



▶ the 1934 Grigsby-Grunow Majestic 161 "Smart Set" radio



▶ Kokeshi Doll Crystal Radio as told by John Anthes



▶ the 1934 Grigsby-Grunow Majestic 161 "Smart Set" radio

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NEW MEXICO

RADIO COLLECTORS CLUB

Next NMRCC Event: Oct 11th – Fall Picnic Ribeye steaks at David Wilson’s Las Cruces and Audio distortion of radio receivers demo at Majestic’s



The first of the company's modernistic "smart sets" had been introduced back in the summer of 1933 and they were instant hits. Encouraged by their success, the company went on to introduce additional models, including in late September the four modernistic deco consoles of which the Lido is a striking example and my favorite.

TWO 1934 ART DECO CHROME GRILLE MAJESTIC'S BY RICHARD MAJESTIC

Mid 1934 Majestic model 174 'Tune-O-Stat Art Deco Chrome-Grille Radio with Clock/Timer and Auto Motor Tuning

This is an extremely rare Grigsby Grunow Majestic model 174 polished-grille radio. The outstanding feature of this radio is the programmable clock in the side of the radio. This allowed the user to set start and stop times for radio stations that were tuned automatically at appointed times. The radio would automatically turn on and seek the selected station and start playing. It's a stunning 1934 art deco designed radio with many technically advanced features. The cabinet is original with no missing veneer or patches but it's been expertly

stripped and refinished using Mohawk lacquer and Mohawk toning lacquer by one of our club members. I traded restoring his 174 chassis for his restoring my 174 cabinet.

The grille is a chrome copy of the original that presented a problem during the restoration. After removing the grille I found that it was not chrome over steel or brass, it was too heavy. It was not lead because it was too stiff and it had been polished to look like chrome. I put it to the polishing wheel with some red compound and it polished up okay but started to tarnish within hours. I took the grille to my chrome plater and they

(Continued on page Four,



The Hewlett-Packard 200 series Audio Oscillators by John Estock

There are several versions of this audio oscillator that have been produced from the late 40s to the late 60s. All are sine wave oscillators with a range of about 10Hz to 600kHz; some versions go down to 1Hz and have accurate attenuator switches for audio work.

Distortion ratings are usually given in the .1 to .2% range, which is very conservative. The 200CD pictured typi-

(Continued on page Five)

The NMRCC Meeting Minutes by John Hannahs

September NMRCC Meeting Minutes

NMRCC met the second Sunday, 1 pm, at 680 Haines Street. Fifteen members attended. President Anthes announced that our speaker, Bill Ripley, KY5Q, and Chairman of the Duke City Ham Fest would be delayed for another time. October's meeting will be held in Las Cruces at David Wilson's home just down the street from Richard Majestic's. Richard will be ordering those 1.5 inch steaks so we need to know who will join us. Our November meeting will feature 3-D printing technology by Nancy and Steve Attaway. The December Christmas meeting will be held at the usual time at Mark and Lynn Toppo's in Rio Rancho, food and drink for all, including sig-others.

John Anthes reviewed Ham Fest events which included Jim Hanlon's on-the-air 50's ham rig and Richard's Software Defined Radio. 9 various radios were donated to the club and promptly auctioned off at 1:15. The bulk proceeds went to the clubs treasury which now stands at \$3700 +/- . All in all, 17 radios went on the block for between \$4 and \$69. Other goodies included an Ampex 10.5 inch tape reel, box of meters, signal tracer kit, Heathkit nixie tube VM, Simpson 260 VOM, 500 yard range finder, an ammo box, plus other items. Many of these items were donated from estates and just good Samaritans. Our members buy and restore them and typically sell them on EBay or donate them to schools or museums. The before and after is always something to behold. It is not uncommon to see our members' homes with several fine old radios in their living-rooms.

