

The Static

An evolving publication of the Hill
Country Amateur Radio Club



...and now a word from the prez.

A great big warm hello, no pun intended, to each of you who might be reading *The Static*. Yes, it has been warm; probably HOT is a better word.

Have you ever stopped to think how many folks are involved in keeping HCARC moving forward each month? I'll name a few and I hope you can think of some I might not list.

How about these.....

Your officers, there are four,

The Executive Committee, that's four more,

The VE test folks, that could be as many as eight,

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The Static, one for sure and all those who contribute, could be up to five,

The Repeater Committee, and additional three more,

The Monday night net, five net control operators plus up to twenty or so who participate,

The Skywarn Net could add another eight or ten,

The webmaster and those who contribute, could be as many as four to six,

And the list goes on and on.

These are the folks who "do the deal" before and after the meeting.

Have you thought about those folks who prepare refreshments each month, present the program, help with registration of members and visitors, plus those faithful who attend the meetings? The list just goes on and on which bring me to the next area FIELD DAY!

Now that was a great big deal!!!! It was fun, interesting, and afforded all the opportunity to operate, eat, greet, and put in a lot of before and after work. Jeff Lavender, N4YPT, did a marvelous job of providing the leadership and of course the energy to motivate all involved. I will save that list of folks for the July and August meetings as well as the August Static.

Now, YOU are involved in some manner with at least one area of HCARC. A big HIGH FIVE to all who keep us moving forward to create a bigger and better ham radio community. I look forward to seeing you on July 5 as we share many more "Thank You's".

73,

Marilyn KE5DDR

Field Day reprise.

File day was a huge success. We made 1465 contacts on the 3 A stations. The break down is 13 Digital, 375 SSB, and the rest, yes they were CW contacts.

W4WJ Made 767 contacts of the total CW contacts. The VHF UHF station had to work a little harder this year than last. The band and or the antenna are to blame I'm sure. I know the operators worked really hard to make every contact possible. The GOTA station was very successful. 113 contacts were made on the GOTA station. 30 SSB, 75 RTTY, and 8 PSK31 contacts.

All in all a really great event. Many thanks to all who setup, operated, and cleaned up afterwards.

Upgrading your license

For those interested in upgrading to General or Extra, the next regularly scheduled VE session will be 10 a.m., August 4 at the Red Cross Building.

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I didn't know that...

Tesla versus Edison

Quoted from the [Tesla Insanity Main Page](#)

The following is a short Tesla bio that I did for school with the topic of "People who have gone against the status quo." -- Thomas Samstag

Nikola Tesla The Forgotten Father of Today

One of the greatest minds of the 19th and 20th centuries, responsible for today's modern world, Nikola Tesla is still virtually unknown to today's textbooks, teachers, and general public. Thinking back to your high school years and looking through an encyclopedia, who do you remember as the inventor of radio? The name that probably comes to mind is Marconi. And if I asked the same about X-rays, you'd probably say Roentgen. And a vacuum tube amp, probably de Forest. While you're at it, who invented the florescent bulb, neon lights, speedometer, auto ignition system, and the basics behind radar, the electron microscope, and the microwave oven? Chances are you see little, if any, mentions of Tesla. Very few people today have ever even heard of him. The all-around nice guy Thomas Edison made sure of that.

Nikola Tesla was born in Smiljan, Croatia (now Yugoslavia) in 1858. Young Nikola had a great memory and spoke six languages. He spent four years at the Polytechnic Institute at Gratz studying math, physics, and mechanics. The amazing thing about him was that he had a great understanding of electricity (remember that this was at a time when electricity was still at infancy, the electric light bulb hadn't even been invented yet).

Tesla moved to the United States in 1884. When he arrived, he worked as an assistant to Thomas Edison, then in his late 30's. Edison had just invented the electric light bulb, but he needed a system to distribute electricity to houses. He designed a DC (direct current)

system, but it had many bugs in it. Edison promised Tesla lots of money in bonuses if he could get the bugs out. Tesla took the challenge and ended up saving Edison over \$100,000, which was millions of dollars by today's standards. Edison later refused to keep his promise. Tesla quit not long after that, and Edison spent the rest of his life trying to discredit Tesla (which is the main reason why he is so unknown today).

