



▶ EH Scott in response to Zenith introduced the Allwave-23 High Fidelity Imperial



▶ Majestic made Charley McCarthy radio 1938



○ 03

○ Vol-20

○ 2019

NEW MEXICO

RADIO COLLECTORS CLUB



Next meeting June 9th Methods of casting, replicating, and repairing radio parts

This Scott All Wave Imperial was designed and sold to counter the introduction of the Zenith Stratosphere introduced in 1934 that was to sell for \$750 and was finally delivered mid-1935. Both were adjustable bandwidth receivers designed for high fidelity AM and both were all wave radios.

The EH Scott Allwave (23) High Fidelity Imperial

The Scott All Wave 12 with 2-dials was introduced in January 1931 with plug-in coils for band change, which covered 15-550 meters. It was equipped with the separate power supply amplifier using an 80 and two 45s and sold for \$212.00 The All Wave 12 Deluxe with a single dial was introduced in December 1932 and had AVC and had the patented turret with RF and local oscillator coils. The All Wave 15 was introduced February 1934 and now had 12 tubes in the receiver chassis and three in the power supply amplifier unit that included a 5Z3 and two 2A3 output tubes and sold for \$155.00 to \$169.81. The 15 had much lower distortion but was still a narrow bandwidth radio. Then the Scott All Wave 19, introduced in

August 1934 selling for \$1,500 in the Warwick Grande cabinet was introduced, the All Wave 23 had been designed and was introduced May 1935 and was sold as the Full Range high fidelity receiver, the "Imperial" in the Imperial Grande cabinet in October 1935.

This Scott All Wave 23 was designed and sold to counter the introduction of the Zenith Stratosphere introduced in 1934 that was to sell for \$750 and was finally delivered mid-1935. Both were adjustable bandwidth receivers designed for high fidelity AM and both were all wave radios. The All Wave 23 sold for \$179.50 to \$217.50 in modest cabinets. And it should be noted that Zenith and Scott had held RCA licensing at bay

(Continued on page Four)

TO THE
Adventurous

Custom-built Full Range High Fidelity 23 Tube Scott

SCOTT beauty of tone and flawless, life-true realism has won it an envied place in the home of celebrated musicians, broadcasters, business leaders and foreign diplomats in 146 countries over the entire globe. Full Range High Fidelity—for those glorious singing silver overtones you have heard so much about but never heard! The SCOTT brings you all those fleeting identifying harmonics which enable the ear to separate oboe, clarinet, cornet, trombone, saxophone, flute and human voice. Its 30 to 16,000 cycles means a tonal beauty you never dreamed was on the air!

LET ME TUNE YOU IN ON P-R-O-F-I-T and we'll MOW 'EM DOWN!

NOT A NOVELTY—BUT A REAL RADIO! A 6 TUBE AC-DC SUPERMETERBOONE

Majestic—CHARLIE MCCARTHY

MAJESTIC RADIO & TELEVISION CORP. 1410 W. 59th St., Chicago

MAJESTIC CHARLIE MCCARTHY RADIO – "Letter of Introduction" film cross promotion

One of the cornerstones of any Bergen and McCarthy collection is the Charlie McCarthy Majestic Radio, introduced to public around the time the Universal Studios release of the movie "Letter of Introduction." This film was released on August 5, 1938 and the radio was cross promoted to radio dealers to cash in on Charlie's popularity at the time.

(Continued on page Seven)

NMRCC President's message 5/19/2019

Our June meeting topic is "Methods of Casting, replicating, and repairing Radio Parts."

I will attend the monthly general members meeting today to ask the general population for capabilities to address our topic of the month.

There is 3D printing.
There is a Laser Cutter.
But is there now a 3D scanner capability? (I did see one email stream) There is a CNC capable milling machine but not operational yet.



I will try to identify Quelab speakers to talk to our needs.

BTW, My friend and his wife were shocked when Steve Attaway had a heart attack and then complications leading to his untimely early passing. They had briefed us on their custom Jewelry manufacturing a couple of years ago. And Steve had used their 3D scanner to develop a model that he sent to another Internet shop to replicate for one of my radios damaged in shipping.

Such a loss!

I've reached out to Nancy hoping it's not too early to speak about her plans for going forward.

Will let you know if I have news for 9-June meeting.
~John A.



Pictures below and to the right on this page are from our May 19th picnic and meeting at Don Menning's home. Sorry, not the greatest material; oh well.
~John H.



