

THE A.W.A. GATEWAY

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Your Entry to the Fascinating World of Vintage Communications



The AWA Gateway is an electronic publication of The Antique Wireless Association, downloadable without charge from the AWA website www.antiquewireless.org, to stimulate interest in vintage communications history, equipment restoration and collecting.

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THE AWA GATEWAY STAFF

Editor
Marc F. Ellis N9EWJ
mfellis@alum.mit.edu

Design and Production
Claudia Gray Sweet

Copy Editor
Joseph J. Schroeder, Jr., W9JUV

ABOUT OUR COVER

The scene that is partially revealed behind the gateway is the Marconi transmitter complex at Poldhu, southwest Cornwall, England, that sent the first transatlantic radio signal. The three dots, representing the Morse letter "s," were received by Marconi at St. John's, Newfoundland on December 12, 1901. Shown are two of the four sturdy towers that replaced the two antenna masts used in the original test.

The AWA Gateway cover was created by Will Thomson of Armadillo Arts, Iowa City, Iowa.

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Marconi at his St. Johns receiving station. Courtesy David Read.

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From The Editor

With the release of this issue, we will have completed a second year of publication of *The AWA Gateway*. And we hope that you readers are enjoying our little on-line magazine as much as we are enjoying putting it together for you.

However, as those of you who have been following *Gateway* for awhile know, much of our content was originally published by your editor several years ago. Of course the nature of this material is such that it is just as relevant today as it was when first published. And we still have enough stories on hand for another few years.

But for *Gateway* to be on a solid footing so that it can continue to encourage newcomers to our hobby for many years to come, we need to receive new articles from new writers. That way, by the time our previously published material begins to run out, we will have phased in a large group of current contributors.

The first few new authors who responded to our call were interested in producing series of articles. But individual articles are also very welcome. What can you write about that would interest newcomers in radio collecting, restoration, or history? Have you visited and taken pictures of sites important in radio or wireless history? Can you describe the excitement of finding that special radio you had been seeking for some time? How did you feel when your

first radio restoration project burst into life?

Don't worry about length. If a particular experience you'd like to describe can be related in just a few paragraphs with maybe a picture, we'll find a spot for it. Likewise if you feel moved to write a thousand or fifteen hundred words. So boot up your computers, folks! We are eager to hear from you.

—Marc Ellis, N9EWJ

From The Deputy Director

Hi everyone. As I write this column, two events have happened recently which bring to mind and reinforce a thought I want to share with you. First, I have had the opportunity and real privilege to take Ethan, a very excited, curious, 10 year-old boy from my church to see the AWA Museum. Ethan asked question after question and listened intently as we viewed the areas and artifacts at the Museum and I told him the history and the stories associated with those artifacts. It was fantastic to share his excitement and to watch his mind take it all in like a sponge. At the end, he asked how he could join the AWA. Our newest and youngest member. Yea!!

I am also reading a book entitled "The Cobra in the Barn" by Tom Cotter. In it are stories about finding Cobras and other rare cars stored for years in barns, garages or warehouses under layers of dust. For some car collectors the excitement comes mainly from finding that special car long forgotten in a barn. For some it is the hunt that is special; for some it is restoration of the car; and for some it is documenting that special car that they find.

Sound familiar? The lesson is that radio collectors collect for the very same reasons.

So, how do these two events tie together? The vision of the AWA is "to preserve and share the history of technology used to communicate and entertain from the first

telegram to today's wireless text messaging." The AWA is committed to "share and preserve," but we can do this only because the artifacts and documentation in our collections have previously been collected and preserved by committed individual collectors over the years.

When each of us began collecting, it was usually because we were fascinated by that "cool radio" or just curious about how it works or just "because." We can't wait to get the radio or whatever home and see if we can make it work and clean it up. That is great. As you begin to enlarge your collection, you will begin to enjoy the hunt for that next special radio or that elusive part you need for restoration. But, don't forget about the importance and the fun of the research into the artifact's or manufacturer's history.

You see we are only stewards of historical artifacts, not owners. We are stewards of the documented stories and ephemera that bring that inanimate artifact alive to young, inquisitive minds like Ethan's. How immeasurably important that we share our excitement and engage those young minds in the sciences and history. As collectors, we are preserving and sharing history for generations to come and we are having a great time while we do that, aren't we? Have a super 2013.

Bob Hobday, N2EVG, Deputy Director

RADIO DAZE DISCOUNT FOR AWA MEMBERS

Radio Daze, a premier source of parts and supplies for radio restoration, now offers a special discount for AWA members. The discount is a generous 8% off of catalogue prices, and shipping on domestic orders is free (by ground service of Radio Daze's Choice) for orders of at least \$50.00. Orders under \$50.00 will still receive the discount, but a flat rate of \$5.00 will be charged for shipping.

International orders also qualify for the discount, and shipping will be at a flat rate of \$15.00. For orders that would ordinarily ship for less than \$15.00, there will be a flat charge of \$5.00. Expedited shipping, if requested, will be charged at normal rates.

Radio Daze will check the membership status of of each AWA customer for the first order placed in each calendar year, keeping the status on file for the balance of the year.