In 1888, Tesla devised a better system of transmission, the AC (alternating current) system used in houses around the world today. By using Tesla's newly developed transformers, AC could be stepped up and transmitted over long distances through thin wires. Edison's DC couldn't be stepped up, required a large power plant every square mile and thick cables for transmission.

Electricity is useless if it can't do anything, so in 1890, Tesla invented a motor to run on AC, the same type of motor used in every household appliance today. Scientists of the late 1880's were convinced that no motor could work with AC. After all, AC electricity reverses itself 60 times a second, so all previous motors would just rock back and forth 60 times a second. Tesla solved this problem and proved them all wrong.

Word of AC eventually got to George Westinghouse. In 1893, Tesla signed a contract with Westinghouse to get \$2.50 per Kilowatt of AC sold. Nikola finally had the money to conduct all of the experiments that he had dreamt of.

Tesla developed and used florescent bulbs in his lab some 40 years before industry "invented" them. At the World's Fair, Tesla took glass tubes and bent them into famous scientists' names- the first neon signs. Tesla also designed the world's first hydroelectric plant at Niagara Falls in 1895. Tesla also patented the first speedometer for cars in 1916. In fact, Tesla invented all of the things that are listed at the beginning of the paper.

But Edison soon had too much money invested into his DC system, and he tried his best to discredit Tesla by showing that AC was more dangerous than DC. Edison paid local children 25 cents for each stray dog they could

bring him. Then he would hold press conferences and electrocute the dogs at public gatherings to frighten people. He claimed that DC could not kill, but in fact, it could. Below is a drawing from 1889 of a horse being electrocuted in Edison's Menlo Park Laboratory.

Edison felt that it was necessary to experiment by killing animals before he could guarantee his electric chair would kill efficiently.

Yes, it was actually Edison who invented the electric chair to frighten people away from Tesla's AC system, as shown in the below drawing from 1890.

But Tesla counteracted by staging his own marketing campaign. At the 1893 World Exposition in Chicago, attended by 21 million, Tesla demonstrated the safety of AC by passing high frequency AC through his body to power light bulbs. He was then able to shoot large lightning bolts into the crowd without harm.

When royalties owed to him by Westinghouse exceeded \$1 million, Westinghouse ran into financial trouble. Tesla realized that if he kept his contract, Westinghouse would go out of business, so Tesla took his contract and ripped it up! Instead of becoming the first billionaire, he got \$216,600 outright for his patents.

In 1898, Tesla demonstrated the first remote controlled model boat at Madison Square Garden.

After all of these technological breakthroughs, Tesla still had not achieved his lifelong dream. All Tesla's life, he had dreamt of free wireless energy and other signals to the world.

In 1900, Tesla was backed with \$150,000 from J. P. Morgan. Tesla began construction of "Wireless Broadcasting System" tower on Long Island, New York. Tesla intended to use it to link the world's telephone and telegraph and to transmit pictures, stock reports, and weather information.



When Morgan found out that it meant FREE energy, he cut Tesla's funding. There is still a lot of controversy to what happened to Tesla's original tower. One story says that the government tore it down during World War I for fear that the German U-boat spies would use the tower as landmark to navigate by. Another story says that Tesla ran into financial trouble and sold the tower for scrap to pay off creditors.

The world thought that Tesla was crazy. Transmission of voice and pictures was unheard of in that time. What they didn't know is that he had already demonstrated the principals behind radio nearly ten years before Marconi's supposed invention. In 1943, the year that Tesla died, the Supreme Court ruled that Marconi's patents invalid due to Tesla's previous descriptions, but yet most textbooks and encyclopedias credit Marconi.

The Press started to exaggerate Tesla's claims. Tesla reported that he received radio signals from Mars and Venus. Today we know that these were really signals from distant pulsing stars.

In his Manhattan lab, Tesla made Earth into and electric tuning fork. He made a steam driven oscillator vibrate at the frequency of the ground beneath him. The result was a small earthquake in the surrounding city blocks. It was here that he contended that in theory, he could do the same to even split the earth in two. He accurately determined the resonant frequency of Earth almost 60 years before science could

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confirm it.

