

BROWARD COUNTY FLORIDA



EMERGENCY COMMUNICATIONS TRAINING

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February 2015



The Drug Warrior with Keith Graves

With written permission from author to reprint
Submitted by Dave N4PQM

How cops are catching grow ops with AM radios

Many ham operators can locate a grow simply by taking a radio and portable antennae out into their neighborhood and using the radio to triangulate the exact location of the grow

With the proliferation of indoor marijuana grows, the indoor “horticulture” industry has been booming. Chinese manufacturers are turning out indoor grow equipment at a rapid pace with little to no regulatory oversight or compliance. Because of this, there has been a significant amount of radio frequency interference (RFI).

Before we get into how to detect a marijuana grow with your car radio, you have to understand some simple mechanics of how a grow operates. To grow marijuana indoors, you need supplemental lighting necessary for photosynthesis. These lights may be fluorescent, LED, and for larger operations, high pressure sodium (HPS) or metal halide (MH).

The HPS and MH lamps may be 1000W per lamp and require a ballast for proper operation. These ballasts were originally magnetic but in the past few years have become electronic. These devices are subject to FCC part 18 rules but there appears to be a total disregard for the FCC rules. Many (if not most) electronic ballasts are manufactured in China and may have little ‘FCC’ stickers on them but there is no evidence of any testing for compliance having been done. Because of this, a large amount of RFI is interfering with nearby electronics. As an example, one grow next to a CalFire station — California’s state fire agency — caused a continuous hum over the station’s callbox speaker and interfered with them receiving radio broadcasts over their station’s PA.

Ham Radio Helpers

Reports have begun to flood into the National Association for Amateur Radio about interference with their ham radios from their neighbor’s marijuana grows. The most complaints

come from California and Colorado, for obvious reasons. Many ham radio operators began to see a correlation with marijuana grows and this RFI.

One amateur radio operator located five marijuana grows near his house due to RFI alone! Many ham operators can locate a grow simply by taking a radio and portable antennae out into their neighborhood and using the radio to triangulate the exact location of the grow.

One industrious ham operator went to his local grow shop and borrowed several lights and ballasts to test for RFI. He found that one light and ballast set up would cause interference up to 700 meters. From our experience, we know that most indoor grows have more than one light and ballast, which would amplify the RFI.

Pioneering Field Use

One narcotics officer from the San Francisco Bay Area turns his car radio to 560 AM when he checks out potential indoor grows. He's checked out seven indoor marijuana grows since learning about the RFI issue. All seven times, the car's radio showed significant inter-ference from the ballasts inside of the grow location.

One ham radio operator described the interference this way: "It can be pops, it can be a buzzing sound, whistles — just all kinds of different noises that we'll hear."

Tom Thompson, a ham radio operator, told a Colorado newspaper, "If I can track this down, anybody can track this down. If I listen long enough, I can tell when they turn the lights off... You can tell exactly when the harvest is."

This method of finding marijuana grows isn't fool proof, but it can be another useful tool in your toolbox.

About the author

Keith Graves has been a Police Officer in the San Francisco Bay Area since 1990 and is currently a sergeant assigned to patrol. Keith is a Drug Recognition Expert Instructor (IACP #3292) and teaches both the DRE course and the CNOA Drug Abuse Recognition Course. Keith has also taught at the Basic Police Academy and has developed a number of POST certified drug courses. Keith has held assignments as a Narcotics/Vice Detective, COPPS Officer, Traffic Officer, Training Sergeant, Patrol Sergeant and SWAT Team Leader. Keith has taught thousands of officers and businesses about drug use, drug trends, compliance training and drug investigations. [Graves & Associates](#) provides training and consulting services to law enforcement, probation, parole, corrections as well as corporate partners.

[Contact Keith Graves.](#)

ARRL Bulletin 4 ARLB004
From ARRL Headquarters
Newington CT January 29, 2015
To all radio amateurs

SB QST ARL ARLB004

ARLB004 FCC "Paperless" Amateur Radio License Policy Goes into Effect on February 17

Starting February 17, the FCC no longer will routinely issue paper license documents to Amateur Radio applicants and licensees. The Commission has maintained for some time now that the official Amateur Radio license authorization is the electronic record that exists in its Universal Licensing System (ULS), although the FCC has continued to print and mail hard copy licenses. In mid-December the FCC adopted final procedures to provide access to official electronic authorizations, as it had proposed in WT Docket 14-161 as part of its "process reform" initiatives.

