BROWARD COUNTY FLORIDA

EMERGENCY COMMUNICATIONS TRAINING

The Broward County Emergency Preparedness Net (BCEPN) meets three (3) Wednesdays per month on the BARC repeater on 146.910 MHz, -600, PL 110.9 and on the fourth Wednesday of each month on the simplex frequency of 146.550. In months with five (5) Wednesdays the net will be held on the BARC repeater. Net Manager is Mike Davis / K2MOL sixdaywarrior67@hotmail.com

Next Meeting January 19th 2016

This month's topic will be an interesting NASA video called "A tour of the Electromagnetic Spectrum" and an intro to NBEMS. The NBEMS hands-on will be done when the workshop is scheduled at an upcoming meeting.

Presented by Barry Porter / KB1PA

Please plan on attending this meeting. Starts at 7:30 PM. Map and contact information on the last page.

January 2016

220 MHz AMATEUR RADIO REPEATER 224.7600 -1.6 MHz PL 110.9 W4BEM Broward County RACES Repeater

By Robin / N4HHP Broward County RACES Officer

Are you on 220 MHz?

We have acquired a well-known repeater frequency. The frequency is not new to you, but is being kept on the air by a small group of radio enthusiasts interested in promoting activity on the 220 MHz band. Now, as a result, our group is composed of Amateur Radio Operators that enjoy the hobby of Amateur Radio.

Broward County Radio Amateur Civil Emergency Service (RACES) has a 220 RACES station for use by anyone that has a 220 transceiver. It will be an open repeater for all to use during non-disaster situations. During man-made or natural disasters, this 220 MHz repeater can be linked to a VHF and UHF repeater combining three repeaters of our choice together.

Some amateurs feel that the 220 MHz band is a useless band because no one ever uses it. I could point fingers at the different repeaters in Broward County and say the same thing about them. I only hear a few hams on the air and the repeater is quiet the rest of the time, with the exception of the SEFTN, DCARC, ARES/RACES and other nets taking place, the repeaters are basically quiet.

My question is this. Should anyone make a motion to remove those repeaters, since they are not used constantly? If you think about this, you will find that there would be no amateur repeaters left for us to use.

The 220 MHz amateur radio band has a long and colorful history. The Federal Communications Commission (FCC) approved VHF bands as early as 1938, one of them being the 1.25 meter (220-225 MHz recently condensed to 222-225MHz) band. Amateur radio activity spiked rapidly in 1960s and 1970s, as 2m and 70 cm band frequencies swiftly rose to prominence. The 1.25m however, escaped commercial popularity - partly owing to lack of commercial frequency allocations. Add to it, commercial radio equipment for the band has been scarce, and that which was available at the time was very cost prohibitive. Amateurs willing to go live on this band have had to build their own equipment or buy specialized amateur radio equipment. Today, the 1.25m or 220 MHz band VHF radio spectrum is universally recognized and reserved for amateur radio use. Primarily available from 222 to 225 MHz, with secondary 219 to 220 MHz for secondary local communications, the Condor Connection. 220 MHz amateur RF bands and repeaters have sparked a recent resurgence in interest. One of the largest groups of 222 MHz in the United States being the Arizona, California and Nevada area, they call themselves, “The Condor Connection”.

Why would anyone want to get on 220 MHz?

* It's a great band, with characteristics similar to 144-148 MHz, and has certain real advantages over the 2 Meter band.
* Radio amateurs may lose this band unless we make better use of it.
* Amateurs in the US lost 220 to 222 MHz some years ago. Canadian amateurs have just recently lost 220 to 222 MHz to manufacturers too. I suspect that commercial interests in Canada want access to the rest of the band, 222 to 225 MHz .
* Everybody seems to want to put up a repeater on the 2 meter or the 70 cm band. Why not so much on the 1.25 meter band?
* Use it or lose it. We have been warned often enough.

220 MHz repeater band plans

Band plan

License class	219–220	220–222	222.00–222.05	222.05–222.10	222.10–222.275	222.275–222.300	222.31–223.370	223.39–223.490	223.49–223.590	223.59–223.890	223.91–225
Basic(+), Advanced											

Key for the band plan

- = Available on a secondary basis to other users.[3][11]
- = Available only to assist with disaster relief efforts.[3][11]
- = Reserved for EME (moon bounce)
- = Continuous wave (CW), 222.1 calling freq.
- = SSB, 222.2 calling freq.
- = propagation beacons
- = FM Repeaters (input −1.6 MHz)
- = High speed data
- = FM simplex

In the U.S. with FCC auctioning licenses for commercial use, things have been relatively better. UPS never quite used the 220-222 MHz band and amateurs are pushing for re-claiming the band. With none of the super-narrowband companies showing particular interest, it appears that the entire 220-225 MHz band is yet again up for ham activity.

Advantages of 220 MHz repeater

The 220 MHz repeaters have some distinct advantages over those designed to operate for 2m/70cm pair:

- Worth the customization effort - a few manufacturers who have made the 220 MHz repeaters have discovered that it's an excellent, low-interference band. That totally makes it worth the effort to even customize equipment.
- 220 MHz band delivers the best propagation among the "big three bands" (432 MHz, 220 MHz, 144 MHz)
- Change in 220 MHz perception - With the 'lack of commercial gear' myth being busted for the 220 band - attractive prices for equipment is the new reality. The repeaters out there today can adapt from weak-signal work to FM. Serious VHF contesters are making a move to leverage 220 using SSB and CW, for the extra multipliers.
- Increased traction of Amateur radio and ham clubs towards the 220 MHz band naturally creates the demand for technology refinement in 220 MHz repeater space.

Most amateurs, especially those newly-licensed, get equipment for the 2 Meter band. Manufacturers put out lots of neat rigs for this band, many paired with 440 capability, and they generally have put the 220 band on the back burner. This all goes back to the early days before amateur rigs were available for VHF and when commercial radios could be readily converted to 144 MHz, and not so easily or not at all to 220. So, lots of hams got on 2 Meters with converted gear. Eventually manufacturers started making rigs for 2 Meters because they saw that the market was there. The same sort of thing happened on the 440 band. But a few manufacturers made equipment for the 220 band, and some amateurs discovered what a good VHF band it is.

Many amateurs when asked why they don't try 220 say 'why should I buy another rig when nobody is on the band, and there is hardly any equipment available for 220?' Why you should make a move to get on 220 is noted above - and there are amateurs on the band. The perception that there is hardly any commercial gear for the 220 band is a fallacy, and new equipment is available – Wouxun, Alinco, Jetstream and Kenwood just to name a few and some at very attractive prices. There is equipment out there that you can use for weak-signal work as well as for FM. Serious VHF contesters have already made the effort to get on 220 using SSB and CW, for the extra multipliers.