NMRCC 2019 MEETING DATES

- January 13th** '40s through '60s tube portable MW – SW radios
- February 10th.** '30s art deco radios, chrome chassis and intricate wood design radios
- March 10th** Techno Art and Techno Jewelry radio-electronics-science-related items that have been made into art or alternate-use objects, such as tubes made into lamps, fish bowls
- April 14th** Crosley tube radio sets
- May 19th** Spring Picnic - TBD
- June 9th** Methods of casting, replicating, and repairing radio parts
- July 14th** Radios with odd construction
- August 11th** Wild Card Sunday
- September 15th** Test equipment and classroom demonstration equipment- tube testers, signal generators, oscilloscopes, bridges, meters and etc
- October 13th** Fall Ribeye Steak Picnic (Majestic's)
- November 10th** Magnetic tape and wire recorders
- December 15th** Holiday Party



NMRCC Officers for 2019

- *John Anthes: President*
- *David Wilson: Vice President*
- *Richard Majestic: Treasurer*
- *Chuck Burch-John Hannahs: Secretary*
- *Randy Gray: Membership*
- *Tony Marshal: Director*
- *Ray Trujillo: Director*
- *Mark Toppo: Director*
- *Don Menning: Director*
- *Richard Majestic: Newsletter Editor (President pro-tem)*

BERGEN & KLINKER "The Radio Comedy Writing Content Kings"

I've worked in the advertising agency business for almost 40 years now and one of the things I find true is that your agency is only as good as it's writers and artists. Creative content is king! I now have a son who works in the film industry and we had a recent conversation on the challenges of sustaining great creative work. You have to have a great appreciation for the "Creative's" in any business that is dependent on their art and writing talents. Writing great creative material is a bit like writing hit music, it's hard to do and sustain, not everyone can do it and the ones that can don't always produce great creative content on a consistent basis like writer artists teams like John Lennon and Paul McCartney or Elton John and Bernie Taupin. It's a very, very rare event when people like this come along.

There is no doubt that Edgar Bergen developed a great creative performing and writing talent at an early age through his vaudeville career. He wrote mostly his own skits and was able to sustain his solo comedy writing for nearly 15 years as he transitioned first to film then radio and later television.

Edgar had a charmed radio career, staying in top 10-ranked radio shows for nearly his entire 20-years on the radio. Not many people in the entertainment business can make a claim like that. One of the keys to staying on top for so long was the quality of the comedy writing for his shows.

Edgar would hire a very creative comedy writer, filmmaker that went by the goofy name of Zeno Klinker shortly after his radio career started. What started as a meeting after a film presentation being given by Klinker on his aviation film, "The History of Aviation" ended up in a 40-year collaborative writing, producing partnership and a close friendship. Bergen and Klinker worked hard together to set a very high creative comedy writing standard for the Edgar's shows over the years.

Zeno and Edgar were close in age with birthdates just a couple days apart. They were also very close in personal interests. According to a 1940's newspaper article there had never, ever been a discussion of Zeno's salary when he went to work for Edgar in 1937, it was always writing based on a very generous performance bonus system. Both men flew airplanes, were accomplished motion picture and still cameramen and both had a mechanical bent to them that translated into their hobbies as well.

When a young Zeno Klinker left school he played piano and the banjo in Los Angeles bands like Abe Lyman and Ray West, even had his own Jazz band for a time. Unfortunately, playing in bands could not pay Zeno's bills during the Great Depression. It would be by accident, Klinker started writing greeting cards and humor booklets. It all started after writing a card

for Christmas for himself. Zeno's printer liked his humorous personal Christmas card so much he told Zeno he could sell it to others. Zeno agreed to let the printer do this and they sold over a quarter of a million of these cards. This was early proof Zeno could strike a funny cord that resonated with a mass audience. This writing success allowed Zeno to put food on his table and pay his rent in a very hard time in his life. Later, Klinker creatively collaborated with his sister Orpha Klinker, who went on to be a famous California artist in her own right, to create a line of humorous greeting cards called "Kliker Kraft Kards."

Edgar early on in his radio career hired his own team of comedy writers, independent of the writers J. Walter Thompson (JWT) provided for the Chase Sanborn Hour, his first radio show. JWT's advertising client was Standard Brands, makers of Chase Sanborn coffee and tea products and their writers wrote content for other the other stars on the show and non-Bergen and McCarthy skits. The agency still had final approval over of all creative materials for the radio shows, but this unique writing arrangement allowed Edgar direct control on what was being written for Charlie and Mortimer. Having his own team of writers, lead by Klinker, would allowed him to also own the content his team created in case he wanted to use the material in his nightclub acts and in other entertainment venues. Having strong creative control like this certainly help contribute to his ability to produce a consistent higher quality creative product for his characters over his career.

