



A 1940 Charley McCarthy, using what most likely was 1st use of the Bakelite case



Another great David Wilson re-construction and restoration



David Wilson's Lone Ranger radio will soon look like this, maybe with a red tuning knob

○ # 10

○ Vol-23

○ 2018



NEW MEXICO

RADIO COLLECTORS CLUB

Next NMRCC Meeting Saturday October 13th War Eagles Aviation Museum and lunch at GA Steakhouse

The Lone Ranger was never seen without his mask or some sort of disguise. He was never captured or held for any length of time by lawmen, avoiding his being unmasked. He always used perfect grammar and precise speech devoid of slang and colloquialisms. Whenever he was forced to use guns, he never shot to kill, but instead tried to disarm his opponent as painlessly as possible. He was never put in a hopeless situation; e.g., he was never seen escaping from a barrage of gunfire merely by fleeing toward the horizon. He rarely referred to himself as the Lone Ranger. If someone's suspicion were aroused, either the Lone Ranger would present one of his silver bullets to confirm his identity or someone else would attest on his behalf; the latter happened at the end of most episodes when someone would ask "Who was that masked man?" as the Lone Ranger departed.

THE LONE RANGER RADIO RIDES AGAIN-2 By David Wilson

Part two: The Cabinet Reconstruction

After assessing the overall condition of my Majestic 104 Lone Ranger novelty radio, I decided the best approach to restoring the severely damage radio cabinet was to start by stripping off the original white finish so I could get down to the Bakelite and repair the cabinet cracks. This time, instead of stripping the finish off with paint stripper, I wanted to try using a media blaster under a hood with silicon beads for a change,



Once I started this blasting process, I was surprised how much work this actually took. I'm not sure if Majestic baked on their white finishes or the paint sticks really well to the Bakelite. All I can tell you is that I would not recommend doing this due to the amount of time it took to get the paint off. In this case, it took an

hour and a half.

One of the advantages of media blasting the radio is that the Bakelite does have a nice, even rough texture to it so that the paint has something to stick to. If you use paint stripper, then you will need to sand your cabinet. I would recommend using 320-grit sandpaper in this process so your paint will stick better to the cabinet. Before sanding the cabinet you should do all your cabinet repairs.

The cabinet I'm working with is going to need some major fabrication due to the missing side louver section where five Bakelite louvers along with about two inches of the Bakelite radius is missing. It looks like Jaws the shark took a chunk out of the side of the radio cabinet. I started first with the simpler repairs of the cracks on the cabinet. These actually were pretty major cracks. One crack runs from the top left from the back of the radio cabinet all the way to the front cut-out where the Majestic nameplate was. The other crack went from the bottom back right side, just under where the levers were missing, all the way down the side, wrapping around the front face of



1951 Majestic Model 104 Lone Ranger, Bakelite cabinet with breaks

(Continued on page Four)

The NMRCC Report: Meeting September 13th

Thanks to a large donation by a club member, other donations and items being sold by members, we had a many item at our pre-meeting auction. Included were some nice radios such as Zenith Transoceanics along with many radios needing restoration. Since the auction took longer than normal, president David Wilson suggested we bypass our normal 2-minute project discussion, which was approved.

The monthly theme was one-tube radios. John Anthes showed his Crosley Pup and an early 1900's coupler regen radio hooked up to Western Electric amplifier driving a horn speaker. He also showed a video of Chuck Burch operating the system. Greg Palmer showed his rare late 1940s Lionel model railroad transmitter/receiver designed to control model railroad cars remotely. Mark Toppo showed a radio consisting of an earphone connected to a high voltage probe. Richard Majestic discussed a one-tube TRF/Reflex radio that he designed and showed a professional-look prototype he built. John Anthes' presentation was voted Best-of-Show.

The club paid tribute to long-time club member George Cortelyou who passed on August 27, 2018 (see article in this month's Newsletter). Rick Harris discussed the club plans for the upcoming Duke City Hamfest being held at Isleta Casino September 21st to the 23rd. We will have two tables in the tailgate area (afternoon of the 21st and morning of the 22nd) where club members can bring items to sell. NMRCC member Jim Hanlon is giving a luncheon presentation on 124 Years of Amateur Radio at the Hamfest on September 21st.

