

Orange County Radio Amateurs (OCRA) Newsletter

April 1, 2007

From the Editor

At the February meeting, I made a request for articles for the newsletter. I truly had no idea of what to anticipate in terms of numbers of articles or subjects of the articles. Trust me - you are going to be as impressed as I am with the information in this month's newsletter. You will find several articles which will be recurring monthly features -- The President's QRM, the Monthly Member Profile, the Monthly Technical Article, and Stations and Operating Activities. You will also find articles that will have a series of contributions over the next several months -- Perspectives from the Old Curmudgeon , Volume 1 is the first series of this kind.

My sincere thanks and appreciation go to all contributors to this newsletter! If you are interested in contributing to a future newsletter, please send me your articles. You'll find my email address below.

Sit back, relax, and enjoy your club's newsletter. And, remember -- Get radio active!

Best regards,
Laurie - N1YXU
lbmeier@bellsouth.net

Summary of February's Meeting

Well, there were actually two parallel meetings in February. One was a paperwork only VE session which was held to allow folks with valid Element 3 and Element 4 CSCE forms to upgrade without having to pass the Morse code exam. Sincere congratulations to all who received their upgrades!

The second meeting was the OCRA monthly meeting. Several topics were discussed including:

- Field Day: You will see in the President's QRM article that Blackwood Farm has been reserved for the OCRA Field Day activities. Field Day will be the primary focus of the April meeting.
- RARSFest: Several OCRA members were planning on attending the RARSFest on April 1. We should receive an update at the April meeting.
- Newsletter: The newsletter will continue to be published monthly. If you are aware of anyone who cannot access the newsletter from the reflector, please let Laurie (N1YXU) know. Alternative arrangements for those without internet access is under discussion.
- The OCRA Cup was presented to Chris (KG4HNC) for his contributions to NC4KW team in the North Carolina QSO Party.
- Congratulations to Justin (KD4CPM) for winning the first OCRA paper contest! [Yes, there will be another paper contest at the April meeting. And, yes, there will be a small prize for the winner!]
- The 50/50 raffle was won by Russ (KF4WXD), who generously donated back his winnings to the club.
- We also had three items for Show and Tell - Skip (N6LUZ) showed us a new tri-band antenna that he has been working on; Russ (KF4WXD) shared an amplifier that he built; and Chris (KG4HNC) showed us his homemade code key. Thanks to all for sharing your projects!

The April OCRA meeting will be held on Monday, April 9, at the Sunrise Church beginning at 7:30 pm. The main focus

of the meeting will be planning for Field Day 2007.

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.

President's QRM

by Dave Snyder, W4SAR

The big topic at next month's OCRA meeting will be planning for Field Day, which will take place the weekend of June 23-24 this year. We will be returning to Blackwood Farm, which is the site of a future county park and is located just around the corner from Sunrise Church where we hold our club meetings. There will be no need for me to hype Field Day to our veteran members, they eagerly look forward to participating every year, so I'm addressing this to new club members, and especially to newly licensed hams.

First off- What is Field Day? Field Day is sponsored by the American Radio Relay League. It is the biggest amateur radio contest in North America, if not the world. But it is a contest with a serious purpose at its heart: participants must act under conditions as if a widespread disaster had occurred. In essence, we must set up stations and shelters expressly for Field Day, no more than 24 hours in advance. Also, we cannot use the commercial power grid to power our stations during the contest. Another purpose of Field Day is to acquaint the general public as well as public safety officials with the capabilities of amateur radio in providing aid during disasters. There is a link on the ARRL website contest calendar for downloading the Field Day rules.

Historically, OCRA has participated as a "7A Battery" club operation. This translates to 7 transmitters operating simultaneously, powered solely by batteries, and running no more than 5 watts of output per transmitter. For purposes of the contest, phone operation, CW, and digital modes (i.e. PSK31) are considered separately as scoring entities for each HF band. Phone contacts count as 1 point, CW and digital contacts count for 2 points each. Since we are running 5 watts maximum (a wise move if you're powered only by batteries) we also get a 5 X multiplier for our contact totals.

In addition to HF stations, we may run a dedicated VHF/UHF station, and a "Get on the Air" or "GOTA" station which is to be manned specifically by Novices, Technicians, and new or inactive licensees. This is a great way for anyone who has not yet worked HF to break the ice and get our club bonus points. Bonus points are also awarded for setting up a public display, passing traffic, copying a special ARRL bulletin, and a few other items.