It's also been speculated by others that by Edgar having writers working directly for him and not the networks or advertising agencies the writers were not required to join the network writer's union, where a good part of their salaries went to union dues. Working direct like this gave his writers more pay in their pockets. Edgar and others in the entertainment business at the time also got a tax break by doing it this way. Keep in mind that in 1944, the top federal tax rate peaked at 94% on taxable income over \$200,000 (\$2.5 million in today's dollars). That was a very high tax rate and owning your own independent production company, which sold creative content back to the networks or agencies, was one of the way entertainers were able to get around these higher personal income tax rates of the time.

The comedy writing team of Bergen and Klinker went on, over the years, to work together on Hollywood movie scripts, television shows and other live public performances. Zeno Klinker's key roll in Edgar Bergen's success

Edgar Bergen, Charlie McCarthy program owner, and writing staff. Left to right, Royal Foster, Bergen, Zeno Klinker, Allen Smith, Marge Petersen



The EH Scott Allwave (23) High Fidelity Imperial

from 1932 up to this point but Scott was forced into licensing cost of \$100,000 and 7.5% royalty payments while Zenith had the resources to continue fighting off RCA.

In 1932 Scott hired Ernest Pfaff who removed the plug-in coils and designed the later All Wave series including the All Wave 23 and the RF/IF portion of the Philharmonic. The All Wave 12 and 15 used capacitive coupling in all IF stages, there was no mutual coupling, the un-tuned plate coil was below the chassis and the IF (intermediate frequency) fre-



quency tuned next stage (grid coil) on top of the chassis, in a separate can was coupled with a wire from below glued to the upper IF coil. Later, to obtain variable IF bandwidth using the staggered tuning method Pfaff moved to the common mutually coupled IF coils with both the tuned plate and tuned grid coils on top of the chassis in the chrome plated cans and variable air dielectric capacitors. This design and construction was carried through into the Philharmonic radios which ended production in 1946 when RCA bullied the current FM band into existence while



the 33 tube FM Philharmonic had the old 38-50MHz. band.

Additionally, to accomplish AM high fidelity Zenith varied the IF bandwidth by changing the IF transformer's mutual coupling by moving one of the IF coils, while Scott varied the staggered tuning of four of the IF amplifier stages, air dielectric capacitors on a common shaft under the IF transformers, some closed and other opened; both designs have their short comings, in that roll-off slopes gets poorer as the bandwidth is increased, this increases the distortion and de-



creases the selectivity of the receiver. About this period McMurdo Silver published

a widely circulated white paper that that explained why these two methods were flawed and described a better way of retaining low distortion and good selectivity while ensuring wide bandwidth, however he didn't introduce a product until 1936.

Both Zenith and Scott used iron core transformers to couple audio stages and the power amplifier sections included eight 45s in the Zenith Strat and four 2A3s in the Scott AW-23. Both produced 35Watts with relatively low audio distortion; it should be noted that no negative feedback was used in either of the receiver's audio circuits, both manufacturers continued to depend on the low distortion from triodes although some pentodes were used but connected as triodes.

My Restoration Progress Story

As most of you know, I've restored a Scott All Wave 12 Deluxe by fully disassembling it, re-chroming all chromed parts and reassembled the radio with new capacitors and new vacuum tubes, along with replacing the stock Magnavox speaker with a good sounding Jensen A12. I also have a Scott All Wave 15 which was purchased working and with very few hours on it. The chrome is a strong 100% and it was equipped with all its original tubes, including single plate 2A3s. On my list of gotta-have Scotts is the All Wave 23, so I now have three All Wave 23 receiver chassis' most in distressed condition. The last, third purchase has good chassis chrome and poor shield cans and tube shields. The second receiver came with the needed power supply amplifier which needed total disassembly and a full re-chroming. The power transformer tested good and all chrome parts and PSA chassis are at the chromer. The first receiver chassis was purchased for its full set of knobs. I also have one of the original Magnavox 12" speaker but I will use a Jensen A12 and some modern 4" PM tweeters. I'll still need to find a cabinet and the panel control bezels and dial bezel, so I'll keep looking.