In his Colorado Springs, Colorado lab, in 1899, Tesla made what he thought was his biggest discovery ever-- terrestrial stationary waves. He sent waves of energy through Earth that bounced back to the source. When they came back, he added more electricity to it. He lighted 200 lamps without wires from a distance of 25 miles and created the biggest man-made lightning bolt ever, 130ft. long! That's a world record still unbroken. Strange electrical things happened near that lab. People would walk near the lab, and sparks would jump up from the ground to their feet One boy took a screwdriver, held it near a fire hydrant, and drew a four inch electrical spark from the hydrant. Sometimes the grass around his lab would glow with an eerie blue corona, St. Elmo's Fire. What they didn't know was this was small stuff. The man in the lab was merely tuning up his apparatus. Unfortunately, he blew out some of the power plant's equipment and was never able to repeat his experiment.

At the beginning of World War I, the government desperately searched for a way to detect German submarines. The government put Thomas Edison in charge of the search for a good method. Tesla proposed the use of energy waves - what we know today as radar - to detect these ships. Edison rejected Tesla's idea as ludicrous and the world had to wait another 25 years until it was invented.

What was his reward for a lifetime of creativity? The prized (to everyone but Tesla) Edison Medal! A real slap in the face after all the verbal abuse Tesla took from Edison.

Lacking capital, he was forced to place his untested theories into countless notebooks.

The man who invented the modern world died nearly penniless at age 86 on January 7, 1943. More than two thousand people attended his funeral.

In his lifetime, Tesla received over 800 different patents. He probably would have exceeded Edison's record number if he wasn't always broke - he could afford very few patent applications during the last thirty years of his life.

Unlike Edison, Tesla was an original thinker

whose ideas typically had no precedent in science. Unfortunately, the world does not financially reward people of Tesla's originality. We only award those that take these concepts and turn them into a new, useful product.

Scientists today continue to scour through his notes. Many of his far-flung theories are just now being proven by our top scientists. For example, the Tesla bladeless disk turbine engine that he designed, when coupled with modern materials, is proving to be among the most efficient motors ever designed. His 1901 patented experiments with cryogenic liquids and electricity provide the foundation for modern superconductors. He talked about experiments that suggested particles with fractional charges of an electron - something that scientists in 1977 finally discovered - quarks!

Tesla was one of the world's most original and greatest inventors and thinkers, but because he was so original and out of his time, his genius was mistaken for insanity and science fiction. Maybe next time, the world will recognize a true genius when it comes around.

Here's the website if you are interested in further reading

<http://www.electroherbalism.com/bioelectronics/tesla/teslaversusedison.htm>

Be careful where you leave your radios. This from Merry Old England

Bomb disposal experts have said a suspicious sparked a security alert in a Surrey town was

"not dangerous".

The device was found after reports of suspicious activity near the Maultway, Camberley at about 10:00 BST on Monday.

The Maultway and roads near the Cheylesmore Park estate were closed for about four hours.

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Surrey Police said it was thought to be a transmitter for a radio station and cordons were lifted at about 14:55 BST.

A spokeswoman for the force said the device was found on land close to Colony Gate, near the junction with the Old Bisley Road.

She added: "Surrey Police can confirm that army bomb disposal experts have assessed the suspicious device found in Camberley this morning and have declared it not to be dangerous.

"The unit is now described as being a transmitter or repeater for a citizen or pirate band radio station.

"Roads are now reopened and cordons have been lifted."

The site of the incident is about seven miles (11km) from the military training academy Sandhurst, and earlier Surrey Police ruled out any connection. Thanks for this story, Fred.

I've got my license, now what do I do?

21 Things to Do After You Get Your Amateur Radio License is a new book by Daniel M Romanchik, KB6NU, is now available for electronic reading on the Kindle and Nook.

Written for the new ham or those amateurs who have not really been all

that active late, its 21 chapters cover just about every aspect of the hobby as it is today. Included are such topics as how to locate an Elmer, how to buy a radio, set up a shack and much more. Also covered are the social aspects of the hobby including participation in clubs, hamfests and the like. The Kindle edition priced under three dollars is available from amazon.com. From AR newsline.org. Here's the link if you want to bookmark it.