Field Day is also an excellent opportunity to experiment, over the years many of our operators have built home brew transmitters and antennas expressly for Field Day and subsequent emergency use. Some have performed beautifully, and others are, well...the subject of some good stories.

At the April OCRA meeting, we will start enlisting Band Captains. Band Captains will take responsibility to set up a transmitter for a certain mode on a specific band or bands. They are not expected to do all the work or have all of the fun- they will need assistants to help with set up, operations, and logging. New operators are welcome, and you are not tied to one station unless you want to be, feel free to cruise around the stations and try your hand at different modes. If you can't copy CW, fear not, the CW operator could tell you what to put in the log.

So come on out to Field Day, it is fun and challenging. I will give more details in the future, I ask that the band captains give us a description of their station plans in the upcoming newsletters.

Perspectives from the Old Curmudgeon, Volume 1

by Mark Lunday, WD4ELG

cur·mud·geon Pronunciation Key - Show Spelled Pronunciation [ker-muhj-uhn] Pronunciation Key - Show IPA Pronunciation

—*noun* A bad-tempered, difficult, cantankerous person [Origin: 1570–80; unexplained; perh. cur- repr. cur]

—*Related forms* **cur·mud·geon·ly**, *adjective*

—*Synonyms* grouch, crank, bear, sourpuss, crosspatch.

Source - <http://dictionary.reference.com/search?r=2&q=curmudgeon>

Hello, good afternoon/evening/whatever-the-heck time it is that you're reading this. It's my first installment of a series of articles about our wonderful hobby, amateur radio.

Let me introduce myself – I am an OT (old-timer) - been doing this since before a lot of you were born, and the rest of y'all were wandering around wondering how that radio thing works in the first place. I'm going to share some thoughts with you on the hobby, as a curmudgeon. Maybe you'll pick up some wisdom. I don't know much, but what I do know I think I should share to make the hobby better.

This month's topic is the recent change to licensing – removal of the morse code proficiency test. OK, we've been debating and hollering and cursing over this whole Morse Code licensing thing for longer than I can remember, and definitely since 1990. Well, arguing is not relevant anymore – the FCC did away with the requirement.

There was a time when I thought it was a matter of great pride to read 30 words per minute (and higher) of code. I'm still proud of it, but looking back it was exclusionary, like a club that I belonged to and not many others did. Almost arrogant. Felt good, of course, *because I was in the club*. I had my Extra ticket, access to that bottom 25 kHz of the CW bands where the rare DX hangs out, and I was right proud of myself. Did I want code test to go away? NO SIR! That was MY elite group, and I was a member.

Here's the thing, though – our hobby has always depended on the youth. When I got my first ticket at the ripe old age of 13, there were lots of youngsters around. At my club meetings, there were at least 5 or 10 kids in high school who had licenses. We did some stuff that was fun as a group. We felt welcome. It was a doorway to the world, learning about geography, participating in neat activities, and a big responsibility to be entrusted with a license from Uncle Sam to operate on the airwaves.

But times have changed a lot since I was a kid.

- First, there are lots of ways for folks to communicate – cell phones, email, IM just to name a few. Back when I was a kid, phones were a novelty. One per household, none of this “phone in the kid's room” stuff!
- Second, time demands are greater: we have more distractions like TV, computer, etc. (When I was a kid, we did not have anything like cable TV).
- Third, there are several threats to our hobby which could eliminate ability to operate altogether – subdivision covenants and restrictions against antennas, broadband over power lines, limited spectrum and more competition for that resource.

How do we compete with change? The answer is simple: we grow or we die. Here are the latest statistics on licensed amateurs:

<http://www.speroni.com/FCC/Licenses.html>

<http://www.dxzone.com/cgi-bin/dir/jump2.cgi?ID=13866>

How many are active? A LOT LESS than we would expect. Maybe 30-40%. And our population is shrinking.

What does this have to do with the removal of code for licensing? It means we can grow without the restriction of learning Morse Code. How? It's easier to get a ticket!

