



ORANGE COUNTY RADIO AMATEURS
(an ARRL Special Services Club)
Orange County, North Carolina



Orange County Radio Amateurs (OCRA) Newsletter
May 2009

From the Editor

Well,

The pleading for articles was heard. My heartfelt thank you to all who contributed to this month's newsletter, please keep it up.

10m net

The 10m net continues to be a success story with an average of 16-26 stations checking in, some from other states when conditions permit.

Lightning protecting my shack (and the attached house)

I have been a very busy boy this month with lots of school work. I have enrolled in: learning "proper" lightning protection techniques as well as understanding the "insurance ramifications" if a disaster will strike. I have discovered that the insurance industry has been very, very busy in promoting regulations to reduce the amount of "self installed" grounding set-ups, all in an effort to keep from paying for repairs.

For those interested the regulations covering this are: NFPA 780 (article 650), National Electrical Code (*NEC-70-1996*) and the newly created "Lightning Protection Institute".

For equipment grounding IEEE standards (*IEEE Std 1100-1992*), guess the membership money I spend a year is worth something if I bothered to access the info ;). I guess better late then never.

In short "be very careful" on what you do and how your areal device(s) and signals, are brought into your QTH. ARRL insurance (if you get it/have it) will only cover \$1K toward your equipment.

73, Adriano (KI4OTN)

News letter Format (going forward)

News letter format will start with:

- 1) Secretary's opening remarks
- 2) Board meeting report
- 3) General meeting report
- 4) QSL Card(s) of the month
- 5) Editorial write ups
- 6) Community involvement by our club
- 7) Miscellaneous information

Until next month.....

Adriano – KI4OTN
KI4OTN@ncocra.org



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Board meeting report:

The OCRA Board Meeting for May was called to order at about 6:00PM in accordance with the previously published notice on the OCRA webpage calendar. Club Officers and Board Members present included K3VSA, President; KR4FM, Vice-President; KR4UB, Treasurer; Board Members W4SAR, KD4YJZ and N4ZAK. Absent were Board Members KI4YSZ and N2JFP. Also absent were KI4OTN, Secretary, and KD4YJV, Board Member, who both arrived at about 6:30PM.

K3VSA proposed bringing before the membership a request from ARRL Headquarters that members contact their US Representatives and ask them to support HR2160, which would direct that a study be conducted that would identify impediments to the use of Amateur Radio in emergency service. This would hopefully be a first step to extending the provisions of PRB-1 to CC&Rs. The Board Meeting approved bringing the matter to the membership.

K3VSA proposed bringing before the membership a request from WUNC-TV for volunteers to staff phones at their next fundraising event. The Board Meeting approved bringing the matter to the membership.

K3VSA brought a request from KI4OTN, Secretary, that the status and future of the ARES Pagers be determined. KR4UB mentioned that these pagers are failing and are becoming increasingly difficult to repair. N1YXU said that the Emergency Training Team she is leading had ARES Pagers as an agenda item to be considered.

K3VSA brought a request from KI4OTN, Secretary, and KD4YJV, Board Member, that some new seating arrangement be considered for the Board Meetings that would better permit board member attendees to hear each other. The Board Meeting approved this request. [Note: After later consultations between K3VSA, KI4OTN, KR4FM and KR4UB, it was decided to change the wording in the calendar to more plainly indicate that the board meeting proper would begin at 6:30PM to differentiate it from the preceding dinner and to provide additional time for everyone to arrive. The calendar on the OCRA webpage was therefore changed.]

There being no further business for the Board Meeting, it was concluded at about 6:15PM.

-K3VSA reporting

General meeting report:

Dan Eddleman (Treasurer) reported that our club coffer is now around \$6,570.60.

The club VE session had six candidates for new licenses and upgrades. All six applicants achieved their desired goal.

Patrick, Brooks (KJ4EWX) passed the OCRA cup to Dewey Thompson (WA4AHR) with thanks for all the behind the scene work and help Dewey provides to OCRA.

OCRA President Woody presented information of US House of Representatives (HR2160) as well as WUNC volunteer needs (see above in board meeting info for more details).

Dee presented information about DFMA hamvention. The event is to take place on May 23 at a place off 15-501 North in Durham.



