

The King Is Dead...

Long Live – the CH Precision P10 Phono-stage

by Roy Gregory

On the face of things, a Spanish Soprano singing English songs with a French hybrid early music/jazz ensemble might not seem like a promising mix, but there's a moment, a moment where it all falls into place. Sure the band has pace and presence, dynamics and a vibrant immediacy. It's as entertaining, engaging, musically and sonically impressive as always. But halfway through 'Strike the Viol' (Christina Pluhar and L'Arpeggiata, Music For A While - Erato 0190295250843) Raquel Andueza shifts down to the minor key, takes a breath and almost literally launches into what amounts to a middle eight of vocal gymnastics to make any guitar God envious. That breath, the way it connects to her

vocal output, the almost physical sense of in — and out — that it coveys, the projection of physical energy as sound, is so spine-tinglingly natural that I do a double-take. It goes from being a collection of related sounds to a single, contiguous and above all, human action and reaction. The focus, technique, vocal energy and artistic intent are bound into a single effort of extraordinary concentrated musical and emotional intensity. This is exactly how people sing and suddenly that 'how' becomes as clear as the 'what', the 'who' indivisible from the 'why' — and post-P10, record replay is never going to be quite the same again.

Spend enough time listening to enough high-end audio equipment and sooner or later, a product will turn up

that causes you to suffer a sudden perspective tilt, reality will intrude and you'll realise you aren't in Kansas any more. This is one of those times...

Treading in the footsteps of a giant...

CH Precision's PI phono-stage has long been THE benchmark phono-stage for more than a few serious listeners and reviewers. There are those who favour transformers or tubes, play only mono or shellac, those that don't play vinyl at all! But for everybody

else – especially those to whom record replay matters – the PI. in single-chassis, two-box, three-box or four-box topology, has set the standard against which others have been measured and generally found wanting. Those looking for the best in record replay may or may not of chosen the

PI – but they were dumb if they

didn't at least listen to it.

When the PI first appeared, it didn't just perform better, it was different too: It offered three inputs, two different approaches to phono amplification, an unprecedented degree of user adjustability and ergonomics, a cost neutral upgrade path and – crucially – the option to switch replay EQ to different curves at the touch of a button (or the tap of a tablet screen). It was, arguably, the first serious phono-stage to offer stellar performance, real versatility in cartridge matching and user convenience. It is also the CH Precision product most likely to have found its way into non-CH systems, making it both a success story and

a gateway product for the company. Even in this day and age, where streaming seems set to swamp the world of audio, the PI phono-stage remains both a key player in the CH portfolio and the single product that does more miles than any other in the Gy8 listening room.

P10 - up close and personal...

Fast-forward to 2020 and the arrival of CH's 10 Series electronics, amplifiers that pretty much re-write the rules when it comes to solid-state. The

performance of the L10 linestage and M10 power amp had wellhealed PI owners licking their lips in anticipation: you didn't need to be a genius to work out what was coming next. Well, the PIO has arrived and it doesn't disappoint. In fact, the most remarkable (but in some ways, least surprising) thing is the degree to which

P1. Not only does it garner the lessons learnt in developing the L10 and M10, it's location at the very front of the system makes its influence that much more musically fundamental.

it totally eclipses the previously all-conquering

While the circuits used in previous 10 Series products are in a very real sense, evolutions of their 1 Series brethren, the P10 breaks that mould. It employs an entirely new topology, aimed squarely at reducing the unit's noise floor. I've discussed the differences between the P1 and the new P10 in detail, in an earlier piece (https://gy8.eu/review/digging-deeper/). However, here are the brief highlights:

Circuit Topology – the P10 employs a five-stage topology (as opposed to the P1's three), with two passive EQ stages sandwiched between three active gain stages. By splitting the passive EQ so that the low frequency gain occurs later in the envelope, they have succeeded in reducing the noise floor while increasing the gain.

Inputs – the PIO offers four phono-inputs (two current-gain and two voltage-gain), one more than the PI. The performance of the voltage-gain inputs has also been improved significantly, increasing the unit's compatibility with MM cartridges and SUTs.

Features – the P10 offers switching for stereo/mono and absolute phase, a high-pass (rumble) filter and, like

the L10, the application of local or global feedback to the circuit as a whole (of which more later).

EQ Curves – like the PI, the PIO offers owners the option to add additional EQ curves for record replay. As well as the EMI, Columbia, Decca and Teldec (DGG) curves featured on the PI, the PIO also provides Philips, NARTB/NAB and Capitol/AES curves too. As delivered, the CH-Control App already offered that facility to PI users, most PIs being used in non-CH systems probably weren't network connected. The IR remote makes such switching easier and simpler but best of all, it allows those listeners who use curves to switch those at the push of a button, a crucial operational advantage.

