10
SERIES

"The CH Precision 10 Series has fundamentally changed my expectation of just how little an amplifier – any amplifier – can do. Transcending the traditional categories of tube or solid-state, high or low power, it has redefined musical performance, irrespective of partnering equipment or system context and it's done it by doing less: doing less damage, imposing less compression, adding less noise and confusion. In doing so it gives each recording and each performer their own distinctive voice. In doing so it brings those voices to life."

ROY GREGORY, HI-FI+ MAGAZINE

10 SERIES

Welcome to CH Precision…
Welcome to a world of music

When I started CH Precision 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, 10 years on I can proudly say that while the CH Precision 1 Series is firmly established as one the benchmark brands in high-end audio, our new 10 Series has 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 products you will see represented in these pages have 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 digital data and error rates, to making each and every aspect of system control accessible via the CH App. You can even pick the colour of the text used for the displays – and if one of the 7 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.

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

+7.0 dB
+7.0 dB
0.000 W
0.000 W

10 Series – Beyond The Horizon

"Plus ça change, plus c'est la même chose"

JEAN-BAPTISTE ALPHONSE KARR

M. Karr may have felt that the more things change, the more they stay the same, but at CH Precision, we beg to differ. In fact, in many cases, the more things look the same, the bigger the differences are...

Take our new 10 Series, outwardly so similar to the familiar 1 Series that we've had to take steps to differentiate them. There's the straight profile on the front-panel, in place of our trademark curve and, for the first time, the units will be available in not just our standard blue-gray finish, but anodised champagne gold or anthracite as well. But the real differences lie behind the façade, in the circuitry, the componentry, the execution and most importantly, in the performance that results.

With 10 years of accumulated experience to apply to improving the breed, the L10 and M10 are no mere updates on existing models. The topology might be the same, as is the design DNA and the governing philosophy, but the execution is all-new, from the circuitry and circuit board layouts to the component choices, the massive power supplies to the new level of adjustability. The new 10 series offers a step-change in both musical performance and system matching.

Even though the 10 Series design process started with our proven audio circuits and power supply topologies, every aspect of the thinking behind them and their design has been re-examined. It has taken ten-years to complete the entire range of 1 Series products and in that time we have learnt some serious lessons, gaining an enormous body of experience and additional expertise. Now we have applied every last bit of that knowledge to the 10-Series. Every circuit has been reconsidered, every circuit board has been re-laid, every component has been reassessed and where a performance advantage is to be gained, replaced. Power supply capacity, components and sophistication have all improved significantly, with dedicated external supplies now introduced as standard on all units.
At the same time, our legendary functionality and user-configurable facilities have been re-examined and updated, tangibly improving system matching and ultimate performance further still.

The benefits are measureable, with amongst other things, reductions in noise floor and phase error and a significant increase in headroom and dynamic response. But more importantly, the differences are clearly audible. As we get nearer to our performance goals, reducing distortion and noise, increasing the accuracy of our dynamic tracking and the intelligibility of the audio signal, even incremental changes become musically significant. Combine ten-years' worth of incremental changes and that's what delivers a step-change in performance – you have performances, living and breathing in your home.

It might look like nothing has changed – but nothing will ever be the same again.

10 Series – proven performance improved

L10

Dual Chassis, Dual Monaural Line Preamplifier

"Nothing strengthens authority so much as silence."

LEONARDO DA VINCI

When it comes to musical integrity, nothing says "walk quietly – but carry a big stick!" quite like the new L10.

When it comes to high-end electronics, there are fewer top-flight line preamplifiers than any other product category, a fact that reflects just how critical their role is to system performance – and how difficult they are to design. So, when you already build the L1, widely recognised as one of the finest line preamplifiers ever heard, how do you set about improving it?

By keeping the recipe and refining the ingredients – something that's easily said but which has taken all of our accumulated knowledge and experience to achieve. But achieve it we did. The L1 set a new benchmark. The L10 sets an entirely new standard for musical performance.

Any line-stage needs to be quiet, transparent and stable. It needs to be seen and not heard – at least until you remove it from your system. Then you should hear exactly what it brings to the party! It must anchor the incoming signals and deliver them onwards, propelled from a firm footing that ensures dynamic and musical authority. It must pass the source signals in your system, without limitation or disturbance, leaving no trace of itself on their passage. It must be all powerful but also invisible...

