

**The Central Texas Amateur Radio Club  
meets the first Tuesday of each month at 7:00 PM at the  
Bell County Communications Center, 798 West Avenue O, in Belton**

## The Prez Says...

*Priscilla Beauregard, KE5UES*

The very first item I would like to announce is, at the last Board of Directors meeting the board members unanimously voted in Sarah Dorn and Bud Garretson - AD5SK, as Honorary Members of CTARC. We appreciate that Sarah comes with Joe and sits through all our meetings even though she is not a ham operator. Bud drives a great distance to attend the meetings and he brings such good desserts, along with his long time service as one of our weekly net control operators. Thanks to both of them for what they mean to the club.

I would like to congratulate Rick Murray - K6WXA on making the Wavelength Newsletter the success that it has been for the last three years. Yes, May begins the third year for the newsletter. Everyone please tell Rick how much you have enjoyed his work.

I want to wish Robert Shoemaker - KE5WVC a speedy recovery from his recent surgery. I know he is going to feel much better.

**The Tour d' Temple originally scheduled for May 4<sup>th</sup>, has been cancelled** due to some route issues from some of the riders.

Some dates to remember in May... the Central Texas Air Show is May 3<sup>rd</sup>- 5<sup>th</sup>. Our club meeting is on May 7<sup>th</sup> and -please- all members plan to attend; this will be an important meeting. Mother's Day is May 12<sup>th</sup> and Memorial Day is May 27<sup>th</sup>.

Hope to see all of you on May 7<sup>th</sup>.

*73 de KE5UES*





The Central Texas Amateur Radio Net meets every Thursday at 8:00 PM on the W5BEC repeater, on 147.140(+) PL 123.0 Join Us!

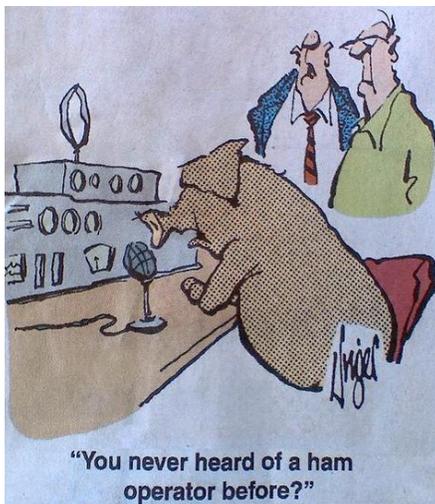
May NCS & Back-Up NCS Schedule

May 2 <sup>nd</sup> : Net Control: AD5SK Back-Up: K6WXA	May 9 <sup>th</sup> : KE5UES AD5SK
May 16 <sup>th</sup> : Net Control: K6WXA Back-Up: W5VEX	May 23 <sup>rd</sup> : W5VEX KE5ISN
May 30 <sup>th</sup> : Net Control: KE5ISN Back-Up: AD5SK	



The Central Texas Air Show runs from May 3rd through the 5th at the Draughon Miller Central Texas Regional Airport.

Volunteers are needed to provide commercial radio support for the support staff. Those who volunteer will also be given free admission to the air show. If you'd like to help out, contact Darwin Geiselbrecht - K5DOA, at: [k5doa01@gmail.com](mailto:k5doa01@gmail.com)



 **Strays** 

## V-E Day

*“This is a solemn but a glorious hour. I only wish that Franklin D. Roosevelt had lived to witness this day. General Eisenhower informs me that the forces of Germany have surrendered to the United Nations. The flags of freedom fly all over Europe...”*



When Germany officially surrendered on May 8, 1945 Americans became cautiously optimistic that a Japanese surrender wouldn't be far behind. Even so, with the invasion of the home island of Japan still a possibility, many felt it inappropriate to celebrate a peace that was only “half-won,” particularly those in the military for whom peace had come at a high cost.

President Harry S. Truman's radio address on “V-E Day” called upon all Americans to remember those whose lives had been sacrificed, and to work to finish the fight to free the world of tyranny in the Pacific and to “build an abiding peace.”

