The Jersey Broadcaster is distributed to members of the New Jersey Antique Radio Club via email as a PDF file. Back issues of many of our newsletters are available on the club’s website: www.njarc.org/broadcaster/

Meeting Notice

Our August meeting will be held on Friday, 8/11 at Princeton University. The Tech Talk will be “Plastics, Benjamin. Plastics!” Our presenter, Bob Bennett was in the Plastics industry for over 25 years and will explain the various plastics that our antique radios are made of and how they were formed. Latest info and directions: www.njarc.org. For our non-local members and anyone else who is unable to make it to the meeting in person, the meeting will also be livestreamed at www.YouTube.com/@njarc.

Meeting Review
By Dave Sica

Our July meeting featured a presentation by Al Klase about test equipment for the vintage radio restorer. Al offered an overview of basic test equipment that is useful in repairing vintage electronics, from basic meters and signal generators to modern digital oscilloscopes. He walked the audience through the troubleshooting process. He also touched on receiver alignment and electrical safety.

Even if you’ve been working with test equipment for years, it’s likely many of you found something to learn in this comprehensive presentation. I know that I did!

A recording of the meeting is available on the club’s YouTube channel (www.YouTube.com/@njarc) as are recordings of many of our other “Tech Talk” presentations.

From the President’s Workbench

Greetings Fellow Enthusiasts.

I want to tell you a little about the government’s ERC that was born out of the Covid Pandemic from March 13th 2020 to December 31st, 2021. Why? Because the Employee Retention Credit had nothing to do with our club. What?

As per the website irs.gov FAQ: “The Employee Retention Tax Credit is a refundable tax credit for businesses and tax-exempt organizations.” “Who is Not Eligible to Claim the ERC? You don’t qualify for the ERC if you didn’t operate a business or tax-exempt organization with employees”.

Well club members, the NJARC does not have employees! Your executive board members, RTM docents, repair clinic experts and club event volunteers do not receive payment. They work for the glory and knowledge that they will receive a Higher Place in Heaven! But, that hasn’t stopped the incessant phone calls I have received in the past six months telling me otherwise!

As per the website irs.gov FAQ: Scams! How do I know if I’m being scammed by an ERC promoter?

Warning signs of aggressive ERC marketing to watch out for:

A. Unsolicited calls or advertisements mentioning an “easy application process.”

B. Statements that the promoter or company can determine ERC eligibility within minutes.

C. Large upfront fees based on a percentage of the refund amount ERC claimed.

(Continued on next page)
NJARC has celebrated two amateur radio events so far this year. Club members participated in an on-air international celebration of Gugliemo Marconi’s 149th birthday held April 22 & 23 at the Radio Technology Museum, and the ARRL Field Day, held June 24 & 25, 2023, both on the grounds of Marconi’s 1914 receiving station, now the InfoAge Science & History Museums. The club station W2RTM was on the air for both events.

The Marconi Day event is hosted by the Cornish Radio Amateur Club, Cornwall, Britain. Poldhu Cove near Cornwall was the site of Marconi’s 1901 transmitter for the first successful transatlantic radio tests. The first International Marconi Day 24 hour event was held in 1988 with a ham radio station set up at the original Poldhu site. It has been a success ever since.

W2RTM went on the air for the event with a Dentron 1kW amplifier, Icom 746Pro transceiver and Dentron tuner. Al Klase, N3FRQ and Nevell Greenough, N2GX visited the Museum on Wednesday before the event to check out the station.
W2RTM went on the air for the event with a Dentron 1kW amplifier, Icom 746Pro transceiver and Dentron tuner. Al Klase, N3FRQ and Nevell Greenough, N2GX visited the Museum on Wednesday before the event to check out the station. Midnight Museum Gremlins had attacked in droves, scrambling cables, breaking connectors, throwing SWR all over the Smith chart and eating the antenna feedline like roof rats. OK, a little dramatic but eventually the gang did find the cause of the wobbly SWR and fixed the antenna with the help of pres. Rich and Ray Chase. Roof shingle stones had scraped completely through the antenna ladderline.