Today, new handheld and mobile equipment is being produced by amateur radio manufactures, and it is estimated that more amateurs have 1.25-meter equipment now that at any point in the past.

From: Ascarrunz, Miguel [mailto:mascarrunz@broward.org]
Sent: Friday, December 25, 2015 7:49 AM
To: Robin Terrill <n4hhp@comcast.net>
Subject: Re: The Broward County 224.76 repeater

Great news! Thanks, Robin.

Merry Christmas and Happy Holidays to all our valued Amateur Radio partners!!!

Miguel Ascarrunz
Broward County
Emergency Management Director
www.broward.org

N4HHP's Note: Please send me an email if you are on or planning to get on 220 MHz so we can plan accordingly

No equipment available, you say? Contact Mike @ Mike's Electronics for availability and pricing.

Mike's Electronics

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2015 Weather Year in Review

Attached is the 2015 Weather Year in Review distributed today by the National Weather Service (NWS) Miami Forecast Office.

2015 SOUTH
FLORIDA WEATHER S

Basic J-Pole Antenna for the 220mHz Band (1.25 Meter band)

Taken From n4ujw@hamuniverse.com - Reproduced with permission

The 220 MHz ham band is the least popular ham band in the VHF/UHF portion of the ham bands. It is not used nearly as much as the 2 meter or the 440 ham bands in the U.S.

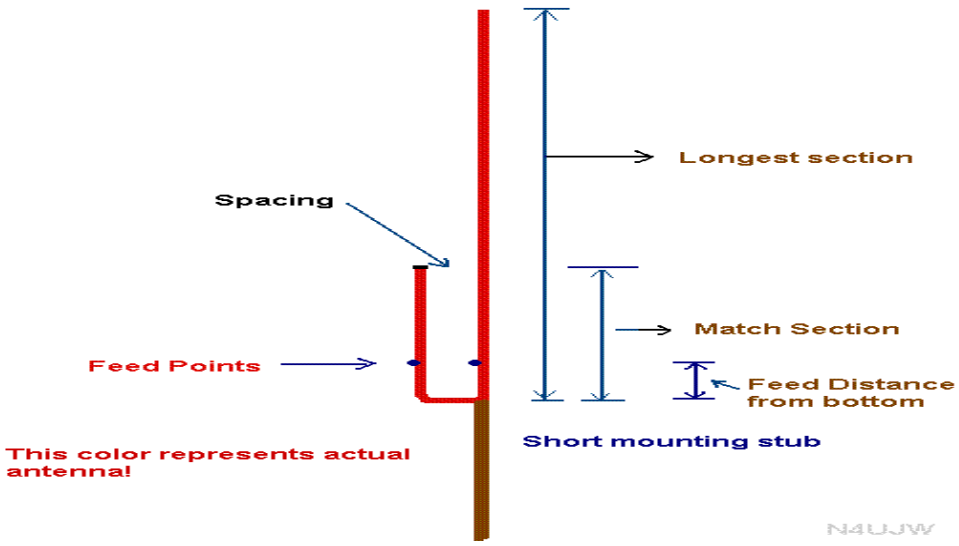
Since we have "220" repeater located at Broward Blvd. and Pine Island Road, and you wish to try your skill at building an antenna and operating on this fun band...read on!

The J-pole antenna is an end-fed omnidirectional dipole antenna that is matched to the feedline by a quarter wave transmission line stub. Matching to the feed-line is achieved by sliding the connection of the feedline back and forth along the stub until a VSWR as close as possible to 1:1 is obtained. Because this is a half-wave antenna, it will exhibit gain over a quarter-wave ground-plane antenna. This article will get you started in building the J Pole antenna for the 220 ham band, also called the 1.25 meter band. The specific lengths, etc. in this article are for the center of the FM repeater input frequency of the band.

The J-pole antenna is somewhat sensitive to surrounding metal objects, and should have at least a quarter wavelength of free space around it. The J-Pole is very sensitive to conductive support structures and will achieve best performance with no electrical bonding between antenna conductors and the mounting structure. (This last sentence is debatable and ignored by many builders). Most builders use an air wound choke made from 50 ohm coax at the bottom of the antenna. About 4 to 6 coils of coax formed into a circle usually does the job.

In this article you will find a basic drawing of a J Pole antenna below and the lengths, spacings, and other details to build one for the 200 MHz ham band. More specifically, the article details lengths and spacings for the center of the FM repeater input section of the band.

The 220 band frequency range in the U.S. is between 219 MHz and 225b MHz so we looked at the ARRL suggested band plan and used 222.8 MHz as the design frequency for this project. It is in the center of the repeater portion of the band plan. You may want to consider another frequency if needed and adjust the lengths and feed point connections as needed.



Note in the drawing above the wording, "This color represents the actual antenna!" refers to the red/orange color, not the brown color to the right of the wording. That is the support for the J pole.

In the drawing above, you will see one long vertical element "spaced" a short distance from a shorter vertical element and connected at the bottom. This is called the "spacing" as you will see later in the lengths section of this article

below. The feed points, noted by the dots in the drawing near the bottom, are actually connected to a part of the lower matching section that consists of a 1/4 wave section. These feed points are the connection points for the coax feed line. The shield of the coax connects to the SHORTEST ELEMENT. The center conductor connects to the longest element. You will want to make these connections temporary at first for swr tuning.

They are adjusted up or down equally from the bottom "U" spacer for best swr after the antenna is built and installed.

Most builders use small copper tubing and 90 degree copper elbows for the construction. However there are other methods of building the J pole antenna. Copper tubing is used for its' strength.

Also most builders use one single very long length of copper tubing for the entire longest vertical section by using a "T" copper fitting at the junction (where the color turns from brown to the different color in the drawing at the bottom of the matching section.)

Below are the lengths for a J pole designed for a center frequency of 222.8 MHz

37.92 inches Longest element (not including) the support below it.

12.6 inches Short element

1.2 inches Spacing from longest element to shortest (metal to metal, not center to center)

1.2 inches Starting point up from the bottom for matching (adjust as needed for lowest swr) When you achieve your lowest swr, then attach the feed connections securely.

(These lengths and measurements were taken from the J pole antenna calculator on this page.) Note that if your swr is at or very near 1:5 to 1 *using the starting point of 1.2 inches*, you need not try to be a perfectionist unless you are!

The formulas used for designing a J Pole antenna are as follows:

Total length (1/2 wave element)	705 / frequency of use = feet
Short length (1/4 wave element)	234 / frequency of use = feet
Feed Tap Point up from bottom)	23 / frequency of use = feet
Spacing between long and short sections	22 / frequency of use = feet

Multiply feet X 12 to convert to inches.