To shop on line or request a catalogue, go to www.radiodaze.com



Evolution of the Broadcast Receiver

Part 1: Crystal and Regenerative Sets

By Marc F. Ellis, N9EWJ
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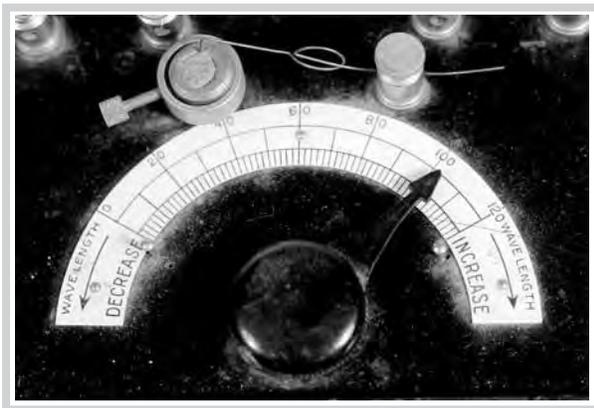
CRYSTAL SETS

Curiously enough, very early radio receiver design was based on solid-state technology. A semiconductor device, in the form of a chunk of lead ore (otherwise known as galena), was the most widely used detector of radio signals until made obsolete by introduction of the much more efficient vacuum tube in the early 1920s. Of course, as we all know, the tables were turned in the 1960s, when semiconductors in the form of transistors and diodes all but totally replaced vacuum tubes in receiver circuitry.

You'll recognize a crystal set when you find one by the little chunk of galena ore which is embedded in a small metal cup and contacted by a fine, springy wire known as the "cat's whisker." At the start of a listening session, the tip of the wire was moved to different spots on the surface of the galena to find the location where signals were loudest.

You'd have to be very lucky indeed to come across a vintage crystal receiver at a local flea market or garage sale. By the time radio broadcasting had become well-enough established to create a mass market in receivers, crystal sets had been replaced by tube models. Hence, there just weren't that many serious crystal radios made.

Your best chance for acquiring a crystal set dating from the early days of broadcasting would be by purchasing it from another collector. Keep your eyes open at antique radio swap meets and check the classified ads in newspapers and other publications. Expect to pay a good buck for your set, but be sure it's truly an early '20s model before shelling out. Crystal sets have fascinated electronics enthusiasts for years because of their simplicity, and the fact that they operate without a power source. Novelty, or toy, versions of these sets (such as the units made by Philmore) were readily available well into the 1960s and maybe later.



The galena (lead ore) and "cat's whisker" detector employed in early crystal sets probably represents the first use of semiconductors in electronics.

REGENERATIVE SETS

Despite the "free-power" advantage of the crystal set and its simplicity of operation, most serious listening during the decade of the 1920s was done with tube radios operated by dry and/or storage batteries. Since tubes had the capacity to amplify signals as well as detect them, these radios were much more sensitive than crystal sets and could deliver much louder signals.

To obtain maximum efficiency in a regenerative set, the amount of feedback had to be carefully regulated. A large percentage of the tube radios in use during this period were of regenerative design. The regenerative set was a product of the fertile mind of legendary radio inventor Edwin Armstrong. It squeezed so much performance from a single tube that few regens had more than two.



"Regen" sets could squeeze amazing performance out of one tube. Note pancake coils in feedback circuitry of a Crosley 50. The rear one is adjustable.



The Crosley 50 was probably the most widely sold single-tube regenerative receiver of the early 1920s.

The regenerative tube did double duty, functioning both as an amplifier and a detector of radio signals. But the real secret of its astonishing performance lay in its feedback circuitry. Part of the amplifier's output was coupled back into the input. The result was that the received signal could be amplified over and over again, resulting in tremendous gain. This was usually handled through changing the relative position of two coils—one in the output circuit and one in the input. The closer together the two coils, the greater the feedback.

With the coils too close together, the tube would go into oscillation—emitting a radio signal that would interfere with other radios in the neighborhood, creating an ear-splitting howl in the headphones. The idea was to reduce the feedback until it was just below this point, resulting in maximum amplification of the received signal.

Among the common small “regen” receivers of the early 20s are the one-tube Crosley 50 and the two-tube RCA Radiola III. The RCA set's extra tube was an audio amplifier, providing more volume in the headphones. The less-common Crosley 51 also sported an extra tube for audio amplification. RCA sold an accessory two-tube “balanced amplifier” that could be added to the Radiola III to obtain speaker volume.

The minimalist design made possible by regenerative circuitry was a very attractive option, so earphone-only regens were very popular. These smaller regenerative radios used tubes such as the types 11 and 12, which had filaments that could be powered by disposable dry batteries. Plate and, when necessary grid bias, voltages were also supplied by dry batteries.

One mark of identification for regenerative sets of all sizes is the simplicity of their controls. Not considering the filament rheostats (sometimes one for each tube) found in battery sets of this vintage, there are usually not more than two: a regeneration control (may be marked “amplification”) and a “station selector” or “tuning” control. Many Crosley sets, however, also incorporated multi-contact “bandswitches,” probably because their odd leaf-type tuning capacitors didn't have enough range to cover the entire broadcast band.

ENTER THE TRF

The regenerative receiver probably would have been the dominant 1920s design if Edwin Armstrong had retained the patents. But, towards the middle of the decade, Westinghouse purchased the rights and held them very closely, making it very difficult for other manufacturers to obtain licenses.

As a result, many companies wishing to enter the lucrative broadcast receiver market had to turn to less efficient circuitry. In fact, it took three tubes (two RF amplifiers and a detector) to provide the same performance as a single tube connected as a regenerative amplifier-detector.

The two stages of RF amplification required three tuned



The RCA Radiola III was more elegantly made than the Crosley 50 and boasted an additional tube that provided extra headphone volume.



The Radiola Balanced Amplifier was a desirable accessory for the Radiola III, enabling the little set to drive a loudspeaker.