Under the new procedures, licensees will access their current official authorization ("Active" status only) via the ULS License Manager. The FCC will continue to provide paper license documents to all licensees who notify the Commission that they prefer to receive one. Licensees also will be able to print out an official authorization - as well as an unofficial "reference copy" - from the ULS License Manager.

"We find this electronic process will improve efficiency by simplifying access to official authorizations in ULS, shortening the time period between grant of an application and access to the official authorization, and reducing regulatory costs," the FCC Wireless Telecommunications Bureau (WTB) said. According to the WTB, the new procedures will save at least \$304,000 a year, including the cost of staff resources.

In comments filed November 5, the ARRL had strongly recommended that the FCC "give serious consideration to continuing a default provision for sending an initial paper license document to new licensees in the Amateur Radio Service, along with detailed, simple instructions for how to make the elections set forth in the notice relative to future modified or renewed licenses."

The FCC said that applicants or licensees who include a valid e-mail address under "Applicant Information" in the ULS will receive an official electronic authorization via e-mail. New license applicants who do not provide a FCC Registration Number at the examination point will receive a printed license as well as an FRN and a temporary password to access the Commission Registration System (CORES).

The ARRL and other Amateur Radio commenters also worried that unless a license document is printed on distinctive paper stock, its authenticity could be questioned in such situations as obtaining vanity call sign license plates. To address this, the FCC said the watermark "Official Copy" will be printed on each page of an official authorization that a licensee prints out from the ULS. The WTB recently stopped using distinctive paper stock to produce hard copy licenses and has been printing these on "standard, white recycled paper." The Bureau noted that the distinctive paper stock it had used was six times more expensive than the plain recycled paper it now uses.

The ULS License Manager now includes settings that allow licensees to notify the WTB that they prefer to receive official authorizations on paper. Once the final procedures go into effect designating electronic access as the default, licensees can change the ULS License Manager setting so that the Bureau will print and mail a license document. Licensees also may contact FCC Support via the web at,

http://esupport.fcc.gov/index.htm?job=contact_fcc_support, or via telephone or mail to request paper licenses.

The FCC rejected as "outside the scope of this proceeding" an ARRL argument that Section 97.23 of the Amateur Service rules be amended to replace "licensee mailing address" with other alternatives, including e-mail, for use in Commission correspondence. The rule, which requires that any licensee mailing address be in an area where the licensee has US Postal Service access, has precluded FCC issuance of location-specific call signs in such areas as Navassa Island (KP1) and some Pacific islands.



The goals of Broward County ARES/RACES are:

Written Permission from Barry Porter / KB1PA

The Broward County 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 the 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.

- In Broward County, all ARES members are automatically members of RACES. ARES & RACES working together provides greater flexibility and utility when serving the various emergency agencies and services within the community.
- Broward County ARES/RACES is in partnership with the Palm Beach County ARES emergency and communications training. The training will correspond with both Counties.
- To establish close cooperative relationships with relevant communication organizations and our partner agencies in Broward and Palm Beach Counties.
- To be recognized as the primary coordinating agency for amateur radio operators in Broward County in the event of a communications emergency either being man-made or a natural disaster.
- To provide competent radio communications support for the Broward County Emergency Management Division, American Red Cross shelters, special care facilities, hospitals or any other areas where secondary communications are needed in Broward County as assigned by the Broward County Emergency Operations Center.
- To be recognized by emergency service agencies and the amateur radio community as a model of competence and professionalism in network operations.
- To foster training and the development of skills and capabilities that will keep ARES/RACES members abreast of new technologies to help support the communication needs of our partner agencies.
- To use the resources of the ARES/RACES team, and our involvement in community activities, to foster awareness of the need for preparedness in the community at large.
- To be the recognized resource agency for community organizations needing communications support for events and activities of general benefit to the community.

WORKING TOGETHER IS A BEGINNING
KEEPING TOGETHER IS PROGRESS

What Happened At The January ARES/RACES Meeting

What a great **ARES/RACES** meeting last night! Thank you Jeff Stahl, K4BH for a Great overhead presentation and a hands-on demonstration on Anderson Powerpoles. Jeff Stahl is pictured with the crimping tool in his hand. Bob Hone, N4JQP is looking over Jeff's shoulder for a closer look on how to assemble this connector by using the right tool for the job.