ARTICLES NEEDED!!!

If you have anything pertaining to ARES, RACES or Skywarn training that you would like to contribute and share with others in the ARES/RACES/SKYWARN organizations, I would be happy to include your offering in any future edition. Anything you would like. Hints and kinks, antennas, technical talk, operating tips, public service, weather related, etc., would be heartily welcomed!!! All articles are to be camera ready. All articles must be in by the 12th of every month. Copyright rules and permission apply to all submissions. All submitted articles submitted will be at the discretion of the Editor.

I hope you enjoy my Newsletters as much as I do putting them together!

Please send your submission to:

Robin / N4HHP Editor

If you know someone that would like to receive these Newsletters, send me their email address

n4hhp@comcast.net

American Diabetes Association.

December 11, 2015

Dear Robin:

On behalf of everyone at the American Diabetes Association, we want to extend a huge THANK YOU for your support of this year's Tour de Cure. This year was our best one yet, and without the support of you and your team of volunteers with command central, this would not be possible. Helping us with our cause every year really means a lot not only to us, but to the community we are living in.

Your support helps to inspire and mobilize the general public, volunteers, donors, corporations and the scientific and medical communities to rally around our cause and our call to "share, act, learn and give." Through these actions, South Florida will have the chance to get involved and help raise awareness, promote healthy living, and raise money to fund educational outreach, advocacy efforts, and critical research that will ultimately STOP DIABETES once and for all.

Your continued support is a greatly valued and gives us added confidence in our mission. Your contributions, time, and effort is greatly appreciated. Thank you once again for everything you have done for us. We can't wait to work with you for next year's Tour, it's going to be even bigger and better! We wish you a very happy holiday and New Year!

Kind regards,

Shaunte, Liz and the Tour de Cure team

FTL
6400 North Andrews Avenue, Suite 480
Fort Lauderdale, FL 33309
Tel:954-772-8040

Diabetes Information
call 1-800-DIABETES (1-800-342-2383)
online www.diabetes.org
The Association gratefully accepts gifts through your will.

The Mission of the American Diabetes Association is to prevent and cure diabetes and to improve the lives of all people affected by diabetes.

The Amateurs that participated in the 2015 American Diabetes Association Tour de Cure are:

Roy Neilman/KJ4EGN, Tony Becker/K4GUU, Ron Ulm/W2RAU, Mary Ulm/W2MGU, Jim Calcanes/WB4JC, Bill Lueado/K4WHL, Arthur Lewis/WA8VSJ, Ty Sarna/N1TY, Jaron Rauscher/KM4OGT, Mike Wolf/K2HXC, Brian Fox/W1FOX, Carol Sjursen/KJ4AWB, Steve Adams/N4JRW, Tom Hayes/N4MEO and Robin Terrill/N4HHP

THANK YOU ALL FOR A JOB WELL DONE

CY HARRIS W4MAQ MEMORIAL FREE FLEA

Broward Amateur Radio Club

SATURDAY, April 23rd 2016

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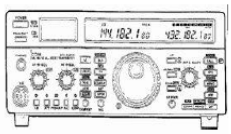

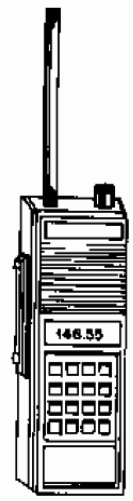

FREE TO BUY-SELL

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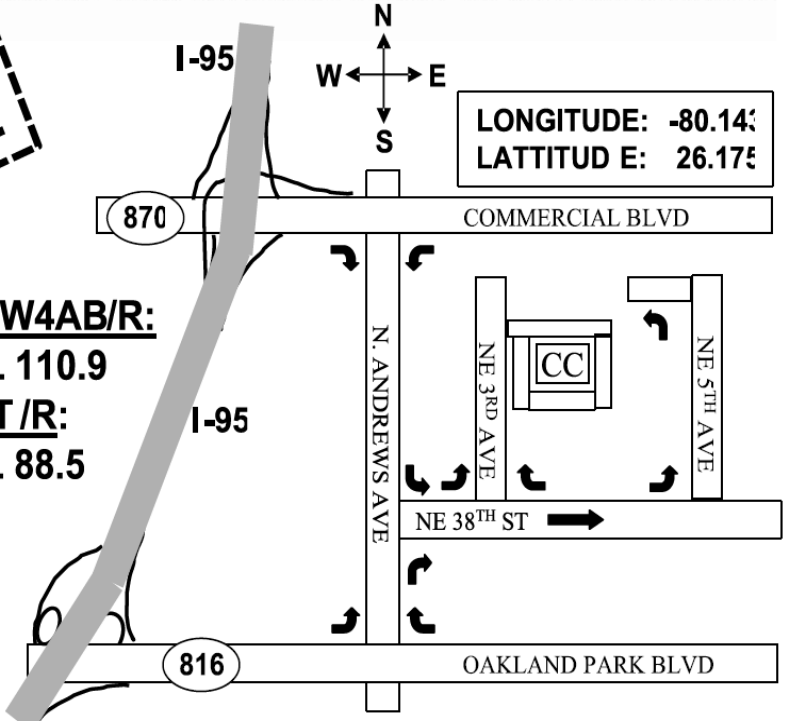
Back-Up W4MOT/R:
146.790 (-600) PL 88.5



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tony@mcrsys.com
954 612-9303

Using an external antenna with your handheld radio

Printed with permission from KB9VBR@arrl.net

Starting out in amateur radio, our first rig usually is the venerable handheld radio. Compact and all-in-one design, these HT's or handi-talkies are an inexpensive choice. In fact, now with the Chinese handhelds flooding the market, a ham can get on the air for as little as $30.

But soon after buying one, you realize the limitations of handheld radios. Battery life being the first, but more importantly, range. We all want to get farther with our radios. Making contacts is an enjoyable part of amateur radio, but the 3-5 watts of the handheld radio can only go so far. Fortunately, hams are resourceful and we love to do more with less. So to make our signal reach further with a handheld radio, we need to add an external antenna.

Handheld radio antennas

A common complaint with handheld radios is the terrible quality of their stock antenna. Rubber duck antennas are poor radiators, and the ones included with your handheld is no exception. But why is this? To illustrate, we need to look at how rubber duck antennas are made.

Rubber duck antennas are basically a wound coil of wire encased in a rubberized sheath. These helically wound springs have the electrical length of a quarter wave antenna, but have a greatly shortened physical length. The main reason for this is convenience. Handheld radios are designed to be worn on the hip, and who wants a quarter wave antenna poking them in the armpit or tickling their neck. Plus the duck antennas are more flexible and durable than a fixed or telescoping antenna. So to make an HT more convenient, we're hobbled by a poor antenna.