<http://www.arnewline.org>

Pavel Costa, CO7WT, says that following both a national debate followed by legal avenues that the government of Cuba has approved the use of new digital modes for all Cuban radio amateurs. With this regulatory change Cuban hams are now permitted use of Domino, Contestia, Olivia, M-F-S-K, J-T-65, and almost all variants of PSK. More important says CO7WT, this approval has set up a mechanism to apply for other new digital modes by any Cuban hams. Previous legislation restricted Cuban radio amateurs early digital modes such as to PSK31, QPSK31, AMTOR, PACKET and RTTY. (CO7WT)

<http://www.arnewline.org>

Some more on that weather thang...

If you have taken the Skywarn training or are just interested in submitting severe weather reports to the National Weather Service, check out the following website and spend a little time familiarizing yourself with it. NWS appreciates severe weather reports and reports from folks on the ground provides information that may be missed

by weather radar. The farther you are from a weather radar installation, the more valuable your reports are.

<http://www.srh.noaa.gov/StormReport/SubmitReport.php?site=EWX>

HAMVENTION 2012: OFFICIAL FIGURE SAYS OVER 24000 ATTENDED THIS YEAR

The numbers are out and they show conclusively that attendance at the Dayton Hamvention is on the rise. Amateur Radio Newsline's Don Wilbanks, AE5DW, has more:

The official attendance of Hamvention 2012 reached 24,483. This good news was announced by 2012 Hamvention General Chairman Mike Kalter, W8CI, at the Dayton Amateur Radio Association meeting Friday night, June 1st.

According to Kalter, this was an increase over last year. He attributed it in part to the excellent weather during Hamvention weekend.

W8CI also noted that many vendors reported excellent sales during the three days of Hamvention. Also that many restaurants, hotels and motels also reported increased sales. This contributing to an estimated \$10 million economic impact for the region.

For the first time this year, a \$3 Dayton Attractions Tour Shuttle ran from Hara's main entrance Friday and Saturday. Stops included the National Museum of the U.S. Air Force, Wright Dunbar Interpretive Center, the Dayton Aviation Heritage National Historical Park and Carillon Park.

In his address to the club, Kalter said that Hamvention would not be possible without the 500 plus volunteers who manage every aspect of the event. For those not aware, the Dayton Hamvention is the largest amateur radio gathering in the world and one of the largest events of its type operated entirely by volunteers.

Planning is already beginning for the 62nd Hamvention which will be held at Hara Arena May 17, 18 and 19, 2013. We plan to be there and hope that you will be too.

For the Amateur Radio Newline, I'm Don Wilbanks AE5DW, in southern Mississippi.

Weekly articles on topics of interest to amateur radio operators are available at the following site
<http://www.arnewline.org>

Hi, folks--

Here's my column for May. It's a little longer than usual, but it's really hard to cover the Dayton Hamvention in less than 1,000 words!

73, Dan KB6NU

Dayton Hamvention 2012: Another great ham radio experience

By Dan Romanchik, KB6NU

My Dayton experience started at 3:45 am Thursday morning. That's when I had to get up so that I could make it to the Fairborn Holiday Inn in time for the first session of this year's Four Days in May (FDIM) conference. FDIM is a one-

day conference put on by the QRP Amateur Radio Club International (<http://qrparci.org/>) and is a great way to start the "Dayton experience."

This year, we were treated to six very fine presentations. They included talks on using microcontrollers for various projects, software-defined radio, VHF and UHF for QRPers, homebrewing with "hollow state" devices (more commonly known as tubes), using open-source electronic design tools, and operating pedestrian mobile. The two talks that I enjoyed the most were "Hollow State (Theratron) Homebrewing" by Grayson, TA2ZGE/KJ7UM and "Leveraging Free and Open Source Tools in Homebrewing" by Jason, NT7S.

Friday morning, I got up early again, so that I could make the 7:30am bus to the Hamvention. We arrived about 8:00 am, just as the gates were opening. The first thing that I did was to head to the FAR Circuits tent, which is—as the name implies—at the far end of the flea market. There, I made my first purchases, a board to make a regenerative receiver and one to make an audio breakout box.

