10
SERIES

“Vinyl survived, we managed not to kill it. Knowing that you’ve taken part in this fight... You can’t imagine the happiness it brings. Every time I see a kid going out of the store with a vinyl record under their arm, my heart beats faster. Music should only be this. An intense emotion.”

JACK WHITE, THE WHITE STRIPES

10 SERIES

Welcome to CH Precision…
Welcome to a world of music

When I started CH Precision over 10-years ago, it was with the goal of not just creating the highest performance audio circuitry, but leveraging it with the flexibility of powerful, software-driven control systems and modular design, construction and application. Now, more than a decade later, I can proudly say that the CH Precision 1 Series is firmly established as one the benchmark brands in high-end audio, while our new 10 Series amplifiers have gone much, much further, widely recognised as defining the current state-of-the-art in audio amplification.

Stories like ours don't happen overnight. The product you will see represented in these pages has been designed and built, quite literally, from the ground up, the result of blue sky thinking and innovative concepts, years of incremental development, measurement, testing and of course, extensive listening – all with the single aim of extending the boundaries of musical reproduction. As well as innovative circuitry and proprietary technology, flexible topology and exacting engineering, we have also established a new user relationship with the audio system, from the use of graphic displays to indicate everything from unit status to operating temperature, the influence of cartridge loading to the selected replay EQ curve, to making each and every aspect of system control accessible via the CH App. If you don't like the standard display colours, you can even pick them yourself – and if one of the 16 standard options doesn't suit, you can mix your own RGB shade.

This flexible, intuitive interface, with its extraordinary degree of insight and control is indicative of our whole approach. There is no "one-size fits all" CH Precision system. Instead, our entire ethos is dedicated to making the system itself as flexible and configurable as the units themselves. The CH solution is a kit of parts, pieces that you can tailor precisely to your individual musical needs, that can grow with you and adapt to new situations and opportunities – without the expensive necessity of trading-in or swapping out the equipment you already own. We were determined to create a system that is as practical and cost effective as it is flexible – and I truly believe that we have succeeded.

But as impressive as we feel our products are, the thing that has really driven us for the last 10-years, is the desire to get closer to great performers and their greatest performances. Just as you need an excellent glass to appreciate a great wine, it takes a superb system to really reveal the depths and emotional power in great music – whether that music is stored digitally or on vinyl, a modern re-pressing or an older, original disc. At CH Precision, we've never forgotten that the glass might be elegant and beautifully crafted, but it's the wine – or the performance – that matters.

Florian Cossy
CEO, CH Precision


STEREO
MM/MC 1
P10

A question of scale...

"If you can't measure it, you can't fix it."
DJ PATIL

A phono-cartridge is tiny, an exquisite work of engineering art, its job to trace the groove pressed into the surface of a vinyl record. In an audio world where bigger (or heavier) is so often considered better, the moving-coil cartridge reminds us that in fact, the big is so often built from and depends on the small.

But how small? At around 20mm long, the chances are that your cartridge is the smallest complete component in your system. But the cartridge body dwarfs the stylus tip – the bit that does so much important work – while at half a millimetre tall, the tip in turn dwarfs the groove! Record replay truly is an exercise in micro engineering, but to really understand the scale of the problem, you need to start where the rubber meets the road...

The contact patch between the edge of a stylus and the groove it's sitting in is around six-microns! It's a dimension so small it is almost impossible to imagine. So let's make that easier. Let's scale things up. Let's assume a contact patch that's one inch long. What affect would that have on the rest of the replay mechanism – the cartridge and the tonearm? Well, the corresponding stylus tip would stand over five feet tall. It would be attached to a cantilever around 80 feet long, built into a cartridge body as long as a jumbo jet. In the same world, a standard nine-inch tonearm would be half the length of the Brooklyn Bridge, with a counterweight that's nearly 200 yards in diameter. Now think back to your own tonearm(s) and cartridge(s). It makes you realise that there's small – and then there's really, really small!

