH Control application, you can control every aspect of the D1.5's set-up and operation via an Android phone or tablet.

Scalability is the Swiss brand's credo. D1.5 owners can start with a player and work their way up to a nine-box digital setup! Of course, they can also stop at two boxes, three boxes or any number of boxes in between: all without any redundancy – the ultimate example of scalability.

Despite sharing its almost identical shape and operational interface with the D1, the D1.5 is a completely different machine. This means that existing D1s cannot be physically upgraded to D1.5 status. But, in accordance with the CH Precision's upgrade philosophy, a factory trade-in program and compatibility with all existing

### Why buy a CD/SACD player in 2022?

With the growing penetration of network playback and the increasing popularity of black discs among audio-philosophes, is there still room for optical discs? For the Swiss manufacturer, this isn't even a question. Florian Cossy explains it very clearly: *"With the constant development of new production techniques, new materials and even new formats, the optical disc has never sounded so good. The emergence of Glass CD, SHM discs, UHQCD, and new formats such as MQA-CD, has improved performance, giving the CD and SACD a renewed relevance. There are millions of discs in circulation that can deliver superb performance. Concurrently, the industry's disinterest in the medium has caused a decline in the quality of playback equipment, undermining these advances and obscuring their true value. With a contemporary, high-performance machine, CDs and SACDs can offer wonderful sound and music performance."*

CH digital products ensures that current owners have a cost-effective path to the vastly improved performance offered by the D1.5.

### THE SETUP

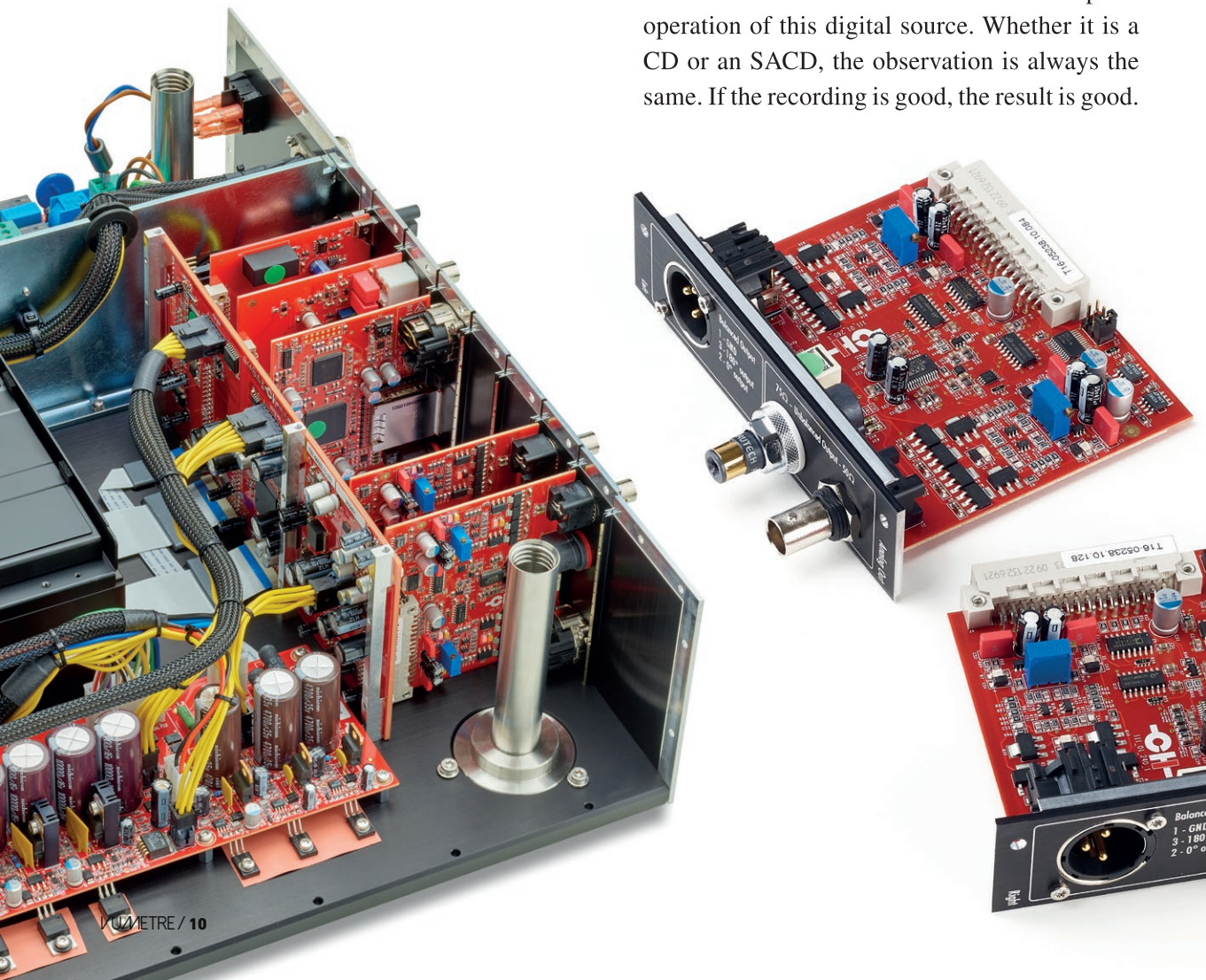
A CH Precision review always involves a little more unpacking than the average! The machine arrives in a large, complete box with accessories. We started by installing the D1.5 on our Centaure L cabinet. We connected it to the mains with an Actinote Sinfonia cord. Then we connected it to the network to be able to take advantage of all its features via the brand's proprietary application. The latter allows you to manage absolutely all the player's operations and options in real time. This is a decisive