You can listen-in again to the V-E Day radio address of President Truman, by visiting:

<http://www.trumanlibrary.org/audio/GermanySurrender.wma>



## Military Cross Band Test

The Military / Amateur Cross-Band Communications Test will be conducted **11 May 2013** in observation of the 63rd Anniversary of Armed Forces Day. This date was selected to prevent conflict with the Dayton Hamvention of 17-19 May, which is the same weekend as the actual Armed Forces Day.

A complete listing of all military participating stations, their call signs, operating frequencies, location and mailing addresses for QSL confirmations can be found at:

<http://www.usarmymars.org/home/announcements>



### Wouldn't it be Wonderful:

If 2AB got some new phonograph records?

If someone invented a hook-up that would do away with 'B' batteries?

If audions sold for 89 cents?

If all the long distance records we hear were true?

If every ham read *QST* ?

If we all had money instead of brains?

If we could tell a naval station to QRT once in a while?

If there were no arc lights to bother us?

If the radio inspector never came around?

If our mineral detectors never got out of adjustment?

If the entire Third District would attend the Phila. A.R.A. Convention?

If all the navy radio experts were experts on radio?

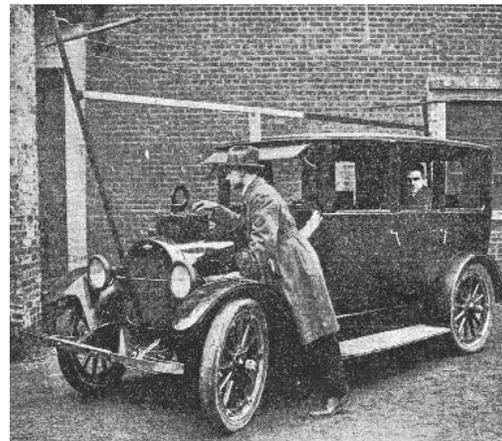
If somebody would invent a circuit-breaker (or a jaw-breaker) for the control of QRM?

- *QST*, May 1920



Originally entitled "*Send Me A Kiss By Wireless,*" members of our staff respectfully suggest that the title might be improved – for example, "*Radio teLEGraphy.*" - *QST*, May 1922

### The First Licensed Automobile Transmitting Station



Equipped with a radio transmitting set, this car was sent out on a news assignment by the *Newark Sunday Call* on May 6, 1922 the first recorded instance of its kind. The car bears the call letters **2CNJ**. In the picture is Emery H. Lee, the radio inspector is seen measuring the wavelength, which was on exactly 200 meters.



## Day of the YL's HF Contest

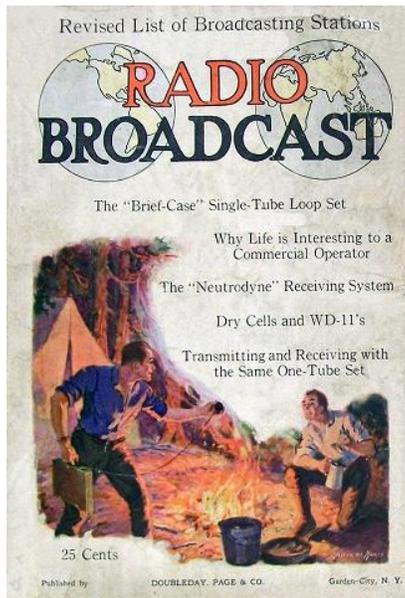
The third annual "Day of the YL's HF Contest" sponsored by the European Radio Amateurs Organization, will be held **May 18<sup>th</sup> and 19<sup>th</sup>**. The purpose of this weekend event is to get as many YL's and XYL's to take to the airwaves at the same time as is possible. Various awards will be available. For more information, frequencies and operating times please visit:

<http://www.eurao.org/en/node/472>



## 1<sup>st</sup> Issue of *Radio Broadcast Magazine*

**Radio Broadcast** magazine which dubbed, "*Radio for Every Place and Purpose*" was published between May 1922, through April 1930.