Now think about the size of the signal it is possible to generate from such a tiny mechanism. More importantly, think about the miniscule variations in that signal that have to reflect and embody the entire musical range. That fragile signal is all the phono-stage has to work with. From such slender resources we have to recreate the power and scale of a full orchestra, a rock band or a jazz band in full swing. We have to capture the power and precision of a great soprano, the subtlety and nuance of a single plucked note, the delicacy of its decay. Is it any surprise that the circuitry and components, the power supplies and noise-levels, the signal path and topology of a phono-stage are arguably more critical to the musical results than in any other analogue device? Is it any surprise that, although our P1 is widely recognized as one of the very best phono-stages available, with even better components, even more care, an even better power supply and more experience, we can lift the performance of the P10 to new, previously unimagined heights. This really is the ultimate case of performance that serves the performance.

"Know your true measurements and dress your mind accordingly."
J. D. SALINGER

P10

Dual Monaural, Twin Chassis Phono Stage

"Music... is the shaping of the invisible"

LEONARDO DA VINCI

Thirty years ago few people predicted that, not only would we still be listening to records in the 21st Century, we'd still be pressing them too. Yet for many listeners, the vinyl record has remained the pre-eminent source of recorded music.

That reflects both the inherent qualities and character of analog sound, but also the fact that record replay has significantly upped its game in the face of ever-increasing competition from high-res digital sources. These days, serious record collectors and listeners wanting the best possible sound will seek out rare original or special re-pressings, appreciate the virtues of mono (as opposed to many stereo) releases and purchase their discs, new and used, from all over the world. Likewise, the once simple process of playing those discs can achieve levels of sophistication and record-by-record optimization we never dreamed of, back when the vinyl LP was the only high-quality format.

These days, we have an increasing understanding of the challenges presented by record replay – and we have developed increasingly sophisticated responses to them. What started out as simply "dragging a rock along a trench" has become a spectacular example of micro engineering excellence. Amplifying and preserving the resulting signal has become perhaps the most musically rewarding field in analog electronics.

Today's record players and tonearms offer an unprecedented range of facilities and adjustability – all designed to extract the maximum possible performance from your cartridge and the record it's playing. But if the magic in that fragile phono signal is to be preserved rather than eroded by the rest of your system,

you will need a phono-stage that is just as versatile and adaptable, that can be fine tuned to the same exacting degree. Meet the CH Precision P10, a phono stage that takes those demands seriously, offering an unmatched combination of musical performance and adjustability – versatility that ensures you hear every last expressive and emotional nuance teased from the vinyl groove.

Of course, we already had what was widely recognised as one of the best and most versatile phono-stages available. But, building on the standard-setting performance of our P1, we have refined and developed the design, shortening signal paths and re-routing them to reduce critical induced noise. Every single discrete component in the signal path has been reassessed and wherever possible upgraded. We have massively increased the size and quality of the power supply, housing its potentially intrusive components in a dedicated, external chassis.

With multiple, independently configurable inputs and with all the important parameters individually adjustable from the CH Control App, the P10 can handle up to four, permanently connected turntables or tonearms. With a combination of both current and voltage sensing inputs (along with a simple yet sophisticated set up protocol for the latter) it optimises the interface with and the musical performance from, any moving-coil or moving-iron cartridge, or via an external step-up transformer. The optional, switchable EQ facility now offers additional curves, meaning that collectors of early, original pressings can finally hear those discs in all their glory.

The result of all these changes is a ghostly-silent noise-floor, improved resolution of fine detail, musical textures and expressive nuance, explosive dynamics and rock stable, fully dimensional images. The result is not just a new level of vinyl replay performance, it gives you a whole new record collection. Whether you want to play the Stones in mono, an early Decca SXL2000, a current DGG pressing or the latest one-step release, the P10 will play it for you – and play it right. It's never been so easy to collect great records. The P10 makes sure that you hear every bit of what makes them so great.

