

# THE A.W.A. GATEWAY

Volume 3, Number 1, Spring 2013



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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](http://www.antiquewireless.org), to stimulate interest in vintage communications history, equipment restoration and collecting.

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#### 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

As regular readers know, I am always interested in encouraging new writers for *The AWA Gateway*—particularly those who would like to stimulate and assist newcomers to the fascinating field of vintage communications. And so I'm very pleased to announce that, with this issue, we begin a new book review column. Eric Wenaas, who is book review editor for our sister publication, *The AWA Journal*, will take on the extra assignment of reviewing books for *Gateway*. His *Gateway* reviews will be selected to be of special value to those just starting out in our hobby. Some may be recent; some may be so old that readers might have to search used book dealers and flea market tables. But

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all will be worthwhile additions to a beginning library.

Eric Wenaas has had a lifelong passion for antique radios, starting with his first Radiola and crystal set given to him by family friends as a young man growing up in Chicago. He experimented with radio devices and repaired radios and televisions as a hobby while in high school. He then studied electrical engineering at Purdue University, graduating with B.S. and M.S. degrees. Wenaas went on to the State University of New York (SUNY) at Buffalo where he earned a Ph.D. degree in Interdisciplinary Studies in the School of Engineering. After graduating, he spent most of his career at Jaycor, a defense company in Southern California—first as an engineer and later as the President and Chief Executive Officer.

Upon his retirement in 2002, he set out to research

the early days of wireless and document interesting historical vignettes based on original materials of the era. He has written numerous articles for the AWA Review, the AWA Journal and Antique Radio Classified. In 2007, he published the critically acclaimed book *Radiola: The Golden Age of RCA—1919-1929*. It covered the early history of RCA and included the formative years of the Marconi Telegraph Company of America. For this work, he received the AWA Houck Award for Documentation in 2007. He is a lifetime member of the AWA and a past member of both the IEEE and the American Physical Society. Dr. Wenaas resides in Southern California and continues to enjoy collecting radios, researching the early days of wireless and writing articles.

—Marc Ellis, N9EWJ

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## From The Deputy Director

**H**i Everyone. As I write this column for the *Gateway*, it amazes me that we are now beginning our third year of publication. Time flies, doesn't it? I hope you are enjoying the issues as much as I am and I offer my congratulations to our Editor Marc Ellis for another fine set of AWA publications.

This is an exciting time for AWA as the first phase of the construction of the new Antique Wireless Museum draws to an end. For instance, at this writing, the new museum is about to be painted! The opening will be May 4, 2013 in conjunction with the AWA Spring Meet in Bloomfield, New York. The grand opening celebration—and it will be a celebration—will be Tuesday, August 20, 2013, at 2 p.m. in conjunction with the AWA Annual Convention. You are very welcome to join us at either event or visit the Museum over the summer as the exhibits become more fully developed.

The Museum Staff is very busy designing and constructing the new exhibits. We are not simply moving the old museum into another building. The new Museum will have a completely different look, and will feature many exciting artifacts not previously displayed. We also will have a Museum store offering such items as AWA clothing, AWA publications and CDs, new and old books, and occasionally antique radios and other items.

While the obvious current focus is on the physical construction of the Museum and its exhibits, a huge

planning effort will be required to successfully open and operate the new Museum. It will require an amazing effort just to recruit and organize the legion of volunteer docents (museum guides) required to staff the Museum throughout the year. In addition, we will need volunteer expertise in many other areas such as marketing, public relations, copywriting, finance, exhibit design and construction, and education.

The need for volunteer educators will grow as we develop the remaining the museum phases. The new, larger Museum will allow us to reach out to children of all ages, but especially school-age children, with science- and history-related programs based on our amazing collection.

I don't believe that the AWA owns the artifacts and ephemera in the collection, but rather that we are its stewards, preserving and sharing it with current generations and generations to come. We will need volunteer educators to help develop curriculum, presentations and programs that maximize our positive impact on children when they visit the Museum.

**CAN YOU HELP? WE NEED YOUR HELP. PLEASE VOLUNTEER.** If you are interested in becoming a museum guide or lending your expertise in education, marketing, public relations, or other area, please contact me at [N2EVG@ARRL.net](mailto:N2EVG@ARRL.net).

—Bob Hobday

# Evolution of the Broadcast Receiver

## Part 2: From “Three Dialers” to Superhets

By Marc F. Ellis, N9EWJ  
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In the last issue, we began our journey through the evolution of the broadcast receiver with a discussion of crystal and regenerative sets. At the conclusion of that story, we pointed out that the incredibly efficient regenerative circuit—brainchild of the legendary radio inventor Edwin Armstrong—would probably have become the dominant 1920s design had Westinghouse not purchased the patent rights and rigidly controlled the licensing.

### ENTER THE TRF!

It required three tubes (two RF amplifiers and a detector) to equal the performance of a single tube connected as a regenerative amplifier-detector. The two stages of r. f. amplification required three tuned circuits (coil/variable capacitor combinations) for proper operation—which 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. Known familiarly to today’s collectors as “3-dialers,” they were produced in great quantities by manufacturers wishing to enter the lucrative radio manufacturing field without the benefit of a regenerative license.

Though three-dial tuning was certainly a clumsy procedure, the simpler regenerative sets were more cranky and difficult to keep in adjustment. And as it turned out, the TRF’s additional tuned circuits provided extra selectivity, which became very desirable as the broadcasting industry expanded and the radio dial became more crowded.

In addition to the basic three-tube circuit already described, most TRF sets had the additional two tubes required to provide good volume from the horn speakers of the era. This was, I’m sure, a cost/benefit issue. It didn’t make much sense to support a power-hungry three-tube circuit providing only earphone volume. Better to add the extra two tubes that would make it possible for the whole family to listen at once via loudspeaker.

### ELIMINATING THE BATTERIES

As the 1920s wore on, the familiar coffin-shaped three-dial TRF set, sporting a rechargeable auto-type “A” battery to power the glaring filaments of its five 0I-A tubes, became a living-room fixture. Plate and, when necessary, grid bias voltages (“B” and “C” voltages, respectively) were provided by disposable dry batteries.