Every issue in the series is available for download in .pdf format online at: <http://www.vacuumtubeera.net/RadioBroadcastMagazine.html>

*Remember those who have fallen in service to our country on this, their day, Monday, May 27<sup>th</sup>*



## The Wonders of Radio



This painting by Norman Rockwell graced the cover of the May 20th, 1922 edition of the *Saturday Evening Post* and is now available as a poster – framed or unframed – from Art.com which is at: <http://www.art.com/products/p9388040520-sa-i5446979/norman-rockwell-wonders-of-radio-or-listen-ma-saturday-evening-post-cover-may-20-1922.htm> or as a collectable plate through: <http://www.rockwellplates.com/rockwell-plates-the-wonders-of-radio.htm>



## North Texas Section Manager KE5SOO, Resigns

Walt Mayfield - KE5SOO, is stepping down after serving as the ARRL's North Texas Section Manager for the past 18 months. This decision was made so as to pursue more focus on his family and career.

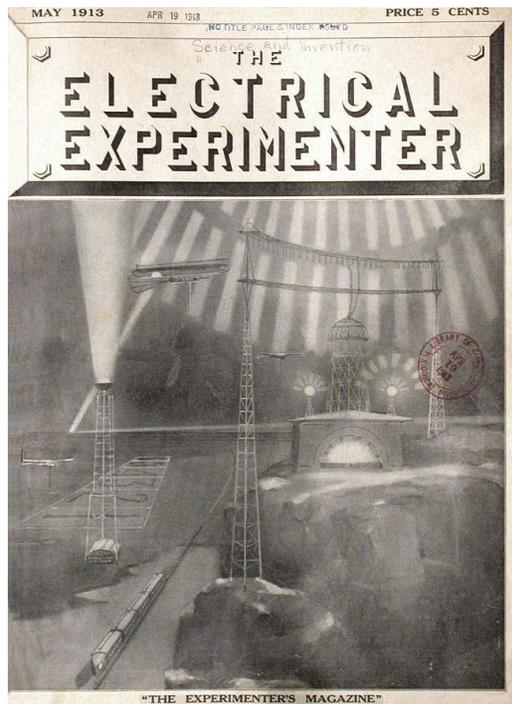
Effective May 1<sup>st</sup>, Chris Brewer - N5GMJ, who has been the North Texas Section Official Observer Coordinator, will take over the position.

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### 1<sup>st</sup> Issue of

### *The Electrical Experimenter*

*"A real electrical experimenter, worthy of the name must have imagination and a vision for the future."* - Hugo Gernsback, Publisher



*The Electrical Experimenter* was a technical science magazine that was first published in May 1913, and ran until July 1920 when it became *Science & Invention*.



## West, Texas Disaster After Action Report

Leon Cheney, K5ZZM

At approximately 7:50pm an explosion was felt and heard in the surrounding area of McLennan County. Shortly thereafter many of the local hams who monitor the local law enforcement freq. determined it was the incident that occurred in the city of West.

After approximately an hour, we were in contact with Aaron Thompson - KD5MBX, Red Cross contact for the area who informed us they could use some help and that shelters may be needed which would require manpower and communications.

A general call for help was initiated on all the local repeaters and our internet ham roster. At that point we changed the net from informal to formal and began taking check-ins. Approximately 30-35 stations activated and began monitoring. We then executed the emergency sequence we have in place which included shelter assistance, communication, and some traffic control until the net concluded at 0430 on 18 April 2013. During the operation participants performed regular communications tasks as well as physical labor at the shelter and traffic control at shelter routes.

McLennan County Sheriff, Parnell McNamara, extends his thanks to all of the hams who assisted on the West disaster. He said this kind of volunteer act may go unnoticed to some, but certainly not to him. He knows what we do and our commitment to our fellow citizens and he hopes will be there in the future because we all are needed and appreciated. Sheriff McNamara extends his best to all of us, and added: *"see you on the next one"*.

## How's DX?

K4UUK plans to operate from Belize, May 4th to the 18th as **V31RD**. He will be active on 80 through 6 meters on SSB. QSL via his home call.

**EJ7NET** will be active from the Aran Islands between May 10th and the 15th. Operations will be on all HF bands and modes. QSL via EI6FR.

Ten operators from the Oceania DX Group will be active from Norfolk Island between May 3rd and the 13<sup>th</sup> as **VK9NT**. The group plans to have 4 stations covering all bands 80-10 meters on CW, SSB and RTTY. QSL via VK2CA.

