

THE DOPE FROM HOPE

201201



2021 marks the 75th anniversary of Klipsch. The company will celebrate throughout the year with new and anniversary-edition Heritage speakers, as well as commemorative items, including:

- ◆ For sale to the public on March 9, 2021 (Paul W. Klipsch's (PWK) birthday) a large coffee table book, **Klipsch at 75 | A Pictorial History**. With many never-before-seen images and photos from Klipsch's rich historical archives, this commemorative volume is sure to be a must for Klipsch fans, audio enthusiasts, and Museum members alike. A standard version and an ultra-limited museum-edition version will be available.
- ◆ On March 9, we will also be launching a **Klipsch Museum YouTube channel**, with videos and content being released weekly. Interviews with PWK, Museum tours, special event videos, and historical films will be posted all year long in celebration of the anniversary.
- ◆ Several **new gear store items**, including bringing back some classic Klipsch wearables and tchotchkes.
- ◆ The **Klipsch Museum Facebook page** will promote the coffee table book with serialized posts throughout the year and sharing videos posted from our YouTube channel. Stay tuned for more to come!

Follow us on Facebook ([facebook.com/klipschmuseum](https://www.facebook.com/klipschmuseum)) for notifications, contests and updates on Museum campus restoration projects, as well as the launch of these exciting efforts. Please be sure to invite your friends to share our stories and grow the social audience for our cause!



FROM THE DESK OF THE PRESIDENT

Richard Groves, KHMA President

Making Lemonade: Elbert Hubbard writing about Marshall Wilder wrote, *"He picked up the lemons that Fate had sent him and started a lemonade-stand."*

The incredibly resourceful and ingenious Klipsch Museum volunteers have created large quantities of delicious lemonade this year from this 2020 bumper crop of sour and bitter lemons. We have made tremendous progress on many fronts while maintaining a reasonable financial position.

The organization continues to grow through 2020. Roy Delgado has assumed the newly created position of Executive Vice President and takes the responsibility of managing the Executive Committee. Beckie Moore, Don Stills, Tim Cooper and Mike Beasley have joined the Board of Trustees. Amanda Knight has joined as Chair of the Communications Committee and will manage organizational analytics. Karen Joy (sander extraordinaire) has joined the hard-working Facilities Team. Thanks to all who have joined and for all the work accomplished.

Progress continues on the Feild House and Education Center. We "steam ahead" on several new fronts including YouTube, publications and communications. Thanks to the incredible work the many volunteers have accomplished on these projects.

2021 will be a milestone year as we celebrate the 75th anniversary of Klipsch and the Klipschorn. Much more to come on that.

Our organization exists because the work of many dedicated volunteers and generous donations of support. If you or an acquaintance can lend some time and talent to our cause, please reach out me anytime. If you can donate money or goods, please let us know. We are thankful and most appreciative of all! As this year comes to an end, please stay safe and maintain your physical and mental health. I'm hoping to replace the lemonade with apple juice in 2021!

BULLSHIT

CURATOR'S CORNER
Jim Hunter, Curator



Donations & Acquisitions:



Gary Gillum, former Klipsch Chief Engineer, donated a unique Kg4 prototype. This configuration never made it to market. Note the use of an early Heppner K-72-H tweeter. The development of the K-74 tweeter soon followed.

In June, we received the sixth Rebel as a donation from PWK's second employee, Ted Jones. This unit was a return that was modified by PWK for Ted's high school graduation present. Ted visited Klipsch headquarters in Indianapolis in 2014 and is pictured here with a 65th anniversary Klipschorn. He just moved from Bloomington, IN to the Bahamas. Damn lucky guy!!



Our own Ian Moore purchased the 26th Heresy at a Little Rock estate auction in November, which he kindly donated to KHMA.