Beside rheostats to control filament voltage, regenerative sets required only regeneration (“amplification”) and tuning controls.

circuits (coil/variable capacitor combinations) for proper operation. That meant that there were three tuning dials to be manipulated in order to locate a station and tune it in at maximum volume. Such sets were called TRF (tuned

radio frequency) receivers. We'll take a more detailed look at the TRF's evolution next month, when we continue our look at the development of radio receivers. In the meantime, good hunting and happy collecting!

Company Chronicles

See copyright statement at end of article.

Stromberg-Carlson

Alfred Stromberg, one of the co-founders of this well-known firm, was born in Sweden—coming to this country in 1884 when in his mid-20s. He met Androv Carlson, who had a similar background but was a few years older, while working for the Chicago Telephone Company. Both men were experienced inventors and mechanics and in 1894, the year the last of Bell's fundamental patents expired, they formed a partnership to manufacture telephone equipment. The company was successful, becoming a major supplier to the independent Rochester (NY) Telephone Company. Stromberg-Carlson was sold to a group of Rochester capitalists in the early 1900s.

Stromberg formed two new Chicago-based companies about 1906. One became the Stromberg Carburetor Company, and was eventually (1929) acquired by Bendix. The other, Stromberg Products, now makes time clocks.

The original Stromberg-Carlson organization diversified into the wireless field in 1910, initiating a small component-manufacturing operation. The firm made some headsets for the Navy in 1915 and, a little later, began manufacturing audio transformers and other parts. In 1916 Ray Manson, an electrical engineer who held many patents on telephone, radio and phonograph equipment, joined the company as Chief Engineer, remaining with Stromberg Carlson until the mid-1950s.

In 1923, the company took out a Neutrodyne license so that it could begin manufacturing complete receivers. At

first, Stromberg Carlson made only a limited number of sets, selling them locally in New York and surrounding states. However, they were heavily advertised, stressing the company's quality image. By 1926, wholesale sales were in the \$700,000 range and about 15 percent of the company's approximately 1250 employees were engaged in making radios.

Unlike many other radio manufacturing companies of the era, Stromberg Carlson had no need to circumvent, or dispute, the ownership of radio patents. They simply signed up for whatever key licenses were available, passing the costs on to their customers. When RCA began offering licenses in 1927, S-C acquired the fourth one issued.

Remarkably enough, the company's strategy of offering high quality at a high price proved successful (or at least successful enough to keep the firm from foundering) even through the depression era. Revenues from radio station WHAM (the NBC affiliate in Rochester, NY), acquired by Stromberg Carlson in 1927, also helped during this difficult period.

The company continued to expand its high-quality consumer electronics business over the years, but began de-emphasizing this area after merging with General Dynamics in 1955. Radio and television production was discontinued the following year. Radiophograph and high-fi component production ceased in 1961. However, the firm is still heavily involved in the telephone business.

These company biographies, used with permission, were abridged from Alan Douglas's three-volume encyclopedia Radio Manufacturers of the 1920s, published by Sonoran Publishing, 6505 West Frye Rd., Suite 15, Chandler, Arizona 85226, sonoranpublishing.com, and copyrighted 1988, 1989 and 1991 by Alan Douglas.

Play It Again

A No-Nonsense Guide to Vintage Radio Restoration

By Ken Owens
1932-2009
© 1995
The Radio Collector

PART 8—SERVICING AC POWER SUPPLIES

A WORD ABOUT SAFETY

Let's begin this topic by discussing safety. The Columbus, OH paper of July 19, 1994 reported the death of a man who was installing a stereo in his car. He had installed a second battery in the trunk in series with the car's battery for "extra power". He was electrocuted when he came in contact with the 24 volt output of the batteries. It took only 24 volts to kill this man, and AC sets have hundreds of volts under the chassis.

I could give you a long list of don'ts, but most are simply common sense. Treat that chassis like a nest of snakes and don't handle it or poke your fingers in it while it is operating. Unplug the set when replacing components. Expect the unexpected because faults can put high voltage where it shouldn't be.

TRANSFORMER AND RESISTOR CHECKS

To begin servicing an AC set, first test the power transformer. Remove all tubes, plug the set into the lamp test rig you built last time and turn it on. The lamp should not glow at all. If it does, you probably have a shorted power transformer. You can stop here unless you have a replacement or can rewind transformers.

If the transformer is good, unplug the radio and check all the resistors in the power supply with your ohmmeter. Most of these old resistors were wirewound units. The bleeder was usually a single resistor with taps. If any resistors are open, replace them. It is safe to repair open bleeder sections by soldering the replacement across the bad section without disconnecting it. Strange values were used because there was no standardization in 1927. If the calculations called for a 1632 ohm resistor, that's what they used. You can use the nearest standard value with no problems.

If the values of the bleeder sections or other resistors you may find open are not given on your schematic, they can be determined by experimentation. I'll be discussing this issue in a later column. Use only 10 watt resistors for replacing defective wirewound units. You can't check the center tapped resistors across the filament windings unless you disconnect them. The low resistance of the winding makes ohmmeter readings meaningless. We will check them later when we have the set going.

ESTABLISHING B+ VOLTAGE

For your second test, turn off the set, insert the 80 recti-

fier and turn the set on. If all is well, the lamp will not glow—or will glow very dimly if the set has a bleeder resistor. If the set passes this test, you should be able to detect B+ voltage at all the output points (see diagram in the September issue). The voltage to the 71A is typically 150-180 V with all tubes in place. It and all other DC voltages will measure higher at this stage with no tubes in the set.