advantage in terms of optimization. Then we installed the decoupling points in the stainless steel rods at each corner of the box. We used a small bubble level to ensure that it was perfectly stable and levelled. We connected this player to several sets of electronics and observed great consistency in its performance. It is a versatile machine that adapts beautifully to its environment. Day-to-day operation is easy and the Lil-liputian 'basic' remote control a real pleasure to handle.

## THE SOUND

There's a lot to say – a lot to tell – but two things are worth mentioning first: this unit's ability, more than any other, to get the music out of the speakers and into the room, and the feeling that the control exercised by the circuitry over the audio signal is absolutely flawless. CH Precision has methodically and ruthlessly tracked down any source of signal alteration within its machine, and as a result the level of purity that emanates from it is far above average. Purity and control are the words that best sum up the operation of this digital source. Whether it is a CD or an SACD, the observation is always the same. If the recording is good, the result is good.





If the recording is excellent, the result is simply phenomenal: because the D1.5 is defined in the first place by the sheer quality of its resolution. We have rarely encountered such a precise digital source. It delivers the musical message with uncluttered simplicity and exceptional accuracy. But precision for precision's sake is of little interest. Here, it takes on a new significance because the residual noise threshold has been reduced to an imperceptible level. Consequently, what strikes you during the first days of listening is the fluid cleanliness with which it delivers the musical performance. No pollution comes between the perception of the recorded music and your ear. It is in this sense that we can speak of a purity that's totally unusual in audio. Rid of all dross, of most colorations, the signal can develop with uncommon ease. It is not restricted, not limited. It is extremely rare to experience sound reproduction that carries so

many attributes of real music within it. On the other hand, the D1.5 will cause a drastic sorting within your disc library. You will discover a new classification: the pile of exceptional recordings, the ones you will unfortunately not listen to much anymore, and the ones you will enjoy more for artistic reasons than for sound only.

And to be honest, you are going to be surprised. You will dig out of your shelves discs whose potential you simply did not suspect... Thus, I discovered the phenomenal *Rocket Juice & the Moon* by Damon Albarn and Tony Allen. The hypnotic melodies of the former, combined with the percussive mastery of the latter creates a superb playground for the D1.5. Frankly, at times, one wonders if the musicians are playing in the next door. The quality of the impact is amazing. It comes through with an explosive edge. With the D1.5, listening to percussion is always a pleasure. We enjoyed it on the Hadouk

Trio recordings, and also on tracks 10 and

11 of the Arrested Development's album *Zingamaladuni*. The total absence of confusion on the fundamental registers allows you appreciate complex works in amplitude as much as density. Thus the repertoire of Maurice Ravel, which we particularly appreciate, monopolized us for long

hours. *Le Tombeau* from Couperin performed by the Cleveland Orchestra conducted by Pierre Boulez becomes a real sonic adventure. The listener is captivated by the intensity with which the different melodic lines are organized and synchronized, all with an unusual and intense luminosity.





This is a powerful indicator. The deeper the listener delves into the most complex recordings in his or her library, the more confident he or she can be that his or her system has the resolution and subtlety to bring out even the smallest nuances that are so often concealed.

## OUR CONCLUSION

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