Restoration Disassemble Procedure

First, I remove and clean the cellulose frequency dial strip with Sprayway glass cleaner before any disassembly. This glass cleaner does not remove the silk

The EH Scott Allwave (23) High Fidelity Imperial

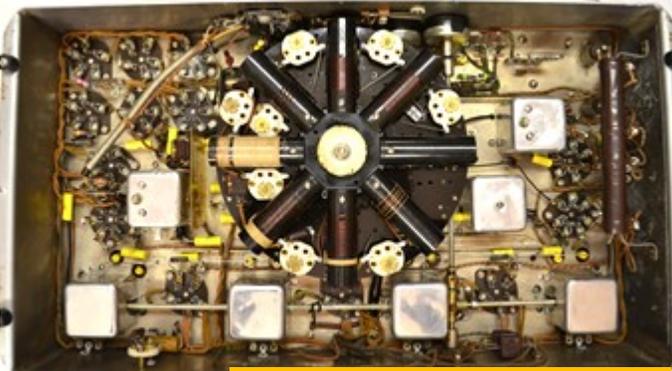
screened legend scale ink.

First step in the way I restore these classic custom chrome radios is to disassemble the receiver chassis covers, tube shields, coil covers, remove the RF coil turret assemble and then remove both the upper and lower chassis dust, dirt and melted wax.

The next step is replace all film capacitors and measure and replace all bad resistors, paying special attention



As purchased



After capacitor & resistor replacement

to plate and screen build-out 1k and 5k resistors. The voltage divider resistors in the bandwidth circuit needs to have all resistors replaced, they are Allen Bradley carbon composition and almost always out of the 5% spec value. Check all pots for good electrical operation and lubricate with white lithium grease and all rotary switches too.

Next step is test all tubes and out of the three chassis' and my stock, putting good tubes back in the sockets. This step includes locating and storing four new 2A3s, a



Typical IF transformer

good 5Z3 and 83 tubes.

The power supply amplifier is now stripped; a few pictures taken for later re-assembly reference. Next the power transformer is unsoldered, the two chokes disconnected and removed, the audio driver transformer disconnected and removed and the power transformer removed.

With a fresh battery in my drill and 1/8" drill installed and all rivet heads, center punched I drill into each rivet about 1/8" and use the automatic center punch to drive the rivet through the chassis.

Remove all wiring with tube sockets and connectors still connected and carefully remove the 10kHz. Filter, that's in the plate circuit of the push-pull parallel 2A3 output tubes. *This 10kHz. Notch filter was needed because of the poor roll-off slope when the radio IF is in the wide bandwidth position. Broadcast band radio station spacing is 10kHz. So it's possible to get a 10kHz. Audio into the speakers when tuned next to an adjacent stations. McMurdo Silver addressed this issue when he designed the model 1517 and Masterpiece 6, he maintained the sharp cutoff slope even at wide bandwidths and was able to pass 15kHz. Audio. The Scott All Wave 23 has a fairly sharp notch at 10kHz. But will pass 15kHz.*

Now the power transformer and two chokes have their chrome brackets and covers removed, ready for the plater.

I install rubber feet on the chassis and use two IF transformer coil cans placed at the corners to support the chassis when turned upside down and the rubber feet for right side up.

Screws and nuts get a cleaning and polishing and stored for reassembly.

The receiver chassis now is detailed first with Windex, rags and a tooth brush, removing all the dirt and dust from between tube shields and the tuning capacitor and antenna coil chromed boxes. The large chrome sections of the chassis now hand polished using mild abrasive 3-M auto polishing compound or Semi-chrome. After hand buffing the chassis, re-inspection and re-worked in imperfect areas.

The 1935 Jensen A12 pedestal and FC cover is disassembled, cleaned and painted silver hammer tone, allowed to dry and reassembled. Using an old Scott AW 23 speaker cable the A12 is rewired and put in its box.

Some design work is now done to accommodate the 250Ohm FC (field coil) that replaces the 400 Ohm FC, a lower value receiver load resistor will raise the current in the FC. Note: the speaker FC is part of the receiver's B+ power supply and part of downstream load is used to raise the 2A3 cathode bias. As originally built the cathode resistor is 1300 Ohms and bypassed with 2uF capacitor. I intend to remove this cathode resistor and replace it with a 10 Ohm resistor so I can measure the cathode current, I'll build a fixed grid bias rectifier/filter to supply -65VDC to the grids. Push pull 2A3s with fixed bias have much lower THD than cathode bias method. There are two independent power supplies in the All Wave 23 and both are choke input filters and the use of a 83 mercury hot cathode rectifier

The EH Scott Allwave (23) High Fidelity Imperial

(Continued from page Five)

was used to further improve power supply regulation for the 2A3s in the amplifier. The 5Z3 used in the receiver power supply is also a choke input filter design and used to help prevent receiver drift caused by AC power fluctuations, but better and temperature compensating capacitors in the local oscillator circuit is a better design. All three Scott All Wave radios use a triode tube 56/76 LO and while my AW 12 doesn't drift my AW 15 drifts, but it's totally original, in my AW 12 I replaced the 50pF coupling cap with a silvered mica and 75k grid resistor with a metalized resistor; I did the same modification in my AW 23 while working on the capacitor change.