10 Series – proven performance improved


JOHN COLTRANE MY FAVORITE THINGS
TRAMPOLENE
MUSIC FOR A WHILE
HOLST THE PLANETS LOS ANGELES PHILHARMONIC ZUBIN MEHTA
DECCA
berlioz symphonie Fantastique
CHARLES K. FELDMAN'S CASINO ROYALE
BURT BACHARACH
SHOSTAKOVICH
RUGGIERO RICCI
LONDON SYMPHONY ORCHESTRA
PIERINO GAMBA
VIRGIL THOMSON
The Plow that Broke the Plains
Suite from 'The River'
LEOPOLD STOKOWSKI
CONCIERTO DE ARANJUEZ
NOCHES EN LOS JARDINES DE ESPAÑA
MOZART
CLARINET CONCERTO
HARRY SIDDELL
PETER MAAG
London Symphony Orchestra
ELGAR · ENIGMA VARIATIONS
OVERTURE COCKAIGNE · London Town
SIR GEORG SOLTI
CASH
LUSH LIFE
JOHN COLTRANE
RACHMANINOV SYMPHONY NO.2
Benjamin Britten
Noye's Fludde
VAUGHAN WILLIAMS
A PASTORAL SYMPHONY
TALKINGHEADS
Caroline Shaw / Attacca Quartet
Orange
BOB DYLAN HIGHWAY 61 REVISITED
DEBUSSY · RAMEAU
VIKINGUR OLAFSSON

Not all records are created equal...

In 1948, Columbia introduced the Microgroove Long-Playing record, a response to the short sides and limited playing times of 78RPM discs. With a run-time of as much as 23-minutes a side, it was finally possible to fit an entire symphonic movement on one face of a record, playing it with no breaks and no changes. The rest, as they say, is history and the 12" LP record is still the *de facto* vinyl standard today.

But to achieve such long playing times, it was necessary to do more than just play the record slower. In order to reduce groove width to manageable proportions, the signal needed to be heavily equalized. In other words, the cutting process involved progressively boosting treble level (to make the vibrations big enough to cut) and a corresponding cut in the bass to limit low-frequency groove excursion. By applying the inverse cut/boost (or EQ curve) at the replay stage, the signal was restored to its original form. Of course, absolute accuracy was required in both stages of this process if the signal was to be preserved intact.

With the 33⅓ RPM LP record winning this early 'format war', soon every record label was producing 12" LPs. But they were employing nearly as many EQ curves as there were labels. In 1954 an effort was made to standardise around the New Orthophonic (or RIAA) curve, with compliance targeted for 1956, before the availability of stereo records. However, human nature and national pride intervened, and adoption of the new standard by some labels was slow, to say the least. The result is that many early mono LPs as well as a large number of early stereo records do not conform to the RIAA cutting standard – and will thus not be properly reproduced if replayed with the RIAA curve.

With so many collectors searching out first pressings of sought-after "Golden Age' recordings, with the growing appreciation of early Jazz recordings on mono LP, the P10 offers owners the option to install selectable EQ curves that accommodate early Decca, Columbia, Teldec/DGG, EMI, Philips, AES/Capitol and NAB records. You can add the Neumann 50kHz pole to curve if required.

Of course, if all your records are new, or pressed post 1985, they'll almost certainly be cut using the RIAA curve. The arrival of CD and the initial collapse of record sales meant that fewer and fewer cutting/pressing plants survived, finally making RIAA the universal standard it was always intended to be. So, if you only listen to 180g records, you only own audiophile pressings or the records you own were cut and pressed in the last 30-years, our supremely accurate RIAA EQ will be just fine. But if you buy older records, collect early pressings, listen to mono discs or enjoy looking for bargains in second-hand record stores (or online), then switchable EQ curves can reveal a whole new world of record quality and musical reproduction.