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IRLP link work is moving forward in spite of a networking set back at the Mary Ellen Jones building.

Bruce Meier (N1LN) had a well articulated presentation in making DX contacts and preparation thoughts for field day operation.

Laurie Meier (N1YXU) presentation was on the desire to improve on the OCRA amateurs emergency communications procedures and training as well as for OCRA emergency communications and procedure become the standard for Orange county EMS.

Yaesu FT-7800R installation in a 2000 Honda Civic EX

By John Shadle, W4PAH



This past September I began a job in RTP which led to more time spent in my car on a daily basis than my previous status as a bus-riding student—and potentially more time to “play radio” on a regular basis. This began an evolution of my reality of mobile operations, as well.

My first mobile station consisted of a Yaesu VX-7R handie-talkie and its rubber-duck antenna. The frustrations of a poor radiating antenna led to the installation of an Austin 500C dual-band (2m, 70cm) antenna on a Comet CP-5NMO mount on the lip of my trunk. Then, I added the earpiece mic (VC-27) to the mix, to keep from having to hold the radio while driving. This worked well for a while, but I soon realized that I wanted to place a higher power radio in my car “permanently”.



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Since I had already solved the antenna side of things, I began my search for the perfect radio for mobile operations.

My car is a 2000 Honda Civic EX with a manual transmission. Because most of my travel would be short trips to work from my house and back, and because of the need to shift gears, I decided against an all-mode, all-band transceiver and for an FM dual-bander, instead. After reading the reviews on eHam.net, and based on my own positive experience with Yaesu rigs, I purchased a FT-7800R on special from one of the online dealers which included the head separation unit. I knew that I would not have room for the full transceiver in my dashboard, so having the ability to place the bulk of the rig elsewhere was very attractive to me.

Now that I had almost all the pieces in place, I began sketching out plans of how I could run wires in my car to get power from the battery to wherever I placed the transceiver, from the transceiver to the control unit, from the transceiver to the speaker, and from the antenna to the transceiver. Lots of wires going different places in this installation!

Running wires from your battery to your transceiver through the firewall of the car is not the easiest task. This, above all else, caused the most trepidation because I didn't want to destroy any wiring currently in my car or create unneeded holes in the firewall. I headed over to KOBG's mobile installation site to view other hams' installations, based on a recommendation from KZ1X. I read on the eHam forums, too. I finally decided that I would run #10 AWG red/black power wires from my battery to the trunk, where I would place the transceiver. The #10 was probably overkill, but I thought that it would allow the most flexibility if I ever decided to put anything else in the trunk in the future which required more "juice".

First I tried simply pushing the #10 through a hole through the firewall I had located behind the glovebox. While the #10 is pretty stout wire, it would not make it through on its own. Next, I tried taping a straightened wire clothes hanger to the #10 and pushing it through. I had made it through the firewall successfully, but once I started pulling the hanger through on the engine side, the hanger snapped in half. Finally, I decided to take advantage of the nature of the twin-lead wire and make a few small slits in the thick plastic separating the red and black wires (NOTE: Be very careful not to breach the insulation of either the red or black wires and create a possible short!) and "weave" the coat hanger in and out of these slits. I tightly wrapped electrical tape around it and I was in business. This technique allowed me to get the wire through the firewall to the battery. Success!

The next step was to figure out a way to fasten the control head to the dashboard. Below the AM/FM radio there is a small pocket where papers, CDs, or the like can be stored. I found a replacement pocket kit on eBay which was manufactured by Scosche. I wanted to preserve the resale price of my car as much as possible, so I decided to purchase the replacement pocket and save the original pocket to re-install once I removed the control head at some point in the future. Thanks to a tip from N2JFP I headed down to Durham's Scrap Exchange to search for something to cover the pocket and attach the control unit to. Success once again, as I found just what I was looking for in a rectangular plastic piece for \$0.10!

I drilled a hole in the rear of the pocket and in the new plastic faceplate for the control wire to pass through, pulled the wire through, and grommetted the front hole (to keep the wire from passing back through the opening if I ever removed the control head). Next, I used super glue to attach the plastic rectangular panel to the pocket and waited. Once the glue was dry, I then measured and installed the control head mount with the included screws.

Installing the pocket in the dashboard is another topic completely, but if you are lucky enough to find a service manual for your particular car, then this becomes much easier to do.