Our members consist mainly of radio collectors who happen to be scientists, engineers, technicians, designers, programmers, and techies of all sorts. This month each individual was invited to speak and do a show & tell about something that would interest the rest of us. Here is a sample:

Chuck Burch is heavy in software and it is no surprise that he introduced Little Bits and Arduino. Little Bits makes and markets small electronic kits that enable folks to learn all about applications dealing with light, sound, logic, and sensors. This is a great way to introduce kids and grandkids to the wonders of electronics.

Arduino creates software code driven controller kits that allow bread boarding of individual projects that can be adopted to all sorts of electronic, robotic, sensor based, and just fun things. This is how

inventions are born and millionaires are created .. "trust me".

John Hannahs demonstrated various types of LED products. High current types that are almost blinding require heat sinks and regulated DC power. Reel tape LED's typically operate on 12 volts and repeat the same circuit every third group and can be sold in lengths of 16 feet and 300 diodes for about a dollar a foot. They can come in various white kelvin temperatures or RGB, were individual red, blue, and green diodes are on a single die. The trick is to mix the 3 intensities to any spectral color from IR to UV by controlling individual R,G, and B junction current. Since the human eye is most sensitive to green and the individual colors vary in perceived intensity when variably driven you will get the desired color by either hit-miss or formulation. From China other LED's can be purchased with US standard 117-volt ac base. Usually they run from 7 to 12 watts and can be spot or 360 degree illumination. Life is typically 50,000 hours; brightness is approximately 10:1 favoring LED.

Don Menning brought older model airplane engines and controls for same. Luckily he didn't crank them up. He showed us



a planetarium made from a potato chip canister, a stereo classroom type projector and a projection type microscope for the classroom.

John Anthes brought a huge synthetic quartz crystalline shape that must weigh in at 5 pounds. His discussion as to how these shapes are created and purified by raising the temperature to 500 degrees centigrade and doing laser beam checks was



interesting.

NMRCC 2015 MEETINGS

Oct 11th – Fall Picnic Ribeye steaks at David Wilson's in Las Cruces and Audio distortion of radio receivers demo at Richard Majestic's

Nov 8th - Old computers, calculators, slide rules, and associated items

Dec 13th - Unusual Devices/ Stump the Experts- Unusual tubes, light bulbs, transistors, and radio parts. Also, who can identify that strange gizmo you found, or explain how an unusual object works?

Proposed Programs

*Radio trouble shooting and repair workshop— (TBD)

*Alignment of AM/FM tuners workshop—(TBD)

Steve Shepard Wowed us with a boule of glass given him by former club member



NMRCC Officers for 2015

- *John Anthes: President*
- *John Estock: Vice President*
- *Richard Majestic: Treasurer*
- *Chuck Burch: Secretary*
- *Ron Monty: Membership*
- *Mark Toppo: Director*
- *Ed Brady: Director*
- *Ray Trujillo: Director*
- *John Hannahs*
- *Richard Majestic: Newsletter Editor (President pro-tem)*



Jim King from the earliest fiber optic manufacturing while he was at Bell Labs. It has a glass core of a lower index of refraction and an outer cladding of glass having a higher index. It is

used to pull miles long optical fiber when heated and then pulled down in a drawing tower. Next he used his Geiger-counter to test radioactive glass and how it looks when exposed to UV light.



Ever heard of



Fiesta ware dishes? Yes, they are radioactive and no longer sold. After the Trinity A-bomb tests the sand was melted and formed the radioactive glassy material called trinitite. We are not sure as to how Steve obtained this sample, but he does have it.

Anthony Marshall designed and demonstrated the use of yesterdays type 816 mercury vapor rectifiers driving a type 826 power triode. He had to use isolated 2.5 volt filament transformer



windings for the rectifiers. His power transformer required use of a voltage doubler and filter circuit to drive the

power triode to the max. of around 750VDC. Once power is turned on it takes about 20 seconds for the Hg to vaporize and light up all 3 tubes .. blue and orange. How cool is that.