Like the other 10 Series products, the P10 is a two-box design with its own, dedicated external power supply. That reduces the number of steps on the upgrade ladder, but P10 owners can still upgrade to the P10 4-box or 4-box extended (double the inputs) topologies. Also like the other 10 Series units, the P10 is available in very fetching Anthracite or Champagne



screen of the unit changes colour in order to reflect the selected replay curve, reducing the chances of accidentally leaving the wrong curve engaged— a feature that users can override or alter if they wish. The P10 also allows users to select the additional Neumann high-frequency pole for any curve/record. Again — more detail later.

IR Remote Control – the P10 comes with one of CH's small, five button IR remote handsets. This allows you to adjust all the important operating parameters listed above from the comfort of your listening seat. While the

finishes as well as CH's 'standard' blue/grey. The P10 will cost you \$76,000 USD (with the cards containing the seven optional curves adding \$2,250 for the set). That compares to \$31,000 + \$17,000 for a P1/X1 pairing, or more significantly, \$89,000 for the P1 four-box. I'll be comparing the P10 to both the P1/X1 and the four-box iteration but, given that the L10 outperforms the four-box L1, I'm not exactly spilling the punch line when I say that the P10 not only manifestly outperforms the four-box P1, despite its significantly (15%) lower price,

it allows the owner the additional saving of two support levels and three power cords – a monetary, practicality and real-estate bonus that's not to be sniffed at.

Listening

One of the first questions I was asked, shortly after the arrival of the PIO, was also one of the most interesting: in musical terms, is the PIO more like the LIO or the MIO? The answer, I discovered somewhat to my surprise, is that the phono-stage's musical qualities are more akin to the power amp than the line-stage. Whilst the PIO certainly

exhibits the sonic invisibility, the uninhibited dynamic response and the unimpeded, frictionless sense of music simply happening that characterise the L10, what marks it out as exceptional is the absolute sense of planted stability and authority it brings to the performance,

qualities that separate the performers and the recorded acoustic from the speakers, placing them solidly in the room with you.

We often describe sound of equipment as "fluid" and talk about "musical flow", but the P10 renders such descriptors redundant. The P1 is one such unit and it is exceptionally fluid. Compared to the phono-stages that preceded it in my system (including the extraordinary Connoisseur 4.2 PLE) its ability to track the music, note-by-note, phrase-by-phrase, was a revelation. The shape it brought to instrumental lines and the articulation it revealed in a soloist's playing were revelatory. The

Connoisseur does an amazing job of placing you in the same space as the musicians, but the PI made those musicians better: better individually but perhaps more importantly, better collectively, with a more developed sense of ensemble playing and more explicit relationships between instruments and parts.

Understanding the step up to the PIO demands a shift in perspective. Hearing the difference is smack you in the face obvious. Working out what's behind that difference, why it is so musically significant, takes a little longer. In comparing products, we often try to quantify

things – in most cases individual attributes: more transparent, more resolution, greater harmonic definition, more dimensional etc. It's an appealing construct: such differences are easy to hear and describe – even if their overall importance is less clearly defined by the exercise. It's

just one step towards the dissection of a performance that should, above all, be holistic. Try the same thing with the P10 and you'll come unstuck: not because there aren't clearly audible differences, but because they defy convention. In most cases, there isn't 'more' but 'less', the P10 making its mark through its sheer absence. Instead of action, you need to start thinking in terms of process: instead of effect you need to think in terms of facilitation.

Listen to any product or system and you are listening to the results of that product or system acting on the signal. In the case of a record, that signal starts as a tiny electro-mechanically generated voltage that is then

>> amplified through multiple gain stages until it is converted into a substantial acoustic output at the speaker. Each separate stage in the process adds its own contribution in terms of the size or nature of the signal – but it also leaves its own mark on that signal. More often than not that mark takes the shape of a subtractive influence: flattened leading edges, diminished dynamics, lost lowlevel information. Think about the PIO in those terms and it suddenly becomes clear exactly what is happening here and what sets it so far apart from and above the norm – even if that 'norm' is as exceptional a benchmark as the PI. The PIO is quite simply the lowest-loss phonostage I've ever used. The signal enters and is passed with maximum fidelity and minimum interference. The PIO responds more promptly and precisely to the signal's demands and its responsibilities. In doing so it leaves less of a mark. It passes the signal without delay, without obstruction, without bending it out of shape and without squeezing it. At least that's what it sounds like. It's a zero-impedance transfer, the music dictating terms and strutting its stuff rather than stumbling and trying to fight its way through the component. The phrase that springs to mind is, "Path of least resistance," which is strange, given just how 'active' a phono-stage is in terms of both amplification AND equalisation!