What do my curmudgeon buddies think about it? Let me tell ya, and I'll dissect each argument with my own grouchy view:

1. **The code requirement helps prevent bad ops from entering the hobby** – yeah sure. Ever listen to 14275 kHz USB, or 80 meters SSB net interference over the past decade? You call that professional operation and courtesy? I say the code requirement had nothing to do with operator habits; it's actually a sign of our society and the times. In fact, I think if we get more folks into the hobby we might see more polite and courteous people who are interested but did not have the time to learn CW.
2. **This change could mean the death of morse code from an amateur radio perspective** – are you kidding? CW is extremely effective even at low power. That mode's not going anywhere but up. In fact, folks may want to participate out of curiosity rather than having it force-fed as part of a licensing requirement.
3. **This means we're getting to be just CB operators** – not even close. Ever read the FCC Notices of Enforcement? Look for the name "Riley Hollingsworth" from the FCC. He's a ham in the enforcement division, and he has a lot of help (and authority) to take action against bad apples.
4. **Why change? Things were just fine before** – no, they were not. Our hobby was pretty much static and facing some competition (which I mentioned before).
5. **Nobody asked my opinion** – wrong again. The FCC has often asked for public input on this topic (and others) before taking action. The ARRL has actively been involved with soliciting amateur operator feedback as well.

What do we need to do to survive? Spread the word! Get others interested in the hobby. There are so MANY things of interest today, some not available when I got my ticket:

- Digital modes
- Satellite comms
- Earth-moon-earth comms
- Kit building
- Restoring old gear
- ELF communications
- Meteor scatter
- Backpack operations
- Emergency preparedness

The best way to get started is to invite someone to a club meeting. OCRA is a strong club with many interests and a diverse membership. A recent meeting had a full agenda and great fellowship. We had young and old attendees, and even a few of us Old Timers.

Also, be an evangelist for your hobby. Talk it up with friends. Invite someone into your shack. Have folks come by for Field Day.

Remember: either we grow the hobby or we die.

"I would never want to belong to a club that would have me as a member" – Groucho Marx

Monthly Technical Article - Installing an N Male Connector

by Steve Jackson, KZ1X

So, you want to install an 'N' connector on your coax? Good idea. They are what the pros use. N connectors are good to several GHz, can handle way more than the ham legal limit on any frequency, are waterproof, and mechanically superior.

Here's a complete, word-by-word instruction on how to install an N male connector, written with enough detail that you can follow each step by yourself and get the job done. These instructions were written while actually doing an installation, and is intended to be completely thorough -- which is why it's long! To write these instructions, I am assuming you have the correct connector for the cable ... and believe it or not, that might be a leap of assumption. While these fittings are all similar, they can be different in subtle ways that can easily make these instructions VERY wrong. It's a good idea to check with your cable supplier to make sure the connector you have is the one designed for the cable you have. I am also assuming you are fairly handy, have access to proper tools, and have assembled other coax fittings before.

For a quick peek at what we're trying to do, see the picture:

http://www.qsl.net/n9zia/wireless/pics/n_connector_install.jpg

OK, now to get all the tools together...

Get a BRAND-NEW box cutter blade. Yes, brand-new, sharp as can be, and, you want the blade out of the handle. Also you'll need some very sharp scissors (electrician's scissors are good) or fine-bladed mini diagonal cutters.

You will further need a suitable way to cut the inner conductor later; this is done with whatever tool you have that does not make a compressive cut (anvil style) of wire of that gauge. Acceptable tools are coaxial shear, or dual-V wire strippers, or similar. Regular diagonal cutters, or linesman's pliers, are not ideal and in fact are a bad idea. If that's all you have, OK, but using such a cutter distorts the roundness of the cable and it will have to be fiddled with to make it round again if that's how it gets cut.

Get a medium size crescent wrench, and a narrow-nose Vise grip if you have one; if not, a small crescent wrench may do. A soldering iron (at least 60W) or hot tweezers (SMD type) or a gun (if you're experienced) will be needed to solder the tip. If you have a flux pen, that will help, as will some 0.020" or similar size solder. 63/37 is best, if you have a selection.

Got all that? Then we're ready to start.

Place the connector nut, washer, and gasket over the outside of the cable. The nut's threaded end faces the cut end of the cable. Orient the gasket so its flat side is against the washer.

Measure back from the cut end a distance of the overall length of the connector, and score the outer insulation all the way around the cable with the sharp blade at this point (you can add a bit, an inch or so, for margin). Cut the outside jacket ONLY to the depth needed to remove it; don't nick the braid. If the jacket slides off easily, fine; if not, you'll have to make a shallow slice longitudinally. Discard the jacket.

Place the ground ring over the braid, orienting it such that the 'V' end faces the matching groove in the gasket. Seat the ring on the outer jacket. Flare the braid symmetrically about the ring, at right angles to the cable. When it's all dressed, use the scissors to trim it to the outside diameter of the ring, all around. Make sure you really do a good job, because stray pieces of the braid can easily cause a short circuit inside the connector if you are not careful. Again use the sharp blade to score the inner dielectric (and any foil thereupon) immediately above the ring. Cut all the way through to the center, but be careful not to nick the inner conductor.