Those wishing to avoid the expense of regular battery recharge and/or replacement—not to mention the menace to living-room furnishings represented by the concentrated sulfuric acid in the “A” storage battery—could purchase battery eliminators. The eliminators converted standard AC house current into the variety of d.c. voltages required to operate the radio. They enhanced the safety and convenience of radio set operation while reducing long-term costs.

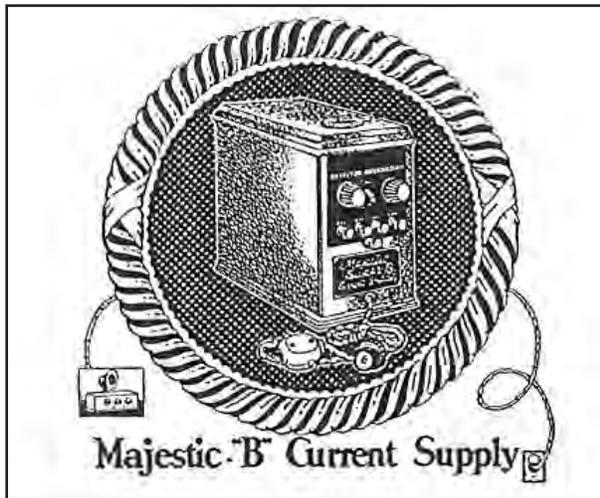
But battery eliminators didn’t do much to simplify the radio installation. Usually, at least two separate



*TRF Circuitry required the use of three RF coils, each tuned by a separate tuning capacitor.*



*The “3-dialers” offered speaker volume and improved selectivity. They were manufactured in great quantities.*



*Battery eliminators allowed operation from the AC line, but didn't do much to reduce clutter of a radio installation.*

eliminators were required to provide necessary "A," "B," and "C" voltages. Whether the radio was running on eliminators or batteries, the power sources were still external to the radio and connected to it via a tangle of interconnecting leads.

Freed-Eisemann and Atwater Kent were among the better known of the many manufacturers supplying TRF sets. And as you begin to collect examples of the "three-dialer," it won't be long before you encounter the term "Neutrodyne" on a set's nameplate or patent tag. That was Freed-Eisemann's name for a proprietary circuit scheme (also licensed to other manufacturers) to neutralize the unwanted feedback and oscillation that was a common problem in the TRF's triode RF amplifiers.

### PLUG-IN POWER!

Towards the end of the 1920s, two technical innovations: one mechanical and one electronic, were to streamline the appearance of the family broadcast receiver and vastly improve its "user friendliness." The mechanical innovation was single-dial tuning, accomplished by ganging (generally via belts and pulleys) the three individual tuning capacitors employed in most TRF receivers. Now stations could be tuned in by setting a single knob rather than adjusting three of them.

The electronic innovation was the development of amplifier tubes (such as the pioneering type 26) designed to be lit from an AC source. This paved the way for the design of efficient plug-in power supplies (usually employing the type 80 rectifier tube) that made the use of batteries unnecessary, except for portable applications.

Also obsoleted were the rheostats (most battery TRF's had two or three) that had to be adjusted to keep tube filament voltage constant as the "A" battery became discharged. Thus the radio control panel, which formerly bristled with tuning knobs and rheostats, now

required only three controls: on-off, tuning and volume. (The latter was a new control made necessary by the elimination of filament rheostats, which had been pressed into service to make volume adjustments in the older sets.)

The shape of the cabinet changed, too, to accommodate the AC power unit which now nestled inside—typically behind the radio chassis. Losing its coffin shape, the cabinet took on a squarer "footprint." And, perhaps to better dissipate the additional heat generated by the internal power supply and the hotter-burning tubes, the cabinet was now made more often of metal than of wood.

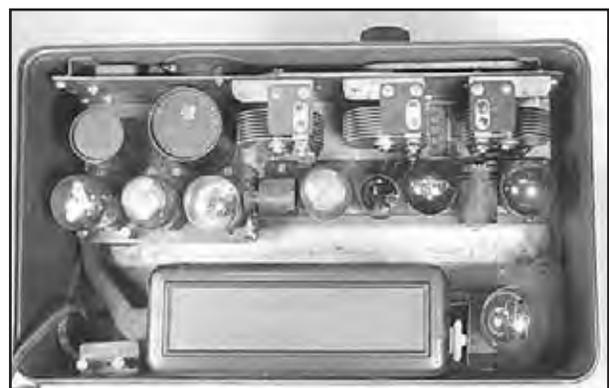
On such cabinets, a snug, friction-fit, lift-off cover replaced the piano-hinged lid formerly used on the old "coffin" cabinets. The speaker was still external, but a more modern paper cone design (mounted in a metal housing that matched the cabinet) replaced the old horn unit used with earlier radios. Typical sets of this style were the Crosley Gembox and Atwater Kent Model 42.

### RCA AND THE SUPERHETERODYNE

The physical designs of RCA's radios were always a little advanced. During the battery-power era, when coffin-shaped 3-dialers with horn speakers dominated the market, RCA's offerings were served up in a variety



*Belting together the TRF's three variable capacitors made it possible to achieve one-knob tuning.*



*The development of tubes designed to be lit by AC allowed integration of the AC power pack (at bottom) with radio circuitry.*

of intriguing packages. There were the sloping front Radiola 20 and 25; there were sets with built-in speakers such as the Radiola 4, 26 and “Grand” (the latter looking more like a table-model phonograph of the era than a radio); and there were radios built into portable (or should we say “luggable”) cases like the Radiola 24.

That’s why it’s a little startling that RCA’s first couple of AC-operated receivers were offered in—have you guessed it?—hinged-lid wood cabinets of the coffin-shaped variety! These sets were the Models 17 and 60, but let me hasten to add that the cabinets were beautifully crafted furniture pieces made of fine woods, not

the more utilitarian Bakelite-front units typical of the battery era.

Though the focus here is on RCA, we need a quick postscript to acknowledge that there were many other innovatively-packaged radios during the battery-set era. Among the ones that come to mind immediately are the thumbwheel-control Grebe sets, the Colin B. Kennedy sloping-panel exposed-tube jobs, the Atwater Kent “open model” breadboard receivers and, certainly, the many interesting designs in the Zenith line.

Aside from the engaging physical design of its receivers, RCA was distinguished by its exclusive ownership of radio genius Edwin Armstrong’s other masterpiece—the superheterodyne circuit. Though not common during the 1920s because of RCA’s monopoly, the superheterodyne circuit would eventually become—and remain—the dominant design for receiving equipment of all types.