Our October meeting will be our "Fall Picnic" which is being held this year on Saturday October 13th in the Las Cruces, NM area. We will start with a tour at the War Eagle Museum (8012 Airport Rd, Santa Teresa, NM) from noon to 2PM. Afterwards, we will have a late lunch at the Great Land and Cattle restaurant (600 Valley Chili Rd, I-10 East Exit 2 & I-10 West Exit 1, Anthony, TX). The cost of both events will be paid for by NMRCC. After lunch, there will be open house radio tours at the homes of Richard Majestic (5460 Superstition Dr, Las Cruces) and David Wilson (5005 Moon Shadow Place, Las Cruces).

The meeting adjourned at approximately 3PM.

~by Chuck Burch Secretary



Remembering long-time NMRCC member George Cortelyou by Chuck Burch

Long time NMRCC member George Cortelyou passed away on August 27, 2018 after a long battle with Parkinson's and heart disease. I first met George in early 1996 when I joined NMRCC when we met at a church near Paseo Del Norte and Wyoming in Albuquerque which was then a remote area unlike today where it is a major shopping center. George was very active with the club then and was a recognized expert with power supplies and CB radios. Even back then, George was under medication for Parkinson's. As his Parkinson's worsened, George attended our meetings less frequently. For the past ten years or so, George has been unable to attend our meetings but continued his membership, and according to his wife, he enjoyed reading our newsletters.

George was born in 1933 in Brooklyn, New York and was named after his grandfather who was rather famous and served several cabinet positions under President Theodore Roosevelt. George attended the University of Vermont and enlisted in the US Air Force in 1953. In 1954, he married his wife of over 62 years Patricia. George served in the Air Force for over 20 years at various locations throughout the world. George enjoyed fixing electronic equipment and after retiring from the Air Force, he operated a CB radio shop in Albuquerque.

NMRCC 2018 MEETING DATES

- January 14th** Old loudspeakers and microphones
- February 11th** Pre-1930 radios
- March 11th** Early FM Stereo receivers, amplifiers, and other vintage audio equipment
- April 15th** Homebuilt crystal, tube, and transistor sets
- May 20th** National Museum of Nuclear Science & History
- June 10th** Atwater Kent tube radio sets
- July 8th** Store-branded radio sets (Airline, Trutone, Airchief, Silvertone and etc)
- August 12th** Wild Card Sunday
- September 9th** One-tube radios
- October 13th** War Eagles Aviation Museum and lunch at GA Steakhouse
- November 11th** Old test equipment, tube testers, RF signal generators, oscilloscopes, bridges, meters and etc
- December 9th** Holiday Party



NMRCC Officers for 2018

- *David Wilson: President*
- *Mark Toppo: Vice President*
- *Richard Majestic: Treasurer*
- *Secretary: Chuck Burch*
- *Membership: John Anthes*
- *Ron Monty Director*
- *Ray Trujillo Director*
- *Open - Director*
- *Richard Majestic: Newsletter Editor (President pro-tem)*