The L10 retains the fully discrete, balanced and complementary design, ultra-short signal paths and heavily regulated and filtered, multi-stage power supplies, wide-bandwidth, high slew-rate and DC coupled topology of the L1. It incorporates the same sophisticated R-2R ladder volume control, sophisticated

DC detection and cancellation circuitry and software control. But while the overall topology might seem familiar, the execution takes performance to a completely new level.

- Signal paths have been further shortened and their routing refined, to reduce induced noise and distortion.
- Every single discrete component in the signal path has been reassessed and wherever possible upgraded.
- The external power supply is a dedicated design, specific to and optimized for the L10, with increased regulation and massively increased capacity.
- Feedback topology can be user selected between local and global settings to suit musical preferences and system requirements.

The result is the most musically sophisticated line preamplifier that money can buy: A lower noise-floor, increased transparency, harmonic layers and textures (especially at low frequencies), wider dynamic range, greater dimensionality and a more natural tonal palette. But what really elevates the performance is the sheer sense of human agency, purpose and drama – from the smallest, poised musical nuance to the most shocking orchestral crescendo, the clarity of the most convoluted solo line to the drive and impact of the most powerful rock band. Irrespective of scale or genre, whether it's a time to reflect or a time to party, the L10 will breathe life into your music, transport you to the original recording.

Being a CH Precision component, versatility, upgradability (to full four-chassis, true monaural topology) user configurable operation and a full-function control interface come as standard. Exceptional audio and musical performance comes as standard too – except that in this case, that performance is truly extraordinary.

"For their advanced capabilities, flawless build-quality, and the transcendental musical experience they provide, the CH Precision L10 and M10 are awarded our highest honor, The Absolute Sound's Overall Product of the Year Award."

ROBERT HARLEY, THE ABSOLUTE SOUND

L10 Technical Specifications

Inputs
4x Balanced XLR
2x Single-ended RCA
2x Single-ended BNC

Input Impedance
Balanced: 94kΩ or 600Ω
Single-ended: 47kΩ or 300Ω

Outputs
2x Balanced XLR
1x Single-ended RCA
1x Single-ended BNC

Volume control range
+18dB to -100dBu in 0.5dB steps

Bandwidth
Measurement conditions:
- Volume: 0dB (unity gain)
- 0dBu in

Bandwidth: DC to > 1MHz (-3dB)

Total Harmonic Distortion + Noise
Measurement conditions:
- Volume: 0dB (unity gain)
- 0dBu in, 1kHz input signal
- Local or Global feedback
- 22Hz to 22kHz measurement window

THD+N: < 0.0008%

Output Noise
Measurement conditions:
- Volume 0dB (unity gain)
- Local or Global feedback
- 22Hz to 22kHz measurement window
- 27Ω input termination

Output Noise:
- -112dBu (1.8µVRMS Balanced outputs)
- -115dBu (1.3µVRMS Single-ended outputs)

Signal to Noise ratio
Signal to Noise ratio: 141 dB

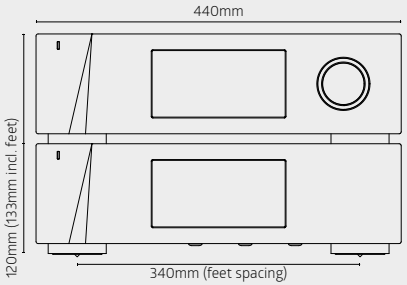
Maximum input level
+26dBu (16VRMS Balanced)
+20dBu (8VRMS Single-ended)

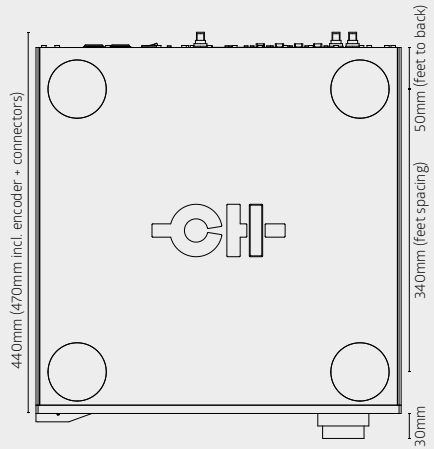
Maximum output level
+29dBu (22VRMS Balanced)
+23dBu (11VRMS Single-ended)

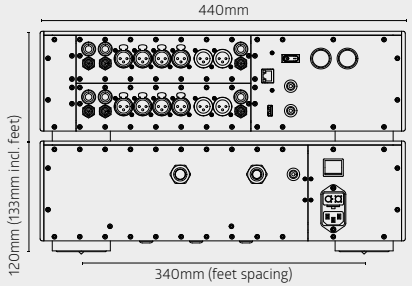
Preamplifier Global vs Local Feedback Ratio
0% Global Feedback (100% Local)
or
100% Global Feedback (0% Local)

Weight
L10 Power supply unit: 23kg
L10 Preamplifier unit: 20kg

Dimensions
L10 Line-Stage Preamplifier







“First exposure to a product like this can be as disturbing as it is exciting, but as a wise woman once sang, ‘It’s a new dawn, it’s a new day, it’s a new life for me, and I’m feelin’ good!’”is one of those times.”