Unlike the TRF receiver (which amplifies the incoming LF signal at whatever frequency it happens to be received), the superheterodyne converts every incoming signal to a standard, much lower, frequency prior to amplification. By amplifying at this lower frequency (known as the intermediate frequency), greater gain can be obtained without danger of oscillation and greater selectivity can be achieved.

Two well-known RCA superheterodynes of the mid 1920s are the already-mentioned portable-cased Radiola 24 and the sloping-front Radiola 25. Both of these sets sport large and flamboyantly-designed rotating loop antennas atop their cabinets. RCA’s first plug-in superheterodyne was the previously mentioned, coffin-shaped Radiola 60.

### THE RADIO IN TRANSITION

By the late 1920s the basic circuitry of the modern broadcast radio receiver had been invented. Though circuit refinements would continue to be made, some of the most striking and important innovations of the next few years would involve the physical and mechanical design of the radio chassis. The family radio was moving out of the “breadboard” stage and taking on the look of a mass-produced appliance. We’ll discuss the details of this interesting process next time, when we advance further along the path of broadcast receiver evolution.



*The Atwater Kent Model 42’s simplified front panel, metal cabinet and square “footprint” typified the design of early AC sets.*



*RCA’s first plug-in superhet, the Model 60, had a “throw-back” coffin shaped case.*

# Play It Again

## A No-Nonsense Guide to Vintage Radio Restoration

By Ken Owens  
1932-2009  
© 1995  
The Radio Collector

### PART 9—THE GRID LEAK DETECTOR

Radios can be divided into circuit “blocks,” or stages, each having a specific function. Before we can fix radios, we must know how each block works. The first one we will study is the detector. Every radio has one, and the earliest radios consisted of nothing but a detector.

The first detector circuit employing the triode tube was the “grid-leak” detector of Fig. 1. deForest used it with his Audion. Although rarely seen as a stand-alone receiver, as shown here, this circuit was used in nearly every radio made from 1921 to 1929. The circuit performs two independent functions: diode detector and audio amplifier.

To understand the function of the detector, look at the amplitude-modulated (AM) radio signal of Fig. 2A. The carrier has a constant frequency whose amplitude is varied (modulated) by the audio signal. Since the amplitude goes both positive and negative symmetrically around zero, the two cancel and the audio cannot be heard. The detector’s job is to recover the modulation by removing either the positive or negative portion of the signal. A detector is therefore a rectifier.

#### EXTRACTING THE AUDIO

The signal passing from the antenna to ground through L1 (Fig. 1) induces a voltage in L2. At the left

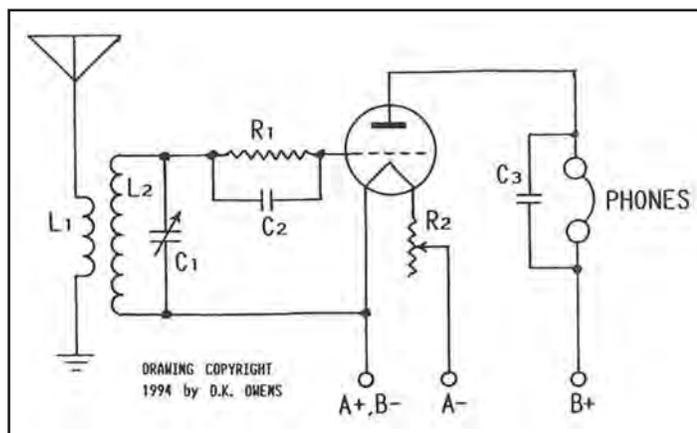


Fig. 1. Grid leak detector circuit. Courtesy of Pat Owens.

side of R1-C2 the signal looks like Fig. 2A. However, the grid of the tube acts as the plate of a diode rectifier and the filament as the cathode. Rectification occurs because the diode conducts during the positive-going signal excursion leaving only the negative-going excursion on the diode plate (grid) as in Fig. 2B. There is now a DC voltage on the grid varying in accordance with the audio modulation.

The tube then acts as a triode amplifier with the varying DC on the grid controlling the plate current to give an amplified signal at the plate. Remember from tube theory that the plate voltage is 180 degrees out of phase with the grid so the signal on the plate looks like Fig. 2C. The rectified RF carrier is still present with the audio signal at this point. C3, called a “phone condenser,” bypasses the RF, leaving only the audio as in Fig. 2D. When used as part of a receiver, the phones are replaced by the primary of an audio transformer.

#### THE GRID LEAK

We have just said that the diode function conducts during the positive signal excursion. A diode must conduct (pass current) in order to rectify. This is one of the few occasions when a tube draws grid current. R1 (the grid-leak) furnishes a path for this grid current to flow and is the diode load resistor. Moreover,

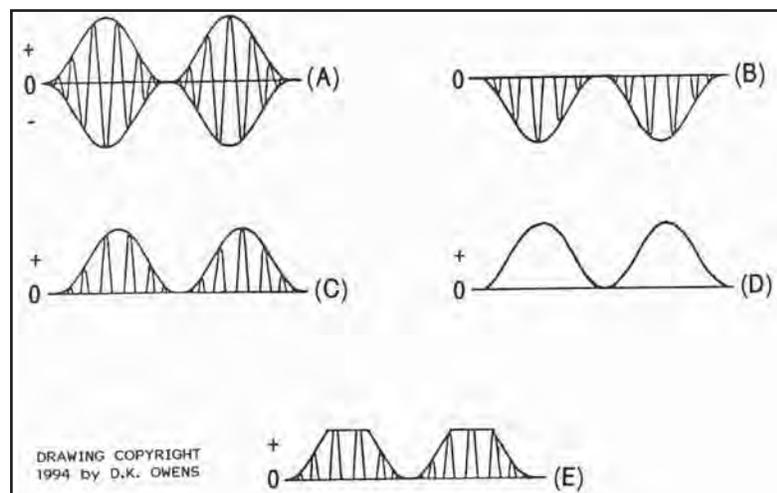


Fig. 2. Extracting the audio. Courtesy of Pat Owens.

although the grid has a very small area, a few electrons strike it on their way to the plate causing the grid to become negatively charged. This is called "contact potential."