Less Davidson brings in a '52 Studebaker car radio that somebody converted



to operate on 117 volts ac. Back then this was done because car radios had better sensitivity and selectivity than regular table radios, for the most part. Noise rejection was also very good. Next

he showed a surplus Korean war "pencil tube" used mostly in avionics equipment and Variable Time VT artillery fuses. These were mostly triodes and pentodes and mostly wired into the circuit. Then there was the Burroughs Nixie display module which he promptly broke .. oh well.

Richard Majestic always has something special for us. This time he brings in the tiny Minox 400ASA film cartridge for the spy cameras that is far from a GoPro, but has quite an interesting history as a WW2 spy camera complete with an built in 18



inch ruler to get the correct focal length to copy secret documents. Richard's film cartridge contains 8mm non-sprocket ASA400 film on two mini reels, the cartridge was stamped 'process before June 1973'. Yes, it is antique compared to today's digital devices, but still a cool representation of a

miniature camera that could be carried in a shirt pocket and do Speed Graphic work without the bulk. Next we have a China built \$18 Noo Elec SDR (software defined radio). Check this out at [NooElec - NooElec Home Page](http://www.nooelec.com) This is not junk stuff. It is the future now. It is changing ham radio, for instance. Richard wrote a paper on SDR published in Radio World magazine. You have to go there: <http://www.radioworld.com/article/an-introduction-to-software-defined-radio/272906> Not to worry as you can buy a pre configured box all pre-loaded with current software. However it will cost bigger bucks. But people like ourselves want to know how things work internally, especially since we already own the computer with speakers and display monitor. Funny thing; we deeply appreciate yesterday's finery and at the same time we want to know what tomorrow has in store.

SIMPLE CHORE: Please email Richard if you will attend next months meeting so he can order the groceries. Count me in.

~ John R. Hannahs

Auction Items



didn't know what the metal was either but told me they could chrome plate it, they wrecked it, they etched away so much of the metal during the cleaning process that it made the grille unusable. The



chrome was rough on the flat surfaces and chunks out of the edges. The young lady at the chromer's



offered to make a new grille out of steel cut on a EDM machine. That grille is what you see in these pictures, it looks very good. I think they had used zinc to make the original grille.

The grille cloth was glued down and was original, a very rare peacock design - it had a small hole in the upper right corner which meant it needed to be replaced. I purchased a 1933 Majestic console, the model 164 that used the same grille cloth. I removed it, cleaned it and put it in the 174. The wooden tuning knob was original, but the other three wooden knobs were not, I purchased a 1935 Grunow 510 battery radio that had the correct knobs and put them on the 174. The chassis was mostly intact and original except for the two replacement

Magnificent examples of the radio art came tantalizingly close to averting the company's inexorable slide towards bankruptcy and

176kHz. IF transformers and the speaker. The guy I bought the radio from claimed the speaker was original but it was a Utah replacement speaker, plus it didn't sound very good. I later bought a radio with the original 174 8" field coil speaker, painted it and installed it in my 174. I had to rewire a lot of the radio but kept the exposed wiring original using the original wire where I could. I had to do a bit of redesign to the 2nd detector and AVC circuit since the last IF transformer didn't have two secondary's as did the original. I used the IF tank primary voltage doubler circuit, it also improved the AVC action.

The motorized tuning worked well after cleaning and lubricating the motor and gearing bearings. The station finder is a contact that is set manually by the user and the motor driven rotating Bakelite disc with an imbedded brass contact has a gap that stops the tuning motor. The clock timer motor has the four time settable switches that close one of four circuits that start the tuning motor. I left the clock motor disconnected because it makes a

lot of noise (it's a Hammond motor in a metal box) and you can hear the switch contacts clicking too. The radio is a single conversion medium wave superheterodyne receiver with a 58 pentode tuned RF amplifier feeding 2A7 pentagrid converter that feeds the 1st IF transformer and single IF amplifier, a 58, the second IF transformer is connected to the 2nd detector diode part of a 55, the triode section is 1st audio amplifier that drives the 2A5 pentode power amplifier stage, and a 80 full wave rectifier supplies the B+. The radio's RF performance is good and the sound quality average for a single output amplifier stage driving an 8" FC speaker. The radio receiver has a 55 triode tube that is used for muting the audio when the motor is tuning in a station.