ROY GREGORY, HI-FI+ MAGAZINE

0.000 W
M10
M10

M10

Dual Chassis, Dual Monaural Power Amplifier

“A New Era in Amplification”
"These new flagship electronics from Swiss manufacturer CH Precision are simply unprecedented in set-up flexibility, control, and adaptability to different systems."
ROBERT HARLEY, THE ABSOLUTE SOUND

Rewriting the record books is never easy – especially when it comes to audio and musical performance. Sometimes that challenge is more than just sonic. In the case of the M10 we had to answer practical and physical demands as well.

In a few short years, our M1.1 has become a classic, setting the standard in terms of both performance and versatility. So superseding it, establishing a completely new level of musical capability was always going to demand a major effort and a complete re-think, re-examining every part down to component level. The result was a unique new input stage that significantly outperforms existing circuits, all new circuit boards, re-laid to minimise induced noise and distortion and upgraded components throughout the signal path – all contributing to a dramatic increase in low-level resolution, transparency, natural tonality and musical flow. But at the other end of the scale, headroom is a major limitation on amplifier performance. Dynamic swings can test even the M1.1’s generous 200 W/Ch rated output, so for the M10 we didn’t just increase that by 50%, we doubled the power supply capacity too, creating an output stage with massive musical potential. That reservoir of power doesn’t just come into play on musical climaxes. It gives the quietest passages and instruments the same stable clarity and presence you hear in real life, it precisely traces changes in level and musical density, it holds instruments separate but places them precisely within a single space. It recreates the energy and chemistry of the original performance – and when that performance reaches its climax, the M10 reproduces that too. Effortlessly!

It’s when you try to put all that musical potential in a box that the physical challenges begin. Power supplies are big – and they’re heavy. Building a single chassis to accommodate the M10 was certainly possible, but the resulting product would have been somewhere between difficult and impossible to move or house. That’s why the M10 amplifier comes in a twin-chassis configuration. Those two outwardly similar boxes are not mono-blocs. Instead they are an amplifier stage and a separate power supply chassis. Even splitting the M10 like this, each box is a two-man lift, although they retain the M1.1’s manageable dimensions and will fit into standard racks.

What the M10 also shares with the M1.1 is that amplifier’s versatile topology and user configurable operating parameters. That makes the M10 four amps in one, with output configurable for stereo, bi-amp operation, high-current or high-power mono – in which mode it delivers over 1KW into an 8 Ohm load. The modular input options have been simplified and users can now adjust global feedback ratio (damping factor) in 1% steps, allowing even finer speaker and system matching.

Twice the size of the M1.1 the M10 delivers 50% more power, is just as versatile and even more configurable. With unique circuitry, improved components and more refined signal routing, it improves on the performance of the established model in every single respect. Our goal was to raise the bar. Listening to the M10, even we are surprised just how high it’s been set.

M10 Technical Specifications

Nominal Input Voltage

Measurement conditions:

- Amplifier unloaded
- 22Hz to 22kHz measurement window
- THD+N < 0.01%, any feedback ratio

Balanced: 3.6VRMS

Single-ended: 1.8VRMS

Input Impedance

Balanced: 94kΩ or 600Ω

Single-ended: 47kΩ or 300Ω

Amplifier Gain

Stereo, Bi-Amp, Monaural: 24dB

Bridged: 30dB

Volume control range

+18dB to -100dBu in 0.5dB steps

Bandwidth

Measurement conditions:

- 8Ω load
- 1WRMS into load (output voltage: 2.83VRMS)

Bandwidth: DC to 500kHz (-3dB), input low-pass filter OFF

Bandwidth: DC to 120kHz (-3dB), input low-pass filter ON

Maximum Output Power

Measurement conditions:

- THD+N: < 0.1 %
- Signal frequency: 1kHz

Amplifier Mode	8Ω	4Ω	2Ω	1Ω
Stereo / Bi-Amp	2x 300WRMS	2x 550WRMS	2x 900WRMS	-
Monaural	300WRMS	600WRMS	1000WRMS	1600WRMS
Bridged	1100WRMS	1700WRMS	2500WRMS	-