You are going to hear the benefits whatever you play, but in the classical canon, few pieces demonstrate the sheer, unhindered continuity that the PIO brings to music better than the works of Sibelius. The symphonic scores draw sporadic, almost random contributions from across the orchestra, the task of the conductor being to bind these disparate elements into a single, contiguous whole. Any hesitation in the direction, the orchestra's response – or the system replaying the recording - and the whole quickly collapses into a muddled heap of separate notes and phrases. Playing the Colin Davis/Boston Symphony Orchestra 2nd Symphony (Philips 6709 011 - 5LP) and the timing and cohesion in the performance is as impressive as the Boston's musical substance and towering crescendos. These Colin Davis recordings are, like many of his other discs, sadly

underrated, but the PIO reveals them in all their glory. The Boston's ensemble playing is superb, the crucial brass and percussion on the best of form, the scale and power that Davis conjures from them to underpin the rest of the orchestra putting these performances - played through the PIO - firmly on the same plane as Berglund and Barbirolli. Tempi are beautifully paced, the pauses and hesitations in the score deployed to maximum effect, contrasting dramatically with the seamless orchestral playing. As the tempo eases and shifts towards the end of the second movement, you know that those subtle pauses are meant to be there adding to the stately sense of drama. The progressive inevitability of the structure and layers, the overlaid phrasing and slowly building density all serve to pull you in. Try listening to this as a system check and you'll find yourself drawn along, reluctant to lift the needle as you follow the performance right to the end of the side. The sense of musical progress and purpose is just so natural that interrupting it seems akin to leaving your seat midmovement at a live concert.

On the one hand, the PIO's ability to step away from the music's path, not impeding it but actively helping it on its way, is perhaps most readily apparent on a record like Vikingur Ólafsson's Debussy-Rameau (DGG 483 8283) with its precisely spaced and weighted notes, elongated pauses and the extended decay of the piano. On the other, the unforced precision lends an almost hypnotic quality to the metronomic rhythms and drum programming of electro-pop. Long a guilty pleasure, the first OMD album (Dindisc did 2.) played on the PIO reveals subtle layering and textures that had completely passed me by until now. 'Julia' is redolent with overlays and compression-driven rhythmic emphasis, 'Red Frame/ White Light' jump shifts it's pace, while 'Electricity' is quite simply a joyous, headlong toboggan ride, as propulsive as it is catchy. The quality that the PIO brings to (or perhaps removes from) record replay is so fundamental to musical integrity and expression – the integrity of and expression inherent in all music - that you are going to enjoy its advantages whatever you play: with a firm emphasis on "enjoy". You can forget po-faced notions of accuracy and neutrality. Sure, this is undoubtedly the most accurate and genuinely neutral phono-stage I've ever heard: but above all it is accurate to the spirit of the music, faithful to the performer(s) and their performance. Since the P10's arrival, I've been wading through recent purchases, seemingly unearthing gold at every turn: A Melodiya/EMI box of Oistrakh playing modern violin concertos; Benedetti Michelangeli playing Debussy's Images I/II; Narcisco Yepes playing Vivaldi (for DGG) and everything (for Decca); a very nice Wish You were Here and a thoroughly nostalgic Wind and Wuthering. It's

a list that barely scrapes the surface, but the PIO approaches each disc with utter equanimity. It makes it all about the music and the recording – not about the equipment

replaying them.

Meet the ancestors – the PIO beside the PI/XI

Before the P10 arrived, although I didn't doubt that it would better the P1, I did wonder just what it would bring to the party? The DGG recording of Boieldieu and Rodrigo Concertos for Harp and Orchestra (Nicanor Zabaleta with Maerzendorfer and the ORS Berlin – SLPM 138 118) demonstrates the difference perfectly.

On the Rodrigo, the PI/XI delivers a stable, intricate and beautifully paced presentation – at least it does until you hear it played through the PI0. The I0 moves things into another dimension, musically, spatially, rhythmically... The soundstage opens out and is both more clearly defined and illuminated. There are simply more individual instruments apparent and they

are tonally much more distinct, with richly layered harmonics and a natural brilliance (NOT brightness). The harp becomes far more complex, its scale and its angle on the stage both clearly defined, it's fundamentals crisper and supported by both their own harmonics and the sympathetic harmonics of the other strings. But it is the playing that reveals the true difference. Particularly in the opening passage, the PI/XI is suitably jaunty but also sounds a little hurried and forced. With the PIO, the harp sounds quicker but also more articulate, lucid and rhythmically expressive. There's

a tonal purity and concentrated musical energy to the music and instruments. The rhythmic shifts between

just more obvious but part of the musical conversation, especially with the arrival of the second theme and

the chaotic

passage that always reminds me of American In Paris.

What sounds ordered and

predictable on the PI/XI is suddenly more vibrant, more rhythmically varied, intricate and far more expressive on the PI0. It is also there

- right there – for you to engage with. Even the Connoisseur doesn't put you this close to the players! The word here is indeed "brilliance": there's a brilliance to the playing, the energy and the performance, to the instrumental tone, presence and air. That vivid musical picture is as compelling as it is entertaining. It's not just a whole new record, it's a whole new system and a whole new experience.