Image: Shootthedevgru at en.wikipedia

There are certainly better designs for duck antennas than what comes with your radio. **Nagoya** makes an excellent aftermarket antenna for the popular Baofeng handheld radios and both Comet and Diamond both offer their version of the duck antenna with the female SMA connector that Baofeng radios require. These aftermarket antennas will certainly improve performance, but your range will still have limits. To make the biggest jump in transmit/receive performance, you will need to take the antenna off the radio and mount it in an advantageous location.

Connecting an external antenna

In a previous blog post, I've given tips on **increasing your range with an attached antenna to your handheld radio**. But to really boost your performance you need to use an external antenna. External antennas come in all shapes and sizes, from the simple quarter wave vertical to multi element beams. A popular model for the new ham is the **2 meter J-**

Pole antenna. This antenna will not only give you increased range, but also offer a upgrade path as you replace your handheld radio with a more powerful base station.

SMA to SO-239 adapters from MPD Digital. Top: SMA Female for Baofeng/Wouxon radios, Bottom: SMA Male connector for Icom, Kenwood, Yaesu, and Alinco models.

So how do you connect a base station antenna to your handheld radio. You will need two items, an appropriate length of coaxial cable with PL-259 connectors on each end, and an SMA to SO-239 adapter. To make things a bit more complex, there are two different styles of SMA connectors, and you will need the right one for your brand of radio. If you have a Kenwood, Icom, Yaesu, or Alinco handheld; they will require an **SMA Male to SO-239 adapter**. If you own a Chinese handheld like the Baofeng, Wouxon, or variants; you will need an **SMA Female to SO-239 adapter**. How do you know which do you need? Unscrew the antenna and look at the threads on the handheld. If the threads are on the outside of the connector (Yaesu, Icom, Kenwood) you will need an SMA Male adapter. If the threads are on the inside of the connector (Baofeng, Wouxon), you will need an SMA Female adapter.

My recommendation is to use an adapter with a pigtail instead of one that screws directly into the radio. The pigtail made out of lighter weight cable offers stress relief. **MPD Digital** offers a line of Made in the USA adapters that feature pigtails from 8 to 36 inches long. So you'll be able to find an adapter that will meet your needs. (full disclosure, MPD Digital sent me some design samples, but I'm only recommending their product because of their quality and customer service).

Mounting locations

KB9VBR 2 meter J-Pole antenna

The antenna's location can make a big difference in the coverage that you will receive. But where you are able to place the antenna is usually determined by outside factors like type of house, land, HOA rules, and spouse. If you live in an apartment, your only options may be to place the antenna on the deck, railing, or even in the window of your home. Or if your home is governed by home owner's association rules, an external antenna may not be allowed, and sticking it in your attic may be the only option. But don't let these limitations hold you back, there are plenty of options for installing an antenna that doesn't require a 60 foot tower and acres of land. Check out my blog post on **installing VHF/UHF antennas for ideas**.

Don't forget the coax

The choice of coaxial cable makes a big difference in the strength and quality of your signal. Coax is rated by it's loss characteristics and power handling capability. For casual VHF/UHF use, power handling isn't a big factor as even lightweight RG-58 will handle 200 watts. But cable loss is a big deal, and you should select a coaxial cable that fits your budget and offers a loss factor that you are comfortable with. I usually recommend investing in the best quality cable that you can afford as properly installed, it will give you years of use and it is often easier to upgrade the antenna and transmitter than it is restringing the coax. More on **selecting coax cable for your antenna system** can be found in this blog post and accompanying video.

Your cable will have PL-259 connectors on each end. The PL-259 connector mates to the SO-239 connector found on the antenna and the adapter I recommended earlier. The PL-259 / SO-239 combination, also known as UHF connectors, is the standard found in most amateur radio and land mobile gear. Some high end equipment will have the N style connectors, but this is more the exception than the rule. **Common connectors for amateur radio** can be found in this blog post.

Conclusion

What kind of performance gains can you expect using an external antenna with your handheld radio? **It really depends on location and terrain**. But putting an antenna on the roof of your house or in the attic should net you triple the range on simplex and give you access to most repeaters in a 40-50 mile radius. Want more coverage than that? You'll need to upgrade to a more powerful base station radio. But installing that rig will be a piece of cake as you will only need to disconnect the adapter and screw the PL-259 from your coax directly into the back of the base station radio.
So, improve your signal and start the process of building your ham radio station by installing an external antenna for your handheld radio today.

Resources

KB9VBR J-Pole and Slim Jim Antennas
Nagoya aftermarket antenna for Baofeng/Wouxon handheld radios
SMA Female to SO-239 adapters for Baofeng/Wouxon handhelds (MPD Digital)
SMA Male to SO-239 adapters for Kenwood/Icom/Yaesu/Alinco handhelds (MPD Digital)
Coax Cable with PL-259 connectors RG-8U 50 feet
Coax Cable with PL-259 connectors RG-8X 25 feet

Shop now for KB9VBR VHF/UHF antennas.

Broward County ARES, RACES & SKYWARN

PLEASE JOIN US

"The Amateur Radio Emergency Service (**ARES**) consists of licensed amateurs who have voluntarily registered their qualifications and equipment for communications duty in the public service when disaster strikes. Every licensed amateur, regardless of membership in ARRL or any other local or national organization, is eligible for membership in the ARES. The only qualification, other than possession of an Amateur Radio license, is a sincere desire to serve. Because ARES is an amateur service, only amateurs are eligible for membership. The possession of emergency-powered equipment is desirable, but is not a requirement for membership." There are no dues or membership fees associated with being part of ARES. To join ARES, please fill out an ARES/RACES m e m b e r s h i p application located on the third last page of every BARC Newsletter and bring it to our meeting.

The Radio Amateur Civil Emergency Service (**RACES**) is a standby radio service provided for in Part 97.407 of the Federal Communications Commission (FCC) rules and regulations. It consists of only those amateur radio operators who have previously registered with State and

local governments to provide or supplement communications during emergencies where normal communication systems are overloaded, have sustained damage or destroyed.

SKYWARN:

Many Americans feel the effects of severe weather every year. To obtain critical weather information, NOAA's National Weather Service (NWS), part of the U.S. Department of Commerce, established SKYWARN. SKYWARN is a volunteer program with nearly 290,000 trained severe weather spotters. These volunteers help keep their local communities safe by providing timely and accurate reports of severe weather to the National Weather Service. By being a Skywarn member, you are the eyes and ears for the NWS. From these reports, the NWS disseminates the information received from a storm spotter and sends out a severe weather announcements to all the TV stations, Marine radio, and to the NOAA weather radios.