The President's Column

The NMRCC Auction Action

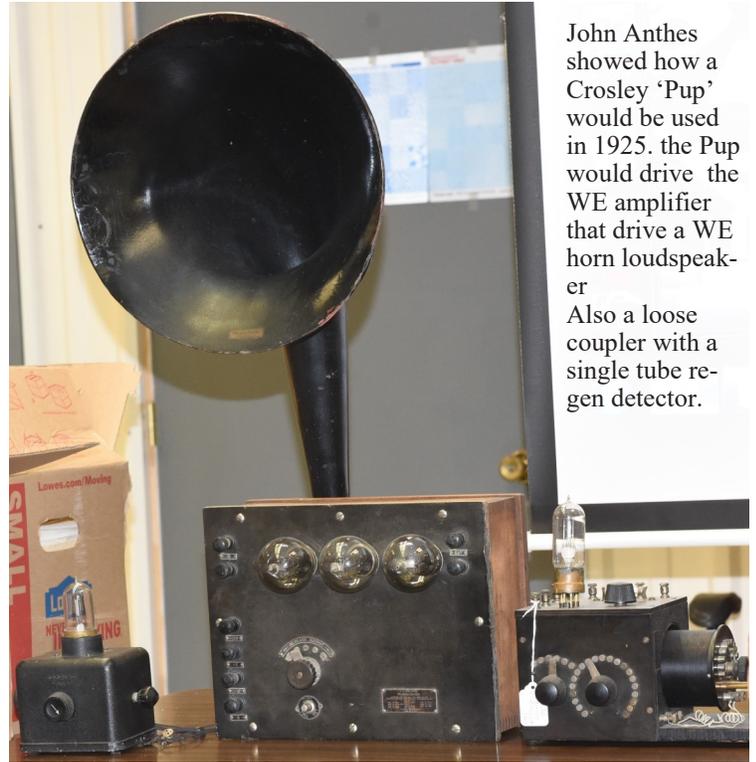


I encourage all of members to join us for our NMRCC Fall Picnic in Santa Teresa, NM at the War Eagles Air Museum. Our group tour will start at NOON and go to 2 PM on Saturday, October 13th. The War Eagles Museum is dedicated to collecting, restoring and displaying historic aircraft of the World War II and the Korean Conflict eras. This is one of the nicest private aviation collections in the U.S. that actually maintain their vintage aircraft in flying condition. The museum is full of really rare warbirds from the World War II era, and jet fighters used in the Korean Conflict plus a number of other historic aircraft. Some of the famous fighters housed at War Eagles two P-51 Mustangs, a very rare P-38 Lightning, the P-40 Warhawk, the F-4U-4 Corsair, plus a twin-engine Invader bomber, a DC-3 transport and a German observation aircraft, the Fiesler-Storch. Among the jets built in the 1950s, you will find an F-86 Sabre, a T-33 Silver Star and MIG-15s. Also, the museum have a number of rare antique automobiles and military vehicles. The museum's special displays include a WWII era Link trainer, navigation and radio equipment.

After our tour we will dine at the historic Great American Steakhouse in Anthony Texas, on the New Mexico border in Vinton, TX just off I-10. Located at 600 Valley Chili Rd. This restaurant is known for its carefully aged beef and amazing deserts. This late lunch will be our clubs treat for all. It worth noting that the Great America Steakhouse was founded by Jack Nunn from the same Nunn family who owns the popular, award winning Sparky's Restaurant in Hatch, NM.

I hope you can join us for an exciting afternoon of fun and great food!

David Wilson , President

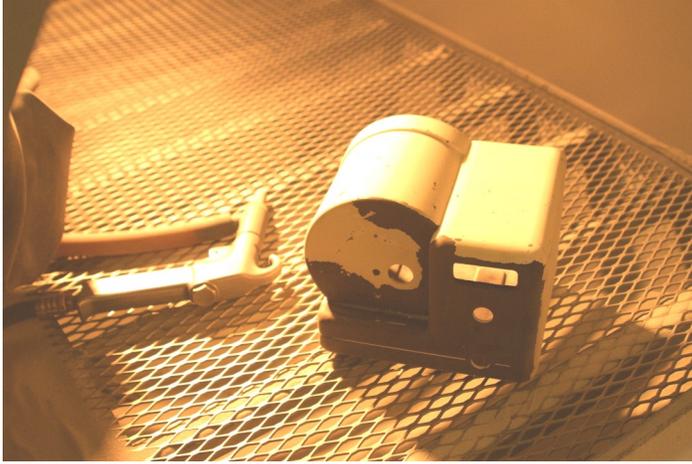


John Anthes showed how a Crosley 'Pup' would be used in 1925. the Pup would drive the WE amplifier that drive a WE horn loudspeaker. Also a loose coupler with a single tube regen detector.



THE LONE RANGER RADIO RIDES AGAIN-2

By David Wilson



screwdriver so that I could insert a Q-Tip with alcohol and clean the areas where I would be applying epoxy. Then I mixed the 5-minute epoxy and let it sit for a minute or two so it started to setup. If you let the epoxy set up before application, it is less likely to run on you once start applying it in the your cabinet cracks. I use the same method with the screwdriver to open up each of the cracks so I can apply the epoxy with Q-Tip and the tip of an old, dull Exacto knife blade. Be-



Photo: Completed bead blasting cabinet.



Photos: Fiberglass & epoxy patch on the inside of the cabinet.

(Continued from page One)

the radio and ending in the middle-bottom of the ledge under the Lone Ranger figure.

In order to do this repair I would need some 5-minute epoxy, fiberglass cloth, some denatured alcohol, and Q-Tips. I first started with a good wiping of the whole radio cabinet with denatured alcohol to get any Bakelite residue off from the media blasting. I then opened each crack up with a standard-blade



(Continued from page Four)

fore I mixed my epoxy, I cut a strip of fiberglass fabric about the length of the crack I was repairing, make the strip about an inch to $\frac{3}{4}$ " wide. Once I had the epoxy applied in the crack you move quickly to apply the rest of your epoxy with a Q-Tip along the crack on the inside the cabinet. Spread the epoxy about the width of the fiberglass fabric and then apply the fabric along the crack by laying it into the epoxy. I then use adjustable clamps to apply the needed pressure to hold the crack together. Sometime the clamps will not work, depending where your crack is in the cabinet. In this case, you may have to use wide rubber bands to hold the cabinet pieces together while your epoxy sets up.