Total Harmonic Distortion + Noise

Measurement conditions:

- 8Ω load
- 50WRMS into load
- 22Hz to 80kHz measurement window

Feedback Ratio	1kHz
100% Local	< 0.01%
100% Global	< 0.002%

Intermodulation Distortion

SMPTE IMD: < 0.001%

Amplifier Output Noise

Measurement conditions:

- Input terminated with 27Ω
- 22Hz to 22kHz measurement window

Stereo, Bi-Amp, Monaural: < -95dBu (14 µVRMS)

Bridged: < -92dBu (20 µVRMS)

Signal to Noise ratio

Stereo, Bi-Amp, Monaural: > 132 dB

Bridged: > 135 dB

Gain Trim

0dB to -6dB in 0.5dB steps

Amplifier Global vs Local Feedback Ratio

From 0% Global Feedback (100% Local) to 100% Global Feedback (0% Local) in 1% steps

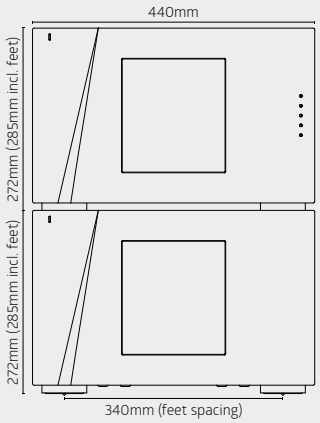
Weight

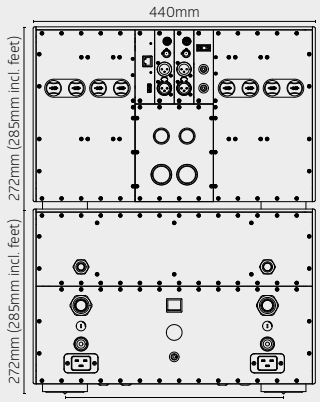
M10 Power supply unit: 78kg

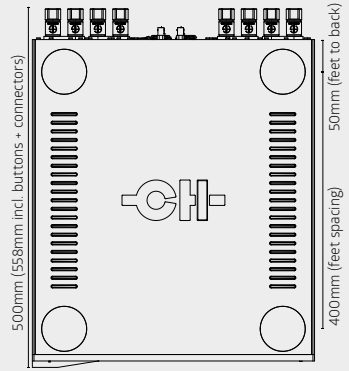
M10 Amplifier unit: 53kg

Dimensions

M10 Power Amplifier







"The metal is smooth as glass, exuding a sense of exquisite refinement and understated elegance rather than superficial bling."

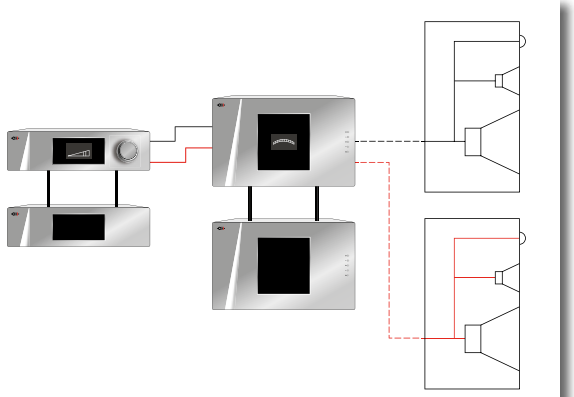
"The 10 Series is chameleon-like in its technical function, and also in its sonic character."