If the grid is insulated from ground, the accumulation of electrons will eventually make it so negative that the tube will cease to conduct and cut off. RI provides a path for these electrons to "leak" from grid to ground. Fig. 1 shows RI connected across C2. Many manufacturers connected it from grid to B-. It works the same either way. RI must be large enough to avoid shunting the audio signal to ground. The usual value is 2-5MΩ.

C2 has a low impedance at radio frequencies and passes the RF freely to the grid. Its value is typically 100-250pF. If C2 is too large, it will shunt the audio signal to ground. CI is a variable capacitor for tuning L2 to the signal frequency.

## GRID BIAS

To increase sensitivity to weak signals, the diode plate (tube grid) is given a positive forward bias obtained in the following way. The average (midpoint) potential on the filament is 5V/2 or 2.5V. If ground (B-) is connected to A+, the filament midpoint is at -2.5V with respect to ground. If we return the grid to A+, it will be biased 2.5V more positive than the filament midpoint.

When we discussed plate curves, we saw that a 201A acting as an amplifier with 22.5 volts on the plate will cut off when the grid is at -4 V. A strong signal can drive the grid so negative that the tube cuts off. The tube hits bottom and cannot reproduce the entire signal. The signal is clipped at the plate as in Fig. 2E with severe distortion.

Next time we will discuss the regenerative detector and the audio amplifier.

# Enjoying Antique Radio

## More on Short Wave

By Andy Ooms  
oomspine@msn.com

In the last segment of our spectrum review, I mentioned that the number of international short wave broadcasts to North America was greatly reduced from earlier times. The peak short wave listening years were not that different from the years that most vacuum tube radios were being manufactured, although it did last quite some time after transistors replaced tubes.

Some fascinating books about historical short wave listening and broadcasting were written by Jerome S. Berg. The titles certainly are enticing to short wave listeners: *On the Short Waves, 1923-1945*; *Listening on the Short Waves, 1945 to Today*; and *Broadcasting on the Short Waves, 1945 to Today*. They are available from Amazon ([www.amazon.com](http://www.amazon.com)) and elsewhere. Reports about SW listener clubs with hundreds of members, the members' loggings, and broadcasters' histories are discussed and explained in quite a readable style. The "Today" in the titles refers to 2007, although there may be updates if there are later editions.

Author Berg is a board member of the North American Short Wave Association, which publishes the monthly *NASWA Journal*. The *Journal* contains current signal catches by the members, as well as some history and current comment pieces per-

taining to short wave. Other publications with a lot of current short wave information, as well as about every other kind of radio listening mode, include *Monitoring Times* (the title is totally descriptive) and *Popular Communications*. These can be located via Internet, and may be found on some chain bookstore magazine racks.

The National Association of Shortwave Broadcasters (NASB) offers its occasional newsletter free via its website. It is an organization of several American religious, and other, private and commercial short wave stations. The association also offers an open invitation to attend their meetings, usually at no cost, although last year a reasonable charge was made for a meeting held on a cruise to Bermuda.

The short wave (or HF, for high frequency) portion of



*The Hallicrafters Sky Champion, manufactured 1939-1945, was a modestly priced general coverage receiver for SWLs and radio amateurs. It covered 550 kHz to 44 MHz.*

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the radio spectrum covers about 1700 kilohertz to 30,000 kilohertz — or 1.7 to 30 megahertz (MHz). I have seen or read about some antique radios that covered frequencies up to 40 or 50 MHz, but most radios with SW bands produced for the average consumer did not cover HF continuously and rarely went above 20 MHz. Many had 2 or 3 bands in addition to the medium wave (AM) band with non-broadcast segments not covered. Standardization did not appear to exist.

So what can be heard on short wave today when you crank up your vintage set in North America? The remaining program broadcasters (program meaning information and entertainment content as opposed to other types of signals) use 2.3 to 2.495 MHz known as the 120 meter band; 3.2 to 3.4 MHz (90 meters); 4.75 to 5.06 (60 meters); 5.73 to 6.295 MHz (49 meters); 6.89 to 7.6 MHz (41 meters); 9.25 to 9.9 MHz (31 meters); 11.5 to 12.6 MHz (25 meters); 13.57 to 13.87 MHz (22 meters); 15.03 to 15.8 MHz (19 meters); 17.48 to 17.9 MHz (17 meters) and other sections at 15, 13, and 11 meters. This data has been obtained from *Monitoring Times'* monthly Shortwave Guide column. Finding a broadcast on many of these frequencies is now rare; most can be found on the 60, 31, 25, 19, and 17 meter bands.

Short wave signals may be heard here from every region of the world because of the wave bounce off the ionosphere. Broadcasts are commonly heard from South and Central America, from Europe (especially in the eastern US, and from Asia, Australia, and New Zealand (especially in the western US). The station you hear identifying as a voice of a specific country may actually be broadcasting from a relay in another country. Radio Taiwan, for example, has a good signal here sent from Okeechobee, Florida. The Voice of America uses transmitters in several countries.

Unlike AM and FM stations, short wave stations regularly change frequencies—often each day. This is done in order to utilize the science of radio propagation to reach various countries and language groups. Higher frequencies are best heard during daylight in the intended reception location; lower frequencies after dark.

Although the number of European and Canadian broadcasts to the US has diminished drastically, China can be heard as often as ever, including both program material and jamming music known as "Firedrake." The latter makes unlistenable broadcasts to China that the government deems unwise for its population to hear.

Taiwan, both Koreas, Japan, Vietnam, Singapore, and India still broadcast English to North America. Asian languages and Arabic can be heard here every day. Cuban stations such as Radio Havana, Radio Reloj and

Radio Rebelde, may be the most available foreign stations here, mostly broadcasting propaganda but sometimes offering some rather enjoyable music.

Private domestic stations mostly carry religious, relatively extreme political commentary, and alternative health programs. Some music can also be heard.

Other transmissions that can be heard on short wave include: Citizens Band; pirates (unauthorized broadcasters, not seagoing criminals); utility broadcasts (airlines, ships, weather stations, military messages, spy codes) and time stations from several countries. The US Bureau of Standards station, WWV, broadcasts on 2.5, 5, 10, 15, and 20 MHz. A continuous tone is interrupted each minute with the time.