A tremendous effort put in by many club members resulted in a fantastic 765 contacts all over the world. Australia, Cuba, Italy, England, Scotland, Germany all came to our station during the event thanks to solar cycle 25. Distant NJARC members Joe Devonshire, AB1YO contacted us as well. John Ruccolo, K2TPP joined Al and Nev for Friday evening to start the festivities on 40 and 80 meter SSB. Ted Copp, Nev and Al kept the tubes warm overnight on 40 meters. A great crew of Gus Shirley, Ted, John, Al, Nev and others lit up the 40M and 20M aether Saturday and piled on the contacts.

President Rich kept the crew fueled with pizza and brownies. Quite a few folks knew about NJARC, and we made certain that the Museum got plenty of on-air mention: “Google W2RTM.” Lots of Museum visitors gave us an excellent opportunity to advertise amateur radio. We even got to visit with a group of young Navy Sea Cadets who were ready to take the Technician radio exam.

ARRL Field Day is an annual event held on the 4th week of June to practice communications under “emergency” conditions. Hams bring our equipment out into the field, set up temporary antennas, and for 24 hours attempt to contact as many other ham stations as possible, both operating from home and out in the field. OK, “emergency” included cookouts, wine and beer. But occasionally mother Nature threw a thunderstorm tantrum making it somewhat realistic.

The first Field Day was held in 1933, and except for WWII, has been held annually ever since. From the 1933 issue of QST: “Clubs, 56mc operators, all hams with licenses for portable stations, attention!! Starting Saturday, 4PM local time, all U.S.A. and Canadian station owners are invited to schedule “field activities,” excursions with concentrated operation of portable transmitters and receivers…… The object will be for each portable station to work as many other amateur stations as possible.”

The rules have since been expanded, but the object remains the same, to establish communications under emergency-like conditions. It’s hard to imagine a “portable” rig of 201As, 30s, 24s, 199s and the like being taken out in a field with dry-cell batteries, headphones, CW keys and haywire antennas. Transmitting crystals were just becoming available and, well, just getting the #$%& receiver to stay on a stable frequency with the antenna blowing about in the trees must have been quite a challenge. “Besides, offering an opportunity to get out in the open in this fine spring weather, the real object of this contest in to test portables wherever they may be available. If successful, we want to make it an annual affair.” (QST, June 1933, p15)

And it has been quite a success. Fueled by Al Klase’s frijoles negro, yellow rice, and chili dinner, Prez Rich Lee’s wine, antennas held aloft by army surplus camouflage poles and plenty of dollar-store rope, powered by a gas generator and a pair of 100AH 12V batteries, our two 100-watt stations accomplished nearly 900 contacts over the 20-hour period from 2PM Saturday, June 24 until the bands fizzled out around noon Sunday, the 25th.
However, the big event Friday wasn’t ours. A brand new exhibit appeared outside Building 9032A right where we put one of our stations last year. Yes, a Beechcraft RC12 aircraft, part of the Army’s Guardrail radio surveillance program landed on the lawn, courtesy of a huge flat-bed truck and crane. Too bad we couldn’t borrow that crane to put up our antennas...

2 PM Saturday arrived and we were off to the races. Several short rainstorms blew over Camp Evans, but didn’t hamper operations. Our canopies stayed firmly in place thanks to several 50-lb weights lent by Darren Hoffman.

Shortly before the contest began on Saturday afternoon, we were visited by a reporter from the Wall Twp. Coast-Star and a photographer. She wrote a very nice article that was published in the June 29, 2023 issue. John Ruccolo must have struck her fancy as he appears on both photos in the article.

Logging was easier this year, as Al and IT expert and member Pete Sandin got the N3FJP logging software to cross-communicate on two laptops and a router. One laptop was designated as a server and the other a client. The master QSO file was kept by the server.

Station #1 stayed continuously on 40 meters. Station #1’s Icom 746pro had no problem holding a frequency while stations answered it’s calls. Saturday evening featured contacts up and down the east coast and Canada. Mother Nature cooperated quite well this year with 40 meters staying open all night long for SSB out into the Midwest. About 20 CW contacts were completed Sunday morning as the band thinned out near the end of the contest.

Station #2 did very well on 20 meters SSB with the club’s second Icom 746pro. 20M even held some DX surprises. Many members got experience on the microphone or logging contacts over the period. One comment made: Operations should have transitioned to 80 meters as 20M faded late into the evening. Remember for next year.

Darren’s Honda generator ran perfectly thanks to a backup Kubota stationed nearby. Let a Honda be shown up by a Kubota?? Not gonna happen!