If the lamp glows half brightness or more in the above test, quickly turn off the set because there is a short in the power supply. One or more filter capacitors are probably shorted. This is common in old radios. I generally run this test only on sets with paper capacitors. If the set has electrolytic capacitors, they should be replaced on sight. In my experience, 50-60+ year old electrolytics are never good.

It is interesting that RCA paper capacitors are rarely bad whereas Atwater Kent units are rarely good. If any of the paper capacitors are bad, replace them all. You will have to use electrolytics because large paper capacitors are no longer made.

Modern electrolytics are superb and are excellent replacements for paper filter capacitors. Watch the polarity when installing them! If you wire them backwards, they will be destroyed when you turn on the set.

Early set manufacturers often put a group of capacitors in a metal box and filled it with tar. You should remove the box from the chassis, melt out the tar and put the replacements inside to preserve the original appearance.

Most old electrolytic capacitors dry out and become open rather than shorted. They will then have only a fraction of their original capacitance. The set will hum badly with this condition. Since such capacitors are not shorted, you may be tempted to wire replacements across their terminals without disconnecting them. Don't do it! The old capacitor may develop a short at any time. Disconnect it, but leave it on the chassis for appearance if it is the can type. Connect your replacement to the appropriate points under the chassis.

SECOND B+ TEST

We have now located and replaced all bad filter capacitors and resistors. Leaving the 80 rectifier in its socket, turn on the set again. You should now get B+ at all points. If some of the voltages are missing, one or more bypass capacitors (labeled "CB" on last issue's diagram) may be shorted. If any are bad, replace all of them. Typical values

were 0.2-0.5 μF . I use 0.27 μF 600V "Mylar" units for bypass replacements.

These capacitors may be potted into boxes and require melting out. If 600V capacitors are too large to fit the boxes, you can use 400V units. I use 600V units where possible for the added safety margin. Some bypass capacitors may be on the radio chassis instead of the power supply chassis. Be sure to check them as well.

On rare occasions, a filter choke is open. You can use modern replacements, but you may have to melt tar again. Repeat the test once more to make sure all B+ voltages are present. Don't worry about the actual value of the voltage now because we will fix any additional problems later.

In sets using electrodynamic speakers, the speaker field coil replaces one of the chokes. We will discuss speaker problems next time, when we will power up our set.

Enjoying Antique Radio

Short Wave Radio

By Andy Ooms
oomspine@msn.com

CONTINUING OUR SPECTRUM REVIEW

In the last issue, we discussed the AM broadcast band (510-1710 kilohertz). Next in the radio spectrum is short wave, traditionally defined as the frequency range from just above 1700 kilohertz to 30,000 kilohertz (30 megahertz). Quite a few vintage radio models, especially consoles, had one or more short wave bands. Short wave bands on most radios of that era did not include the entire 1.7 to 30 megahertz spectrum, but covered selected portions, particularly those which carried broadcasting stations. Later we will discuss what sounds other than broadcasting are heard on short wave.

The history of short wave listening by Americans is long, rich, and fascinating. Many of the listeners have been hobbyists since their elementary and high school years. During World War II, in those pre-TV and pre-Internet days, adults eagerly listened to short wave in order to catch the latest news, especially from Europe, ahead of the next morning's newspaper. The national AM radio networks, (CBS, NBC, Mutual, and later ABC) of course had regular and breaking newscasts. Much of the content of those newscasts was based on short wave reports and sometimes included actual short wave broadcasts.

During the Cold War era, about 1945 to 1989, nations on both sides of the Iron Curtain used government-operated stations to get their messages of democracy or communism to as many people as possible around the world, and especially to the people on the other side of the ideological divide. Their messages included news, lan-

guage lessons, national culture, history, and music, all edited to present the best side of the transmitting nation.

During the peak years of U.S. short wave listening, many clubs and publications devoted to the hobby existed. Difficult signal catches, logs, and QSLs (acknowledgements by stations that a listener had indeed heard their signal) were shared and published. Some of that still is occurring, but the peak for SWL (short wave listening) is over. Texting, chatting and internet browsing have replaced for many the strange enchantment of using old school technology to detect various sounds from sometimes unexpected sources.

VINTAGE RADIOS WITH SHORT WAVE CAPABILITY

Covering the entire short wave spectrum (1.7 to 30 megahertz) as well as, usually, the broadcast band (510 – 1710 kilohertz) are the various brands of vintage short

wave radio communications receivers (sets originally made for amateur radio communications). These include Hallicrafters, National, Hammarlund and Heathkit, the latter famous its electronic kits, built by many a young hobbyist. Heathkit receivers were actually pretty good at affordable prices, and are very collectible now. An unassembled Heathkit is a wonderful find today.



The Hallicrafters S-40 was a popular receiver among short wave listeners in the mid 1940s and early 1950s.

The Zenith family of Transoceanics, though not strictly speaking communications receivers, is also sought after by listeners and collectors. Finally, a growing number are attracted to military communications equipment.

Who else made short wave sets? Almost every manufac-

turer in the 30s, 40s and 50s produced some short wave capable sets. Many consoles, designed for living rooms, had short wave bands; quite a few table models also did. As portable radios became more convenient to use and power, an increasing number had short wave bands for those times the radio was taken along on camping trips, military exercises, or DXing excursions to remote sites with few electronic interference sources.