Try to slide off the dielectric; it should come loose with a slight spiral motion, since the center conductor is probably made that way. If it does not come off easily, you may have to rely on your wits. It's important to not flex or nick the inner conductor.

Here's where it gets tricky: you want to cut the inner conductor so it seats well in the center tip contact, and such that the contact tip ends up just inside the plane of the edge of the completed fitting. There are several ways to do this, but here's the simplest ... measure the inside depth of the tip, and cut the conductor using the non-compression type cutter. If you try to use a compression type cutter, you will distort the circularity of the conductor and you'll have a dickens of a time getting it on right.

If the connector is the right type for the cable, the center tip will JUST fit. If you have a flux pen, a bit of rosin is very helpful at this time. Place a drop of flux on the center conductor.

Test out the fitting's dimensioning by inserting the unsoldered assembly into the connector. Be careful not to disturb the flared braid and especially wary of strands going awry and shorting the connector. If the tip comes out at the right depth (compare it to another N male) then you're ready to solder the end.

Warm up your iron, and look for the small weep hole in the connector's tip barrel. Heat the tip barrel so that it and the wire inside comes up to the solder melt temperature, then feed a bit of solder at the weep hole. Go slow. Keep heating the tip and feeding the solder in such that the molten solder wicks up into the tip. You don't need a lot. Try to keep the solder from getting all over the outside of the tip barrel.

Some will get on anyway, and you'll need the sharp blade to CAREFULLY shave the errant solder off. The tip is designed to fit very precisely into the connector and excessive solder on the tip barrel will cause it to not fit.

Once this step is complete, you are nearly done. Wait for the tip to cool a bit. Then insert the prepared end into the connector barrel. The barrel usually has two chamfers on it, and you can 'grab' the connector using a wrench, needle nose type Vise grips, or similar. Use the crescent wrench to tighten the connector nut into the barrel. You can now see that the gasket will get pinched in place and form a water-tight seal once the nut is sufficiently tightened. Don't go too tight, because you can over-torque the connector and strip the threads.

Now, test the connector for short-circuits. Make certain the other end of the cable is not connected to anything, and with an ohmmeter, see if you have a short between the tip and ground. It should be open-circuit. Now, test for continuity between the connector shell and the braid on the other end (shows shorted, good) and then test the center conductor (ditto).

Voila! Once you've done a few of these, you can do it with no instructions, and it takes only a few minutes.

OCRA March Member Profile

By Woody Woodward, K3VSA

Welcome to a new, hopefully ongoing feature for our new and hopefully ongoing OCRA Club Newsletter. Each month, I hope to profile a different Club member so we'll all get to know each other better. For this month, I'm going to be the one, not because of some burning desire to toot my own horn, but rather to get past the first month's feature and on to some truly interesting people! So here goes:

Name: Raymond ("Woody") Woodward

Callsign: K3VSA

First licensed as: K3VSA

Some history about you: I was born in Baltimore, Maryland in 1946 and was always a gadgety sort of kid. For example, I was the only kid I knew who owned a microscope. I cannot remember ever not knowing how to solder, because I and the other neighborhood boys used to make homemade rockets out of recycled food cans and match heads. (Don't try this at home now!) I first became interested in radio when I got a Remco crystal radio kit for Christmas one year. It was a "slider" set with a magnet wire coil and no tuning capacitor. I strung up an outdoor antenna and picked up WBAL,

1090KHz (they called them “kilocycles” back then) regardless of which position the slider was set to on the coil.

Several years later, I asked for and got a real communications receiver, a Hallicrafters SX-110, actually a pretty good radio for being a single-conversion superhet, with a BFO, RF amp, and crystal filter. I had lots of fun DXing the broadcast band late nights. I heard KSL in Salt Lake City early one morning, which is pretty good for the east coast.

Not too long after this, I got the bright idea of building a Q-multiplier using a surplus “command set” receiver to act as a second IF at 85KHz. Why I thought this would be useful when my receiver already had an excellent crystal filter is beyond me now, but I was only about fourteen at that time. Anyway, I constructed a full wave power supply using a 6X5 rectifier tube, power transformer, electrolytic capacitors, “swinging” choke, and bleeder resistor, all mail order from Allied Radio in Chicago.