NJARC turned in a respectable score of 35 contacts on 80m phone, 20 CW and 739 phone contacts on 40m, 64 contacts on 20m phone and 6 contacts on 15m phone. Add 550 bonus points for publicity, safety, emergency power and our public location. Grand total: 2318 points.

Many thanks to all who lent their expertise to the events: Ted Copp, N2KPS; John Ruccolo, K2TPP; Darren Hoffman; Bill Sloma, W1WJS; Al Klase, N3FRQ; Bob Bennett, WB2SRF; Joe Devenshire, AB1YO; Robert Forte, K2RGGM; Paul Mondok, AA2PM; Nev Greenough, N2GX; Matt Reynolds, KD2WRU; Jules Bellisio; Ray Chase; Bob Maddox; Rich Lee. I apologize in advance for anyone I’ve left out.
Remember, the club offers access to much of the SAMS Photofacts service literature, access to Riders Radio service information and access to capacitors, resistors, vacuum tubes and other repair parts. Our Repair Clinics are an opportunity to obtain assistance from club experts with any tough repair challenges you may be struggling with. Our Radio Repair Our Radio Technology Museum at InfoAge offers members a chance to serve as docents to promote radio history to the public. The club’s radio repair shop located adjacent to our museum is fully stocked with test equipment and parts to keep the displays in our museum running and also offers an opportunity for members to work on their own radios.

Our twice weekly Zoom social meetings continue to be popular. See the website for more information on all the great club member benefits. And we have brand new color tri-fold brochures which we use to market the club. Our Facebook page is another way we reach out and promote ourselves to the community, as is our YouTube channel, which serves as a repository of recordings of the Tech Talks presented at our meetings.
Three 1954 RCA CT100 Color TVs Need Fixed in Four Days. Come to Indianapolis Now!

RCA introduced compatible color television to the public in 1954 with their thousand dollar model CT100 set. In 2004, to commemorate RCA’s fifty years of color TV, the company scheduled a day-long celebration on the Home Shopping Network. They wanted to show a working original 1954 set on their live program from RCAs headquarters in Indianapolis, Indiana. However, they had exactly three of these TVs in their archive, none of them functional, only a month before the live cablecast, and no one was available to fix them. Where to turn?

They asked Alex Magoun, then director of the David Sarnoff Library in Princeton, if he knew anyone who could fly immediately to RCA in Indianapolis to fix theirs. I’d restored the library’s 1948 RCA 8TS30 B&W TV, and repaired, when needed, their CT100, so Alex recommended me. A deal was cut where I would fly to RCA’s TV development lab in Indianapolis under contract to fix at least one of their three sets – in one week – all expenses paid.

So, what to bring? I could swap hard-to-get parts between their three non-working sets, but vacuum tubes and high voltage capacitors were unlikely to be stocked in a 2004 electronics lab. I packed a full set of electrolytic and paper capacitor replacements for one CT100, and also brought my Philco traveling TV repairman’s tube tester from the 1950s.

I had hoped to have a full week, day and night, to do the work. That seemed like enough time to repair one set. After I arrived, however, I was informed that I could only be there during regular work hours (9-5) due to security rules, and that I had to begin Monday morning and finish Thursday evening. The job had to be completed in only four days with only eight hours per day.

These cantankerous old TV sets are often difficult to fix. They have 36 tubes, over 50 suspect capacitors, and were the most complicated electronic devices ever used in homes until personal computers. I had literally only 32 hours to get at least one working.

Basic black and white TVs are complex. Think of them as radios with complicated tuners, many IF stages, AM and FM demodulators running at the same time, sync separators, synchronized sweep oscillators, and very high voltage DC supplies. Color sets additionally include a third demodulator for color, another sync-locked oscillator, a chroma decoding matrix, convergence circuits, a regulator for extra-high voltage, and a focus rectifier. They also have many complex alignment procedures that are not present in B&W sets. Can I make three non-working sets into at least one working set in 32 hours? I warned them I could not guarantee it, but it’s quite an advantage to be able to swap components between sets.

I was assigned a cubicle in RCA’s television development laboratory. They had all the tools and equipment I needed, except for the tube tester I’d brought. The lab had advanced transistor, IC, and LDC parts and instruments, but little suited for tube sets. The old NTSC television standard was still in effect at the time, so test signals – convergence and color bars – were being piped throughout the lab.

