

Orange County Radio Amateurs (OCRA) Newsletter
June 2008

From the Editor

When amateur radio operators think about the month of June, there is one event that comes to mind almost instantaneously. It is, of course, Field Day. I was introduced to Field Day in Massachusetts the first June after I earned my license back in 1997. To say that I had a great time at Field Day would be an understatement. Field Day is not only about emergency preparedness and operating in simulated emergency conditions. It is also an opportunity for club members to work together toward a common goal, to spend time together getting to know one another, and to demonstrate amateur radio capabilities to the general public. If you have not participated in Field Day in past years, I highly encourage you to come out to the OCRA Field Day site.

Each year, the ARRL sells Field Day t-shirts and pins with the current year's Field Day logo. Sincere thanks goes to Dave Snyder, W4SAR, for coordinating the purchase of these items for OCRA members. I'm sure many of us will be wearing this year's Field Day t-shirts during the event. This year's logo carries the phrase, "Ride the Waves". A picture is shown below.

As I usually do, I will end my newsletter introduction by asking you to get comfortable and to take time to read through your club's newsletter. This month, I also encourage you to "Ride the Waves"!

See you at Field Day!

Best regards,
Laurie - N1YXU
lbmeier@bellsouth.net

Summary of the May Meeting

The May OCRA meeting was held on Monday, May 12. There were quite a few topics discussed at the meeting. Summaries are shown below:

[Editor's note: Thank you to Woody, K3VSA, for providing the meeting highlights to me. I was unable to attend the May meeting.]

- 1 It was agreed that OCRA would rent two spaces for the DurHamFest and spend an additional \$4 per table to rent the two tables rather than go to the hassle of transporting tables there ourselves.
- 2 Dave Snyder (W4SAR), our Field Day chief, went over Field Day preparations to date and said he would have loose leaf binders for each Band Captain that would contain all the relevant documentation needed.
- 3 Gerry Cassara (KD4YJV) won the paper contest. Congratulations, Gerry!
- 4 We got the chance to meet the future XYL of Adam Sowers (KJ4DEO).
- 5 Please note that the next VE session will be held on Saturday, June 14, at the Sunrise Church (the location of our monthly meetings). The VE session will begin at 10:00 am.

The June OCRA meeting will be held on Monday, June 9, at the Sunrise Church beginning at 7:30 pm. The weekly Orange County ARES net meets on Saturdays at 9:30 am local on the W4UNC repeater [442.150MHz with a PL tone of 131.8Hz]. All licensed amateur radio operators are invited and encouraged to check in.

The President's QRM

by Woody Woodward, K3VSA

Well, we now have gasoline at an unheard of \$4 a gallon, and people are, of course, having to cut back on non-necessities in order to pay for basic transportation. This, of course, will inevitably mean that retailers will be hurt and then manufacturers, etc. We could end up in a serious downward spiral here when you factor in the housing situation and the increasing cost of food. Remember how long it took our economy to work its way out of the "oil shock" of the 1970s? Oh, you weren't BORN THEN? OK, well it took a long time for us to become upwardly mobile again.

Then we have the climate concerns and the weather issues about the tornadoes, hurricanes, ice storms, damaging hail, etc.

The idea of becoming more self-reliant will start kicking in for many folks, and they'll dust off those ten-speed bikes, plant gardens, chop firewood, turn off the A/C, and break out the window fans. A good number of them might even think that getting a ham ticket is a good idea in these uncertain times. We can help with that. Here's a magnetic sign that we OCRA members will soon be seeing on the back of a certain YL's automobile:

So, how are you going to communicate when the power is out and the cell phones are gridlocked?

got ham?

because when all else fails, Amateur Radio works (ask us how!)

The Orange County Radio Amateurs – www.ncocra.org

This message is a result of some brainstorming that we've done recently in preparation for Field Day PR. I had thought of a more conventional approach, but KI4OTN's XYL, Valley, saw what we'd come up with and said it didn't speak. This revised version is the result of that. It's punchy and to the point. If you want one of these for your car, ask me.

Presidential thanks are in order to the anonymous OCRA member who stepped up to the plate and purchased "www.ncocra.org" along with six month's web hosting. The OCRA and OC ARES websites are now consolidated at the new "earl" and are up and running FB.

By the time the next President's QRM is written, Field Day 2008 will be history. I know that Dave Snyder has worked long and hard in preparation for this, and I believe we'll do well yet again. If you've never experienced working HF Amateur Radio or have never operated on a Field Day, you really should consider coming out and doing so, even if only for a few minutes. I'll bet you'll be like I was and find it great fun! I look forward to seeing you there.

Field Day 2008 – It’s Almost Here!

by Dave Snyder, W4SAR

Field Day Coordinator

At last, we’re in the final planning stages for Field Day. If all works out, it will be the largest operation to date for OCRA- “Nine-Alpha Battery”!