Hams (Radio amateurs) use several parts of the spectrum not reserved for broadcast stations. Major HF ham bands include 160, 80, 60, 40, 30, 20, 17,15, 12, and 10 meters. Hams use Morse code or voice, aka phone. Voice is usually transmitted by single sideband, but AM can often be found on 75 meters. Instead of using the full bandwidth of an AM signal, the carrier is removed as well as the upper or lower sideband. Using this partial bandwidth transmits signals further using less power than does using the full bandwidth.

Receivers equipped to receive the upper or lower sideband are required; antique sets did not have that capability until toward the end of the tube era. However, most early communication receivers had a Beat Frequency Oscillator control, which could be adjusted to make a sideband signal readable. By tradition upper sideband is more common on higher frequencies; lower sideband around 7 and 3.8 MHz.

In addition to Morse code and voice modes, other signals include automatic link establishment, advanced narrowband digital voice terminal, facsimile for maps and charts, TADIL-A for secure military messages, radio teletype (RTTY), SITOR-A (also called AMTOR), SITOR-B, and PACTOR. These signals need communications receivers with many modes not likely in vintage sets. A Multi-Reader, produced by MFJ Enterprises, Inc., a Mississippi company, is advertised as capturing "mysterious chirps, whistles, and buzzing sounds of RTTY, ASCII, CW and AMTOR (FEC) that can be turned "into exciting text messages" that "scroll across an easy-to-read LCD display." These "mysterious noises" can be heard by any radio that covers the frequency used.

Reportedly there were about 1200 companies producing broadcast and/or short wave radios in 1930. Obviously a lot more could be written to expand on the subjects touched on here, but I don't intend to at this point unless I get some request to do so. Likely our next column will cover some of the spectrum above HF. See you then!

# Old Time Radio Programs

## THE LONE RANGER

This month I would like to tell you about a show that premiered 80 years ago, on January 30, 1933, on WXYZ radio in Detroit, Michigan. Called *The Lone Ranger*, it was the first of 2,956 episodes. Sources disagree on whether station and show owner George W. Trendle or main writer Fran Striker should receive credit for the concept. Elements of the Lone Ranger story had been used in an earlier series Fran Striker wrote for a station in Buffalo, New York.

In any case, the show was an immediate success. Though it was aimed at children, adults made up at least half the audience. It became so popular, it was picked up by the Mutual Broadcasting System radio network, and finally by NBC's "Blue Network," which in time became ABC. The last new episode was broadcast September 3, 1954. Transcribed repeats of the 1952–53 episodes continued to be aired on ABC until June 24, 1955. Then selected repeats appeared on NBC's late-afternoon weekday schedule (5:30–5:55 p.m. eastern time) from September 1955 to May 25, 1956.

Each episode was introduced by the announcer as follows: *In the early days of the western United States, a masked man and an Indian rode the plains, searching for truth and justice. Return with us now to those thrilling days of yesteryear, when from out of the past come the thundering hoof beats of the great horse Silver! The Lone Ranger rides again!*

By the time it was on ABC at 7:30 p.m. eastern time, voiced by Fred Foy, the introduction had changed, eventually becoming: *A fiery horse with the speed of light, a cloud of dust and a hearty Hi-Yo Silver! The Lone Ranger! — with his faithful Indian companion Tonto — the daring and resourceful masked rider of the plains led the fight for law and order in the early western United States! Nowhere in the pages of History can one find a greater champion of justice! Return with us now to those thrilling days of yesteryear! From out of the past come the thundering hoof beats of the great horse Silver! The Lone Ranger rides again!* This was followed by Brace Beemer's voice: "Come on, Silver! Let's go, big fellow! Hi-yo Silver! Away!"

The Lone Ranger was played by several actors: John

L. Barrett, on test broadcasts on WEBR in January 1933; George Seaton (under the name George Stenius) (January 31–May 9, 1933); series director James Jewell, for one episode; an actor known only by the pseudonym "Jack Deeds" for one episode; Earle Graser (May 16, 1933–April 7, 1941). On April 8, Graser died in a car accident, so for five episodes after that the Lone Ranger was unable to speak beyond a whisper, with Tonto carrying the action.

Brace Beemer, who had been the show's deep-voiced announcer for several years, took over the role from April 18, 1941 to the end. However Fred Foy, also an announcer on the show, substituted for Beemer for one broadcast (March 29, 1954), when the latter had laryngitis.

Tonto was played throughout the run by actor John Todd (although there were a few isolated occasions when he was replaced by Roland Parker, better known as Kato for much of the run of sister series *The Green Hornet*).

Other supporting players were selected from Detroit area actors and studio staff. These included Jay Michael (who also played the lead on *Challenge of the Yukon* aka *Sgt. Preston of the Yukon*), Bill Saunders

(as various villains, including Butch Cavendish), Paul Hughes (as the Ranger's friend Thunder Martin and as various army colonels and bad men), future movie star John Hodiak, Janka Fasciszewska (under the name Jane Fae), Rube and Liz Weiss (a married couple who acted in several radio and television programs in Detroit), and others. The part of nephew Dan Reid was played by various child actors, including Bob Martin, James Lipton and Dick Beals.

The theme music was primarily taken from the "March of the Swiss Soldiers" finale of Gioachino Rossini's *William Tell Overture*, now inseparably associated with the series. The theme was conducted by Daniel Pérez Castañeda, with the softer parts excerpted from *Die Moldau*, as composed by Bedrich Smetana. Many other classical selections were used as incidental music because they were in the public domain, thus allowing production costs to be kept down while pro-



*The Lone Ranger and Silver.*

viding a wide range of music, as needed, without the cost of a composer.

In the late 1930s, Trendle acquired the rights to use incidental music from Republic Pictures motion picture serials as part of a deal for Republic to produce a serial based (loosely) on the Lone Ranger. This music was then modified by NBC radio arranger Ben Bonnell and recorded in Mexico to avoid American union rules. This music was used in both the radio shows and the later television productions.

Many premiums were offered on the program, including the Lone Ranger Six-Shooter Ring and the Lone Ranger Deputy Badge. Some used a silver bullet motif. One ring had a miniature of a six gun atop it, with a flint and striking wheel as used in cigarette lighters, so that "fanning" the gun would produce a shower of sparks.

Some premiums were rather anachronistic for a 19th-century hero. During World War II, In 1942, the program offered the "Kix Blackout Kit."