We also acquired Cornwall #228. This is the prototype (note the "X" in the model designation) that first used the front slot port that we all are familiar with. It also happens to be a "horizontal" configuration. Turk Tourtellot, a friend of PWK, acquired this unit directly from Paul. His grandson, Peter Horne,

delivered it to Hope in November. The first Cornwall's were slot-ported on the back with a vent running from top to bottom of the back door. I've been through the logbook from the beginning, and this is the first reference to porting on the front side. Further review does not reveal this becoming standard practice at any particular serial number. More than a year later, the little sketches in the logbook show the ports as we know them, although still sporadic. There does not appear to be a clear transition date.



Gary Hughes, a friend of Ian Moore, donated five 1940's Jensen technical mono-graphs. PWK had a good, early, and long-standing relationship with Jensen. Two of the five publications are pictured.



Archives:

More than 5,000 photographs in the KHMA archives are being reviewed for possible inclusion in the Klipsch 75th Anniversary coffee table book.

Housekeeping:

The September work weekend included moving all of the trailer items from rented storage back to the trailer that sits beside the Museum. Many thanks to the Hope High School football team! These were initially moved to the Education Center for inventory documentation. Then they were moved to a rented storage facility while we did trailer maintenance.



A Fascinating Find

by Chris Hornbeck and Ian Moore



“Rebuilding to exact original spec would have been like using real hand grenades in a military exhibit...”

PWK's own homebrew amplifier was recently unearthed in the Klipsch Museum basement. It was the Museum's original intent to rebuild it for active service, but we found too many safety concerns. Built in a more daring time, wires with hundreds of volts were run between the amplifier chassis and the loudspeaker - not even remotely safe enough in a modern, and public context. Is this the 5-watt amplifier PWK famously proclaimed the world needed? This amplifier was designed around 1945, predating the David Theodore Nelson Williamson (also known as D.T.N. Williamson) amplifier, but included the push-pull triode finals of the best designs of the day (maybe still true in modern day!)

Paul's 1945 amplifier used 6A5G or 2A3 output tubes in a push-pull configuration, with push-pull cathode degenerated (negative feedback) 6SJ7 drivers fed from a 6J5 split-load phase inverter, all resistance capacitance (RC) coupled. The very high impedance available at the 6J5's grid would have been useful in those days, when good amplifiers were expected to include tone controls, which would perform at their best into very light loading. Provision was made for optional (marked "mandatory if used with pentode outputs") output anode to driver cathode push-pull feedback.

Missing on the amplifier (and its schematic) was an output transformer. The output stages' anodes terminated into a three pin jack, with the third pin at B+ voltage. Rebuilding to exact original

spec would have been like using real hand grenades in a military exhibit - a little too much authenticity. Nonetheless, here the beauty of the design begins.

Further research uncovered a high impedance crossover Paul had designed for the very early Klipschorn, in an era when Hi-Fi fanatics wound their own coils and often their own output transformers. Coils (inductors) were reasonably well understood, and ham radio guys had been making their own from the beginning, but output transformers were a darker art.

An output transformer that would not significantly reduce the performance of the best contemporary loudspeakers, like his, would need to cover a frequency range of at least 1000 to one - a very demanding requirement, and practically beyond the abilities of most home or non-specialized builders. A few years later, the D.T.N. Williamson amplifier was popularized, but folks then had lots of teething issues trying to build the very difficult and demanding output transformer specified (and necessary for amplifier stability).

PWK's solution was that of an engineer: if a single extremely broadband transformer, which will also be compromised in other ways to be so broadband, would be more expensive and difficult, why not use two simpler transformers, each optimized for its own driver range, woofer or midrange/tweeter? Relative driver sensitivities could then, as a bonus, be a simple

matter of transformer turns ratios. No autoformers, no resistive padding needed.

The mystery of the missing output transformer was instead an interesting discovery: By placing a high impedance crossover between the output valves' anodes and a pair of specialized matching (output) transformers, Paul had simplified yet improved a very difficult region of the reproduction chain. PWK wrote and had an article published the same year titled "Woofer-Tweeter Crossover Network".