The measured performance of the PIO looks impressive on paper. I wasn't ready for its impact in practice. The drop in noise floor (over the already ghostly quiet PI) is musically substantial. This isn't

▶ a case of a blacker background: it's a case of no background! Notes and incidental noises materialise out of nothing. John Ogden's typically emphatic playing on the Shostakovich Concerto for Piano, Trumpet and Strings (Wilbraham, Marriner, and the ASMF – Argo ZRG 674) is characteristically crisp and definite when required, full of sudden attack and power. But it is fleet, agile and humorous as well. John Wilbraham's trumpet is an object lesson in capturing the brassy tonality and punch of the instrument, its ability to switch to more elongated, lyrical, almost languid lines. This ability

point, the gradient of its leading edge and amplitude, the length of its tail, the development of its harmonic envelope is intimately tied both to that silent background and

the PIO's speed

of response. It

to capture the whole note, its initial

makes every other phono-

stage I've used (and pretty much every other system I've listened to) sound 'gated', limited by dynamic stiction (the size the signal needs to reach before the device reacts), by how fast it can react and how far its dynamic envelope extends. The P10 just sounds more responsive and more able to track the signal's demands without hesitation or limitation. As a result, there's a real sense of the music simply arriving in the room, driven by the input of the musicians, the reaction of their instruments — rather than by the system and its accumulated electronic circuits. In contrast, other replay chains sound processed, their audible boundaries letting you hear them at work.

As already discussed, another thing that set the PI apart from the phono-stage crowd was the ability to

expand the product, not just with the XI power-supply, but all the way to a true mono, four-box set-up, with a separate audio chassis and power supply for each channel.

[In theory, there's a three-box option, combining the two mono audio boxes with a single, dual-output XI power supply, but in practice that is a sideways step, adding detail and resolution without the musical and dynamic integrity to bind it convincingly to the artistic whole. The price of stepping up to the fourth box is so small (relatively speaking – remember, you've

so essentially all you are adding is the chassis itself and the transformer)

already paid for the regulation stage

that, given the musical benefits it makes no sense to stop halfway. What might make more sense is a single, two-channel audio chassis with a pair of

separate XIs, but that

isn't possible within the current product line: Maybe something for next time...?

Given the price of the four-box PI and the PIO – and given the number of four-box PIs out there – how the new, flagship phono-stage (quite literally) stacks up against its predecessor is a serious question.

Four-box PI – meet the PI0...

The sonic and musical benefits of moving from the PI/XI to the full PI four-box are well documented. The 'true mono' set-up delivers a more developed acoustic space, more air and seats you more definitely in the orchestra's presence. There's a greater sense of temporal and dynamic authority, wider bandwidth, wider dynamic range and greater dynamic delineation. Musically, that translates

to a more palpable sense of presence, purpose, texture and colour. Playing the Solti/CSO Enigma Variations (Decca SXL6795) there's a more natural sense of orchestral weight and swell as Solti moves the orchestra through the piece. Structure and direction are writ more clearly, string tone is richer and harmonically more complex: percussion is more explosive and exhibits more identifiable character while the Chicago brass takes on a whole new solidity, richer colours, more concentrated energy and projection. The music makes more sense and it's much more of a performance, Solti's perfect pacing never more obvious than in the upward swell of Nimrod or the jaunty, dance-like figures of Dorabella. The world isn't short of decent Enigma recordings, but the musical and spatial coherence of this Decca, revealed by the fourbox PI, suggest that it has been unfairly overlooked.

As good as the four-box PI is, the PIO elevates the musical experience to a more communicative, more involving and far more impressive level. It brings a sense of substance, colour, dimensionality and concentrated energy that lifts the performance away from the speakers and the system, projecting a vivid and engaging presence firmly into the listening space with you. Solti's Enigma gains a much more natural perspective and a whole new expressive range. The structure of Dorabella, with its intricate, interlocking phrases takes on a natural clarity, the different instrumental voices more distinct and easily identified, the overall form and shape of the piece more naturally explicit, articulate and captivating as a result. The Beethovian reference at the beginning of Nimrod is more obvious, but also more seamlessly integrated into the variation's theme and structure. Percussion has just the right, sudden quality to its interjections, the texture of drum skins and their hollow bodies an almost effortless extension of the complex musical textures It's indicative of the greater, indeed, the unrestrained dynamic range, substance, solidity and focussed energy that the PIO can conjure from the record's grooves. But the most impressive aspect of the PIO's presentation is the holistic quality and sheer density it brings to the performance. Solti's mastery of

his orchestra, the incredible quality of the ensemble playing becomes almost casually apparent, making you realise that for all its undoubted qualities, you can still hear the four-box PT working.