Four Phases Of Emergency Management:

There are four phases of Emergency Management that all of our activities can be grouped into. The following is a short definition of each.

PREPAREDNESS:

Preparing to handle an emergency - This includes plans or preparations made to save lives and to help response and rescue operations. Evacuation plans and stocking food, water and other supplies are all examples of preparedness activities taken BEFORE an emergency occurs.

RESPONSE:

Responding SAFELY to an emergency - This includes actions taken to save lives and prevent further property damage in a disaster or emergency situation. Response is putting your preparedness plans into action. Seeking shelter from a tornado or turning off gas valves in an earthquake are both response activities. Response activities take place DURING an emergency.

RECOVERY:

Recovering from an emergency includes actions taken to return to a normal, or even a safer situation following an emergency. Recovery includes getting financial assistance to help pay for repairs. Recovery activities take place AFTER an emergency or disaster.

MITIGATION:

Preventing future emergencies or minimizing their effects. It includes any activities that might prevent an emergency from happening again, or reducing the amount or severity of damages of unavoidable emergencies. Buying flood insurance and fire insurance for your home and business are good examples of mitigation activities. Mitigation takes place both before and after an emergency takes place.

After examining the four phases of Emergency Management we can see that Emergency Management is a full circle of never ending activities. No matter where you live, or what emergencies have occurred in the past Emergency management is working to assure that when an emergency does happen a minimum of lives and property are impacted.

For information on how you can be a part of these programs, contact Carol Sjursen, KJ4AWB, Amateur Radio Emergency Service (ARES), the Broward County Emergency Coordinator kj4awb@arrl.net or Robin Terrill, N4HHP, Broward County Radio Amateur Civil Emergency Service (RACES), the RACES Officer & the Broward County Skywarn Coordinator, n4hhp@comcast.net for more information.

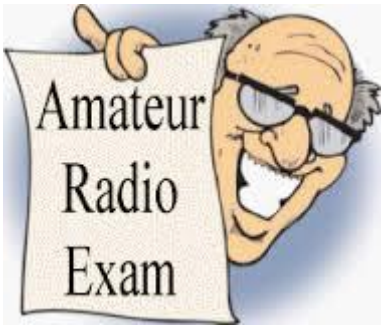
Please see the back cover for information and directions to the ARES/RACES meeting.

Skywarn Class Coming to Sunrise Florida

The effects of severe weather are felt every year by many Americans. To obtain critical weather information, NOAA's National Weather Service (NWS), part of the U.S. Department of Commerce, established SKYWARN® with partner organizations. SKYWARN® is a volunteer program with more than 290,000 trained severe weather spotters. SKYWARN Storm Spotters is a nationwide network of volunteers who report observations of significant weather and damage resulting from severe weather to the National Weather Service. The National Weather Service then sends alerts to the public via television, radio, marine and NOAA weather radios, public safety agencies and other information sources that severe weather is approaching or has been sighted.
A free training class is required to participate. When registering for this class, please include your name, home address, cellphone number and your callsign if you are a ham.

Date: ***Saturday, January the 23rd.***
Time: ***10 am – 12:30 pm.***
Location: ***City of Sunrise Fire Station 59***
8330 NW, 27th Place, Sunrise
FL, 33322

Registration: ***Via E-mail***
jfarach@sunrisefl.gov
(First-come, First-serve, 30 maximum)
Registration Deadline: January 15th, 2016



Amateur Radio Testing in Broward County

Davie Cooper City Amateur Radio Club: Meets 6:00 PM for Testing on the first Monday of each month at Davie Moose Lodge, 4483 SW 64th Ave, (Davie Road) Davie, FL 33314. Contact Tom Hayes, N4MEO / DCARC VEC Phone: 954 218-1567.
email: hayest6961@gmail.com

Broward Amateur Radio Club: (BARC) W4AB Meets 7:30 *PM* on the second Tuesday of each month in the Oak Room, which is located at Broward Health Medical Center, 1600 S. Andrews Ave, Fort Lauderdale. Contact Tom Hayes, N4MEO / BARC VEC Phone: 954 218-1567, email: hayest6961@gmail.com

Gold Coast Amateur Radio Association: (GCARA) W4BUG meets on the fourth Tuesday of each month (except December) at the Imperial Point Medical Center, 6401 North Federal Highway, Ft. Lauderdale, FL in the hospital auditorium. ARRL VE Testing @ 6:00 pm in Auditorium C. Contact: John Kramer, W4JRK. GCARA President. Phone: (954) 298-4004 E-mail:W4JRK@hotmail.com

The Palmetto Amateur Radio Club test by reservations ONLY! They will set the time and place for the session. Please Contact Volunteer Examiner (V.E.): Ed Kashuba, WD4HIP (954) 551-9463 for further information.

Broward County Amateur Radio Clubs and Nets

AllStar: The AllStar Link portal allows licensed amateur radio stations to communicate with one another over the internet using streaming-audio technology. This allows worldwide connections to be made between stations or from computer to station greatly enhancing amateur radio communications capabilities. Broward Amateur Radio Club 146.910 MHz -600 Hz PL 110.9 FM AllStar Node 28478 Nodes List: https://allstarlink.org/nodelist.php

American Radio Relay League: Founded in 1914 by Hiram Percy Maxim, ARRL (American Radio Relay League) is the national association for Amateur Radio in the US. Today, with more than 161,000 members, ARRL is the largest organization of radio amateurs in the world. ARRL's mission is based on five pillars: Public Service, Advocacy, Education, Technology, and Membership. http://www.arrl.org/

Broward Amateur Radio Club: (BARC) W4AB Meets 7:30 *PM* on the second Tuesday of each month in the Oak Room, which is located at Broward Health Medical Center, 1600 S. Andrews Ave, Fort Lauderdale. Further information is available on the club repeater 146.91 Contact: Tony Becker, KK4GUU BARC President. Phone: (954) 612-9303 E-mail: tony@mcrsys.com: Club Web site: http://browardarc.net, Club Info: info@w4ab.org Club repeaters: 146.910 MHz -600 Hz PL 110.9 FM AllStar Node 28478, 224.76MHz -1.6 MHz PL 110.9 Hz FM, 444.825 +5 MHz PL 110.9 FM, 442.450 +5 MHz no PL DSTAR (Gateway). For information VE Testing contact VE Tom Hays/N4MEO 954-218-1567 Email: hayest6961@gmail.com

Broward County ARES®/RACES: The Amateur Radio Emergency Service (ARES) is a corps of trained amateur radio operator volunteers organized to assist in public service and emergency communications. It is organized and sponsored by the American Radio Relay League The Radio Amateur Civil Emergency Service (RACES) is a standby radio service provided for in Part 97.407 of the Federal Communications Commission (FCC) rules and regulations governing amateur radio in the United States.