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Once the pocket was installed, I began the process of routing the power cord, speaker cord, and control cord from the front of the car to the rear of the car, where I was going to install the actual transceiver. I bundled the three wires together with wire ties and used split-loom tubing to protect them from potential nicks. Using the handy service manual I had found on the internet, I removed the interior side paneling to pass the protected wires to the trunk. (Again, I'm making this sound easier than it really is, but each installation will be different depending on your automobile.)

I decided to install the transceiver on the back of the passenger-side rear seat. I first removed the backing of the seat to reveal the metal where I would drill through to attach the transceiver mount. A Dremel came in handy for this task, then I used a cordless drill to drive the screws into the metal.

On each end of the #10 AWG I attached the ubiquitous Anderson PowerPole connectors. This allowed easy attachment of my transceiver to the power cable, using replacement VHF/UHF "T" connectors from PowerWerx, as well as to the Littelfuse (yep, that's how they spell it!) ATO/ATC fuse holder (attached to my car's battery on the other end).

I was finally ready to apply power and try it all out. Lucky for me, the result was a clean, alternator warble-free sound. Thanks to all the club members who offered encouragement and experience along the way. I couldn't have done it without you!

As far as I'm concerned, the installation is complete. I decided on the Vertex Standard MLS-100 speaker, which plays perfectly with my FT-7800R. The speaker is loose in the floor at the moment as well as the hand mic. I may eventually fasten them to the interior of the car at some point, but I'm quite happy with their locations at this moment.

References

<http://www.eham.net/reviews/>

<http://www.KOBG.com/>

<http://scosche.com/>

<http://www.scrapexchange.org/>

CARQUEST: split-loom tubing, Littelfuse fuse holder, fuses, battery terminal connections

<http://www.powerwerx.com/oem-connectors-filters/>

High resolution photos of the install are available at

<http://www.flickr.com/photos/shadle/sets/72157613559691280/>

My New 10 Meter Band Experience

By Karen Snyder, KD4YJZ

With the removal of the Morse Code requirement to operate in the "Novice" portion of the 28 MHz phone band, a new world opened up for me, a holder of a Technician's license. Communication via the 10 Meter band was a fascinating new experience for me in the world of amateur radio. When the Orange County Radio Amateurs recently started a Monday night net on that band, I was happy to find other people with the same interest.



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After digging out the G5RV antenna from storage, Dave and I spent a couple of evenings shooting pilot lines into the trees to haul the antenna to a suitable height. Then we worked on tuner settings that gave us low enough SWR to allow us to work the band without straining our Kenwood TS440S. All that was left was to wait for the net to begin, I could hardly contain my excitement!

We found that most of the net participants could hear us with 50 Watts of transmitted power. Woody, K3VSA was the net control that night. He informed me that I was the "Sweet 16" on the list of participants that evening. Lo and behold, he even sent me my first QSL card! I eagerly look forward to the net every Monday night (except of course when OCRA is meeting).

Now with Field Day approaching, I have decided to volunteer as the band captain for 10 meter phone. I am looking forward to working that band for that emergency exercise. The 10 Meter bug has bitten me hard!

Field Day 2009 – Final Planning

By Dave Snyder, W4SAR
 Field Day Coordinator

This is likely my last newsletter article before Field Day itself, so here's the finalized portion of the plans as well as some items that need to be sewn up.

First off, we're on track for holding a 9A Battery operation, we now have captains for all the primary HF stations as well as VHF/UHF, see the list below

<u>Band/Mode</u>	<u>Captain</u>	<u>Antenna(s)</u>
80M CW	Mac, WQ8U	dipole
40M CW	Steve, KZ1X	phased verticals, dipole
20/15/10M CW	Wilson, W4BOH	tri-band yagi
40/15 Digital	Dave, W4SAR	G5RV
20M Digital	Ken, KR4FM	dipole
80M Phone	Dave, W4SAR	vertical
40/15M Phone	Gerry, KD4YJV	loaded yagi, dipole
20M Phone	Ted, KE4NBB	vertical, dipole
10M Phone	Karen, KD4YJZ	rotatable dipole
VHF/UHF	Chris, KG4CFX	yagi

Band Captains will receive a manual at the next OCRA meeting which will have a map of the camp layout, copy of the Field Day rules, safety advice and list of rules for the use of the FD site, a sign up sheet for operators, an information sheet for you to fill out about your station, and paper log sheets and dupe sheets as a back-up for computer logging. We will use the WR9R FD logger for computer logging, you can download a copy from the Field Day 2009 folder in the files section of the NCO CRA yahoo group. Get familiar with it, I will run a live tutorial at the next OCRA meeting.