Moving on to the fabrication of the missing Bakelite louvers and round section of the radio's cabinet, I will show how to reproduce and replace these missing pieces.

I looked at several types of material to bend and try to reproduce the missing radius section. I ended up using a thin piece of Bakelite Phenolic resin plastic, just enough in length to be glued in place to create the proper radius to match the rest of the curve in the back section of the radio. I use three more pieces of Phenolic plastic strips, epoxy glued one at a time on top of each other until the thickness matched the original Bakelite. In theory, this should've worked. It did not. When I applied the fourth Phenolic layer, the radius developed a flat spot in it. So, I had to go back to the drawing board on this. I removed the fabricated piece and started over again, only this time I applied a single layer of Phenolic plastic with epoxy just like the first step last time. I then cut four strips of fiberglass cloth and epoxied one layer on top of the other to hold the correct radius curve needed. After the epoxy set up this time, it worked; the curve held with no flat spot. My final step was to apply one more thin layer of Phenolic plastic on the top to give me a flush, smooth surface to work with in the final finishing process.



Photos: Install Bakelite phenolic resin strip insert and fiberglass cloth strips.



The next step in the fabrication process was to recreate the five missing Bakelite louvers. Measuring the thickness of one of the existing louvers and finding the same thickness in a wood strip accomplished this. I bought the wood to accomplish this from Hobby Lobby. Each louver was then measured and cut to the approximate size. I kept each louver over sized so I could sand them to the exact size and angle needed. I then used wood filler on the wood to give the grain a good sealing for the final primer paint on the cabinet. Once this was done, I glued in place each fabricated louver with epoxy. When mixing the epoxy in this process, let the glue set up again for a

(Continued on page Six)



(Continued from page Five)

couple minutes so the louvers are less likely to move and they will set up quickly in place. I then adjusted the louver for the correct final position.



Photos: above: Body puttying of the cabinet cracks.



Next, I let the epoxy cure for 24 hours on the louvers and then used Bondo brand spotting putty to fill the imperfections and cracks. After the spotting putty set up, I sanded the putty using a very coarse sanding fabric in order to quickly take down the excess body putty down to the level of the Bakelite. I then sanded the whole radio with a sheet of 320-grit sandpaper and reapplied spotting putty, repeating the sanding process until all the cracked and fabricated areas were filled, level, and smooth.

The next step after filling and sanding was shooting the whole repaired body of the radio inside and out with black primer made by Duplicolor. For this kind of repair, it's critical to get all the imperfections addressed before the final paint, and the black primer helps you spot slight imperfections.



Photo: Making and Sanding louvers.



Photo: Installed louvers.



Photo: Cabinet now in Black primer

In our next newsletter, I will show you the final, two-step paint process and then I will restore the radio chassis and do the final assembly to complete this fun radio restoration project.

~David Wilson

Leo Baekeland

POLYOXYBENZYL METHYLENGLYCOLANHYDRIDE, BETTER known by its easily pronounceable trade name “Bakelite,” is the stuff of great significance and great misinformation in the world. It is named for its inventor, Belgian chemist Leo Baekeland.

Before the industrial revolution, and even in its early years, most products were made from natural materials: leather, bone, ivory, wood, metal, plant fibers, animal hair, etc. The only materials similar to plastics were also natural in origin. Think of latex from rubber trees or shellac from the lac beetle. As human industry began to produce more and more, these natural sources became a bottleneck in production.

One of the earliest artificial plastics was celluloid, a highly flammable material that had the added disadvantages of being expensive and difficult to produce. In the early years of the 20th century, the time was ripe for a replacement.

Born in 1863 in Ghent, Belgium, just a few months after Henry Ford, Baekeland came from a modest background—his mother was a maid and his father repaired shoes.

Baekeland attended the University of Ghent thanks to a scholarship. There, he studied chemistry. By the age of 21, he was Dr. Baekeland and a professor.