P10 Technical Specifications

Inputs

2x MC current-sensing inputs, each available on both XLR and RCA connectors

2x MM/MC voltage-sensing inputs, each available on both XLR and RCA connectors

Unused inputs can be turned off

MC current-sensing inputs

Input impedance: < 100mΩ, virtual ground

Gain: +56dB to +77dB in 3dB steps, @1kHz, 10Ω cartridge (on single-ended output; +6dB on balanced output)

Equivalent input noise (EIN): < -144dBu / 1Ω termination, 22kHz BW, any gain

MM/MC voltage-sensing inputs

Input impedance: Variable from 100kΩ to 5Ω

Gain: +41dB to +74dB in 3dB steps, @1kHz (on single-ended output; +6dB on balanced output)

Equivalent input noise (EIN): <-142dBu / 1Ω termination, gain +53 to +74dB, 22kHz BW

Equivalent input noise (EIN): <-139dBu / 1Ω termination, gain +41 to +50dB, 22kHz BW

Outputs

1x Balanced XLR (8V RMS max)

1x Single-ended RCA (4V RMS max)

1x Single-ended BNC (4V RMS max)

Equalization

Playback EQ curve accuracy: +/- 0.1dB

Standard EQ Curve: RIAA

Optionnal EQ curves: EMI, Columbia (LP), Decca (London), DGG (Teldec), NARTB (NAB), Capitol/AES and Philips

Ultrasonic: Neumann pole at 50kHz can be engaged with any EQ curve

Subsonic: Anti-rumble 2nd order high-pass filter at 7Hz can be engaged with any EQ curve

Other features

Local or global feedback in amplification stages

Stereo/Monaural mode

Absolute phase polarity inversion

Total Harmonic Distortion + Noise (ikHz signal, output level 3V RMS, 22kHZ BW)

THD+N < 0.001%, MM/MC voltage input, gain < 50dB

THD: unmeasurable (below noise floor) for MM/MC voltage input, gain > 50dB

THD: unmeasurable (below noise floor) for MC current input, any gain

Weight

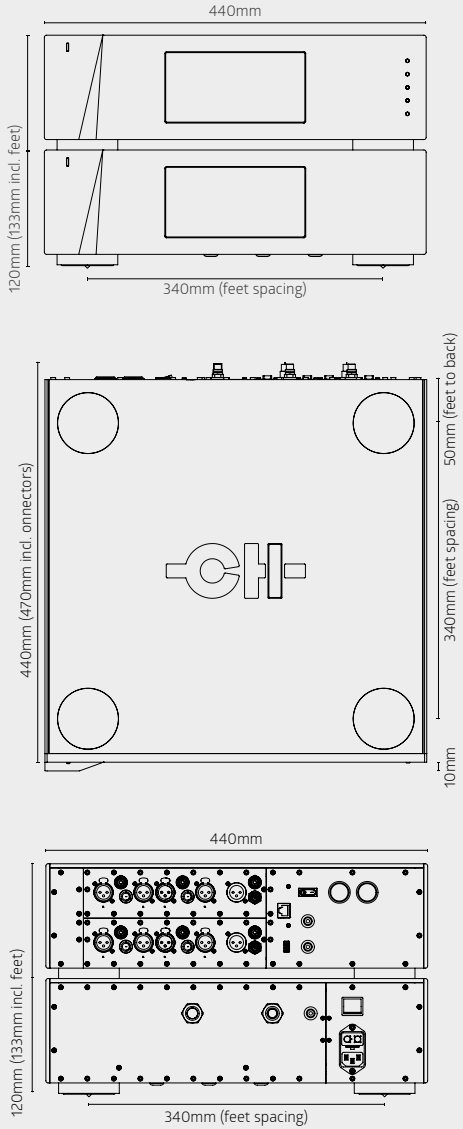
P10 Power supply unit: 23kg

P10 Phono preamplifier unit: 20kg

**Specifications updated May 25th 2023*

Dimensions

P10 Dual Monaural, Twin Chassis Phono Stage



“Steve Jobs was a pioneer of digital music. But when he went home, he listened to vinyl.”

NEIL YOUNG

10 SERIES

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