The rest of the day was a combination of wandering the aisles of the outdoor flea market, fighting the crowds inside the arena, attending seminars, and meeting people that I know. By the time, 4:30 pm rolled around, I was pretty hot and tired. Temperatures topped 80 degrees, and on the blacktop surface of the flea market, temperatures were undoubtedly higher. I was happy to get on the bus and head back to the hotel.

Saturday, was pretty much the same story, except it was even hotter. The

temperature almost hit 90 degrees. I didn't bring any sunscreen, either, so I got a little rosy.

I ran into some people that I knew that had just come down for the day, or perhaps that I'd missed the day before. One guy I ran into at the Ohio Repeater Council booth, pulled out his new Elecraft KX-3 and gave me a quick demo. It's actually quite a cool, little radio. I'm still saving up for a K-3, though.

Around noon, I went to the food court for a slice of pizza and a glass of beer. Seating is catch as catch can, so I shared a table with several other hams. This is great because you get to meet all kinds of different people.

This year, an older gentleman sat down next to me with his beer. We got to chatting, and as it turned out, this was his 55th straight year attending the Dayton Hamvention! He started going before it was even held at Hara Arena, and even after they moved to Hara, they didn't use the entire facility as they do now. I'm really glad that I got to speak with him.

So, what did you buy?

I didn't really go down to Dayton with much of a shopping list. In addition to the PC boards, I did pick up a bunch of other little stuff including some strain reliefs, more clamp-on ferrite cores, a paddle pad from Vibroplex (\$1) to keep the paddle down at the club station from sliding around, and some tube sockets! One of the vendors there had a box of tube sockets that they were selling for a quarter apiece or five for a dollar. I picked out five and paid the lady, and as

I was walking away, I decided that they were such a good deal that I went back and bought five more.

My biggest purchase was NT7S's OpenBeacon QRSS transmitter (www.etherkit.com). It cost me \$40. It looks like a very nice kit, and I'm hoping to be on 30m QRSS shortly with it. The nice thing about this transmitter is that it has a microcontroller that lets it transmit DFCW and Hellschreiber, in addition to CW. It should be fun to both build and operate.

Too rich for my blood

In other news, both Kenwood and FlexRadio both introduced new radios at Dayton. Perhaps the most buzz was around the Kenwood TS-990. All they were showing was a prototype under a Plexiglass cover. In addition to being incredibly expensive, the radio is huge! I heard someone joke that to produce this radio, Kenwood is going to have to corner the market on buttons and knobs. If you've seen the photo in QST (which was allegedly produced with Photoshop), you'll know what I mean.

The other radio with a bit of buzz is the new FlexRadio FLEX-6000. For the past couple of weeks, the FlexRadio website was proclaiming that this radio was going to be a game changer. Perhaps it is, but at \$6,000+, this radio is out of my league, and too expensive for the majority of radio amateurs. That being the case, I really don't know what all the buzz is about.

I'm sure that the TS-990 and the FLEX-6000 are both great radios, but I think that the law of diminishing returns applies here. At some point, are you

really getting \$6,000 or \$12,000 of fun out of the radio? I don't think that I would.

Well, that's it. Another Dayton Hamvention is in the bag. It was a lot of fun, and I'm already looking forward to next year. I've already contacted one of the forum organizers about adding an adult education forum. I think that's something that's both needed and would be popular. I'll just have to make sure to leave enough time to hit the flea market and grab some more tube sockets or coax or whatever.

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When he's not tromping around flea markets, or attending conferences, Dan, KB6NU, writes books about ham radio. His latest, 21 Things to Do After You Get Your Amateur Radio License, is available as an e-book from Amazon, Barnes&Noble, or from his website, <http://www.kb6nu.com/>. You can e-mail him with comments, questions, compliments, or brickbats at cwgeek@kb6nu.com.

Put this on your calendar

The Texas State Amateur Radio convention will be August 3 and 4 in Austin. You can get information and register online at www.austinsummerfest.org Admission is \$8 in advance or \$10 at the door. There will be sessions on WX, DX, ARES, QRP and software defined radio. There will be an indoor swapfest and outdoor tailgate opportunities.