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KLEI™ Harmony Binding Post

BROCHURE

Advancing the art and science of the
Eichmann Cable Pod

Keith Louis (KL) proudly introduces the
next generation Harmony Binding Post design

The KLEI Harmony Binding Post takes the highly acclaimed Eichmann Cable Pod to a new level of performance and sophistication. In 2005, the Eichmann Cable Pod set the industry on fire by offering radical improvements to the venerable Binding Post both in design and performance, and as a result the Eichmann Cable Pod received worldwide acclaim.

KL's Harmony Binding Post offers new materials and design enhancements, ie. new and superior technology and architecture, which can be considered the true and next generation Eichmann Cable Pod design (introduced in 2005, an earlier KL invention and design), extends and builds on its superiority over the Eichmann Cable Pod, variations and enhancements of the Eichmann Cable Pod, and traditional Binding Post designs. It represents a wholesale rethinking of the Binding Post.

MATERIALS: From the very outset, KL has had an understanding of and a sensitivity to electron and energy flow. His designs focus on signal integrity, the elimination or mitigation of causes of electron turbulence, most notably eddy currents, capacitive reactance, and micro-arcing. A central theme in his designs has been his choice of materials.

He made a conscious decision to eliminate metal housings as standard on his connectors. Whether magnetic or not, metals surrounding the conductor contribute to electron chaos, and inhibit smooth signal flow. KL uses highly heat resistant and electrically inert polymers both for body, thread, and locking nut and washer. Not as a cost saving, but for better performance. In fact, the tooling required for these glass impregnated polymer housings arguably results in costs that are *higher* than those for metal equivalents. These materials serve to improve signal integrity and reduce or eliminate known compromises for smooth electron flow.

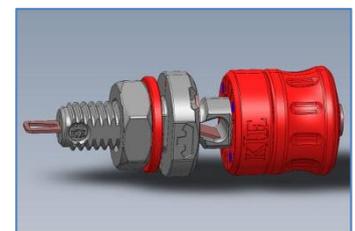
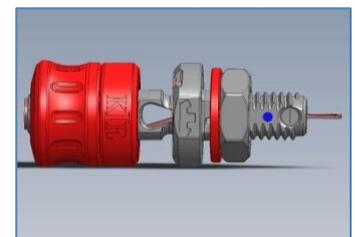
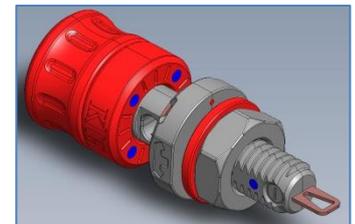
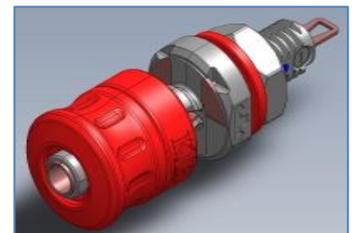
OPTIMUM MASS: Bigger, thicker, and more massive doesn't add up to better sound, and in fact, quite the contrary. A studied, optimised, and in most cases a minimalist approach to mass actually results in better sound – and better electron and energy flow. KL's proprietary signal to ground mathematical formulae, ensure an optimal architectural relationship between all metal complements and dielectrics that have been utilised. The result is control, and the avoidance of sonic compromises caused by skin effect, and the reduction of EF and EMF interference. Controlling these parameters ensures a complete, full, and extended frequency range, where harmonics are conveyed from component to component intact.

METALLURGY: This is of paramount importance; and something that's been central to KL's designs from the very beginning. KL is committed to implementing and using, in his current Harmony Binding Post designs, only conductors that are *more* conductive than pure copper, and even pure silver.

KL, in fact, is responsible for bringing IACS (International Annealed Copper Standard) into the audio conversation. Using pure copper (100% IACS) as a reference, the IACS percentage defines a metal's electrical conductivity relative to pure copper. For example, brass (25%~37% IACS), bronze (15 ~ 48% IACS), and rhodium (35%~38% IACS) are poor to average electrical conductors when compared to pure copper. Pure silver is better at 105% IACS. Gold is about 70% IACS. These numbers — 100, 28, 105 and 70 are known as percentages of IACS.

KL's Harmony Binding Posts are all at an IACS rating of 101% or greater, and are breaking the conceptual boundaries that have been previously thought to be absolute. A lot has happened since the days of the original Cable Pod; and the metallurgy utilised in the Harmony Binding Posts represents new understandings that have grown out of research into the processes of forming, finishing, metallurgical affinities, and intrinsic crystalline structures.

KL also rejects the use of passivation for preserving and protecting conducting metals which is something touted by some connector manufacturers as being a feature. We are opposed to zinc, zinc oxide or these kinds of coatings, and simply will not knowingly compromise our IACS ratings for unnecessary protection.



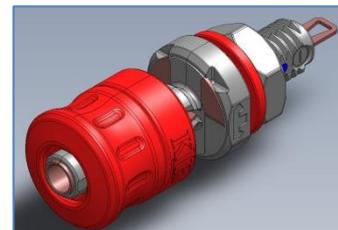
It is important to note that the Harmony Binding Posts pins are harmoniously formed in a way that the metallurgical processes work together and not in opposition to each other, both electrically and mechanically.