Photograph and article by Carol Sjursen KJ4AWB Broward County Emergency Coordinator



Published on Nov 30, 2013

This video below shows how to install Anderson Powerpole connectors onto a power cable / wire. These connectors are very popular with the amateur / ham radio community as well as emergency and first response teams (ARES, RACES, CERT) as a universal, reliable way to connect radio equipment to power sources (batteries, vehicles, power supplies). I also discuss the benefits and downsides of soldering these connectors.

For more information, watch this video. <https://www.youtube.com/watch?v=QzLvdR6X81k>

SUPPORT OUR LOCAL AMATEUR RADIO DISTRIBUTOR HERE IN BROWARD COUNTY.

Mike's Electronics

1069 NW 53 STREET, FT. LAUDERDALE, FL. 33309

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TOLL FREE 800-427-3066

Email: mspivak@bellsouth.net

Store hours are

Monday, Tuesday, Thursday, Friday 9:00 am to 4:00 pm,

Wednesday and Saturday from 9:00 am to 12:00 pm for your shopping convenience. Top of Form

WORKING TOGETHER IS SUCCESS

ARES Deployment Vest Could Save Your Life

Broward County ARES/RACES advocate every member to purchase this ARES Deployment Vest as part of their go-kit. The purpose of you having one of these vest is for visibility to the public, letting them know that you are providing communication and for your safety to let everyone see you if you are deployed at night.

Please Note: This item is manufactured as ANSI/ISEA 107-2004 Class 2 compliant, a design and performance criteria for vests worn by police officers, firefighters, emergency medical services and other public safety personnel.



ARES Deployment Vest (Mesh)

This reflective style vest is similar to the type you'd see police or runners wearing. Place this green "bib" over your shirt or jacket. Constructed of neon mesh with large front and back reflector panels. Imprinted with the words "AMATEUR RADIO EMERGENCY COMMUNICATIONS" on one side and the ARES logo on the other. Lightweight. Fold it up, and store this small handful in your immediate-response kit. Great for ARES volunteers, emergency and public service use.



This vest is produced exclusively for ARRL, the national association for AMATEUR RADIO.

Cost for ARES deployment Vest with no pockets \$15.95

ARES Deployment Vest with Pockets (Solid) \$24.95

ARES Deployment Hat \$14.95



**Contact the ARRL at 1-888-277-5289 to order yours
Buy yours today and wear it to all the Broward County ARES/RACES meetings!
Let's be proud to show off our hobby to everyone!**

What is SARnet?

Sent in by Sandy/WB2MBV

SARnet is the Statewide Amateur Radio Network which 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 this network is that it uses dedicated bandwidth that is separate from the internet. State-wide connectivity is achieved without the uses of any commercial telecommunications services. SARnet does not use the internet, cellular telephones or land lines.

Why was SARnet Started?

The State of Florida Department of Transportation (FDOT) is continually investigating new IP technologies for use in improving its own voice radio network and to meet its mandate to provide interoperable communications with other state agencies and public safety entities.

Instead of using their live voice network as an ongoing test bed for these new IP technologies, the FDOT has partnered with the amateur radio community to use their radio systems throughout the state as part of a test bed to support FDOT's research. The benefit for the FDOT is that they gain valuable knowledge about how to install, operate, troubleshoot, expand, upgrade, and maintain a sophisticated IP radio network. With SARnet, the FDOT can conduct their research without jeopardizing their live voice radio system and creating potentially unsafe and counterproductive conditions for the FDOT personnel who work on the state's highways every day. In exchange for supporting this research, the amateur radio community can talk across the state using the same amateur radio equipment they use every day.

The fact that the DCOT network that connects these amateur radio repeaters together is a stand-alone carrier class microwave network means that SARnet is using dedicated bandwidth on a network that is much more likely to remain operational during a severe weather event like a hurricane.

Is SARnet only for EmComm?

SARnet is a network of amateur repeaters. So no, it is not just for emergency communications. That being said, the creators of SARnet are active in public safety communications, both commercial and amateur, so they have an understanding of what the SARnet can do for emergency communications in the state of Florida. Currently, the Duval County EOC conducts a brief check-in net 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).