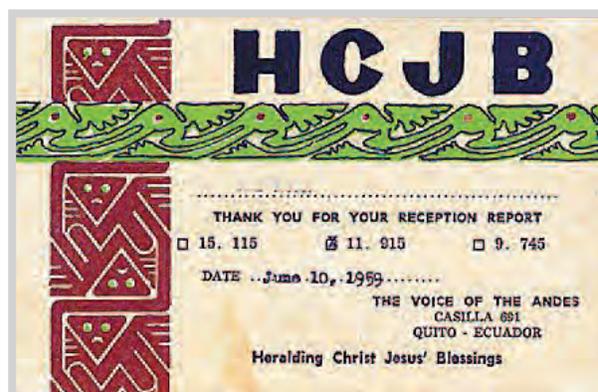
SHORT WAVE BROADCASTERS DURING THE PRIME YEARS

Back in the vacuum tube era, many console radios showed American or Canadian cities on the dial face for the AM band. The short wave bands showed international cities from around the globe which created a sense of drama, intrigue, and mystery for young persons gazing at the family set. So who was broadcasting? Rather than trying to discuss the World War II era, let me tell you about a four year period when I listened to short wave radio almost daily and nightly on a Hallicrafters in Grand Rapids, Michigan. Those were my college years, and having a radio on while doing my assignments was my habit, not necessarily one I recommend for serious scholars.

The years were the very early sixties; government short wave stations were numerous, and they broadcast for many hours daily and in many languages. A significant difference between medium and short wave broadcasting is that short wave stations were more likely to broadcast in several different languages each day, and the frequencies used were changed throughout the day for signal propagation reasons. Higher frequencies were of maximum efficiency in daylight; lower frequencies in darkness. Some of the unpredictable aspects of short wave listening that keep it fascinating are that factors affecting propagation are changeable; daylight and darkness are not always equal at the transmitter and receiver locations; and 11 year sunspot cycles have a significant but sometimes erratic effect on signal paths.

"Friendly" programming in that time frame included that of the Voice of America, British Broadcasting Company, Radio Nederland, Deutsche Welle, and the stations owned by most other Western European nations. The other side of the philosophical divide was represented by strong signals from Havana, Cuba; Moscow, USSR; Warsaw, Poland; Bucharest, Romania; Budapest, Hungary; and Sofia, Bulgaria. The Communist country programming was pretty much dictated by the Kremlin and sounded similar from country to country, much of the content being descriptions of the horrible conduct of the free world countries, especially the capitalistic USA. The Western stations presented news, hopefully more accurately than the Communist stations did, and music. American jazz, and later rock, had a significant influence in molding public opinion to be more pro-American in many European countries.

At the time, the BBC World Service had an impeccable reputation for accurate presentation of the events of the



A QSL card (radio reception confirmation) sent by station HCJB in Quito, Ecuador to a listener in the United States in 1959.

day from around the world. The Western stations also had some excellent and beloved interactive programming involving listener letters with comments and questions. I was greatly pleased when one night Radio Switzerland International played a song that I had requested, by letter, not phone or email in those days. They played "Alte Kameraden," a German march which I had previously played four or five times a week, for a year and a half, as a trombonist with a U.S. Army Infantry band during my tour in Germany.

Accurate newscasts were so desired that many citizens of various dictatorships risked their lives by listening to, or even owning, short wave sets during World War II and the Cold War. Obviously accurate news was deeply feared by the kinds of governments that would imprison or execute persons with radios.

Some non-governmental stations during that 60s time frame included HCJB (Heralding Christ Jesus Blessings), a private station covering North America and more very well from high in the Andes Mountains at Quito, Ecuador. They still broadcast in South American languages with a much reduced signal as their towers were considered an aviation hazard for the Quito airport. Their main station now is in Australia, and is more easily heard in Africa and other Southern Hemisphere locations.

Another private station I listened to many mornings was CFRX simulcasting AM station CFRB, Toronto, Ontario. Canada still has some stations on short wave simulcasting major city AM stations, although as the transmitters get older they are not always replaced. The U.S. military Armed Forces Radio was on many frequencies, with transmitters in several countries, and carried popular and country music, news, network comedies and dramas, and live baseball and football games.

SHORTWAVE BROADCASTERS NOW

Short wave listening opportunities are greatly reduced today. The BBC and Radio Netherlands are among the stations that no longer transmit to North America. The reasons for the diminished programming directed here are predictable: government budget issues, and online capability

expansion. Unfortunately I believe that it is still true that fewer than half of the world's population has Internet access, whereas short wave is available in any location for a relatively small investment by the listener. However, many of the major broadcasters who have dropped North America and Europe from their plans still continue to broadcast

to Asia, Africa, South America, and Oceania.

Remember that vintage radios with short wave bands do still work and there is always something to catch on short wave even today. Our next piece will discuss what can be heard on your vintage set and which frequencies to listen on.

Clubs That Will Welcome You

- The Antique Radio Club of Illinois (ARCI)—Meets bi-monthly. Meets generally held at the American Legion Hall, Carol Stream IL but meets in June in conjunction with the 6-Meter Club of Illinois at the DuPage County Fairgrounds and once per year for Radiofest at the Willowbrook, Illinois Holiday Inn. Check website for schedules, details and maps. Contacts: President, Olin Schuler oschuler@comcast.net; Club Public Contact, Art Bilski, 630-739-1060, clubinfo@antique-radios.org. Website www.antique-radios.org.

- Antique Radio Collectors of Ohio—Meets first Tuesday of each month at 2929 Hazelwood Ave., Dayton, OH (4 blocks east of Shroyer Rd. off Dorothy Lane) at 7 p.m. Also annual swap meet and show. Membership: \$10.00 per year. For more info, contact Karl Koogler: mail to above address; phone (937) 294-8960; e-mail KARLKRAD@GEMAIR.COM.