Baekeland’s first experiments had to do with developing photographs. After a visit to the United States in 1889, he was persuaded to relocate here. Before a decade had passed, he had invented and sold a new type of photographic paper called Velox. Under the terms of its sale to Kodak, Baekeland also agreed to do no further photographic research for 20 years, and he set about to study plastics.

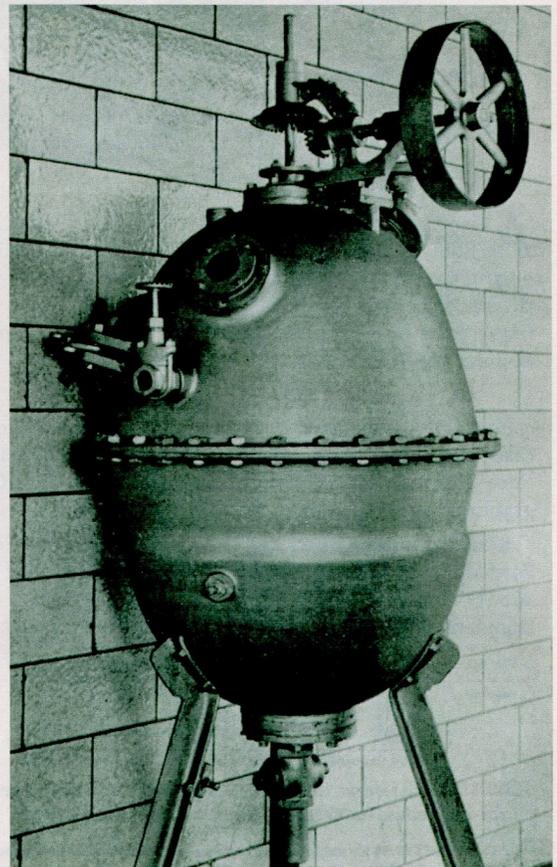
Baekeland was interested in perfecting earlier experiments with phenolic resins, which had failed to produce a useable material. The difficulty was that in order to create a phenolic resin, extremely high temperatures were

required, but those same high temperatures caused the mix to foam up. Upon cooling, the result was porous and fragile.

Around 1907, Baekeland discovered the secret to success, performing the last step of the process under pressure, which prevented the foaming. He produced an egg-shaped chamber he dubbed the “Bakelizer” to heat the mixture to 300 degrees Fahrenheit while preventing the creation of bubbles. The resulting plastic was hard, could not be melted, and was insoluble. He was granted a patent for the process in 1909.

Bakelite was the right product for the times as the automotive, aviation, and electronic industries were all on the rise and all needed a material like Bakelite. Distributor caps, electrical connections, knobs, and even entire car bodies, such as the Trabant, have been made from phenolic resins impregnated with fiber—materials based on Baekeland’s original. Colorful Catalin, developed upon the expiration of Baekeland’s patents in the 1920s, was used to create many consumer goods in the 1930s and ’40s, and is a hot collectible even today.

Bakelite itself, usually black or brown to hide the fibers inside, is still produced by the Union Carbide Company. It remains heavily used whenever a moldable, easily machined, electrically inert, heat-resistant material is required. 📷





**NEW MEXICO RADIO
COLLECTORS CLUB**

New Mexico Radio Collectors Club

Richard Majestic (Membership inquiries)
5460 Superstition Drive
Las Cruces NM 88011

E-Mail: ronmonty@comcast.net

Phone: 505 281-5067

E-Mail: rmajestic@msn.com

Phone: 575 521-0018



FOR INFORMATION CHECK THE INTERNET
<http://www.newmexicoradiocollectorsclub.com/>



The New Mexico Radio Collectors Club is a non-profit organization founded in 1994 in order to enhance the enjoyment of collecting and preservation of radios for all its members.

NMRCC meets the second Sunday of the month at The Quelab at 680 Haines Ave NW, Albuquerque NM, 1:00PM meetings start. Visitors Always Welcomed.

NMRCC NEWSLETTER

THIS PUBLICATION IS THE MONTHLY NEWSLETTER OF THE NEW MEXICO RADIO COLLECTORS CLUB. INPUT FROM ALL MEMBERS ARE SOLICITED AND WELCOME ON 20TH OF THE PRECEDING MONTH. RICHARD MAJESTIC PRO-TEMP NEWSLETTER EDITOR, SEND ALL SUBMISSIONS IN WORD FORMAT, PICTURES IN *.JPG FORMAT TO: RMAJESTIC@MSN.COM

USPS Stamp