Besides QSO points, there is a significant number of bonus points we need to nail down, some are covered, many are still open. Let's nail this down by the meeting:

100% Emergency Power - 100 points/station- band captains



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Media Publicity -100 points- K3VSA (he is our Public Information Officer)

Set-up in Public Place -100 points- done!

* Information Booth - need flyers from both OCRA and DFMA, an info sheet on amateur radio in general and emergency communications would be good.
Any takers?

* NTS Message to ARRL SM/SEC - 100 points- N1YXU/ N1LN

* FORMAL NTS Messages handled - 10 points each- N1YXU/ N1LN advised only worthwhile if they can be passed in a timely fashion

Copying of W1AW Field Day Message- 100 points- W4SAR & KR4FM via PSK31

* Satellite QSO- 100 points- any takers?

Natural Power - 100 points- KZ1X? – Steve usually provides a battery solely charged by capture of solar radiation.

Site visit by elected official- 100 points- K3VSA

Site visit by served agency official- 100 points- Tim Bothe, the Director of Disaster Services of the Orange County Red Cross Chapter has accepted an invitation to attend Field Day

* Educational Activity Bonus - 100 points- Ideas? Takers?

Youth element achieved- up to 100 points- 20 points for each operator under 18 y.o. who makes a QSO, band captains document this on your operator sign-in sheet and on the log.

Electronic submission of final score- 100 points- W4SAR

Let me know as soon as you can if you can take any of these on.

Lastly, let's talk about the FD weekend itself. The rules state that we can start setting up no sooner than 24 hours prior to the start of FD itself. Therefore, I will enter the field at 2:00pm on Friday, June 26 to start marking the locations for the campsite. I will place wooden stakes with signs marking the location for each station. I cannot emphasize enough to everyone that the earlier you get your set up done for Field Day, the more enjoyable your experience will be. Try to get your antennas up on Friday if possible, I will be staying there overnight to keep an eye on things. If you plan on starting set up on Saturday, SUNRISE IS NOT TOO EARLY! Ideally your stations should be completely set up, tested and all troubleshooting done by noon at the latest. Then you can have a leisurely lunch and be relaxed and ready for the "starting gun" at 2:00pm on Saturday. Many hands make light work, so we'll need lots of volunteers to assist in both the set up and tear down of stations.

I am looking forward to the collaboration this year of our two great clubs, I already know that this year's field Day will be awesome!