Because I only had 8 hours per day to work on the sets, each day I pulled every tube from one of the sets and packed them in my briefcase to bring them back to my hotel room in the evening to test them.

(continued on following page)
One of the three sets I decided was to be a sacrificial parts donor, because its 4,500 volt focus supply had a wax and foil capacitor that had exploded deep in the high voltage cage. One of the other sets had a defective picture tube, so I swapped the bad tube with the one in the donor set. These picture tubes have become very rare and often fail because of vacuum leaks between their glass faceplate and their metal bell cone.

I found the atmosphere at the lab pleasant, and everyone I encountered was helpful with tools, supplies, and lifting the heavy cabinets, chassis, and picture tubes. They were enthusiastically rooting for me!

Ultimately, I was able to get two sets working acceptably for the upcoming live Home Shopping Network broadcast scheduled to air only a few weeks after my assignment when time ran out. On one working set the color gamut was curtailed – I think because of a problem in the chroma matrix – and the other had a rather un-sharp picture. The non-working set became just a collection of defective parts. I think they used the one with better color for the broadcast, playing a video of a 1950s Rose Parade – the first program broadcast nationwide by RCA’s compatible color system. I watched and taped the Home Shopping Network cablecast. It was slick and my set looked pretty good! A fun adventure!

Below, on the final work day: Fuzzy picture with good color on left, parts donor set in back, sharp picture with inaccurate color on right.
In the early days of radio, listening to a broadcast from a faraway station was a big deal. DXing or the art of listening to distant signals was widespread. Many people found great enjoyment and satisfaction in spending their free time trying to hear the call letters of faraway stations.

Listeners of commercial radio broadcasts would correspond with stations in order to receive proof they had indeed received the programming. The listener would send a card, which had become known as an “applause card,” or a written report to the station and receive back a card or letter confirming the information they had sent. Collecting these verifications of reception had become a very popular pastime that had benefits for both the listener and the broadcaster. The listener received documentation that they could use for their own satisfaction or for “bragging rights” amongst their friends and neighbors. The stations got feedback that helped them map out decisions for their current and future plans. It didn’t take long for someone to figure out how to make a profit from this.

1924, the EKKO Company of Chicago, a manufacturer of radio parts, decided to jump onto the radio verification bandwagon with an idea of their own. They came up with a plan to issue a stamp printed with a radio station’s call letters on it and sold the idea to over 600 stations. The stations would buy the stamps from the EKKO Company and send them out upon receipt of a verified reception report. The stamps were printed by the American Banknote Company and had an eagle (beaver for Canadian stations,) and radio towers on it. Additional countries used the eagle version. Station call letters and the words “Verified Reception Stamp” were overprinted. The border had the word EKKO spelled out with one letter in each corner. The stamp was available in several colors.

Within the regular stamp collecting community, this type of stamp is known as a ‘cinderella’ stamp, which is "virtually anything resembling a postage stamp, but not issued for postal purposes by a government postal administration." There is a wide variety of cinderella stamps, such as those printed for promotional use by businesses, churches, political or non-profit groups. Stamp collecting was a very popular hobby back then and with being combined with the new radio craze would prove to be a real win-win situation.
The EKKO Company advertised their stamp collecting plan in radio publications and through radio dealers. Standard supplies printed by EKKO were highly recommended. An initial supply of 25 could be obtained for 25¢. A reply and stamp from a broadcast station would be accompanied by an additional blank card.

This process also provided the EKKO Company with a list of participants they could market to in the future.

The February 1925 issue of Radio News ran a story on this new fad.

Listeners would record their radio broadcast receptions on the supplied card, secure a dime to it with a special sticker and send it to the EKKO Company. Not much information was required. One simply had to note their name, address, date and time, call letters and something specific that would indicate that they actually listened to the broadcast.
You could also send a note with the reception information to the EKKO Company.

The EKKKO Company provided stations with a supply of stamps with their call letters printed on them so they could handle their own correspondence if they chose. Some stations continued sending out stamps as long as they had supplies. There are reports that some stations were still issuing stamps into the 1960s.
The station would compare the information recorded on the card with their logs and after confirmation, the listener would receive a verification stamp with a card or letter.
EKKO and Other Radio Verification Stamps
(continued)

[Images of radio verification stamps]

(continued on following page)
Stations often elected to let the EKKO Company handle their transactions.