JL1UTS and L3PFH will be active as **KHØTH** and **KHØTG**, respectively, from Saipan between May 2nd to the 5th. QSL via their home call signs.

A group of Italian operators are on a DXpedition to Djerba Island using the call **TS8TI** through May 6th. Operation is on all HF bands plus 6 meters using CW, SSB, RTTY. QSL via IK2DUW.

On April 30 Queen Beatrix of the Kingdom of the Netherlands abdicates in favor of her son Willem Alexander. On behalf of this event, the crew of the PI4DX station will be operating with the special call **PA33KBX**, through May 23<sup>rd</sup>. QSL via PAØABM.

**OT4R** will be active **stroke HI7** from Punta-Cana in the Dominican Republic from 11 May through the 31<sup>st</sup> on 10, 15 & 20 meters SSB and PSK31. QSL as directed.

ZS6AYU will be operational as **C91GR** from Mozambique between May 7th and 11th. He plans to be on 40 through 10 meters operating CW only. QSL via his home call sign.

JH3QFL and JH3AZC will be active from Pohnpei Island through the 5<sup>th</sup> of May as **V6H** and **V6S** on 80-6m SSB, CW & RTTY. QSL via their home call signs.

UT6UD will be active from Tongatapu Island 1-7 May as **A35UD**. He'll be active on 40-10m CW, SSB & RTTY. QSL via his home call.

A group of Egyptian amateurs will be active from Nelsons Island 3-10 May as **SU8N** on the HF Bands. QSL direct.

CT1FTR is active from the Sudan as **ST2FT** operating both the HF and VHF bands. Word is that he will be there until June. QSL via his home call sign.

UAØLCZ will be active from Kamchatka - Land of Volkanos, 15-21 May as **UAØLCZ/Ø**. QSL direct.

IK2GZU will be in the southern region of Tanzania through May 8th as **5H3MB**. QSL via his home call.

W4VKU will be operating from Kavaratti Island, Laccadive Islands through the 5<sup>th</sup> of May as **VU7KV**. He is planning to be active on 80-10m SSB & RTTY. QSL via his home call.

KT3Y, K9VV and WP2XX will be active from **KP2M** on St. Croix Island from May 25th to the 26<sup>th</sup>. QSL via AI4U.



*“Unstable SWR’s at NØGEF”*



## Meteorologists Warn of Active Severe Storm Season

Meghan Evans, Meteorologist  
AccuWeather.com

Long-range forecasters are predicting an active severe storm season during the mid-spring and early summer of 2013, despite a slow March this year, compared to last year. In short, atmospheric conditions that have kept a lid of severe weather thus far will soon change and the Deep South is going to be under the gun.

The blocking pattern responsible for sending cold, dry air masses over the South and Gulf of Mexico should wind down during April. The pattern has driven the jet stream well to the south, a necessary ingredient for providing energy for severe thunderstorm and tornado development.

With a slightly later start to the severe weather season, the atmosphere will be hard-pressed to



produce an above-normal amount of tornadoes this season, but we are likely to see the counts of tornadoes increase as we normally would moving forward from April onward through the spring.

The ingredients may come together for more violent outbreaks of severe storms and tornadoes during the second half of April and May. As water temperatures increase in the Gulf of Mexico and more humid air reaches the South, the northward shift of the jet stream will also be coming together. The proximity of the jet stream to a potential severe thunderstorm formation area often increases wind shear and exploits other atmospheric conditions, tipping the scale toward storm development. The transition time where the jet is slowly shifting northward during late April and May can set the stage for the worst outbreaks of the year.



While severe thunderstorms and tornadoes are expected in the traditional tornado alley over the Plains, the prime threat area for tornadoes is skewed farther east this year (similar to last year), due to an anticipated building zone of high pressure at most levels of the atmosphere centered over the Rockies. During the heart of the severe season, when the threat of tornadoes should be highest, an area to watch will be the lower Mississippi, Ohio and Tennessee valleys. Little Rock, Memphis and Nashville are among

the cities that lie in the zone of greatest risk this year.

This year is expected to be a more active severe weather year than 2012, but overall, the number of tornadoes is expected to be near to slightly below average in 2013.