- California Historical Radio Society—For info on current meetings, call the CHRS hotline: (415) 821-9800.

- CARS, the Cincinnati Antique Radio Society—Meets on the third Wednesday of each month at Gray's History of Wireless Museum, which is part of The National Voice of America Museum of Broadcasting, Inc., located in a building that is now on the National Historic Register at 8070 Tylersville Road, Westchester, Ohio. 45069. For more information contact Bob Sands at (513) 858-1755.

- Carolinas Chapter of the AWA—Hosts four "mini-swap-meets" each year (in January, May, July and October) plus an annual conference, "Antique Radio Charlotte," on the 4th weekend in March. Executive committee meets approximately quarterly. For more info, visit the website at CC-AWA.ORG or contact Ron Lawrence, W4RON, Chapter President, P.O. Box 3015, Matthews, NC 28106-3015; phone (704) 289-1166; e-mail W4RON@carolina.rr.com.

- Central Ohio Antique Radio Assn.—Meets at 7:30 p.m., third Wednesday of each month at Devry Institute of Technology, 1350 Alum Creek Rd., Columbus. (1-70 Exit 103B.) Contact: Barry Gould (614) 777-8534.

- Delaware Valley Historic Radio Club—Meeting and auction begins 7:30 p.m. on the second Tuesday of each month. Location: Telford Community Center on Hamlin Ave. in Telford, PA. Annual dues: \$15.00, which includes a subscription to the club's monthly newsletter *The Oscillator*. For more info contact Delaware Valley Historic Radio

Club, P.O. Box 5053, New Britain, PA 18901. Phone (215) 345-4248.

- Houston Vintage Radio Association (HVRA)—Meets the fourth Saturday (January thru October) at Bayland Park 6400 Bissonnet, 9 a.m. in SW Houston. Each meeting includes an auction and program. Annual two day convention held in February includes three auctions, old equipment contest, technical talks, swap meet, and awards banquet. One day MEGA auctions held in the spring and fall. A newsletter, *The Grid Leak*, is published bi-monthly. Event postings, announcements, photos and other features are available on HVRA web site: www.hvra.org. Membership is \$20/yr. Address: HVRA, P.O. Box 31276, Houston TX 77231-1276 or call Bill Werzner, 713-721-2242; email: werz1943@gmail.com

- Hudson Valley Antique Radio & Phono Society—Meets third Thursday of month, 7 p.m. Meeting, swap meet, and membership info: Peter DeAngelo, President, HARPS, 25 Co. Rt. 51, Campbell Hall, NY 10916. (914) 496-5130.

- Indiana Historical Radio Society—Active since 1971. Meets quarterly in Feb., May, July and Sept/Oct. Flea market, old equipment contest and auction at all events. The IHRS Bulletin published quarterly since 1971. Meet details and club information at website www.indianahistoricalradio.org. Contact Herman Gross, W9ITT, 1705 Gordon Dr., Kokomo, IN 46902, 765-459-8308, email w9itt@comcast.net.

- London Vintage Radio Club—This Ontario, Canada club meets in London on the first Saturday of January, March, May, June and November. Annual flea market held in Guelph, Ontario in September in conjunction with the Toronto club. Contact: Lloyd Swackhammer, VE3IIA, RR#2, Alma, Ontario, Canada N0B1A0. (519) 638-2827. E-mail contact is Nathan Luo at Ivrceditor@yahoo.com.

- Mid-Atlantic Antique Radio Club (MAARC)—Meets monthly, usually on the third Sunday of the month at the Davidsonville Family Recreation Center in Davidsonville, MD. (But meets once or twice a year in Northern Virginia—check website for schedules, details and maps.) Contacts: President, Steve Hansman, 855 Arundel Drive, Arnold, MD 21012, (410) 974-0561, email: shans01a@comcast.net; Membership Chair, Geoff Shearer, (703) 818-2686, email: gshearer2@verizon.net. Website www.maarc.org

• New Jersey Antique Radio Club—Meets second Friday each month, 7:30 p.m. Holds three annual swap meets. Visit the website, www.njarc.org or contact Phil Vourtsis, 13 Cornell Pl., Manalapan, NJ 07726, (732) 446-2427, pvourtsis@optonline.net.

• Northland Antique Radio Club (Minneapolis/St. Paul)—Hosts four events with swap meets each year (in February, May, September and November) including an annual conference, “Radio Daze,” for two days in mid-May. Annual dues are \$12.00, which includes a subscription to the club’s quarterly newsletter. For more info, visit our web site at www.northlandantiqueradioclub.com.

• Northwest Vintage Radio Society—Meets the second Saturday of each month at Abernethy Grange Hall, 15745 S. Harley Ave. Oregon City, OR. Meeting starts at 10:00 a.m. Membership \$25.00 per year. Guests welcome at all meetings and functions except board meetings. Spring show, the second Sat. in May. For more information, contact Mike McCrow 503-730-4639; e-mail: tranny53@comcast.net.

• Oklahoma Vintage Radio Collectors—Meets second Saturday of each month, (except for April, October, and December), at Hometown Buffet, 3900 NW 63rd St., Oklahoma City, OK. Visitors welcome. Dinner/Socializing, 6 p.m., meeting, 7 p.m. Swap meets on second Saturday in April and October at 8 a.m., Midwest City Community Center, 100 N. Midwest Blvd., Midwest City, OK. Membership \$15/year including monthly Broadcast News. Info: contact Jim Collings at (405) 755-4139 or jrcradio@cox.net. Website: www.okvrc.org.