During a significant emergency event, the SARnet may be called upon for support and radio traffic in and out of an affected area may become heavy. Under such a scenario it is hoped that all of the local repeater trustees in the affected area will agree to let their repeaters continue to be used as part of SARnet.

SARnet (State Amateur Radio Network) (17 of 25 TOTAL now working)

East Side of FL - North to South

Yulee	442.9000 127.3,	Jacksonville	444.2000 127.3,	* Flagler	
Cocoa	444.6500 107.2,	*Sebastian		Stuart	444.1500 107.2
*Palm Beach	443.9750 110.9,	Ft. Lauderdale	442.8250 110.9,	Miami	444.6000 167.9
Islamorada	444.4000 114.8				

West Side of FL - North to South

*Milton Ne Fl	443.8500 100,	*Crestview	444.9000 100	Chipley	444.7500 100
Chattahoochee	444.9750 94.8,	Tallahassee	442.1000 94.8,	Madison	444.3000 94.8
Live Oak	442.8500 110.9,	Lake City	444.9000 110.9,	Gainesville	444.9250 123.0
Ocala	444.3250 123.0,	Orange City	442.8750 DCS 411,	*Lake land	442.2750 82.5
Tampa	442.8500 146.2,	*Pinellas,		*Sarasota	444.8000 100.0
*Port Charlotte	444.2250 100.0,			*Fort Myers	444.9500 100.0

*not functional yet

FOR YOUR INFORMATION

Toxic Light - The Dark Side of Energy Saving Bulbs

Published on Dec 2, 2012 Sent in by Dave/N4QPM

A look at how dangerous the new energy-saving light bulbs are. The EU has banned many incandescent bulbs in favor of Compact Florescent Lights (CFLs). CFLs emit serious toxins while being used. All Florescent lights contain Mercury. There is enough Mercury to pose a serious health risk in the event of a CLF breakage. People are being told to run out of the building for 15 minutes, open windows and turn off the heat. Additionally the bulbs do not last as long as advertised and they take a long time to warm up, decreasing in brightness over time. The light they emit is not a full spectrum steady light. Few Bulbs actually get recycled and they need to be treated as hazardous materials when discarding them.

Consumers be alerted!
A Report by Alexandra Pfeil



Presented on LINK TV in the USA for DW In Focus, English Version
<https://www.youtube.com/watch?v=x0x3rbHFwQU#t=188>

An Explanation of What ARES, RACES and SKYWARN Are

Sources are the ARRL, NWS and Broward County Emergency Management Division



The Amateur Radio Emergency Service (**ARES**) is an Amateur Radio Relay League nationally sponsored program where HAM radio operators work together at the local level to provide emergency communication services to government and public service agencies. There are four levels of ARES organization--national, section, district and local. National emergency coordination at ARRL Headquarters is under the supervision of the ARRL Field and Educational Services Manager, who is responsible for advising all ARES officials regarding their problems, maintaining contact with federal government and other national officials concerned with amateur emergency communications potential, and in general with carrying out the League's policies regarding emergency communications.

At the section level, the Section Emergency Coordinator is appointed by the Section Manager (who is elected by the ARRL members in his or her section) and works under his/her supervision. In most sections, the SM delegates to the SEC the administration of the section emergency plan and the authority to appoint District and local ECs. Some of the ARRL sections with capable SECs are well-organized. A

few have scarcely any organization at all. It depends almost entirely on who the section members have put into office as SM and whom he/she has appointed as SEC.

It is at the local level where most of the real emergency organizing gets accomplished, because this is the level at which most emergencies occur and the level at which ARES leaders make direct contact with the ARES member-volunteers and with officials of the agencies to be served. The local EC is therefore the key contact in the ARES. The EC is appointed by the SEC, usually on the recommendation of the DEC. Depending on how the SEC has set up the section for administrative purposes, the EC may have jurisdiction over a small community or a large city, an entire county or even a group of counties. Whatever jurisdiction is assigned, the EC is in charge of all ARES activities in his area, not just one interest group, one agency, one club or one band.



The Radio Amateur Civil Emergency Service (**RACES**) is a Federal Program designed to allow State and Local EMA officials to take control of Amateur (HAM) Radio Frequencies using trained HAM radio operators during extreme instances of emergency or disaster that might require government control of these vital communications resources. RACES, administered by local, county and state emergency management agencies, and supported by the Federal Emergency Management Agency (FEMA) of the United States government, is a part of the Amateur

Radio Service that provides radio communications for civil-preparedness purposes *only*, during periods of local, regional or national civil emergencies. These emergencies are not limited to war-related activities, but can include natural disasters such as fires, floods, tornadoes, hurricanes and man-made disasters.

