After what seemed like an extraordinarily long R & D effort, <u>KLEInnovations</u> has released the long awaited KLEI™Classic Harmony Banana – Connector & Adaptor. KL had "hinted" a while back

that these connectors were in the development stage.

Well, as with all things designed by Keith Louis Eichmann, attention to detail is paramount and this "philosophy" is evident by close inspection of these bananas with the housing removed.

As can be seen in the images...

- The design utilizes a double barrel design, with one barrel being just under half the length of the second barrel.
- The shorter of the two barrels is normally used to attach the cable (up to 4mm in diameter).
- There is a small shoulder half way down the longer barrel of the banana pin, allowing for a second Banana to be inserted into the rear of that barrel.
- This allows for the stacking of bananas a very convenient feature for attaching jumpers on speakers with bi-wire terminals while using a single-run speaker cable.
- The shorter barrel can also be used to attach a second banana (provided a cable has not been attached), which is a very convenient feature for temporarily connecting a set of bi-wire cables to a speaker having only two connecting terminals.
- This feature prevents the bananas on the second cable run from flapping around waiting to "short out". In this scenario the banana is acting more as an adapter.

So what else makes the Classic™Harmony banana so special?

- They boast a %IACS conductivity rating >101%, which is impressive for a copper product, since copper is normally rated at 100% and Beryllium Copper, a material of choice for this style of connector by many other brands, has an IACS rating of between 40%-60% they have perfectly round spring pins most spring pins are not completely round which allows air gaps that may be prone to micro-arcing.
- They fit into all of the banana terminals I have tried with an "unforced snugness" that grips the speaker and amp terminals securely, which is probably due more to the 'friction element' of the snug fit, rather than the amount of spring in the clip.
- They are very simple to connect to cables using solder and removal is also very easy should you want to try them on a different cables.
- Having the second barrel to connect the wire to makes it almost impossible to run solder into/onto the "business end" of the banana something other manufacturers should consider.
- <u>KLEInnovations</u> state the bananas can be crimped but that's not something I would personally try with my crimping tool I've tried crimping spring style bananas in the past and the result was less than satisfactory.

The KLEI™Classic Harmony banana, like other <u>KLEInnovations</u> products, are silver finished, not Gold or Rhodium, which is a feature some people could consider less than optimum due to its tendency to tarnish over time. My response to those concerns...

- 1. I have been using <u>KLEInnovations</u> connectors (RCA's and Bananas) for close to 4 years and I am yet to see any sign of tarnish under normal use, ie household humidity between 40% 65%.
- 2. Any other finish will impact the overall IACS rating, which will degrade performance.











Connecting the cable is extremely easy:

- 1. Remove the plastic housing from the banana pin.
- 2. Strip 5~10mm of the insulation from the speaker wire.
- 3. Tin the bare wire with solder I recommend WBT (4% silver) solder, Wonder solder, or equivalent solder.
- 4. Insert the wire into the top barrel, which is the shorter of the two barrels, ensuring the tinned end comes to the angled end of the shorter top barrel.
- 5. Solder the wire in place by applying solder at the angled end of the shorter barrel and leave to cool down.
- 6. Re-insert the banana pin into the plastic housing it only fits one way.
- 7. Fold the small plastic door into place then press and ensure the locking tags click into place VOILA!



- 1. I leave insulation on the wire such that it too will be inserted into the barrel as well, which effectively prevents the solder from filling up the barrel.
- In the case where a thicker wire is used, I remove enough insulation
 so that the flap on the housing can close, but I add a piece of heat-shrink to prevent the solder from filling up the
 barrel and insulate the exposed conductor.
- 3. The finished result is a neat connection with no possibility of an accidental short circuit,







How do I remove the Banana housing once the door/latch is closed?

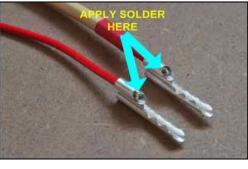
If you wish to open the door/latch at the back of the banana housing once it has been closed, you can simply...

- Insert another banana into the plastic housing part only. I recommend that you use an old banana and NOT another KLEI™Classic Harmony banana.
- Ensure the nose of the banana is NOT inserted into the metal barrel part of the banana, as it may damage the banana pin.
- Gently pry the flap open.







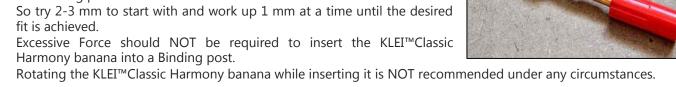


What if the banana slips out of the Binding Post?

Since binding posts do not adhere to a strict 'standard size' for the hole, the fit of the KLEI Banana may not be snug enough to prevent the weight of the cable from pulling the banana out.

Should this be the case, you can simply enlarge the size of the barrel by inserting another banana into the barrel for 5-6mm.

- Note that you want a snug fit, ie. the banana can easily be inserted into the Binding post.
- fit is achieved.
- Harmony banana into a Binding post.



Side Note:

- I have observed throughout the reviews I have conducted that any improvements observed can be impacted by the quality of the components and cables that a newly installed piece of equipment or connector is connected to.
- In plain language installing these bananas on lamp cord speaker cables purchased at the local hardware store will probably NOT dramatically improve the sound of your system!
- However, these connectors are capable of conveying details to an extremely high level of resolution and as such should be installed on cables of a similar resolution capability.



How do they sound?

The package the bananas arrive in states that the KLEI™Classic Harmony banana will require a 125 hour burn-in period to sound their best! If your experience is anything like mine, they will improve your sound immediately and then continue to get better over time.