When my homebrew power supply failed to work as designed, I was at a loss to understand why and had no resources I could turn to for help. Remember, this was long before the Internet! Somebody suggested that I talk to a man I didn’t know who was a ham radio operator and lived about five blocks away from me. So, one afternoon, power supply in hand, I walked over to where this man lived. There was a chain link fence around the house and an angry dog inside the fence. I stood out there long enough for the man’s wife to notice my presence with some annoyance. She asked me what I wanted, and I said I would please like to talk to the radio ham who lived there. So the dog was put up and I was ushered inside.

Mr. James P. Fleming, the Amateur Radio operator, was not what I expected. He was blind and suffered from an arthritic condition that caused him to be bent over to one side when he stood up. But despite his infirmities, he was a kindly and patient man, and he listened to my story about my power supply. After having me make sure that the capacitors were discharged, he used his fingers to thoroughly explore the wiring. He asked me questions about the color codes of the transformer wires as he built a mental picture of the whole thing. This took about two minutes, and then the expression on his face changed from puzzlement to understanding: I had wired the socket for the 6X5 backwards! I was crestfallen, but he told me it could happen to anybody. He had a surefire cure for my embarrassment: “How would you like to see my shack?” he asked. I’d never seen a real radio transmitter before! His was an enormous Johnson Viking. He got on the air and talked to people all around the country, just like they were sitting there in his radio shack! I was fascinated!

Within a week, I was starting to spend two or three afternoons over at “Jim’s” house as he began to “elmer” me on Amateur Radio. He taught me Morse Code and some practical aspects of radio. I would read to him from issues of QST for hours on end, which he loved. I took and passed my Technician license in 1962. I bought a “lunchbox” rig that was crystal controlled to transmit AM on 50.2MHz. Jim didn’t operate VHF or UHF, so we never got the chance to talk to each other over the air, and I deeply regret that I do not remember his callsign. Jim got sick and died only a couple of years after that. I was one of the all-ham pallbearers at his funeral.

Once I got my driver’s license, radio took a distant second place to other, more compelling social interests. But I was able to leverage my ham-obtained knowledge to get into electronics school in the Air Force. My ticket lapsed over time, but there was still an interest in Amateur Radio somewhere in the back of my mind.

Interestingly, it was the Internet that brought me back into the fold. I studied online and took the Element 1, 2, and 3 in Smithfield NC and was assigned KG4NGX as my callsign. I found out that nobody had ever requested my old callsign of K3VSA, so I applied for and got it under the vanity program. I now have the privilege of being the vice-president of a terrific radio club, and I get to hang out with some of the most amazing and talented bunch of hams anybody could hope to be friends with.

Most noteworthy achievement in Amateur Radio: Being a volunteer examiner and getting to tell some kid, “Congratulations. You’re now a Ham Radio Operator!”

Station and Operating Activities

by Bruce Meier, N1LN

Now that many of you have recently upgraded to General Class and have new HF privileges, what are you going to do with them? Well, other than try out that new radio, antenna, microphone and code key – how about going after some rare DX? Start to work on your DXCC, 5BDXCC or WAZ awards.

This month there will be two DXpeditions on the air, with one of them a “ten most wanted” location. Ten Most Wanted means exactly what it sounds like. This DXpedition is in a location that is on the top of the QSO, QSL needs list of Hams around the world. I, myself, need them both !!!

1. Scarborough Reef: The exact dates for this DXpedition have not yet been released, but it was stated that “late April” was the target. The call sign will be based on the BS7H format. Scarborough is the #1 most wanted DX entity. For additional information refer to their web site: <http://www.scarboroughreef.com/>
2. Swains Island: Swains Island will be on the air from April 4 – 15 and be using the call sign N8S. They will be on SSB, CW and perhaps RTTY. For more information you can refer to their web site at: <http://www.yt1ad.info/n8s/>

The best way to know if these stations are on the air is to first, refer to their respective web sites for modes and suggested frequencies of operation. Then keep an eye on your favorite DX Cluster. If you are not familiar with DX clusters, take a look at DX Summit at this URL: <http://oh2aq.kolumbus.com/dxs/>. Once there, click on NO FRAMES or Spot Database Search. No Frames will show the most recent spots and will update on a regular basis. Spot Search is used to look up the most recent spots of the call sign you are looking for. If you already have computerized logging software – you already know what I am talking about. HAPPY HUNTING !!!

NEXT MONTH: If I had \$1200.00 to spend on upgrades to my Ham station, how would I spend it?

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OCRA Officers

Dave Snyder, W4SAR - President
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