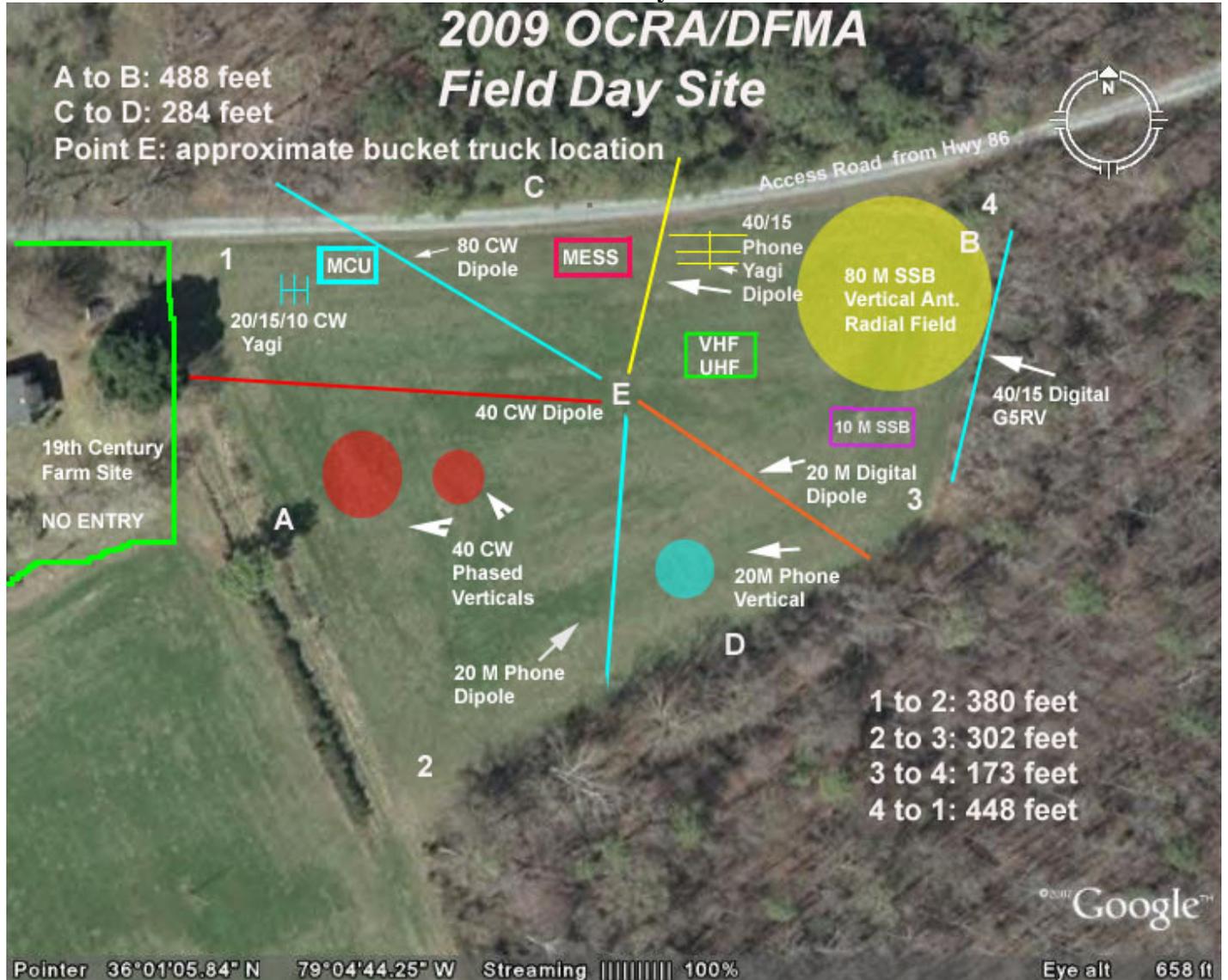


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73, Dave

Blackwood farm field layout as of 4/13/09



The President's QRM
 (May 2009)

A warm OCRA welcome goes out this month to our newest member, David Sanders (W4DES). Great to have you, sir! I suppose in one sense it's a good thing, but to me, it's bad that now there are so many members of our club that I cannot mentally put a face next to each and every name in the membership roster. Somebody pointed out to me Monday evening that we enjoyed having seventeen people just at the open board meeting and dinner that takes place BEFORE the club meeting. That's more people than show up for many other clubs' meetings, so we must be doing something right.

So what do we do with all these people? Train 'em for emergency service, that's what we'll do. OCRA has a fine tradition of helping with emergency communications going back many years now. We've provided radio support "when all else failed" in the aftermath of hurricanes, ice storms, phone cable outages, etc., and we intend to continue that tradition of support. But we've had so many new people



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join the club that there is now a need to indoctrinate them in the time-proven methods of emcomm. Toward that end, Laurie (N1YXU) and a group of volunteers are developing a training program that will bring all of us up to speed on this subject.

Along the way to developing this program, new ideas for improving our served agency support will be examined and implemented where new ideas make sense. Keep in mind, it's a new ball game out there. September 11th and FEMA have made it a new ball game. New forms, new courses for certification, new ways of thinking. It'll be a challenge, but as they say on Bob the Builder, "Can we do it? Yes we can!" So, if you're new to Amateur Radio and emergency services, contact Laurie and ask what you can do to be a part of one of the main reasons why Amateur Radio exists. And if you've been around awhile and have experience to share, by all means, get connected and share it!