# The Army Marathon – A Recap

*Robert Shoemaker, KE5WVC*

On the 20<sup>th</sup> of April, Bell County hosted the inaugural **Army Marathon**. There was a 5K and a 26.2 mile run. Amateur radio operators from both the Temple Amateur Radio Club and the Central Texas Amateur Radio Club volunteered to help support the run. These operators were stationed along the route to relieve some of the Bell County Sheriff units so they could be used elsewhere. The run went off without a hitch.

The volunteers were:

Robert Shoemaker, KE5WVC

Donald Wood, KF5OFC

Priscilla Beauregard, KE5UES

Teddy Bruski, KE5UET

Myron Mesecke, N5TFK

Gerald Richmond, N5ZXJ

John Hobson, WD5BFS

Rick Murray, K6WXA

Gilbert Rymer, W5GLR

Joe Dorn, W5VEX

David Sprankle, KE5NQK

Ernest Wankowski, KB5OJ

Ron Thompson, W5WRE

Terry Evans, KF5OHR

## *The Official Numbers:*

**The Army Marathon** was the first fully certified marathon to be completed within the greater Killeen / Fort Hood / Bell County area. As one of the first marathons to be run after the tragic events in Boston, this race had special significance for the participants.

611 participants began the 26.2 mile course, 601 finished.

Richard Shaw, running his 36<sup>th</sup> marathon at the age of 54, finished first over-all with a time of 2:51:22. 35 year-old Meredith Thompson was the women's winner, finishing 12th overall, in 3:09:46.



I wish to thank everyone that volunteered. I saw some comments made on some web sites. The runners said this was a well planned out race and nice scenery. Some said they will be happy to come back next year. At the start of the race there were close to a thousand runners for the 26.2 mile. This race is expected to grow next year. This was also good for the economy of Central Texas.

## The Opus of Mobile Amateur Radio

Eric P. Nichols, KL7AJ

Many radio amateurs have radio stations (hmm--I guess if you're moving, it really isn't a station, is it?) in their cars. It's a great way to enjoy the hobby while on the move, and you can actually be useful in the process.



Most people can't walk and chew gum at the same time

The downside of mobile hamming is that most people can't walk and chew gum at the same time. This has come to light with the proliferation of cell phones in use by drivers, and the resultant proliferation of laws prohibiting the use of cell phones by drivers. Now, I'm not sure an absolute blanket ban on radios and cell phones while driving is called for, but I do believe one should have to acquire an additional endorsement on one's driver's license to be allowed to do so.

"I'm sorry, sir/madam, but we don't believe you're coordinated enough to talk and drive at the same time. We therefore are issuing you a no-talk driver's license." There is sound reasoning behind a two-tiered driver's license such as this. Indeed there are numbers of us who could achieve this endorsement.

I used to operate Morse Code while driving the 405 Freeway in Los Angeles - with a stick-shift vehicle, no less - all without incident. I know many other hams equally qualified to handle this kind of multitasking. So we need to cut some slack. However, even if you do manage to pass your talking endorsement hands down, there are some reasonable precautions to take. Never wear headphones while driving. You need to hear traffic sounds as well as that Somalian radio-teletype station on 15 meters. Do NOT have any equipment that requires you to take your eyes off the

road - ever! This includes modes like slow-scan TV, or any other mode where looking at a screen is necessary, like teletype. Yes, I know hams that have actually done this! This limits you to voice modes, and possibly CW.



It looks downright civilized, doesn't it?



Don Wallace - W6AM, operates CW mobile

Of course, if you're parked, these restrictions don't apply. Or, if you're not driving, just "passenging." Just be sure you aren't too much of a distraction for the driver. Enough said on that. If you need further elaboration, you probably don't need to be doing this in the first place.

In fact, many hams who have excellent home ham shacks also have nicely equipped mobile ham shacks.

Where to put the radio itself? Our stations may look like they belong in Frankenstein's lab, but the more you operate the more important ergonomics becomes. Whatever you do, be SURE your radios are firmly attached to your vehicle. Even a small radio is a dangerous projectile in a moving car - or, more precisely, in a car that's suddenly stopped moving.