The P10 moves record replay beyond hi-fi and into the realm of human communication, something that becomes even more apparent on voices. Our ears are so attuned to vocal nuance that the natural diction and expressive range, the micro-dynamics and details of speech and song revealed by the P10 seem almost ghostly on first listen. Whether it's the slight husk and distinctive accent of Eleanor McEvoy's voice, the intimacy and emotional intensity of Janis Ian or Steve Earle's gravelly tones on Copperhead Road, the communicative power of the vocals is as clear as each singer is instantly recognisable. Voice really is the acid test and it's a test that this phono-stage aces.

The P10's presentation might not reach the point that can be described as life-like – but it is more 'like life' than any other phono-stage – and as a result, pretty much any other source – that I've heard. It's ability to preserve both the information extracted by the cartridge and the pattern of that information, makes this the most natural record replay I've experienced: natural in the way that instruments and voices are presented, but more importantly, natural in the way that they combine. If the purpose of a hi-fi system is to bring you closer to the original musical event, then this is one giant leap for audio kind.

Onward and upward - P10 goes four-box...

For a fair few years, the four-box PI was comfortably the most musically convincing phono-stage I'd ever used. It made sense of the music and it made sense of the upgrade path, an elegant if increasingly bulky route to vinyl nirvana. Yet the PIO has just bettered it — and not by a small or musically insignificant margin. Does that make the PIO the best phono-stage in the world? Not even close, because waiting in the wings is the option to add a second PIO and investigate THAT four-box

solution! At this point, we are truly leaving the realms of the reasonable and abandoning cost considerations all together. Even though the P10 four-box comes in at rather less that twice the price of two P10s (you actually save \$20,000, or the cost of two audio circuit boards) by now, things have become real simple, you either have the coin – or you don't. – so I'm not even going to address the issue of price. What I am going to talk about is performance and what is possible...

Listening to the twobox P10 compared to its four-box iteration

is a sobering experience: As astonishingly impressive as the two-box product is, for all the places it takes you that you've never been before in terms of musical and sonic reproduction, doubling up the box count removes



yet another layer of expressive, spatial and dynamic constraint. If the P10 introduces you to the idea of frictionless transfer, of unimpeded musical projection, of natural pace and dynamic response, it takes the four-box to reveal the true implications and results of that reproductive revolution.

Let's take 'Somewhere somebody' from the Jennifer Warnes album The Hunter (Sony BMG/Impex 6007) as an example. It's sparse arrangement, with lead vocal, a backing harmony, bass and percussion leaves nowhere to hide. Sonic and musical differences are writ large and in this case, almost brutally apparent. In terms of scale and perspective there's almost nothing to choose

between the two renditions. But there, all similarities end. Although this is clearly the same performance, the presentation on the four-box PIO is dramatically more present and natural. The Jennifer Warnes vocal becomes more solid and dimensional, locked in space, believable. Listening on the two-box, you'd never describe it as floating or insubstantial, but switching to the four-box locks in both the location and the physical presence. You can hear the shape of the mouth, the chest behind

it, the way she forms
the words and the
way she works her
lips and palate. The
diction, the subtle

nuances and timing cues that we hear every day in other peoples' voices and speech are suddenly not just present, but almost preternaturally correct, in the way that only a microphone can capture.

Max Carl's backing vocal is just as solidly projected and located, precisely in space, three feet behind Jennie. The sheer clarity with which the vocal lines are separated yet relate, the intelligibility of the words themselves, is not just more natural, it raises the song and the sense of the song to a more powerful level. The pitch, shape and timing of the bass notes is also clearer and more precise, its tactile quality again, more natural, but also more naturally integrated into the musical whole. It's this combination of clarity and coherence that elevates the performance. It really does become incredibly easy to place yourself in the same space as that original event, to understand the presentation as real people

Not in the sense that it's indistinguishable from reality. But it's certainly easy to appreciate the reality that the recording captures.

Larger works, like the Colin Davis/Boston - Sibelius 2nd Symphony gain that same body and stability, temporal continuity and natural sense of musical momentum. But here the four-box renders the expansive orchestral score even more compelling and the emotional sweep even greater. The instrumental presence and harmonic density creates a stage with real scale and substance and I've never heard the horns. so critical to Sibelius. reproduced so naturally. At the other end of the scale, play Caroline Shaw and the Attaca Ouartet's Orange (New Amsterdam/ Nonesuch 075597921434) and that same focussed density and substance is beautifully translated into the dynamic tension, textures and intensity of this modern quartet. The four-box PIO reproduces the sense of bow on string, the length and pressure of the stroke, with such immediacy and in a way that, once again, recreates the musical event right in front of you. It's not so much reach out and touch as the music reaching out and touching you.