1934 Majestic model 161 Art Deco Bright-Grill Radio

This is a beautiful Art Deco Majestic Chrome Front Wood Tube Radio. It's a stunning looking radio in true art deco style and it's in beautiful condition.



The lovely two tone wood detailing is fabulous. Grigsby-Grunow introduced their fabulous Majestic model 161 as part of the "smart set" series during the "twilight" of their regrettably all-too-short reign in the radio manufacturing business. The first of the com-

(Continued on page Six)

cally measured in the .035% range even up to 50kHz. The low distortion of these generators is a direct result of the use of a balanced RC bridge in which the frequency determining components and amplitude stabilizing components form two arms of the bridge. A key feature of these HPs is the use of a thermally sensitive resistance in the amplitude stabilizer; this is an incandescent lamp and it works quite well.

Other manufacturers have copied parts of this design, then reduce the number of components which adds to distortion levels and adversely affects stability.

If you find one of these oscillators that has not been maintained it will probably need some cleaning and lubrication. The output level control is an Allen-Bradley dual control; they are sealed and the values are not the same (and not easily obtained), so extreme care is needed when servicing. If they need cleaning, the control must be removed from the chassis and two small holes drilled through the metal case to allow cleaning spray to be applied; you must use a drill press to avoid damage to the control.

The tuning gear assemblies are often stiff or completely seized. You can't just squirt oil around to correct the problem; the tuning and reduction gear shafts need to come out for cleaning and republication. This usually involves heating the shafts with a large soldering iron or even a torch; this operation can take 2-3 hours. Re-calibration is not necessary after this procedure unless the instrument already needed it. Take care with the plastic dial pointer, as they are brittle.

I can't remember ever having to replace electrolytics in these HPs, but after 50-65 years that may change soon. If properly cared for, these audio oscillators will last another lifetime.

John Estock



Auction Items





IF transformer
repair

NEXT MONTH

pany's modernistic "smart sets" had been introduced back in the summer of 1933 and they were instant hits. Encouraged by their success, the company



went on to introduce additional models, including in late September the four modernistic

deco consoles of which the Lido is a striking example and my favorite.

The rarely seen model 161 appears to have been one of the last of the line to have made its debut, in late 1933 or early 1934, and shortly before the company closed its doors for the last time. Grigsby-Grunow Majestic was declared bankrupt in February of 1934, assets sold at auction in September 1934. If there was ever a per-



fect illustration of "twilight's last gleaming", it occurred when the company introduced their "smart sets". For these magnificent examples of the radio art came tantalizingly close to averting the company's unstoppable

slide towards bankruptcy and corporate oblivion. So popular were the sets that for the nine months ended November '33, the company sold eight times more radios than in the corresponding period a year earlier.

Grunow had been thrown out of the company in 1933 so it was Grigsby who led this art deco charge. However, it was not enough to save them. Most of "smart-sets" were given an official name, such as Lido, Mayfair, Tune-O-Stat or Ritz, a practice which Grigsby-Grunow Majestic had begun a few years earlier. However, for whatever reason, the 161 was in the minority of the sets that had to make do with just a model number.

The model 161 radio I purchased had the original 8" speaker and one original IF transformer, the second IF was missing the metal can cover. The chassis is relatively clean and rust free but the top edges of the tuning capacitor and the two tube shields (not original) were very rusty. This radio uses the 460 chassis also used in many of the 'Smart Set' radios like the Ritz model 666, Park Avenue model 866, Lido model 766 and Riviera model 996 console models.