In 1947, listeners could send for the "Kix Atomic Bomb Ring," also known to collectors as the Lone Ranger Atom Bomb Ring. It actually had a small amount of radioisotope in it to produce scintillations suggestive of a nuclear reaction.

The sponsor was General Mills, with its breakfast-cereal products: Cheerios, Wheaties, and Kix. In 1947, Cheerios produced a line of Frontier Town cereal boxes with the Lone Ranger likeness on the front. On the backs of these boxes were different Frontier Town buildings to be cut out. One could also send in ten cents and a box-top to get each of the four map sections of the town. These, as well as the buildings from nine different boxes, were needed to complete the cardboard Town.

The Lone Ranger TV show aired for eight seasons, from 1949 to 1957, and starred Clayton Moore as the Lone Ranger and Jay Silverheels as Tonto. It was the ABC television network's first big hit of the early 1950s.

For the show's third season, Moore sat out due to a contract dispute and was replaced by John Hart. Moore returned for the final two seasons. Moore's version of the Ranger is probably the best-known. Only five of the eight seasons had new episodes. The fifth and final season was the only one shot in color. A total of 221 episodes were made.

Besides the premiums offered in connection with the radio series, many Lone Ranger commercial toys were introduced over the years. One of the most successful was a line of 10-inch action figures and accessories released by Gabriel Toys in 1973.

A video game version of The Lone Ranger was released by Konami for the Nintendo Entertainment System in North America in 1991. It is an action adventure game featuring three different perspectives: side-scrolling, overhead, and first-person exploration. The

game loosely follows the plot of the 1981 film *The Legend of the Lone Ranger*. Its ultimate was the rescue of the President of the United States, whom the Lone Ranger's nemesis, "Butch" Cavendish, has kidnapped.

The first Lone Ranger novel appeared in 1936, and eventually 18 volumes were published. The first book was written by Gaylord Dubois, but the others were written by the character's primary developer, Fran Striker. Striker also re-edited and rewrote parts of later editions of the first novel. First published between 1936 and 1956 in hardback by Grosset and Dunlap, these stories were reprinted in 1978 by Pinnacle Books.

### The Dynamite Entertainment Lone Ranger Series

Vol. 1 (160 pages, Collects The Lone Ranger #1-6)

Vol. 2 "Lines Not Crossed" (128 pages, Collects The Lone Ranger #7-11)

Vol. 3 "Scorched Earth" (144 pages, Collects The Lone Ranger #12-16)

Vol. 4 "Resolve" (Collects The Lone Ranger #17-24)

"The Lone Ranger & Tonto" (128 pages)

King Features Syndicate distributed a newspaper strip of the Lone Ranger from September 1938 to December 1971. Fran Striker himself initially scripted the feature, but time constraints soon required him to quit. He was replaced by Bob Green, who was later followed by Paul S. Newman and others. The original artist was Ed Kressy, but he was replaced in 1939 by Charles Flanders who drew the strip until its conclusion. In 1981, the New York Times Syndicate launched a second Lone Ranger strip, written by Cary Bates with art by Russ Heath. It ran until 1984. Two of the storylines were collected in a comic book by Pure Imagination Publishing in 1993.

In 1948, Western Publishing, with its publishing partner Dell Comics, launched a comic book series which lasted 145 issues. This originally consisted of reprints from the newspaper strips (as had all previous comic book appearances of the character in various titles from David McKay Publications and from Dell). However, new stories by writer Paul S. Newman and artist Tom Gill began with issue #38 (August 1951).

Some original content was presented as early as #7 (January 1949), but these were non-Lone Ranger fillers. Newman and Gill produced the series until its the final issue, #145 (July 1962).

Tonto got his own spin-off title in 1951, which lasted

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31 issues. Such was the Ranger's popularity at the time that even his horse Silver had a comic book, *The Lone Ranger's Famous Horse Hi-Yo Silver*, starting in 1952 and running 34 issues; writer Gaylord DuBois wrote and developed Silver as a hero in his own right. In addition, Dell also published three big Lone Ranger annuals, as well as an adaptation of the 1956 theatrical film.

The Dell series came to an end in 1962. Later that same year, Western Publishing ended its publishing partnership with Dell Comics and started up its own comic book imprint, Gold Key Comics. The new imprint launched its own Lone Ranger title in 1964. Initially, material was reprinted from the Dell run; original content did not appear until issue #22 in 1975; the magazine itself folded with #28 in 1977. Additionally, *Hemmets Journal AB* published a three-part Swedish Lone Ranger story the same year.

In 1994, Topps Comics produced a four issue miniseries, *The Lone Ranger and Tonto*, written by Joe R. Lansdale and drawn by Timothy Truman.

One of the major changes in this series was the characterization of Tonto, who was now shown to be a very witty, outspoken and sarcastic character. He was even willing to punch the Lone Ranger during a heated argument, commenting on his past pop-culture depictions with the words, "Of course, *quimo sabe*. Maybe

when we talked I should use that 'me Tonto' stuff, way they write about me in the dime novels. You'd like that, wouldn't you?"

The first issue of a new Lone Ranger series from Dynamite Entertainment by Brett Matthews and Sergio Cariello shipped September 6, 2006. It started as a six issue miniseries but, due to its success, it has become an ongoing series by the same team.

On September 15, 2006, Dynamite Entertainment announced that *The Lone Ranger* #1 had sold out of its first printing. A second printing of the first issue was announced, a first for the company. While generally considered a critical success, the new series has received some backlash from classic Lone Ranger fans for its graphic depictions of violence.

The series received an Eisner Awards nomination for best new series in 2007. *True West* magazine awarded the publication the "Best Western Comic Book of the Year" in their 2009 *Best of The West* Source Book.

In 2010 Dynamite released "The Lone Ranger avenges The Death of Zorro".

As you can see what started as a 1933 popular radio show turned into almost 80 years of books, toys, TV series, and comics.

Who would have thought a radio show from 1993 could become such a big part of American history!