I was very surprised to hear an immediate discernible improvement across the board, since many products, regardless of brand, normally require a little time before they start to "step up to the plate". It was one of those moments when you turn on the system and start streaming content from internet radio stations to start the burn-in process, only to be "persuaded" to switch over to a source of a higher quality because of "something" very interesting you have heard.

That something was - outstanding clarity!

The trip through the content of my library also revealed...

- A larger, better defined 3D image, with more precision in instrument/performer placement and isolation.
- A faster dynamic performance across the board, resulting in more sparkle at the top end and more texture in the mid and bottom end.
- Classical recordings tended to demonstrate the extraordinary imaging the KLEI™Classic Harmony banana are capable of, simply by providing superb isolated placement of violin/viola/cello/double bass across a very wide image, combined with placement front to back of strings/woodwind/brass and percussion sections to such an extent that left me feeling I was actually sitting in the concert hall.
- The presentation of *Is This Love* by Bob Marley seemed as cavernous as a large stadium.



In short - very much so!



And so, I turned to my vinyl for a more detailed audition...

- The album that had some of the greatest impact was The best of Dire Straits & Mark Knopfler, Private Investigations a nicely engineered double LP set on heavier vinyl.
- The superb clarity and detailing on Sultans of Swing made for a mesmerizing listening experience.
- The dynamics of Mark Knopflers guitar work on Money for Nothing were perhaps the fastest I had heard.
- Yet the soft textures of his voice on Brothers in Arms was ethereal.

By contrast, a couple of albums from the mid 1970's highlighted another attribute of the KLEI™Classic Harmony banana - their smoothness.

• Jethro Tull's - Songs From The Wood and The Steeleye Span Story had always sounded quite shrill, so I was expecting an even brighter performance. However, the harshness of both of these albums seemed to be tamed and the music had much more body and depth without sacrificing the very crisp dynamics.

Stevie Wonder's Talking Book is a well played favourite in my review process, mainly for the track Superstition.

• In the opening scene of the movie I Robot - Will Smith plays this track on a futuristic audio system. Of course, with the enhanced sound engineering and Dolby Surround Sound cranked up - it sounds incredible! So I figured that it might be a good track to truly test the abilities of the KLEI™Classic Harmony banana. The reproduction of sound from this old piece of vinyl was spectacular - a crisp, fast, full bodied, deep, clear listening experience. This album, a favourite for years, seemed like it had been completely re-mastered.

One last album where the KLEI™Classic Harmony banana delivered an outstanding performance is a TACET recording of Paul Florin (violin) playing Partitas by Johann Sebastian Bach.

• This album demonstrated just how much "space" these connectors are able to convey. I was transported into the church where the recording was made. Reflections bouncing from wall to ceiling to wall getting fainter with each reflection. Just me and Paul Florin - an experience I am now able to relive again and again.

I could go on dissecting and analysing each album in my library, since it was as though the KLEI™Classic Harmony banana had re-mastered every piece of vinyl.

- Classical albums best demonstrated their ability to cast a very large image in 3 dimensions.
- Jazz vocals conveyed superbly soft velvety tones.
- Pipe organ music demonstrated the amazing control the amp now had over the speakers with superb dynamic textures across the entire frequency range.
- Pop and rock albums served up dynamic drums and crisp bass lines like never before.

Not to be left in the wings, one of the nicest improvements was the very analogue presentation now produced by my Bluesound Node 2 digital streamer, since all traces of "digital" had now been vanquished, leaving only an extremely enjoyable listening experience.

Should I have expected anything less?

Perhaps not, especially considering my prior experiences with other products from <u>KLEInnovations</u> that I have reviewed over the years, that have proven every single time to provide outstanding improvements in sound quality.

But all this from a little banana soldered onto the end of my speaker wires - really?

Well let's be quite clear, the KLEI™Classic Harmony banana is not just "a simple banana"...

- It's fabricated from high tech modern day materials whose metallurgy is a closely guarded secret.
- It's designed to exacting specifications.
- It's manufactured to extreme engineering tolerances.
- It really is...

The "F22 Raptor" of Banana plugs!



Much like the Harmony Connectors also designed by Keith Louis Eichmann, the KLEI™Classic Harmony banana is capable of much more than simply holding a cable in a hole. It will revolutionize the Banana plug, just as the Harmony plugs have revolutionized RCA plugs.

The KLEI™Harmony bananas, ie Classic™Harmony and PureQ™Harmony bananas, are standard on the new KLEI™QSeries speaker cable models (QFLOW2/Classic, QFLOW3/PureQ, QFLOW7/PureQ, QPURITY8/PureQ SCs) but not on the current gZero and zPurity models. For the current gZero and zPurity speaker cable models you will probably be able to have them installed at additional cost – contact KLEInnovations.

Summation

It took a while to bring the KLEI™Classic Harmony banana to market but I have to award kudos to Keith Louis Eichmann, and his team, for taking their time to "get it right".

The KLEI™Classic Harmony banana appear to allow every detail and nuance of the recording to be conveyed with amazing clarity and dexterity - something I have not observed to this level in any similar product.

They really are - THE Banana Plug you want at the end of your speaker cables!

I give them my "Best Bang For The Buck" award.

My Review System

- Custom built turntable with a Soundsmith Denon DL103 phono cartridge mounted on an Audiomods Arm with one piece silver litz harness + KLEI™Absolute Harmony plugs
- Simaudio MOON LP5.3 RS phono stage
- Bluesound Node 2 music server
- NAIM 5i integrated amp (with passive pre-section)
- Gershman Acoustics Sonogram speakers
- DIY Speaker Cables The HELIX Speaker
- DIY Power Cables The POWER HELIX
- DIY Interconnect Cables The Helix Mark V



KLEI^{IM}Classic Harmony Banana Connector/Adaptor



A highly recommended product

Steve Reeve (Fine Art)