Broward County ARES/RACES: provides emergency communications through amateur radio in the event of a disaster. They meet every *3rd Tuesday of the month, at 7:30 PM.* Broward Health 1600 South Andrews Avenue, Fort Lauderdale, FL 33316 Meeting is held In the Oak Room. Broward County ARES Emergency Coordinator, Carol Sjursen, KJ4AWB (kj4awb@arrl.net) Phone: 954 803-6338, Broward County RACES Officer and Broward County Skywarn Coordinator, Robin Terrill, N4HHP (n4hhp@comcast.net) Phone: 954 249-5343, Broward County ARES/RACES Training Officer Barry Porter, KB1PA (barryp13@mac.com) 1 561 499-8424 Website: https://www.facebook.com/BrowardARESRACES. Want to be a member? Fill out the application in the rear or this newsletter and email it to kj4awb@arrl.net or n4hhp@comcast.net
Broward County Emergency Operations Center Broward County Emergency Operations Center

Broward County Emergency Preparedness Net (BCEPN): Broward County ARES RACES provides emergency training. Net meets every Wednesday at 7:00 PM on the 146.910 MHz -600 Hz PL 110.9
Net Manager: Mike Davis Cell: 954 826-4758 Email: k2mol@seftn.net
Website: https://www.facebook.com/BrowardARESRACES

Davie Cooper City Amateur Radio Club: Meets 6:30 PM. on the first Monday of each month at Davie Moose Lodge, 4483 SW 64th Ave, (Davie Road) Davie, FL 33314. Further information is available on the club website, http://www.dcarc.club/ Contact Tom Hayes, N4MEO / DCARC President. Phone: 954 218-1567, email: hayest6961@gmail.com

DCARC RF Net: is held on the 146.790 MHz -600 PL 88.5 Hz on the every other Thursday starting at 7:30 PM for an question and answer session or you can tell us what you've been doing; purchased a new rig, worked a new DX contact, upgraded your license, put up a new tower, etc. You can also Buy, sell or trade on this net too. Net Manager Tom Hayes, N4MEO, 954 218-1567, email: hayest6961@gmail.com

D-STAR: (Digital Smart Technologies for Amateur Radio) D-Star offers digital voice and slow and high-speed data communications. Slow-speed digital voice and data are transported at 4800 bps, of which 3600 bps is used for voice transmission and the remaining 1200 bps is used for synchronization and general use. http://www.dstarusers.org/repeaters.php

Echolink / VOIP Net: High-Speed digital data communication is transported at 128kbps and is capable of supporting Ethernet packets and also is fast enough to use for Internet applications such as displaying web pages. Repeater Fort Lauderdale 443.625 + PL 110.9. ECHOLINK #48646 Margate Repeater on 444.025+ PL. 107.2 ECHOLINK #269436. Boynton Repeater 147.225+ PL TONE 107.2 Hz and on 444.650- 5 PL 127.3 Hz.

"The VoIP Connection" originating in Naples Florida, connects to Fort Lauderdale on 146.910-600 PL 110.9 AllStar Node 28478. We meet every Tuesday night at 7:00 PM EST Net MGR. is Harry Sevush, KD4JMV Phone 1 239 322-2586 Email: kd4jmv@comcast.net

Gold Coast Amateur Radio Association: (GCARA) W4BUG Meets 7:30 p.m. on the fourth Tuesday of each month (except December) at Broward Health Imperial Point, 6401 North Federal Highway, Ft. Lauderdale, FL in the hospital auditorium. Refreshments are provided. Dinner is available in the cafeteria @ 5:15pm GCARA / ARRL VE Testing @ 6:00pm in Auditorium C. Meeting starts @ 7:30pm in Auditorium A. Talk-in on 146.610 MHz and 146.820 MHz, -600 Pl 110.9 Hz., Other repeaters: 442.50 MHz.+5 PL 151.4 Hz. and 145.340 MHz D-STAR SYSTEM. Contact: John Kramer, W4JRK. GCARA President. Phone: (954) 298-4004 Web: http://www.w4bug.org/; E-mail:W4JRK@hotmail.com

Gold Coast Amateur Radio Association: (GCARA) Amateur Radio Fun Net every Thursday. Starts @ 7:00pm on 146.610 MHz -600 Pl 110.9 Hz and 442.500 MHz +5 PL 151.4 Hz. Discussion: Anything the check-in wishes to discuss. Everything from Ham Radio topics to general information. It's an easy come format and I never have a set discussion. It's where the station ops take it. Contact: John Kramer, W4JRK. GCARA President.
Phone: (954) 298-4004 Web: http://www.w4bug.org E- mail: W4JRK@hotmail.com

Internet Radio Linking Project: (ILRP) uses Voice-Over-IP (VoIP) custom software and hardware. Coupled with the power of the Internet, IRLP will link your repeater site or simplex station to the world in a simple and cost effective way. IRLP operates a worldwide network of dedicated servers and nodes offering very stable worldwide voice communications between

hundreds of towns and cities. All this with unsurpassed uptimes and the full dynamic range of telephone quality audio. Node: 7830 WB2NBU Wellington FL USA 147.2850 +600 No PL.

Knights Of The Roundtable Net: When all else fails, keep it Simplex. This is an open Forum Radio Group. We meet every Monday starting at 7:30 on either the 146.550 MHz (no PL tone) Simplex frequency or on a back-up frequency 145.555 (no PL tone) Simplex frequency. At that time Check-ins will be taken and begin our Rag Chew session.
Web: www.knightsoftheroundtable.info www.knightsnet.org NCS: Kenny Hollenbeck KD4ZFW Cell 954 692-4600 Email: kd4zfw@gmail.com

Motorola Solutions Amateur Radio Club: (MARC) (open only to current and former Motorola employees) Contact: Rich Pratt, K4XF. Web: E-mail: w4mot.club@gmail.com The repeaters are accurately listed on QRZ.com under the call sign W4MOT. Current VHF repeater is 146.790 – 600 Pl 88.5 Hz

Hurricane Watch Net: 14.325 MHz The Hurricane Watch Net consists of a group of licensed Amateur Radio Operators trained and organized to provide essential communications support to the National Hurricane Center during times of Hurricane emergencies. Our primary mission is to disseminate tropical cyclone advisory information to island communities in the Caribbean, Central America, along the Atlantic seaboard of the U.S., and throughout the Gulf of Mexico coastal areas. We also collect observed or measured weather data from amateur radio operators in the storm affected area as well as any post storm damage, and convey that information to the Hurricane Forecasters in the National Hurricane Center via the amateur radio station in the center (WX4NHC).