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## 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](http://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/>

Civilian Conservation Corp. 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](http://www.radionutzantiqueradios.com)

# Company Chronicles

*See copyright statement at end of article.*



Radio company histories abound with “rags to riches” tales of enterprising young men from impoverished backgrounds who made it big in the booming 1920s radio market. And the story of Fada Radio is no exception. Frank Angelo D’Andrea, the son of a junk dealer, had a driving ambition to get rich. At age eleven, he stopped helping his dad collect scrap and struck off on his own. Beginning as a newsboy, he later tried his hand at prizefighting and working in an electroplating plant.

Frank eventually became a tool-and-die maker at a firm specializing in experimental work for inventors. World War I was in progress, and the young man became involved in adapting a German-designed receiver for wartime production. After the prototype was completed, the deForest Company received the production contract and D’Andrea went along to supervise.

Not long after the Armistice, D’Andrea went into business for himself. In June, 1920, adapting the Fada brand name from his initials, he set up a store front firm in the Bronx, (New York City) to manufacture crystal detectors. With beginning of the radio boom in late 1921, Frank expanded into three more stores and was soon turning out 1800 detectors per day. By early 1922, the company was taking in as much as \$50,000 per month.

Fada began to manufacture some vacuum tube gear, but continued to specialize in crystal detectors until D’Andrea learned of Hazeltine’s newly-invented Neutrodyne circuit. The Fada firm was the first to put the circuit into production and, in 1923, began to market a line that eventually included both completed sets and kits.

The firm did very well in 1923 and an additional plant was opened. However, the cyclical nature of the radio business being what it was, the original plant was closed down in the following year. Nevertheless, Fada’s 1924 gross was well over a million dollars.

1925 was a slow year, and D’Andrea responded with several strategies. A low-priced receiver (the Model 192A) was developed to draw on the inventory of over-produced parts; the Fada dealers were required to purchase a quota of older models in order to obtain new stock; a top-notch engineer was brought on board to develop a new state-of-the-art set; and a Canadian company was formed.

Fada’s 1926 profits approached a million dollars, with the firm paying record royalties to Hazeltine. Sales for the first half of 1927 were also strong, but bad times were approaching. The new AC-operated sets were cutting into the company’s business, and Fada shut down, near the end of the year, to retool for a competitive radio. During this period, Fada also lost its new engineer and its top marketing executive.

The new sets didn’t work well and the company was forced to shut down again for redesign. Though Fada kept going, this was the beginning of the end. In 1932, the firm was purchased by a group of Boston businessmen and that year posted a loss of over a quarter of a million dollars. It was in bankruptcy by 1934 but, revived by other interests, continued into the 1940’s.

D’Andrea himself formed a new company, Andrea Radio, in 1934. He operated Andrea until his death in 1965.

*This company biography, used with permission, was 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.*

# Members' Corner

News of Particular Interest to the AWA Membership

## EXCITING PROGRESS IN MUSEUM CONSTRUCTION!

As winter wanes and spring approaches, we look forward to the AWA Spring Meet in May, along with the opening of the initial portion of the AWA Museum.

Our construction contractor and a number of sub-contractors began the renovation work on Monday, January 8th. Two months later the 400 amp electrical service was installed; the sixteen display booths were complete and ready for painting; new ceiling lighting was in and operational; flooring was installed in the mechanical room; floor and wall tiling was completed in the bathrooms. Plumbing in this area is complete and we are awaiting delivery of all bathroom fixtures.

Once this initial, or "Phase 1" portion is completed, the plank flooring (already delivered), will be installed along with a fabric material covering both sides of the main corridor wall. This flooring will cover the main display hall, including exhibit booths, as well as the AWA store. AWA volunteers should be able to begin installation of their displays once the flooring is laid.

Additional flooring to complete the rest of the museum is on hand, stored to await the renovation of additional areas. This guarantees that there will be a consistent flooring pattern throughout the entire facility.

A 24-volt electrical installation to power LED lighting within the display booths, baseboard and soffit is currently under construction. This system will illuminate signs and print material. Dan Waterstraat, the AWA Parts Manager, has undertaken the fabrication of multiple linear power units to supply the lighting. These units, which will be placed in soffits in both halls, will eliminate electrical interference to the operating equipment in various display booths.

An enhanced security system is currently being installed to provide fire, access and visual remote moni-



*Main entrance and gift shop of the new Museum.*



*Exhibit booths in main hall.*

toring of the museum. Two ADA access ramps are scheduled for installation prior to the "soft" opening of this first portion of the museum at the May 4th Spring Meet. Plans are already underway for the August 20th official dedication of the Phase 1 portion of the museum, coinciding with the beginning of the multiple-day AWA International Convention.

Ron Roach  
AWA Operations Manager

## MEMBERSHIP SERVICES COMMITTEE HAPPENINGS

This winter has seen a critical infrastructure change for AWA membership services. This key effort includes the migration of the membership database to a new system that will allow for both member and non-member information collection. It's part of the PastPerfect software that has been used to catalog the museum collections for a number of years.

Last year, in anticipation of the expansion of our museum and the accompanying need for a better docu-

mented and supported system to manage memberships, it was decided to use an already available tool within PastPerfect. The tool provides several critical functions including a transaction log of all changes; a report writer to create periodic reports, including mailing label information; and ability to support future AWA Museum activities, including the maintenance of a non-member mailing list that is now handled manually.

A second change has been a revision of the PayPal

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subscription tool for membership creation or renewal to support a newly implemented “Sustaining Membership” option. Currently priced at the \$100 level, this option provides a way for members to make an annual donation to the AWA Museum operation when creating or renewing their memberships. This is possible via the following link:

To save postage and to facilitate your membership

renewal, please use this link.

Don’t forget to keep the official AWA Museum opening day of Tuesday, August 20, 2013 on your personal schedule! Details will be following as spring arrives. First previews of the new facility will be available during the annual Spring Meet, May 4, 2013.

Richard Neidich

Chairman, Membership Services Committee

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## Book Reviews

By Eric P. Wenaas, [eric@chezwenaas.com](mailto:eric@chezwenaas.com)

### Recommended additions to your Antique Radio Library

**Radio Manufacturers of the 1920s**, by Alan Douglas. Reprinted by Sonoran Publishing, Chandler, AZ. . Vol. 1: A-C Dayton to J.B. Ferguson, Inc., 1995, 226 pages; Vol. 2: Freed-Eisemann to Priess, 1995, 266 pages; Vol. 3: RCA to Zenith, 1999, 285 pages. Each volume: 8 ½ x 11, paperback, \$29.95.