• Ottawa Vintage Radio Club—Meets monthly (except

June and July) in the Conference Room, Ottawa Citizen, 1101 Baxter Rd., Ottawa, Ontario, Canada. Contact: Lea Barker at (613) 829-1804 or check www.ovrc.org. Membership: \$10 Canadian/yr.

• The Pittsburgh Antique Radio Society welcomes visitors to our Saturday flea markets, contests and clinics held at least four times yearly. A fall auction is included in September and our annual luncheon program is on the first Saturday in December. An annual Tri-State Radio Fest is held in April. Our journal, *The Pittsburgh Oscillator*, is mailed quarterly. For more information visit us at <http://www.pittantiqueradios.org>, email President Chris Wells at radioactive55man@comcast.net, or phone Treasurer Tom Dixon at 412-343-5326.

• Society for Preservation of Antique Radio Knowledge (SPARK)—Meets monthly at Donato’s Pizzeria, 7912 Paragon Rd., Centerville, OH. Annual swap meet. Membership, \$18/year. Write SPARK Inc., P.O. Box 292111, Kettering, OH 45429; e-mail sparkinc@juno.com or call John Pansing at (937) 299-9570.

• Texas Antique Radio Club—Meets alternate months in Kyle and Shertz, TX. Contact: Doug Wright, 625 Rolling Hills Dr., Canyon Lake, TX 78133. e-mail dwjw@gvtc.com; website www.gvtc.com/~edengel/TARC.htm

• Vintage Radio and Phonograph Society (VRPS)—Meets monthly on the third Saturday. Located in the Dallas, Fort Worth Metroplex, our current activities are annual convention, auctions, swap meets, repair training sessions and monthly programs. For details visit our website www.vrps.org, or by contacting VRPS President Jim Sargent at (817) 573-3546 or bsargent@swbell.net.

READER INTERNET SITES

In the April issue of *The AWA Journal*, we mentioned an idea proposed by reader Steven Johannessen. He felt that *Gateway* readers might find it interesting and stimulating to look at collections our readers might have posted on line. We agreed and solicited URLs. We received and included three of them last time. Here they are again along with some additions received since then. Four readers have responded so far. Additions to the list are always welcome!

Allie Lingo (radiodoc@windstream.net) sent two:
Radios: <http://www.radioatticarchives.com/contributor.htm?code=499>
Test Equipment: <http://www.oldtestequipmentarchives.com/contributor.htm?code=26>

Mike Adams (mike.adams@sjsu.edu) has recently redesigned his Lee de Forest website. Look it over at www.leedeforest.org.

Ron Lawrence sent several URLs featuring his collections and interests:
Radio Heaven Page
<http://radioheaven.homestead.com/menu.htm>
Clough-Brengle test equipment page

<http://cloughbrengle.homestead.com/CivilianConservationCorp.page>
<http://radioheaven.homestead.com/CCCradio.html>
Ron’s YouTube channel—with video tours of his collections
<http://www.youtube.com/user/w4ron>

The Tube Collector’s Association Tube Photo Gallery
<http://radioheaven.homestead.com/TCA.html>

Don Ignatius Collection
www.radionutzantiqueradios.com

Members' Corner

News of Particular Interest to the AWA Membership

MEMBER SERVICES COMMITTEE REPORT

By Richard Neidich, Chairman
RGNeidich@aol.com

The Fall 2012 Meeting of the AWA Board of Trustees saw considerable discussion of the new AWA Museum and the plans for its official opening on August 20, 2013. (Previewing of the new facilities will begin during the annual Spring Meet in May 2013.) As development of the facility occurs, *The AWA Gateway* will be documenting the progress.

At the Fall Meeting, the AWA Board of Trustees voted to adopt a museum admission fee for non-AWA members and a free admission policy for AWA members. This will significantly increase membership value. AWA membership is available in several forms, be that Regular for \$25, Sustaining for \$100 (which presently includes an annual tax deductible donation of \$75) and Life for \$500 (20 times Regular). Non-U.S. residents must pay a premium to cover foreign postage costs. See <http://www.antiquewireless.org/otb/memapp.htm> for becoming a member. If you have membership-related questions, contact membership registrar Ed Gable at <http://www.antiquewireless.org/otb/memapp.htm>.

Members who live within commuting distance of Bloomfield, NY, are always welcome to join the museum staff on each Tuesday to assist with the facilities activities and learn about our radio history.

MUSEUM NEWS

From Bruce Roloson, W2BDR, Curator, AWA Museum

Just a reminder: Mark your calendars for next August 20th as the grand opening of the new museum building. This will be the first day of the 2013 Annual Conference. Internal construction is already underway. Later in this report Ron Roach will be reporting on the progress to date and the preparations being made for the opening.

We are working with several new collections that are being donated to the museum. I am always amazed at the variety and condition of these donations. More will follow in the next report.

The staff is continuing the cataloging of the contents of our now closed museum in the former Bloomfield Academy building. We are getting ready to move out in the spring of 2013. As they are catalogued, items in the old museum are also being marked according to the display or other location where they will be placed in the new building.

Those of you who have visited the museum at the Acad-

emy can get an idea of the size of this project by imagining the work involved in moving all the items in just one display, the 1920s radio store, into their showcases and shelves in the new museum. In spite of our need for haste, the important work of properly packing and tracking the movement of the museum artifacts is a very time consuming part of our project. But our volunteers continue to rise to the challenge.