As defined in the rules, RACES is a radio communication service, conducted by volunteer licensed amateurs, designed to provide emergency communications to local or state civil-preparedness agencies. It is important to note that RACES operation is authorized by emergency management officials only, and this operation is strictly limited to official civil-preparedness activity in the event of an emergency-communications situation.

Amateurs operating in a local RACES organization must be officially enrolled in the local civil-preparedness agency having jurisdiction. RACES operation is conducted by amateurs using their own primary station licenses, and by existing RACES stations. The FCC no longer issues new RACES (WC prefix) station call signs. Broward County Emergency Operations Center holds a RACES station license with the call sign of W4BEM and this license is good for ten years. Operator privileges in RACES are dependent upon, and identical to, those for the class of license held in the Amateur Radio Service. All of the authorized frequencies and emissions allocated to the Amateur Radio Service are also available to RACES on a shared basis. But in the event that the President invokes his War Emergency Powers, amateurs involved with RACES might be limited to certain specific frequencies (while all other amateur operation could be silenced).

While RACES was originally based on potential use for wartime, it has evolved over the years, as has the meaning of civil defense (which is also called civil preparedness), to encompass all types of emergencies. While operating in a RACES capacity, RACES stations and amateurs registered in the local RACES organization may not communicate with amateurs not operating in a RACES capacity. (Of course, such restrictions do not apply when such stations are operating in a non-RACES--such as ARES--amateur capacity.) Only civil-preparedness communications can be transmitted. Test and drills are permitted only for a maximum of one hour per week and one twenty four hour drill per year. All test and drill messages must be clearly so identified.

ARES and RACES Working Together

Although RACES and ARES are separate entities, the ARRL advocates dual membership and cooperative efforts between both groups whenever possible for an ARES group whose members

are all enrolled in and certified by RACES to operate in an emergency with great flexibility. Using the same operators and the same frequencies, an ARES group also enrolled as RACES can "switch hats" from ARES to RACES and RACES to ARES to meet the requirements of the situation as it develops. For example, during a "non-declared emergency," ARES can operate under ARES, but when an emergency or disaster is officially declared by a city, county, state or federal authority, the operation can become RACES with no change in personnel or frequencies.



SKYWARN is a National Weather Service sponsored program whose primary purpose is to solicit Storm Spotter reports from NWS trained participants. Skywarn storm spotters are a part of the ranks of citizens who form the Nation's first line of defense against severe weather. The effects of severe weather are felt every year by many Americans. To obtain critical weather information, NOAA's National Weather Service, part of the U.S. Department of Commerce, established SKYWARN with partner organizations. Skywarn is a volunteer program with nearly 290,000 trained severe weather spotters

Over eighty percent of trained Storm Spotters are HAM radio operators the United States. The primary goal is for trained spotters to provide ground truth reporting of NWS radar and other sensors to better enable NWS personnel to issue more timely and accurate warnings to the public. The secondary role, though just as important if not more so in many cases, is to report storm damage to both NWS and public service officials.

These volunteers help keep their local communities safe by providing timely and accurate reports of severe weather to the National Weather Service.

Although SKYWARN® spotters provide essential information for all types of weather hazards, the main responsibility of a SKYWARN® spotter is to identify and describe severe local storms. In the average year, 10,000 severe thunderstorms, 5,000 floods and more than 1,000 tornadoes occur across the United States. These events threatened lives and property.

Since the program started in the 1970's, the inform spotters, coupled with Doppler radar technology, improved satellite and other data has enabled the NWS to issue more timely and accurate warnings for tornadoes, Skywarn® storm spotters are part of the ranks of citizens who form the Nation's line of defense against severe weather. There can be no finer reward than to know that their efforts have given communities the precious gift of time—seconds and minutes that can help save lives.

What is SKYWARN®?

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 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.

What will I learn as a Skywarn Storm Spotter?

Training covers:

- Basics of thunderstorm development
- Fundamentals of storm structure identifying potential severe weather *features*
- *Information to report*
- How to report information

- Basic severe weather safety

Where can I get more information about becoming a Skywarn Storm Spotter?