This three volume series provides a definitive account of the more popular broadcast radio receivers manufactured in the U.S during the 1920s—the first decade of the broadcast era. Volumes I, II, and III of this classic book were first published in both hardcover and paperback by Vestal Press in 1988, 1989 and 1991 respectively. Sonoran Publishing Co. of Arizona acquired the assets of Vestal Press and subsequently republished all three volumes as paperbacks in the years listed in the heading above. With 73 chapters devoted to the history of the more popular manufacturers of radio receivers, it is an invaluable guide for radio collectors and historians alike. It is a “must have” book for anyone interested in antique radio receivers from the 1920s.

This book is so well known by antique radio aficionados that this review would be redundant were it not intended for newcomers to the field of communication history, equipment restoration and/or the collection of antique radio equipment. The three volumes contain innumerable photographs of factories, products and advertisements, and while they are not in color (most contemporaneous images were not in color), there are many clear images and many rare photographs.

The introduction found at the beginning of the first volume provides an overview of how the broadcast era began in 1921, and how it evolved into big business in nine short years with retail sales of \$842 million by 1929—almost \$2 billion in today’s dollars. It also provides a context for all three volumes that is particularly relevant since the chapters are arranged alphabetically by manufacturer rather than chronologically. Douglas

has a unique take on the history of the evolution of broadcast radio in the 1920s, and his version of the contributions of the various manufacturers in this introduction should not be missed.

Douglas has compiled a very comprehensive book with virtually all of the receiver makes and models from the 1920s that the collector is likely to encounter. He states in the introduction that “. . .almost every company in business three years or more is here, as well as many of the small companies they acquired.” He also states that he “aimed to describe every advertised model of each company, whether common or scarce, collectable or not.” I think he has succeeded admirably in these goals, although there may be a few manufactured receivers that are not included—most likely those with limited production runs sold by selected distributors with no national advertising.

I have found these books to be most useful for learning about the history of the early radio companies. Each chapter contains some or all of the following information: how and why the company was formed, background on the principal or principals who founded the company along with their photographs, other miscellaneous photographs appearing in magazines or taken by company photographers, types and lists of radio equipment and models manufactured, key features of receivers, company chronology, licensing agreements, key patents, tiffs and lawsuits with other companies, photographs of radio receivers and other components including vacuum tubes, display ads used to promote sales, and retail prices of equipment. Have I left anything out?

Consult the table of contents in the front of each volume to find the company in which you are interested. They are listed alphabetically in the three volumes with first and last company in each volume identified on the cover. Note that the first volume does not have a table of contents, which had been a minor irritation until I typed up a table myself and glued it into the front of

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the book by applying glue from a glue stick along one edge. Also note that The Radio Shop beginning on page 60 is absent from the table of contents in the third volume. Be sure to pencil it in immediately following RCA, the first entry.

It should be noted that some of the major manufacturers of radio receivers do not have separate chapters devoted to their history or equipment, most notably General Electric, Westinghouse, and Wireless Specialty. These three companies had agreements to manufacture sets for sale by RCA, and their receivers are covered in the chapter on RCA, the longest chapter of the book consisting of 68 pages. There are other manufacturers addressed in the book that were not accorded separate chapters—the publisher advertises that there are approximately a total of 150 companies named in the book. In order to see if a particular company is listed, check the Index in the third volume, which covers the entire book. Companies appearing in bold print in the Index indicate they have been accorded an entire chapter.

The book is also useful for biographical information on key individuals who played a part in the development of broadcast radio equipment in the early 1920s. You will find information on a wide range of contributors to the field of radio, both the well-known and the more obscure. Douglas seems to know more about more individuals than anyone else that comes to mind. A quick look of the index indicates there are hundreds of names listed.

Last but not least, the book can be used to identify makes and models of receivers or find photographs of a particular make and model. There is no index of mod-

els for each manufacturer to guide searches, so the reader will have to go through each page in the appropriate chapter. Given the large number of makes and models that were manufactured, such an index would have taken a very large number of pages. It should also be noted that there are few if any references in the book, something that would have been very helpful to the researcher. However, as Douglas points out, the list of references for this comprehensive book would have required at least another entire volume.

Alan Douglas is well known to those in the field of antique radio from the publication of this book as well as his many publications in club bulletins (e.g., *Radio Age*), amateur radio magazines, IEEE publications (e.g., *IEEE Spectrum*), and engineering publications. He graduated from Swarthmore College with a B. S. in Electrical Engineering, and shortly after graduating he went to work for Benthos, Inc. designing and building oceanographic research equipment. He has amassed a personal library of over 5000 volumes, which he consults in the course of researching and writing about the early days of radio. He is a member of the Antique Wireless Association (AWA), and is the recipient of the AWA Houck Award for Documentation of radio history and the AWA Tyne Tube Award for documenting the history of vacuum tube development.

*Summary versions of the manufacturer's biographies from these books are regularly printed in the AWA Gateway with permission of the author and publisher.*

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## 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 oshuler@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 KARLRAD@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;

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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](http://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](mailto: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](http://www.indianahistoricalradio.org). Contact Herman Gross, W9ITT, 1705 Gordon Dr., Kokomo, IN 46902, 765-459-8308, email [w9itt@comcast.net](mailto: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 [lvrcreditor@yahoo.com](mailto:lvrcreditor@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](mailto:shans01a@comcast.net); Membership Chair, Geoff

Shearer, (703) 818-2686, email: [gshearer2@verizon.net](mailto:gshearer2@verizon.net). Website [www.maarc.org](http://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](http://www.njarc.org) or contact Phil Vourtsis, 13 Cornell Pl., Manalapan, NJ 07726, (732) 446-2427, [pvoirtsis@optonline.net](mailto:pvoirtsis@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](http://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](mailto: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](mailto:jrcradio@cox.net). Website: [www.okvrc.org](http://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](http://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](mailto: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](mailto:sparkinc@juno.com) or call John Pansing at (937) 299-9570.

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- 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](mailto:dwjw@gvtc.com); website [www.gvtc.com/~edengel/TARC.htm](http://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](http://www.vrps.org), or by contacting VRPS President Jim Sargent at (817) 573-3546 or [bsargent@swbell.net](mailto:bsargent@swbell.net).

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## 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](http://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 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](http://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.