Off to Electroplating for the chrome re-work.



Part-2 will be published soon and include performance measurements and opinions.

~R. Majestic

References:

E.H. Scott The Dean of DX, written by Marvin Hobbs – Chief engineer 1939 to 1947

E.H. Scott Radio Collectors Guide, written by Jim Clark

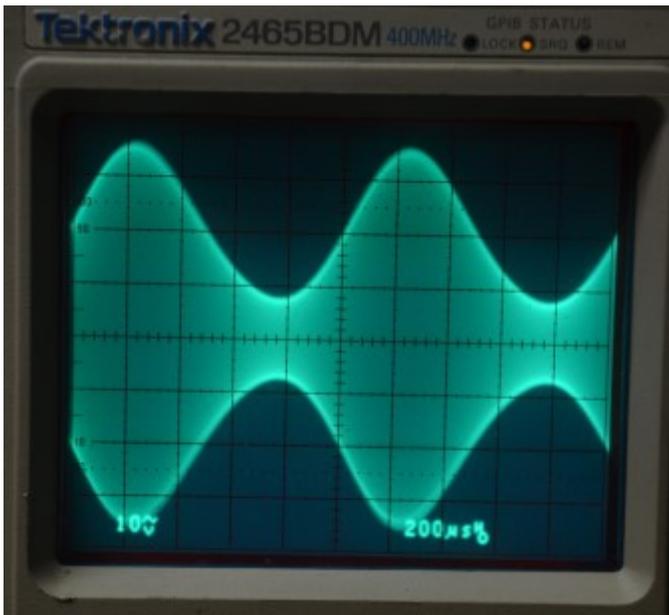
Riders schematic information from Nostalgia Aire

RCA Receiving Tube Manual, RC15 published 1947

Pictures by, Richard Majestic

Imperial picture from Richard Majestic's Laureate Grande cabinet from his collection





One of the reasons that the Allwave (23) High Fidelity Imperial is worthy of that model designation is shown above. The modulation distortion is less than 2% THD, the scope picture is of the IF signal before the second detector, HP 606A generator modulation at 80%.

So, we can guess this radio was first produced mid-1938 and was licensed by Bergen's Charlie McCarthy Inc. licensing division of his growing empire at the time. This radio was marketed by the Majestic Radio & Television Company, which was not affiliated with the earlier Gigsby-Grunow Majestic Radio Company (1921-1933).

There were actually two versions of this radio produce. The first version was Bakelite painted white/ivory with a cast iron Charlie McCarthy figure screwed on to the cabinet. If you looked on the backs of these radios the chassis usually has a paper tag that will tell you which version of chassis the radio had in it. The Charlie McCarthy chassis No. 1 paper tag was the early chassis found on the 1938 white/ivory version of the radio that had a front brass tag with black Majestic Radio Charlie McCarthy written on it. The later version of the Charlie McCarthy radio had a slight chassis design changes to circuitry to improve the reception. This version of the radio also had the paper tag on the back that listed the radio as a Charlie McCarty No. 2 chassis. You can find this radio in white/ivory and produced in new color made dark brown Bakelite. This No. 2 chassis radio had the brass tag with the brass writing reversed out of a dark navy blue color.

These Charlie radios were marketed as a children's novelty radio. My experience of owning many of these radios and visiting with Jerry Simpson, who has restored over 35 of them, is that about for every 10 of these radios found only 1 will not have a broken case. Since these radios were given mostly to children they got broken over time. Also the way the radio case was designed, with speaker louvers at one end, it made this area of the radio especially susceptible to breakage. If you have one of these, all original, unbroken radio they are especially rare and go for more than double the going price for a restored broken one. ~David Wilson





**NEW MEXICO
RADIO COLLECTORS CLUB**

New Mexico Radio Collectors Club

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

E-Mail: rmajestic@msn.com
Phone: 575 521-0018

FOR INFORMATION CHECK THE INTERNET
<https://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 CueLab at 1:30 pm. 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

ALL MATERIAL COPYRIGHT 2014

USPS Stamp

tends to get overlooked, like the many other talented writer's work in the entertainment business. The many thousands of pages Klinker's script work for Edgar Ber-

gen is now preserved in my collection. I will work to share some of his great work here in the future.

~David Wilson



Original Zeno Klinker script writing May 12, 1946. The script is about Candice Bergen's birth.