ROBERT HARLEY, THE ABSOLUTE SOUND

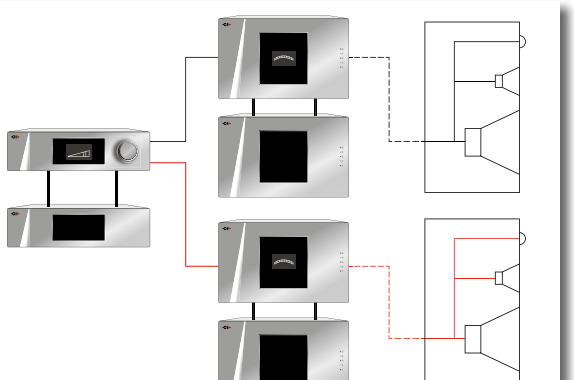
10 SERIES

Scalable System Topology

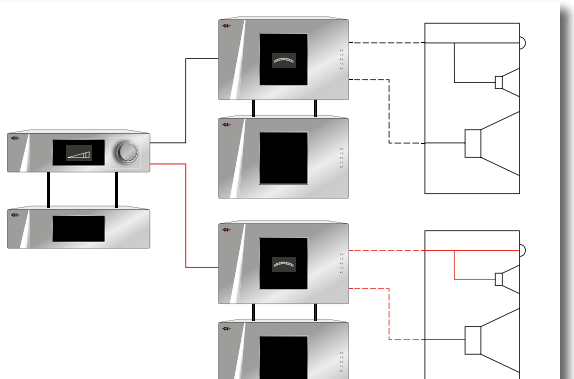
L10/M10 Stereo System



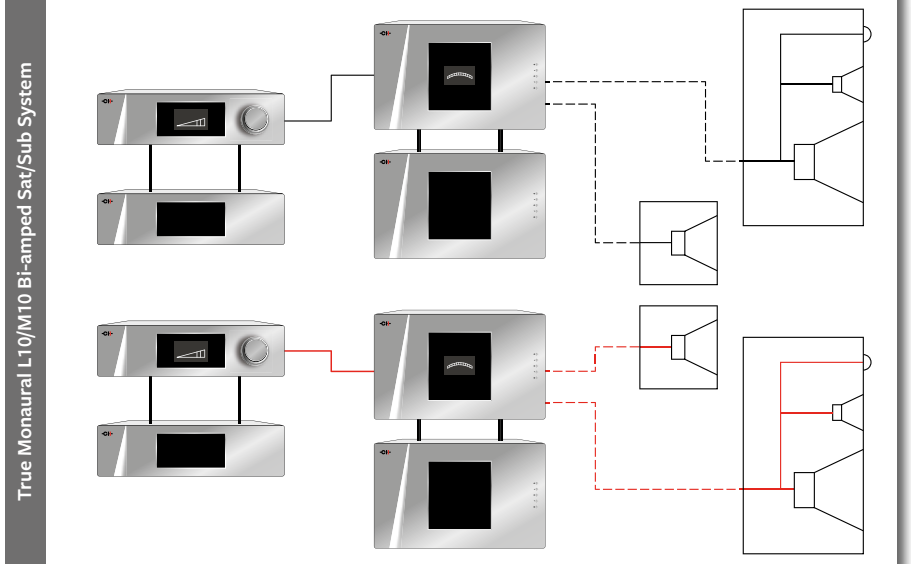
L10/M10 Mono-bloc System



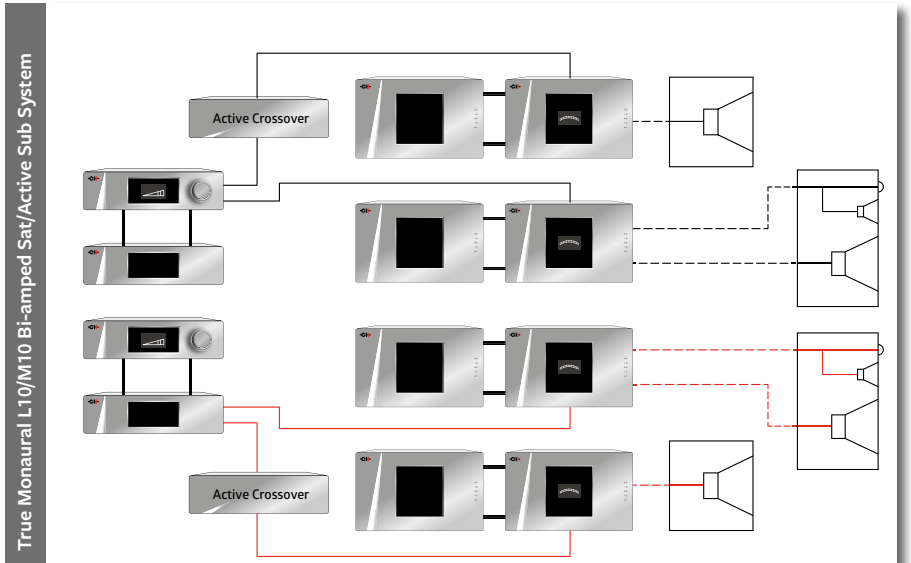
L10/M10 Bi-amped System



True Monaural L10/M10 Bi-amped Sat/Sub System



True Monaural L10/M10 Bi-amped Sat/Active Sub System



“Strive for perfection in everything you do. Take the best that exists and make it better. When it does not exist, design it.”

SIR HENRY ROYCE, 1863-1933

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