How relevant is a phono-stage that demands four shelves and I32,000 of your hard earned dollars? Given that anybody who owns or is contemplating owning a four-box PI a) already has the space, and b) is only doing so because they want the best and they're prepared to pay for it, I'd say the four-box PI0 is actually surprisingly relevant – as the number already ordered underlines. It might be beyond your means. It's certainly beyond mine. But just the fact that this level of performance actually exists and you may well have the opportunity to hear it –somewhere, someday – is reason enough to rejoice.

Cartridge matching gets serious...

As well as unprecedented performance, the PIO also offers an unprecedented level of cartridge and system matching. It offers the choice of current-gain or voltagegain inputs. The former is ideally suited to cartridges with an internal impedance of less than 10Ω , while the latter is best for cartridges with an internal impedance of over 50Ω . In between those values you'll need to suck it and see on a cartridge-by-cartridge and systemby-system basis, but as a rule of thumb, you'll get better results from the current-gain inputs with cartridges that have a lower internal impedance, so anything below 20Ω is probably going to work better into the current inputs. Once upon a time, that was an issue, because the current-gain inputs on the PI sounded significantly better than the voltage-gain MM/MC input. But CH has done considerable work on the voltage-gain inputs and brought performance into line with the current-gain option. Add to that the fact that both

types of input
now offer 3dB
gain steps
(as opposed
to the 5dB
steps in the
PI), increased
overall gain and
impedance matching

for the MM/MC inputs that start in $I\Omega$ steps and run all the way to $I00k\Omega$ and you can really dial in cartridge/ system matching and damping. In turn, what that does is make the PIO a much better match for cartridges like the Clearaudio Goldfinger Statement, with its 50Ω internal impedance (I know, because I tried it). I also ran the Nagaoka MP-500 moving-magnet into the PIO, with results that probably warrant a separate article all of their own! The PI was able to match a lot of cartridges. The PIO matches more – and it matches them better.

▶ Local or global feedback?

In addition, the PIO adds settings for mono (omitted on the PI because it was present in the LI – but as I already mentioned, the PI often finds itself outside of CH systems) and absolute phase. Finally, there's the option to use local feedback only or global feedback. That isn't as straightforward or knee-jerk a question as you might assume. In certain sectors of the industry, global feedback is a dirty word and certainly, its excessive application kills the life and

dynamics in music. But few circuits are totally feedback free and the judicious use of global feedback can bring stability and definition to the sonic picture. The ability to select global feedback (or not) allows users to match the performance of the record replay chain to their system - or adapt it on a record-by-

record basis.

While I generally operate the PIO with feedback set to Local, there are certainly discs that benefit from the Global setting. A good example is the Decca Phase 4 Series, whose OTT dynamics can definitely stand a little taming. Playing the 'Miller's Dance' and 'Finale' (from Falla's Three Cornered Hat – Stanley Black and the RPO, Spectacular Dances for Orchestra – PFS 4118) using the Global setting locks in the soundstage, defining the space around and between instruments. It cleans up the splashy top-end and reduces the brightness and glare in orchestral tuttis, while still allowing the recording's sheer energy full reign. It works just as effectively in sorting out splashy, congested pop

recordings or bringing a degree of spatial and locational stability to big and overly dense orchestral recordings. This is no sledgehammer to crack a THD nut: It is a subtle corrective to allow for system matching and/or less than brilliant recordings that you still want to hear. The fact that you can switch it from the IR handset means it's there if or when you want it – or if you simply want to see if it helps.

EQ curves: who needs 'em?

When the PI first arrived, besides its stellar performance, the thing that really sold it to me was the option to include additional EO curves.

I was already aware of the importance of correct

EQ in playing classical recordings from the early stereo era, having encountered the facility on the FM

Acoustics FM-222, ARC and Zanden phono-stages.
But none of these was ideal: the rotary controls on the FM

needed adjusting for each curve and while

the Zanden and ARC did offer a switched solution, they omitted (at that time) the crucial Teldec curve used by DGG until it ceased record production the first time around. The PI was the first phono-stage I came across that offered a push-button solution to selecting the EQ curves for early EMI, Columbia, Decca and DGG pressings. It's a facility that, once heard is hard to forget, and the dramatic musical impact of using the correct curve on many mono and early stereo records is easily demonstrated. So much so that I've been doing that at audio shows for nigh-on twenty years. The standard reaction from the audience goes something like, "How can we not know about this?" Explain that there are many that either won't or can't hear the effect of

>> correct EQ and it changes to an incredulous, "What? They can't hear that?"