The Antique Wireless Association and its museum have gained the reputation of being a preferred repository for those seeking to donate collections of radio artifacts and documentation. We need more storage right now. All of our nooks and crannies are filled to their limits. Ron Roach is working with Jack Roubie and Joe Granica on plans for a storage building.

We will need some help with the funding for the building, and will be discussing financial support with those considering the donation of large collections. The expanded facilities will make the AWA Museum a true research center.

Our successes have provided us with new challenges as well. May we continue to live in exciting times!

From Ron Roach, W2FUI,
Operations Manager, AWA Museum

Progress continues on several fronts with the renovation at the new museum and the closing of the Academy facility. Cataloging and bar coding of artifacts continues at the facility in preparation for the transfer of artifacts for



From left: Curator Bruce Roloson, Deputy Director Bob Hobday, Tom Conklin of Betacom Construction, and Operations Manager Ron Roach meet in the new museum building to finalize construction sequence.

display or storage at the new museum campus. A need for additional storage has developed at the campus to accommodate this transfer along with continuing additional donations.

The design of an electrical grid system has been completed, along with individual display booth outlets and elevated box shelving to provide outlets for lighted signs over the booths and LED lighting for the booth interiors. These plans have been turned over to the electrician for installation.

Tom Conklin, of Betacom Construction, the contractor engaged to develop the campus, met with Curator Bruce Roloson, Deputy Director Bob Hobday and Operations Manager Ron Roach to finalize the construction sequence. The laying of a luan sub floor will be followed by the construction of the individual booth walls before the final plank flooring is installed.

Analysis of the requirements for more substantial stor-

age to facilitate consolidation of all artifacts at the campus location resulted in specifications for a larger structure than anticipated at the November board meeting. Meetings with several manufacturers culminated in a custom design which would provide square footage storage equal to the interior of the Academy Museum at 2,100 square feet. Jack Roubie and Joe Granica have been asked to complete a proposal to place such a building next to the Gauss Road facility.

Special tours continued to be given at the campus in November and December, with the Rochester VHF group holding their November meeting along with a tour. The Ontario County ARES/RACES and Squaw Island Radio Club once again held their Holiday event at the AWA Campus in December.

Joe Granica has agreed to assume responsibility for the Tech Center at Gauss Road during the absence of John Atwood.

ABOUT THE ANTIQUE WIRELESS ASSOCIATION

The Antique Wireless Association is an organization of about 2000 international members linked by a common interest in the history of electrical and electronic communications. AWA members come from all walks of life and our ranks include teenagers, octogenarians, and beyond in both directions. At one of our meets, you might find yourself shaking hands with a retired broadcast executive or military electronics specialist, an engineer in a high-tech electronics firm, or an eager young person looking for advice on restoring his or her first radio.

The organization was started in 1952 by Bruce Kelley, George Batterson, and Linc Cundall—amateur radio operators and radio collectors from upstate New York. Their initial goal was to establish a museum where they could collect and preserve early wireless and radio equipment and historical information before it was lost to future generations. Decades later, their legacy continues to motivate our members.

Some of us are most interested in the technical background behind the epoch-making discoveries that now make it as easy to communicate across the globe as around the corner. Others enjoy the romance surrounding the men and institutions that put these discoveries to work: the maritime radio operators who averted disasters with their alert ears and quick thinking; the short-wave stations that radiated glimpses of exotic cultures and mindsets; the giant radio networks that delivered unparalleled entertainment and timely news to our homes while hawking toothpaste, cigarettes and soap flakes.

Though AWA members share this common interest, which many can trace back to early childhood, they express it in different ways. Some of us collect radio-related literature and manuals. Others collect and restore hardware: Morse keys and sounders, battery radios of the 1920s, telephones, advertising signs, cathedral and console radios—you name it! Collections can become very specialized, restricted to such things as radio components crafted of shiny Bakelite and gleaming brass or perhaps the fragile and intricate vacuum tubes that made the communications miracles possible.

Among our members are meticulous craftsmen who enjoy replicating vintage receivers and/or transmitters.

Those who are licensed amateurs frequently operate such equipment in special communications events sponsored by the AWA.

In addition to the commitment to the preservation of historical artifacts and background materials at the Museum, AWA also publishes *The AWA Journal* and *The AWA Review*. The *Journal* is a quarterly publication that gives our multi-talented members an outlet to share their historical research, equipment restorations, troubleshooting and servicing tips and other information of common interest. *The AWA Review*, which also publishes member contributions, contains more extensive and scholarly papers. It is published once a year.

The AWA Gateway is the latest addition to the AWA family of publications. It's delivered electronically and free of charge—downloadable from our web site www.antiquewireless.org.

Our content is targeted at those who may not be familiar with the AWA and who perhaps are just becoming interested in the history, collecting or restoration of vintage communications gear. For that reason, our technical articles are more basic than those in our other publications and our articles about AWA generally do not assume knowledge that only those familiar with our organization might have.

The AWA also sponsors a four day annual convention in August featuring technical presentations and forums, a large auction, an awards banquet, an equipment and artifact competition, a book sale, and an active flea market. The convention affords attendees plenty of time to renew and make friendships, time to engage in long conversations on collection, preservation and all other aspects of the hobby.

The AWA is chartered as a non-profit organization in New York State, an IRS 501(c)(3) tax-exempt corporation, and is a member of the American Association of Museums. To learn more about AWA or to join our organization, visit the AWA website at www.antiquewireless.org.

DONATING ARTIFACTS TO THE AWA

You may have artifacts that you are interested in donating to the AWA. We would be pleased to discuss any possible donation. Please call us at (585) 257-5119.