There are a few tricks to making a mobile ham shack work properly, however. Most new cars have a lot of persnickety electronics in them. Be sure when you key your mike, it doesn't cause your brakes to lock up or cause other surprising events. The place to check this out is in your driveway, not whilst cruising the interstate at seventy-five miles an hour!

Always run power to your mobile radios directly from the car battery. This is sometimes a bit of a trick, since most new cars have drivers' compart-

ments that are sealed tighter than Lenin's tomb. But there's always some portal to the engine compartment; sometimes you just have to dig for it. The reason to use a direct battery connection is that it's quieter. Although a battery itself is a wonderful source of power—the best you can get—the rest of a car's electrical system leaves something to be desired.

Oh yes—be sure to FUSE your power cable AT THE BATTERY! There are in-line fuses available at your local auto parts store just for this sort of thing.



*Your radio should be set up to do everything by feel.*



*You're goal is to make radio, not a fashion statement.*

Vehicular antennas are necessarily short; they are also very narrow-banded. The laws of physics dictate this. You aren't going to find a mobile antenna that covers the entire 80 meter band without some retuning! On the lower H.F. bands (or 160 meters, if you're one of that rare breed), MOST of your antenna will be loading coil. Therefore, your loading coil must be a GOOD one. In fact, the performance of your mobile ham station on the lower frequency bands is solely determined by the quality of your loading coil. An effective low-band mobile antenna will have a loading coil that's short and fat and a ways up on the antenna. In other words, it will be big and ugly. Get used to it.

You don't need to have every band available. Most dedicated mobile operators end up settling on a favorite band or two anyway. It's always better to have a mobile station that works well on one band than one that works like excrement on every band.

I suppose there's a lot more to be said about setting up your own mobile ham station, but I believe we've covered the basics.

Enjoy!

*This article is an extract from "The Opus of Amateur Radio" which is copyright by the author and is reprinted here with his permission.*

## WLW's Big-Arse Transmitter

AM radio used to be different. It was the only thing on the air. At night, signals traveled thousands of miles through the noise-free sky, and everyone kept a DX log. The FRC / FCC made the 5 kW hay burners leave the air at sundown, leaving clear channels for the big guys. If you lived way out on a farm, you probably depended on one or more of these distant, clear-channel stations for your only night time contact with the world. They were the Class 1-A's, the superstations, the flame throwers. They had callsigns like KFI, KOA, WSM, and KRVN. There were no market areas, and no sound-alike syndications. AM was bigger stuff than that, and Ohio's **WLW** was the biggest. WLW was, and still is, radio engineer heaven. They've been building, modifying, and improving equipment since there's been equipment to build, modify, and improve. WLW was the 1930s version of NASA, continually testing the limits of just what AM broadcasting could do.

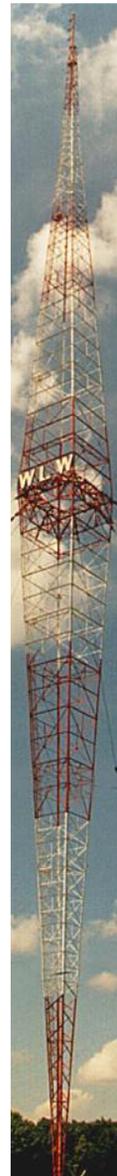
WLW was originally the extended shadow of Powel Crosley, Jr., yet another of those forgotten, 20th century visionaries. Crosley backed into the radio game in the 1920s when his son wanted one of those newfangled receiver gadgets. Crosley could not believe how expensive they were, so he decided to build his own and for a fraction of the cost. Soon he was selling absolutely astonishing numbers of little radios that people could afford.

Receivers didn't sell without something to receive, so Crosley, like most early manufacturers, built a radio station and since regenerative radios in general, worked best on strong signals, he wanted watts. Lots of watts. He saw to it that his stations always had the highest signal strength possible. He was the champ photon-slinger of American broadcasting.

In 1928, WLW was the first U.S. station to make it to 50 kW, courtesy of an enormous, water-cooled, Western Electric transmitter on a choice frequency of 700 kHz. 50 kW was a hell of a lot of juice in 1932; it's still a lot of juice today. Crosley, though, knew he could do better. Somehow, he finagled the Federal Radio Commission into an "experimental" authorization for 500 kW, first with the special callsign of W8XO and then finally as commercial WLW.