Palmetto Amateur Radio Club: (PARC) Meets quarterly. Meeting place announced on the club web site: http://www.palmettoarc.org The Palmetto Amateur Radio Club's Repeater's. Call Sign: K4PAL 146.850 MHz - 600 PL 91.5 Hz, 442.250 MHz +5 PL 114.8 Hz., 147.210 MHz - 600 PL 103.5 Hz., 147.375 MHz - 600 PL 91.5 Hz, 443.825 MHz +5 PL 103.5 Hz. Contact: Edward Kashuba / WD4HIP. Phone: (954) 551-9463 E-mail: questions@palmettoarc.org

The Statewide Amateur Radio Network (SARnet) is a network of linked UHF voice repeaters that serves the State of Florida. The repeaters are operated by their local trustees and the network that connects them together does not interfere with the local use of the repeaters. **The key to what makes SARnet work so well is that this network uses dedicated bandwidth that is separate from the internet. Statewide connectivity is achieved without the use of any commercial telecommunications services. SARnet does not use the internet, cellular telephones, or land lines. They use part of the Florida Department Of Transportation network that connects amateur radio repeaters to their microwave system together.** ***Currently, the Duval County EOC conducts a brief check-in net on Friday mornings starting at approximately 0900 on SARnet and any amateur that can access SARnet is encouraged to check in (late check-ins are ok too). The Fort Lauderdale frequency is 442.850 MHz +5 PL 110.9 Please go the SARnet site and read what SARnet is all about. http://www.sarnetfl.com/home***

Southeast Florida Traffic Net: (SEFTN) SEFTN is part of the American Radio Relay League's National Traffic System. We meet daily at 6:00 PM local time on 146.61MHz- with a PL tone of 110.9, or 442.50MHz+ with a PL tone of 151.4, which is the Gold Coast Amateur Radio Association repeater. Our backup frequency is 146.79 MHz with a PL tone of 88.5, which is the Motorola Amateur Radio Club repeater. Learn the ARRL MESSAGE FORMAT

National Traffic System: ***Our purpose is to pass formal written traffic, announce amateur radio events, deliver information on severe Weather, and to provide training for new operators and net control stations. We also provide emergency or special sessions when necessary and will assist agencies under Homeland Security, such as FEMA and Broward County Emergency Management, and the Broward County Emergency Coordinator, if called upon to do so. Thank you for visiting and we hope you will join us on the air. Web site: http://seftn.net/ Net Manager is Mike Sanner, KM2V Email: km2v@arrl.net***

How to Become a Skywarn Storm Spotter: SKYWARN Amateur Radio Serving the National Hurricane Center Covering all counties served by the Miami forecast office of the NWS on your local Florida AllStar Hub Repeater Since 1965 WX4SFL Skywarn Net FL AllStar Wiki The National Weather Service in Miami-Dade Florida National Weather Service The Amateur Radio Station at the National Hurricane Center for over 35 years. National Hurricane Center "Become A Storm Spotter From Home" http://www.improvenet.com/a/become-a-storm-spotter-from-home Broward County Skywarn Coordinator, N4HHP Email: n4hhp@comcast.net

South Florida DX Association: (SFDXA) K4FK Meets 7:33 p.m. on the first Wednesday of odd numbered months at Florida Medical Center, 5500 West Oakland Park Blvd, Ft. Lauderdale. Further information is available on the club repeater K4FK, 147.33/93 PL 103.5 DX Net: Wed. evenings at 7:30 PM on the club repeater. Contact: Don Drennon, N4TZH, SFDXA President E-mail: n4thz@arrl.net Web: http://www.qsl.net/k4fk/.

Wellington Radio Club: in Palm Beach County leads the effort to promote and train amateurs in the reliable transmission of complex documents such as FEMA and Red Cross forms and spreadsheets. All done with only with a computer, simple and free software and a transceiver. No special equipment or cables are needed. It's called Basic Narrow Band Emergency Messaging System. Repeaters and nets 147.285 +600 PL 103.5 and 442.050 +5 PL 103.5. Emergency Net on Mondays 7:30 PM on the 1st, 2nd and 3rd Mondays on VHF. This net also meets on holidays. President Larry Lazar KS4NB Phone: (561) 694-0868 Email: LARRY33414@aol.com Beginner's Guide to FLDIGI FLDIGI User's Guide Free FLDIGI/FLMSG Digital software download site http://www.w1hkj.com/

WR4AYC Repeater Group repeaters are 145.110 -600 PL 110.9, 145.110 -600 PL 100.9 and 443.850 +5 PL 110.9. These repeaters are also P25 machines.
Contact: Marshall A. Paisner, K4MAP. Phone: (954) 873-2234 Web: http://wr4ayc.org/ E-mail: wr4ayc@arrl.net for more information

WX4SFL South Florida Regional Skywarn Training Net: The Purpose of the net is to assist Skywarn operators in the training for and handling of emergency communications, to provide useful information to Skywarn Members, and to familiarize people with directed net operations. We provide support for the NWS WFO's in both Miami and Key West. The Net meets every Thursday night at 1930 hrs. Local time on the SoFla AllStar Broward Amateur Radio Club 146.910 MHz -600 Hz PL 110.9 FM AllStar Node 28478. Net Mgr.: Chris Vasilenko, K4FLL phone: 954-465-8425 email: WX4SFL@earthlink.net www.facebook.com/SouthFloridaRegionalSkywarn

If you know of any Broward County clubs or training nets that are not on this list or you notice an error in a listing, please contact me, Robin Terrill, N4HHP Editor n4hhp@comcast.net