I hope to see all of you at the upcoming DurHAMFest. Stop by the OCRA tables (three, count 'em: three!) and say hello. If you have any Amateur Radio-related items you want to part with, or other items you think would interest our demographic group, mark them with your name, the price you're asking for them, and what percentage (if any) that you wish OCRA to retain. We'll do our best to sell them for you. And, remember, the Hillsborough Bojangles on Saturday mornings beginning about 9:00 AM. Be there!

Until next time,
vy 73 de Woody K3VSA

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OCRA Emergency Communications Team Update

By Skip, Fisher (N6LUZ – ARES Emergency Coordinator- Orange Co., NC)

The OCRA Emergency Communications Team met on Sunday, May 24, at the Orange County EOC facility. Those who attended include Woody (K3VSA), Kelly (W4KSP), Dave (W4DAP), Chip (KF4WBK), Steve (W3AHL), Chris (KG4CFX), Bruce (N1LN), Laurie (N1YXU), and myself. Other members who were unable to attend the meeting due to the holiday include Ken (KR4FM), Patrick (KJ4EWX), Perry (KJ4IYJ), Dan (KD4AGQ), and Jeff (KD0DNN).

The OCRA Emergency Communications Team will meet monthly at the Orange County EOC facility (the location of the monthly OCRA meetings) on the last Sunday of the month at 6:00 pm. All OCRA members are encouraged to attend the meetings and participate in the discussions and planning sessions. Please note that the month of June will be an exception to the normal schedule. Since Field Day will end on Sunday, June 28th, the June meeting will be held on Sunday, June 14.

OCRA has a long history as a club focused on Emergency Communications and Public Service. The club was formed originally with the goal of being one and the same with Orange County ARES and the agencies we serve have been very supportive of the club with initial funding to get the club repeaters on the air and providing OCRA with repeater locations second to none. OCRA/ARES club members have served with distinction in several incidents over the years, and deserve to be honored for continuing the tradition of public service upon which amateur radio is built.

A number of new OCRA members that have offered their service as ARES volunteers form this new team and represent a fresh dynamic in the emergency communications work for OCRA. I applaud and support their efforts.



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The ARES landscape is changing. There are new federal guidelines for the relationship between ARES and federally funded agencies and the relationships of County and State agencies are becoming more structured. OC ARES needs to stay abreast of these changes by bolstering our own level of emergency communications training, strengthening the relationships between County ARES chapters, with our served agencies, and by ensuring that we are adhering to any new requirements that will enable us to continue to support groups that need our assistance. The work the OCRA Emergency Communications Team is focused on will enable all OCRA members to become more effective ARES volunteers the next we are needed.

The OCRA Emergency Communications Team current activities and upcoming meetings will be announced at the monthly OCRA membership meeting. Meeting minutes, action items, and documents will be posted to the OCRA reflector and also to the OCRA website in the ARES section to keep everyone informed. Please take time to review the information and plan on attending a team meeting if you would like to join their efforts.

Here is a preview of some of the upcoming activities:

- A new weekly net focused on traffic passing using the new 213 form and emergency communications protocols.
- A SkyWarn program at an OCRA club meeting sometime soon to review preparedness for the upcoming hurricane season and schedule basic/advanced training classes.
- Review of free training courses that each ARES member needs to complete to be credentialed to support served agencies

Stay tuned. There is a lot more to come!

73's, Skip

REMINDER:

Location for the Monthly OCRA Meeting is: Orange Co EOC, 510 Meadowland Dr. in Hillsborough.

Direction to meeting site:

From Chapel Hill:

1. Take Martin Luther King ("Historic Airport Road") north toward Hillsborough.
2. MLK becomes Highway 86 (north towards Hillsborough)
3. Turn right onto Highway 70 Business at Hillsborough at the "T" intersection
4. Pass Meadowland Drive at the Triangle Sportsplex entrance to Meadowland office park
5. Turn right onto the second Meadowland Drive (Meadowland Drive is a loop), approximately six tenths of a mile from the intersection of Highway 86 and Highway 70 Business
6. Turn left into second driveway at 510 Meadowland (see radio tower), which is the location of Orange EOC

From Durham:

1. Take Interstate 85 South toward Hillsborough.
2. Exit Interstate 85 at Highway 70.
3. Bear to the left and take Highway 70 Business at Wayside Baptist Church
4. Turn left onto Meadowland Drive
5. Turn left into second driveway at 510