Other "Smart Set" table models, the Master Six 461 Chrome grille, 463 Chrome waterfall grille used the 460 chassis. Some very rare non Art Deco console radios like the Royale model 85, Savoy model 69, Plaza model 68, Hyde Park model 86 and Barclay model 67 used the 460 chassis too.

Other extreme art deco chrome grill "Smart Set" models like the Studio 59 with a polishes cast aluminum grille used a power transformer design, with no RF amplifier but they added short wave and two IF amplifier stages. A few small extreme art deco chrome grille "Smart Set" models like the Duette model 55, Duo-Modern model 49 and Dou-Chief model 44 all used 4-tube superheterodyne design with a power transformer. The De Luxe model 411 used a 5-tube AC/DC design.

The final cabinet work or reassemble

and refinishing was done by a another club member too, his expert workmanship put the 161 back into better than new condition. The grille cloth still needs to be replaced with the original pattern and I also had the steel grille re-chromed. The knobs are all original as is the chrome tone control case and function bezels. The chassis was in poor condition as was all the chassis mounted items. I disassembled the entire radio, had the chassis chromed along with some of the original parts, including the last IF transformer which I took off a purchased 460 chassis.

The radio receiver design is the same as the 174 but just missing the 55 muting triode. ~ Richard Majestic



Lido model 766 console and the center top is not black, it's dark brown translucent lacquer



The De Luxe model 411



The Studio model 59

Kokeshi Doll, Germaphone Crystal Radio by Miniman by John Anthes

Recently a friend and colleague, Deborah Belasich, decided to make me a very generous offer. As a young girl she was a U.S. Air Force "Brat" while her family was on station in Japan during the 2nd-half-1950's. Deborah's parents gave her a rather unique radio using just a single germanium crystal.



Station tuning is performed by revolving the doll's head on the vertical axis

Made by Miniman Industry Co, LTD the Doll Kokeshi Germaphone was backed, by "Government Subsidy as an excellent article for export and awarded prize for invention." "A PAT. 29618, 15374." The photo shows that this radio is in excellent original condition with vibrant orange, pink, yellow, red, green and black with a high gloss clear coat.

Also included are the box containing the original 1-page operating instructions (See end of document) printed on nearly transparent rice(?) paper. Notice also that the radio has two ear plugs and an antenna on a 8-foot-long length of red wire. The antenna wire has a connector on the end shaped like one prong of a typical 115 volt AC wall plug.

The crystal radio having limited un-amplified sensitivity has an estimated hearing distance table (Double for Night Reception). For example, a typical AM clear channel station in the US broadcasting 50 kW may be picked up at a distance of 45 miles or 100 during the evening.

Also included in the operating instructions is a sketch showing four separate possible

antenna. Number 1) shows inserting the antenna connector into an AC outlet (Presumably a neutral!), 2) shows connection to a telephone, 3) wrapped around the power line of a home lamp, or 4) wrapped around an elevated (metal?) curtain rod.

Deborah recalls listening to the crystal radio just once while in Japan. So I decided to try signal reception during the night here at our home in Cedar Crest New Mexico. My attempt to pick up a signal failed. And my attempt to gain access to the interior of the doll also failed upon risk of permanently damaging the wooden doll.

Unfortunately the reception of Sandia Crest broadcast radio signals here are shadowed by a secondary mountain ridge. And even my high-tube count radios routinely have limited daytime signal reception.