Extrapolation indicates, electrically, that the utilised metal complements are at least as conductive as pure copper (100% IACS) and/or pure silver (105% IACS). In pure annealed form, pure copper and pure silver are too soft to machine and easily bend. As such, the machinable forms of copper and silver, as used in audio applications, have noticeably lower IACS values than their pure copper and pure silver forms. The bottom line is that conductivity (IACS percentage) is defined by a metal's formation, ie. its completed form. No matter how you get there and to quote Keith Louis, *the proof's in the pudding/listening*. The Harmony Binding Posts excel in this area, and better any Binding Posts we have seen to date.

ARCHITECTURE: The Binding Post conductive pin offers an elegant – and arguably major – redesign of the Binding Post, and in itself is fundamental but extensive. We have opted for...

- A design where the conductive pin architecture and structure acts and flows like an exceptionally high quality PCB track while allowing for a Banana, Spade, or Bare wire connection.

KL's Harmony Binding Post design features an optimised pin arrangement/positioning, optimised pin shape, optimised mass and thickness of the conductive elements, and eliminates and controls eddy current turbulence, micro-arcing, and capacitive/inductive reactances.



We believe this approach solves a series of problems that collectively degrade audio performance and does so in an additive manner. The importance of this innovation and redesign cannot be overstated. Extensive listening and critical comparisons played a major role in the evolution of the design, confirming at every juncture the audibility of properly applied science, even in the area of Binding Post connection.

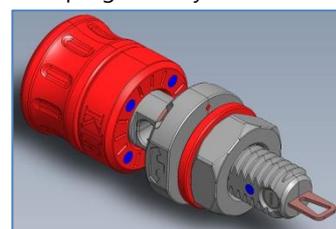
MATHEMATICAL MODELING: The relationships between ground and signal pin, i.e. metal complement, mass, and other critical parameters, are derived via KL's signal to ground mathematical formulae, and has been applied through the Harmony Binding Post range.

SPECS/DIMENSIONS:

- Overall length - 50mm, including solder tag
- Widest diameter - 17mm
- Panel/Chassis Cutout diameter - **8mm**
- Panel/Chassis thickness - **1mm and up to 10mm with washer**
- Panel Washer - diameter **15mm**, width 1.5mm, fitted internally
- Panel Nut – M8, spanner size 13mm, width 4.6mm, fitted internally
- Connection – Banana, Spade, Bare Wire

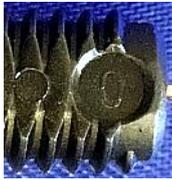
SUMMARY: Each Harmony Binding Post in the product range, from Naked to Classic Harmony, offers progressively enhanced conductivity from >101% to even >105% IACS, which results in an improved response to those exceptionally fast transient signals in the audio signal, improvement in the transmission and resolution of fine details, and achieves a more realistic reconstruction and presentation of the recorded image.

In summary, KLEI's Harmony Binding Post represents a further innovation and a totally refined approach to Binding Post connection.



The KLEI™ Harmony Binding Post's innovations and refinements include:

1. The Conductive pin incorporates highly conductive materials, such as ultra-high purity copper and silver.
2. KL's proprietary mathematical modelling optimises mass, thickness, and composition of the Conductive pin, resulting in enhanced electron and energy flow.
3. The Conductive pin architecture/structure acts and flows like an exceptionally high quality PCB track while allowing for a Banana, Spade, or Bare wire connection.
4. The Conductive pin allows for small and large conductor wires to be soldered to it.
5. The Harmony Binding Post utilises a standard M8 Panel hole, M8 Nut and Washer, and an extremely high temperature melting point polymer, with excellent electrical and mechanical characteristics where the Binding Post Body and Nut thread/washer insulate the Conductive pin from the Panel hole.
6. The Mounting Panel maximum width/thickness can be upto 10mm.



0/ KLEI NAKED HARMONY BINDING POST

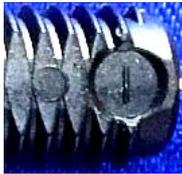
- Proprietary mathematical modeling is utilised to produce the Naked Harmony's ground to signal pin relationship, parameters, and determines the proprietary metallurgical processes that are used. Extrapolated: >101% IACS
- The Conductive pin architecture and structure acts and flows like an exceptionally high quality PCB track while allowing for a Banana, Spade, or Bare wire connection.
- Utilises a standard M8 Panel hole, M8 Nut, and Washer, and an extremely high temperature melting point polymer which tolerates the high temperature soldering required for high silver content solder
- *Note that the naked copper surfaces will require cleaning from time to time.*
- *Higher conductivity. Calculations indicate a progression in IACS percentage, in the series. Greater than that of the Eichmann Cable Pod*

Recommendations: depending on the audio system...

- Burn-in Time: >100hrs and even >200hrs

Coming soon:

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1/ KLEI CLASSIC HARMONY BINDING POST

- Proprietary mathematical modeling is utilised to produce the Classic Harmony's ground to signal pin relationship, parameters, and determines the proprietary metallurgical processes that are used. Extrapolated: >101% IACS
- The Conductive pin architecture and structure acts and flows like an exceptionally high quality PCB track while allowing for a Banana, Spade, or Bare wire connection.
- Utilises a standard M8 Panel hole, M8 Nut, and Washer, and an extremely high temperature melting point polymer which tolerates the high temperature soldering required for high silver content solder
- *Higher conductivity. Calculations indicate a progression in IACS percentage, in the series. Greater than that of the Naked Harmony binding post.*

Recommendations: depending on the audio system...

- Burn-in Time: >125hrs and even >250hrs

Coming soon:

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