At least part of the problem lies in the fact that it only applies to some records. If you don't have those records, or only have later pressings of them, then they will likely be RIAA compliant and you won't experience any benefits from switchable EQ. What this means is that whether you decide to take up the EQ option on the PIO (or PI) depends on the nature of your listening, the nature of your record collection and where you see it going. I've covered the issues in some detail in the article linked below, so I'll not repeat the whole saga here.

https://gy8.eu/blog/some-things-are-just-plain-wrong/

But, the one thing that really does bear repeating is the access that curves CAN give you to great performances and recordings via the second-hand market.

early stereo
discs attract
big money,
many
contemporary
pressings
don't – often
because they
are sonically
disappointing, often

While certain collectible.

because they require something other than RIAA EQ. Classic examples

would be the UK pressed
RCA Living Stereos. Legendary

amongst collectors, early US LSC

series pressings can command high

prices. Their direct equivalents, the SB series pressed by Decca in the UK generally go for a few pounds. Yet, play an SB with the Decca EQ curve and it's every bit as impressive as a US Living Stereo – at a fraction of the price! Meanwhile, DGG pressings are almost universally reviled, yet the label had a roster of peerless performers and super-stars. Play those discs with the correct Teldec EQ curve and those recordings are transformed, giving you access to some of the greatest artists, recorded at their best on quality pressings – again for a few pounds, Euros or dollars a disc. If you are a classical listener, or you collect '60s jazz or pop, this is not an opportunity you should ignore. There's a whole world of affordable and (thanks to the internet) available recorded music just waiting to be explored.

When more is definitely better...

Bringing the discussion round to this review and this product, I don't just love the fact that the PIO offers the option of different EQ curves: I love the curves it offers and I love the implementation, which is even better

than the PI's. As mentioned in the brief summary above, in addition to EMI, Columbia, Decca and Teldec/DGG curves, the PIO adds curves for Capitol/AES, NARTB/NAB and Philips (another sleeping giant lying undiscovered in the second-hand classical bins). Whereas on the PI, switching curves meant using the push-buttons

on the unit's front panel or connecting it to a network and the CH-Control

App, they can now be switched from the IR hand-set, meaning that you can

check the EQ

on a given record without leaving your listening seat. You can also select the so-called 'Neumann Pole', a high-frequency roll-off applied in cutter-heads to help prevent overheating and/or ringing. Although

no single standard seems to have existed in this instance, it generally involved an additional pole (turnover frequency) at around 50kHz and was named after Neumann's implementation in their cutting electronics. Again – on certain records and particularly DGG pressings – this can have a remarkable impact on the sense of acoustic space and definition. Finally – and on a purely practical level – CH has made use of the full-colour display to help indicate which curve is

currently selected. The curve in use is displayed in text in the bottom left corner of the display - but it's too small to read from any distance. So. each curve also has its own display shade, from white for the 'pure-vanilla' RIAA to red for EMI, purple for Decca, yellow for DGG and plum for Philips: you get the idea... It certainly helps you see not only which curve is selected, but to avoid leaving the PIO set to the wrong curve because you forgot to switch it. Of course, if you don't like the shades that CH has selected, you can adapt or change them – or you can change them all to a single colour if you just want the display to match the rest of the system. The PIO's curve implementation pretty much ticks all my boxes and given the modest price of the option (\$2,250 gets you a pair of boards containing all seven additional curves) it's a no-brainer for me. Fortunately, the option is also

cost neutral, meaning that you don't get punished if you

choose to add it later.

Many (but not all) of the musical examples cited so far have been early pressings that used the appropriate curve to achieve the results described. Perhaps it's time to give some specific examples of the curves in action, so let's start with the Colin Davis/Sibelius recordings that I've already used as a point of comparison, both for what the PIO does and what it does relative to the PI/XI. As a fan of his taut and explicitly structured performances, I bought the Davis box-set

of the seven Sibelius symphonies

maybe 20-years ago. I

balance and flattened the

stage. But then, back in the day

I never had access to the Philips EO

curve. In fact, I've never had access to it until

it twice,
disappointed
by the
disjointed and
inarticulate
performances,
the oppressive,
sluggish and
bloated bass that
slowed the tempi,
the glassy, forward
treble that tilted the

the arrival of the P10. Perhaps not surprisingly, as soon as the P10 arrived rooting out older Philips pressings was a matter of priority and one of the first was the Davis/Sibelius box...

What a transformation. The lumpen bass was banished, the lower registers gaining energy, texture, shape and subtlety. Suddenly the performances had exactly the sort of drama and tension, perfectly paced bass and scaled dynamics I'd always expected. The treble set back into its proper proportion and perspective, adding to a deep, coherent soundstage. The energy and brilliance of the brass emerged, underlining the dramatic tonal and dynamic contrasts in the scores.

As I mentioned earlier, it's a performance that places this box alongside the Berglund and Barbirolli readings at the top of my personal Sibelius tree – and that is only possible because of the Philips curve provided by the PIO. It has turned a set of records that was simply filling shelf space into a wonderful musical discovery to be explored and enjoyed.