Here’s the breakdown of stations and band captains:

- | | |
|-------------------------------|-----------------------------------|
| 1) 80 Meter CW- K4SAR | 6) 80 M Phone – W4SAR |
| 2) 40 Meter CW – KZ1X | 7) 40/15 Meter Phone- KD4YJV |
| 3) 20 Meter CW – W4YAS | 8) 20 Meter Phone - KE4NBB/KF4WXD |
| 4) 40/15 Meter Digital –W4SAR | 9) 10 Meter Phone – N4ZAK |
| 5) 20 Meter Digital – KR4FM | |

Additional Stations (not counted for the category number, however QSO points and some bonuses are added to our total):

VHF/UHF – KG4CFX

GOTA – KD4LLM

Everyone and especially band captains please try to attend the next OCRA meeting on June 9, as it is our last opportunity for making plans as a group before Field Day itself. All band captains will receive a three-ring binder with ground rules for the site, reference materials, forms, operator sign-in sheets, a site map, and other useful information. There will be a form in which the band captain describes the station set-up and critique its performance. That information will be a record for posterity.

An important action we are taking this year is planning the siting of stations to minimize interference. I will bring a poster sized map of the Field Day site to the meeting. Band captains will cooperate in selecting their sites on this map so that stations working the same band, but on different modes, will have both a good physical separation, as well as choosing the best “geometry” to minimize coupling of signals between their antennas. Based on this information, I will plant reference stakes on the Field Day site that Friday afternoon to direct band captains to their sites.

I want to thank everyone for stepping up enthusiastically to make Field Day work. It’s been a blast coordinating this, and I’m getting more excited to see it happen as the day draws near!

Our Rich Ham Radio Heritage (Number 5 of a Series)

by Woody Woodward, K3VSA

In 2012, we'll celebrate the centennial of the singular event that started the relative ease with which we now receive and transmit. It changed wireless into radio by allowing the human voice to be transmitted by electronic rather than mechanical means and on much higher frequencies than before. This event happened on a September night in 1912 in a family's home just north of New York City and was brought about by the experiments of a young man, almost still a boy, really. The event to which I refer is, of course, the creation of the first regenerative receiver by that giant of radio, Edwin Howard Armstrong. He was working with one of de Forest's "audion" tubes and found that he could obtain "great amplification at once" by feeding part of the output of the tube back into the input to be amplified over and over again. Up until this time, detectors of radio waves were passive devices, like galena crystals, and you had to strain your hearing to make out the faint signals using a set of high impedance headphones. With a "regen", you could have enough receive power to run a speaker using a minimum of (very expensive at the time) vacuum tubes.

The regenerative receiver's simplicity came with a price, however, and that was mainly instability. Even something as insignificant as the wind moving your dipole would cause a shift in reception parameters sufficient to require readjusting the controls. And the regen could radiate a signal, too, and thereby cause QRM. Advances in vacuum tube manufacturing helped bring multiple tube sets down enough in price so that most hams could afford them, and the high water mark of regen receivers probably was George Grammer's classic, "Rationalizing the Autodyne" in the January 1933 issue of QST.

However, by that time, Armstrong's second great invention, the superheterodyne receiver, was beginning to prevail, and one of its hallmarks was stability.

Nevertheless, another Armstrong creation, a variation of the regenerative called the superregenerative, in which the receiver was switched in and out of oscillation at a rate of perhaps 20kHz, enabled hams to cheaply populate the VHF/UHF frontier throughout the 1930s. The "supergenny" radiated a strong interfering signal on its receive frequency. It also had what would now be considered an excessively wide receive passband, but this property was perfect to use with the simple, modulated oscillator transmitters that many hams built in order to get on the bands. These modulated oscillators produced almost as much unwanted frequency modulation as desired amplitude modulation, but the superregenerative receiver tracked them just fine. I'm told that during the Great Depression, more than a few hams pulled the tubes out of the family's broadcast band receiver late at night and plugged them into simple rigs like these to ham it up on the cheap. And the higher the frequency, the fewer real "for money" components were needed. Your "coil" would be a short piece of wire bent into a "hairpin loop". Other than the tube and a tuning capacitor, you could construct your own inductors and chokes. Even as recently as the 1960s, the Handbook was publishing construction plans for a modulated oscillator for the 220 and 420MHz bands.

In fact, the concept of the transceiver, a combination transmitter and receiver that shared some of their circuitry in one box, probably came from simple, one or two tube sets that used a regenerative stage as both an Armstrong oscillator transmitter and regenerative receiver, depending on the switched value of a couple of grid components.

Once World War II put an end to the Great Depression and flooded the surplus market with military equipment, the superheterodyne became virtually universal. Even so, the regenerative receiver still refuses to die and be buried. Between 1998 and 2001, several very clever variations of the regen have appeared in QST. In the June 1998 and September 2000 issues, Dan Wissell (N1BYT) published articles on a regenerative that used an opto-isolator front end that promised to

virtually eliminate the instability issues, and he followed these up in the August 2001 issue with yet another design that configured the front end in the form of a balanced bridge circuit to limit unwanted radiation. And Armstrong's superregenerative circuit is still widely used today for inexpensive microwave applications. That's quite a life for some circuits that a young man implemented on a cold, New York winter's night!

2008 OCRA Officers and Board Members

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