Of note in the operating instructions is the statement that "These radios work with only one particle of germanium, and do not need batteries." Mention of a "Particle" suggests a fragile mechanical connection

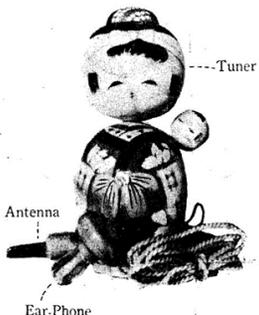
that may have long ago separated? I did wonder how this radio may be valued in today's market. An internet search provided many instances of Kokeshi Dolls. It seems that up to and including today that

these dolls are a favorite tourist purchase. I found just one reference, on a Japanese auction site, to the Kokeshi Radio. The Google translation shows that this "Rare" radio sold for \$40.



NEW, OUTSTANDING IN RADIO!

Listen in through a Doll -
KOKESHI GERMAPHONE



Special Features

- 1) No battery or current needed, hence no operating expense.
- 2) Long Life.
- 3) Small and handy. Can be carried in coat pocket.
- 4) Useful also as an ornament.
- 5) No disturbance to others, and you may fall off to sleep while listening without danger to yourself or surroundings.
- 6) Tune in by revolving the head of doll.

Hearing range and how to operate the antenna:
See the following illustration.



Notice

- 1) These radios work with only one particle of germanium, and do not need batteries. Listening-in is always possible except when major interference obstructs reception.
- 2) Signals may be jammed occasionally as these radios are not super-radios, but one is able to obtain clear reception after some experience in handling and installing the antenna.
- 3) These radios are not over-amplified due to its restricted size, and therefore operate only in districts where broadcasting stations exist or their vicinity.
- 4) Reception is not possible in trains, or buildings where electric waves are absorbed into the reinforced concrete walls, but it can be operated in buildings or trains where the broadcasting output exceeds 100 kw.

Hearing distance

OUTPUT POWER OF R.C.	DISTANCE
100 KW R.C.	90.00 MILES
50 KW R.C.	45.00 MILES
10 KW R.C.	23.00 MILES
1 KW R.C.	12.50 MILES
500 W R.C.	9.00 MILES
50 W R.C.	6.00 MILES

DOUBLE DISTANCE FOR NIGHT RECEPTION

Many thanks to Deborah for this unique and interesting addition to my radio collection: the only crystal radio! ~ John Anthes

VTG Kokeshi Wooden Doll-Radio / Germaphone W / original Instructions And Wiring RARE



Information Sold

- product name : VTG Kokeshi Wooden Doll-Radio / Germaphone W / original Instructions And Wiring RARE
- Contract price : \$ 40
- Qty : One
- Price start : \$ 25
- Exhibitor : illovetanks04
- When D-Day : 2015-03-28 10:19:03 AM
- End date and time : 2015-04-04 10:19:03 AM

리스트 보기
결제비용 상세보기



**NEW MEXICO RADIO
COLLECTORS CLUB**

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



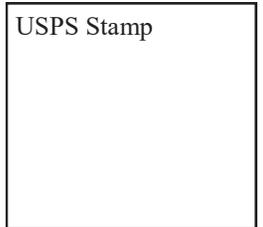
The New Mexico Radio Collectors Club is a non-profit organization founded in 1994 in order to enhance the enjoyment of collecting and preservation of radios for all its members.

NMRCC meets the second Sunday of the month at The Quelab at 680 Haines Ave NW , Albuquerque NM Tailgate sale at 1:00PM meetings start at 2:00 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

USPS Stamp



CONTENT REQUEST !

NMRCC club history column for our newsletter, a story about why we collect old radios, old ham receivers and transmitters, vacuum tubes and old black and white televisions.

Tell Us, Collector...

What's your motivation? What's the limits we set for a collection? Why a particular brand? Why a particular year? Are we collectors or technology hoarders? How much time do we spend on this hobby? Do we research and record the history of items we collect? What are our sources of the items we collect? What are the stories you've heard from a seller? How far will travel to get an item? What's your hot pursuits this month?

Put your story in words, write it up and I want to print it as a monthly column in our newsletter. ~RM

- * Thank you Don Menning our first and **only** contributor...
- * John Doe a Atwater Kent replacement auto parts vendor