Nor is the Sibelius box an isolated example. Ask anybody in the classical establishment for a list of

sense of shape in the phrasing and the sheer sensitivity

in the playing were astonishing – especially after prior

experience. Am I exaggerating the difference here?

Invited by CH Precision to once again demonstrate

the impact of curves on record replay at the Munich

Show, this was the disc I chose to demonstrate the

the five greatest pianists and there's a better than good chance that Claudio Arrau will be in there somewhere. Extend the number to ten and he's pretty much a definite. I bought his recording of Debussy's Images and Estampes (Philips 9500 965) back in 1980 when it first appeared - and boy was I disappointed by the aimless, wooden and two-dimensional performance. But with the arrival of the PIO, all that

-CH-MM/MC 1 -CHchanged. The performance was literally transformed. The weight, spacing and placement of the notes, the

musical importance of the Philips curve. Even under show conditions, this transformation was smack you in the face obvious. Listen to this – as many did in Munich - and the 'can't hear, won't hear' brigade start to look increasingly ridiculous.

The elusive 'Neumann Pole'...

But the PIO hasn't finished with its record optimisation just yet. The ability to switch in the 'Neumann Pole' on

> any curve – and to do so remotely. from the listening seat - is an added bonus. Not every disc will benefit. but then it's easy to hear which ones do. One particularly clear example was the 1975 DGG recording of Daniel Barenboim and the English Chamber orchestra accompanying Pinchas Zuckerman in RVW's Lark Ascending (DGG 2530-906).The lilting fragility of the solo part plays perfectly to Zuckerman's

strengths, with his fine-ness of line and bow control. It's a beautiful recording and performance, but engaging the 'Neumann Pole' brought air, focus and a sweet substance to the violin, greater dimensionality, a deeper sound stage and more convincing string tone from the orchestra. It didn't make or break the listening experience, but it certainly enhanced it, with an added sense of immediacy, presence and vitality that

breathed life into the performance. Is this vital to record replay (in the way that curves can be)? No. Is it nice to have? Most definitely – especially when it is as easy as this to apply.

Good – better – better – best...

It's easy to see the performance progression from PI to four-box PIO in terms of a simple, linear continuum, but that really isn't the case. Each step of the way brings new and previously unexpected musical benefits, not just opening the window wider and delivering more detail, but bringing greater clarity and organisation to the picture, a significantly more natural sense of human agency - especially in the case of the PIO. If you really want to talk in linear terms, then best do so by considering musical access and distance, rather than sonic minutiae: how much the system tells you about what is being played, who is playing and why they're bothering – and how close it brings you to that original event. But along the way, let's not forget just how good the PI is. The advent of the PIO might show us what's possible, but for many of us, the already expensive P1 is as much as we could or would pay for a phono-stage. It's easy to get blasé about price and \$31,000 (before you add the optional XI power supply) is a chunk of anybody's change. The PI isn't going anywhere and, despite the arrival of the PIO, I expect it to retain its core position and importance in the CH range – or even, possibly, extend it. It will still be the benchmark phono-stage and the CH product that most often finds its way into non-CH systems.

It's not often in audio that we can declare anything to be the best. Too many variables, too many scenarios and too many different systems make suspect any such universal declaration. Yet the PIO is getting awfully close to that status. The PI/XI has been an established benchmark since its launch – and one that I haven't heard bettered, until now. That the PIO doesn't just eclipse the PI but in musical terms (as well as sonic ones) crushes it so emphatically is, frankly, pretty shocking. It extends record replay performance into

realms and onto levels previously unimagined — certainly by me. It's not just the best record replay I've heard — it's the best by a country mile: Once heard it's hard to forget — and harder to give up. Outrageously expensive, even in its standard, twin-chassis form, this is a product and a performance that anybody serious about vinyl reproduction needs to hear — if only for the educational experience. It's versatility and ability to match multiple, different cartridges, combined with the limited system context that any source component enjoys, means that for once, not only might there just be a meaningful best, but for the moment, this is it. There are other ambitious phono-stages out there that I have yet to hear. Maybe one of those will surpass the P10? Here's hoping...

Meanwhile, what's the best thing about the PIO? For anybody who doesn't have the \$76,000 ticket, it's going to be the number of factory certified, pre-owned PIs that are going to become available. Given CH's flawless record when it comes to longevity, reliability and updating its products, there's never been a better time to invest in the world's second-best phono-stage! Because for all those people who already own, appreciate and enjoy the PI, once they hear the PIO, like me, they're going to find it awfully hard to say no...

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ZI Le Tresi 6B, 1028 Préverenges, Switzerland www.ch-precision.com

Prices:

CH Precision P10 \$76,000 CH Precision P10 Mono (four-chassis) \$132,000 P10 to P10 Mono upgrade \$56,000