Southeast Florida Repeaters At A Glance
Miami-Dade – Broward – Palm Beaches

Output Freq. MHz (Numeral Order)	Offset	PL in Hz	Location	Callsign	Notes
145.270	-	-------	Parkland	WR4AYC	(Not on yet)
145.290	-	110.9	Boca	N4BRF	Monday Club Roundtable 7:00 PM
145.290	-	110.9	Boca	N4BRF	Monday New Ham Net 7:30 PM
145.290	-	110.9	Boca	N4BRF	Wednesday Training Net Starts at 7PM for South County, 7:30 for North County and 8 PM for Central County
145.340	- D	-------	Fort Lauderdale	W4BUG	
145.555	S	-------	Broward County	----------	Knights of the Roundtable
146.550	S	-------	Broward County	----------	Knights of the Roundtable
146.610	-	110.9	Pompano Beach	W4BUG	SEFTN Net 6:00 PM Daily (GCARA) Amateur Radio Fun Net every Thursday. Starts @ 7:00pm on 146.610 MHz / 442.500 MHz
147.615	+	110.9	North County	W4JUP	North Co. ARES Net 7:30 PM
146.790	-	88.5	Plantation	W4MOT	
146.820	-	110.9	Boca Raton	W4BUG	
146.850	-	91.5	Hollywood	K4PAL	
146.910	-	110.9	Fort Lauderdale	W4AB	BCEPN Wednesday at 7 PM
146.910	- A	-------	Fort Lauderdale	W4AB	AllStar Node 28478
147.045	+				Central County ARES Net 8 PM
147.075	+ I	110.9	Delray	W2GGI	IRLP, node 9050
147.210	+	103.5	Dade/Broward Co. Line	K4PAL	
147.255	+	110.9	Boynton Beach	NR4P	South County ARES Net 7 PM
147.330	+	103.5	Fort Lauderdale	K4FK	
147.375	+	91.5	Dade/Broward Co. Line	K4PAL	
224.180	+	131.8	Plantation	N4RQY	
224.400	+	110.9	Ft. Lauderdale	KF4LZA	Linked to 927.700 MHz
224.680	+	131.8	Coral Springs	N2DUI	Linked to 444.575 MHz
224.760	+	110.9	Plantation	W4AB	
442.200	+ D	-------	Fort Lauderdale	W4BUG	
442.250	+	114.8	Dade/Broward Co. Lin	K4PAL	
442.450	+ D	-------	Fort Lauderdale	W4AB	DStar Gateway
442.500	+	151.4	Pompano Beach	W4BUG	
444.600	+	94.8	Miami-Dade	K4AG	Local Coverage
444.600	+	167.9	Miami-Dade	K4AG	SARNET
444.700		110.9	Boca Raton	KC4GH	
442.825	S	110.9	Andytown on Alligator Ally		SARNET
442.850	+	110.9	Fort Lauderdale	----------	SARNET
442.875	+	110.9	Boca Club		
442.875	+ E	110.9	Boca Club		Echolink Node 826953
443.825	+	103.5	Dade/Broward Co. Line	K4PAL	
443.850	+	110.9	Coral Springs	WR4AYC	
443.975	S	110.9	Palm Beach	K4EEX	SARNET (Not in repeater guide)
444.025	+	107.2	Margate	KA4EPS	AllStar Florida Hub
444.825	+	110.9	Fort Lauderdale	W4AB	

Note: S = Simplex D = DStar A = AllStar I = IRLP E = Echolink S = SARNET

If you know of any Broward County clubs or nets that are not on this list or you notice an error in a listing, please contact me. Robin Terrill, N4HHP Editor n4hhp@comcast.net

Broward Emergency Management
ARES / RACES Membership Application

Please type or print clearly

EOC Use Only

RACES # _____ RACES POSITION

Effective _____ _____

Expires _____ Approved by _____

Name

Address

City Zip Code County

Home Phone Work Cell

Amateur Call License Class Expiration Date Date of Birth

Emergency Contact Phone

Completion of this Application DOES NOT OBLIGATE YOU

Enrollment in RACES qualifies you for County insurance in the event RACES is activated, and you are performing duties.

This information provides a database of qualified Amateur Radio operators available for ARES/RACES emergency activation.

ARES/RACES participation is voluntary.

By submitting this application you consent to a background check.

Email Address to receive Broward County ARES / RACES Alerts / Bulletins

You reside at the above address during what months? From _____ To _____

Are you capable of setting up a station in the field? Indicate what, below, if yes YES NO

What languages are you fluent in? _____

In the event of an emergency do you have family members you must assist? YES NO

Are you willing to Staff a shelter during a hurricane? YES NO

Is your home station capable of operation without commercial power? YES NO

Could you serve another area in Florida by joining the Communications Away Team (CAT)? YES NO MILES AWAY _____

Indicate below any capabilities you have i.e. big beam, tall tower, high power, special mode etc. that could assist in the event of an emergency.

Modes	160	80	40	30	20	17	15	12	10	6	2	1.25cm	70cm	Add. Bands/ Comments
SSB- Power in Watts														
CW- WPM														
TOR- RTTY, PSK31, WinLink, Pactor II, etc.														
SSTV, DSSTV, NBTV														
Mobile / RV- Modes and Power in Watts														
Packet- Baud 300, 1k2, 9k6														
APRS- GPS, WX, DF, Tracker														
ATV- AM, FM														
FM- Power in Watts														
Satellite- AO, FO, RS, SO etc.														

Other modes or special operation / capabilities / equipment i.e. CERT, CAP, Coast Guard, Marine, MARS, REACT, Contest Station, Remote Control, ect.

Do you have ICS 100 200 700 800 Do you have Emcomm 1 2 3 (circle those that you have) Please submit Certificate Copies.

Signature Date

Use back of this application for additional space. Please be as detailed as possible with all information.

Please list experience, qualifications and other special considerations or capabilities. Use back of this application for additional space. Revised 04/2014

Please email this Application to Carol, KJ4AWB at Carol Sjursen (CSjursen@bellsouth.net) or bring it to the next meeting

Broward County ARES® /RACES

3rd Tuesday of the month, at 7:30 P.M. Meeting in the Oak Room.

Broward Health (The old Broward General Medical Center)
1600 South Andrews Avenue, Fort Lauderdale, FL 33316
Meeting is held In the Oak Room

Parking will be in the 7 story parking garage, (see A Above). The entrance to the building is on the first floor directly across from the parking garage (see B above). You will need to go in the main entrance and sign in at the security desk and they will issue you a pass to wear. Bring a driver's license with you or a picture I.D. Do not by-pass security. They will tell you how to get to the Oak Room.

From I-95 or 595
Take I-95 or 595 to SR 84. Go east on 84 until you get to Andrews Avenue turn left (North) until you get to the hospital on your right. 1600 South Andrews Avenue

From I-95 to Broward Blvd

Take I-95 to Broward Blvd. East on Broward Blvd until you get to Andrews Avenue turn Right (South) until you get to the hospital on your Left. 1600 South Andrews Avenue

Talk-in will be on the 146.910 Mhz. -600 PL 110.9 Hz.
If you get lost or need directions, please call our cell phones:

Robin Terrill, N4HHP RACES Officer 954 *249*-5343
Carol Sjursen, KJ4AWB ARES® EC 954 803-6338
Barry Porter, KB1PA ARES/RACES Training OFFICER 1 561 499-8424

Sign Up to Receive Your Free Tropical Weather Emails

If you would like to receive this training Newsletter when they come out, please reply to n4hhp@comcast.net.net