A final note with regard to the safety issues (as seen in a modern light): This type of construction, with output transformers mounted remotely at the loudspeaker, was common professionally in those days, including theater sound, jukeboxes, inside of radios, etc. Power, often at hundreds of volts, was also run to the loudspeakers to energize them because permanent magnets were difficult before the war. Civilians were expected to keep their mitts out, but those were different days. Instead of trying to restore Paul's amplifier, we will build a clone of the amplifier and the crossover for the museum. One last note on Paul's amplifier... His gain control went to 11 in 1946.



KHMA Facilities Team Making Progress on Feild House Renovations



Almost one year ago, thanks to the generous donation from Andy Barnett, KHMA was fortunate enough to purchase a wonderful historic home in downtown Hope to house our official Visitor's Center. Affectionately called the Feild House after the previous owners, the home was constructed in 1921 and is located next to President Clinton's birthplace home. Members of the Facilities Team and KHMA leadership were able to tour the home and do an assessment before the purchase. It was agreed by all that the house had good bones but would take a lot of work.

The Facilities Team took on the challenge and got to work in January. Multiple work weekends and full work weeks were held over the next few months. Early projects centered on cleaning out trash and trying to get the yard under control. There were many trips to the dump with debris taken out of the house. It was decided to tackle the work in phases. The initial focus would be on the front rooms on the first floor with the goal being to have these ready for use first. Once the first floor was complete, we would move on to the second and finally the third floors. Early work included scraping walls, patching holes and applying fresh paint.

Things were going along well and then Covid came to town. With the early uncertainty around the virus, work on the house came to a complete halt for several months. We were, however, fortunately able to hold work weekends in June, September and November. Needless to say, the work slowed way down. That's not to say the team hadn't accomplished quite a bit!

A list of our accomplishments on the Feild House this year include:

- ◆ Debris removal
- ◆ Cleanup of the grounds
- ◆ Cleanout of the carriage house





- ◆ Restoration of water service
- ◆ Installation of a new HVAC system for the first floor
- ◆ Prep and painting the first floor walls and ceilings
- ◆ Removal of window treatments/old carpeting
- ◆ Plumbing assessment
- ◆ Sanding of the hardwood floors

We've accomplished a lot given the limited amount of time we've been able to spend in Hope. We still have a long way to go, but are proud of the progress to date (see photos).



I would like to give a big thank you to everyone who has taken time to come help us with our newest project. Specifically I would like to recognize Don Still, Vice-Mayor of Hope for his assistance coordinating with the city, Beckie Moore with the Hope Chamber of Commerce for her assistance in gaining community support, and the Hope High School football team for their tremendous help during our September work weekend.



by Craig Strause, Facilities Committee Chair



WHO WE ARE

Paul W. Klipsch (PWK) was an American audio pioneer, a true eccentric and a proud member of the *Engineering and Science Hall of Fame*. He gave rise to technologies that would forever impact generations of music lovers. He left an amazing legacy for you to discover.



Klipsch Museum of Audio History is owned and operated by the Klipsch Heritage Museum Association (KHMA), whose mission is to restore, preserve, maintain and display Klipsch and Klipsch-related artifacts and archival materials for historic purposes, as well as to conduct pertinent historical research and to host educational activities and events.

PLAN YOUR VISIT

We would love to have you tour our collection and hear our stories. They're good ones.

Admission: Admission to the Museum is free to all. However, donations are always welcome. Let your conscience be your guide after your tour!

Hours: Open 10AM-2PM Wednesday through Friday. Also open by appointment - email us! Closed July 4th, Thanksgiving Day, Christmas Eve, Christmas Day, & New Year's Day

Contact: Klipsch Museum of Audio History
Visit: 136 Hempstead 278, Hope, AR
Mail: P.O. Box 280 Hope, AR 71802
833-794-5287
info@klipschmuseum.org

Follow & Donate:
Website: klipschmuseum.org
FaceBook: @klipschmuseum



We believe in the importance of science in education, the spirit of discovery, and good ol' American ingenuity. As a non-profit organization, the Klipsch Museum of Audio History is dedicated to preserving and sharing the technological discoveries, artifacts, and principles of Paul W. Klipsch.