Half a megawatt, three-quarters fully modulated, millions of peak-envelope watts, on 700 kHz, with existing tube electronics, had never been tried. This was an experiment, and not a cheap one. Building the beast required the combined engineering talents of RCA, General Electric, and Westinghouse. The investment, changed into today's dollars and at today's engineering prices, might not have been much less than a space mission.

GE built most of the modules, but RCA put them together, and gave it a modular design with a lot of built-in redundancy, good for when something blew up, which everyone knew it would. To this were added three parallel, water-cooled, 167 kW power amplifiers, each with four 100 kW RCA 867 tubes, making for 12 of these incredibly expensive, five-foot-tall firebottles. Even more mindboggling were the two modulation transformers, one per module, each 37,000 pounds, oil filled, and 10 feet high. Voltages came from a bank of six huge, forced-air cooled, mercury-vapor rectifiers. These 450



amp monsters would shake the building's brick walls. Pure DC, 3000 amps of it, was put through the many filaments. The whole plant looked a bit like a power station, which to some extent it was. Outside, it looked more like a nuke plant.



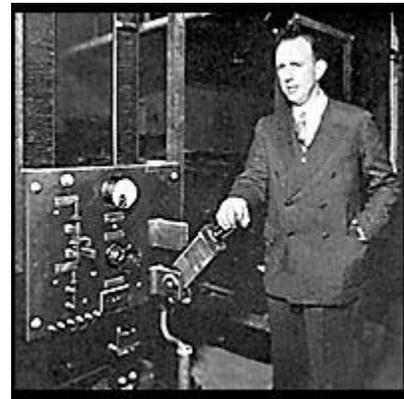
There had to be a new, vertical antenna, and not just anything could do a good job on the expected 70 RF amps at the current loop. Up went a beautiful, Blaw-Knox diamond, the strongest and dizziest-looking AM radio tower ever designed. WLW's version was an 800-foot half-wave, guyed in the middle with bridge cables. It weighed nearly a million pounds, as much as a small building, and in fact it was very briefly one of the world's tallest structures. An airplane hit this tower once, barely denting it.

There were folk tales, probably accurate, of talking rain gutters, sparking fences, singing water pipes, nearby street lights dimming on modulation peaks and cows felt funny tingles in odd places.

Late-night tests went on for months, then on **May 2, 1934**, anticipation mounted as a warning klaxon echoed through the buildings as pumps and generators came up to speed. Outdoors, in the pond, water fountains began to spray. In the filament room, bells rang as operators zapped those big switches into place. In the contactor room, huge relays banged closed. The vast plant came alive. At long last, though, a new signal lit up the air worldwide. The Nation's Station, **Whole Lotta Watts, World's Largest Wireless**, The Voice From The Sky, the flame thrower, the mighty mike. It soon became clear that its potential night coverage was global, propagation and power supplies permitting.

Seeing this high-voltage profit potential, fifteen other US stations filed for 500 kW. None were authorized. Soon, bitter competitors turned up the legal heat on WLW. In 1938, the US Senate got into the radio consulting business and passed the Wheeler Resolution, asking the FCC for an absolute limit of 50 kW. After a year of intense court battles, the station exhausted all appeals, and shut down the huge amplifiers.

Crosley noted, bitterly, that 50 kW wasn't that many more horsepower than a couple of speeding Buicks. It wouldn't even make coffee as far as he was concerned.



*Powel Crosley throws the big switch*

Meanwhile, back at WLW, the engineers weren't exactly sleeping. They kept the venerable, 50 kW, 1927 Western Electric going, decade after decade, modernizing its insides a number of times. Today, the mighty Blaw-Knox spits photons from yet another 50 kW, the fourth on the site. It's a new, solid-state, class D, all-digital, Harris box, a real nice rig; if a bit dull by comparison. It's about the size of a walk-in refrigerator, with no external modulator.

People moan that AM is dead, but nobody's told these guys. **700 WLW**, still calling itself "The Big One," and "The Nation's Station," remains a well-engineered, profitable, Class A non-directional. Radio will survive.

*- Thanks to KE5WVC for contributing this article.*