Go to: <http://www.stormready.noaa.gov/contact.htm> and click on your state. When your state comes up, click on the name of your Weather Forecast Office (WFO). Once at your local WFO home page, in the blue bar on the left, look for the SKYWARN link to find a schedule of classes and other local information.



This four hour BASIC/Advanced SKYWARN Storm Spotters training class will be at the
Broward County Emergency Operations Center
Broward 201 NW 84th Avenue, Plantation Fl.
Saturday February 21st. 2015

Please note that you must preregister for this class, and there is no charge for this class or materials.

Please bring a picture ID to gain admittance to this class

The class is intended for those interested in becoming a Skywarn Storm Spotter. Interested persons must be at least 14 years old, accompanied by an adult and preregister by Monday, February 16th, by emailing Robin Terrill, the Broward County Skywarn Coordinator. Email: n4hnp@comcast.net.

When registering for the class, please include your name, home address, cell phone number and your callsign if you are a ham so I can preregister you prior to the class. You can bring a bag lunch and drink with you and you can even eat it during the class or during numerous 15 minute breaks.

Training is required in order to become a recognized Storm Spotter. SKYWARN classes are ideal for amateur radio operators, CERT members, Red Cross volunteers, firefighters, nurses, doctors, students or anyone who is interested and wants to serve. Classes will be taught by a meteorologist with the National Weather Service from Miami-Dade County.

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.

The Broward County Emergency Management Division reminds all residents that severe weather can happen at any time. Everyone needs to be prepared year-round.

"Being pre-prepared for any severe weather can make a big difference for Broward residents when disaster strikes," said Miguel Ascarrunz, Director of the Broward Emergency Management Division. "Our message to residents is very simple: determine your risk, take action and set an example for others."

- **Determine Your Risk:** Understand the types of dangerous weather that can impact your home and family.
- **Take Action:** Develop a preparedness plan, put an emergency kit together, determine how to communicate with your family during an emergency and practice your plan.
- **Set an Example for Others:** Once you have taken action to prepare you and your family, share with others what you have done to be prepared.

Residents wishing to become part of an important nationwide volunteer network that reports significant weather can enroll in the **SKYWARN** Storm Spotters class hosted by the Broward County Emergency Management Division and the National Weather Service. The next class will be held from 10AM to 2:30PM on Saturday, February 21st at the Broward County Emergency Operations Center, 201 N.W. 84th Avenue, Plantation. Early registration is encouraged as class size is limited to 60. To register, email n4hhp@comcast.net

Robert Molleda, NWS Radar. NWS WFO-Miami Skywarn Coordinator Meteorologist
Robin Terrill N4HHP Broward County Skywarn Coordinator

WHO ARE OUR ARES RACES MEMBERS



Our members are Amateur Radio Operators, individually licensed by the Federal Communications Commission. They are trained emergency communicators who have volunteered personal time, skill and equipment to serve in the public interest.

Most members have taken ICS 100, 200, 700, 800 and 802 to be compliant with NIMS and Incident Command Requirements for volunteers. Many members have also taken the Basic/Advance Skywarn class given by the National Weather Service by a Meteorologist from the Miami-Dade NWS office. Many members have gone far beyond this in their training and/or careers when it comes to public safety and emergency communications training experience.

Our meetings are held the third Tuesday of each month. We meet at 7:30 PM at Broward Health Hospital. (See the map and directions on the last page of this Newsletter). The purpose of our meetings is to provide members with updated information and training related to emergency communications.

We are looking for new people to join our team. If you live within Broward County and are interested in emergency communications (you do NOT need to be a licensed amateur radio operator to participate), we encourage you to get involved and we can assist you with getting your amateur license, if so desired. You may contact any one of the officers of the group for more information. (You will find this information on the last page).

We are also looking for presenters for our ARES/RACES meetings. We are also actively looking for a ARES/RACES program instructor. If this is you, then please contact either Carol or myself with that you can offer. Lastly, you can also join our mailing list for this newsletter. Please send an email to n4hhp@comcast.net and include your name, callsign, preferred email address and communications qualifications and we will put you on the mailing list. Robin / N4HHP Broward County RACES Officer and Broward County Skywarn Coordinator

Resources for all Emergency/Disaster Response volunteers

John Rabold KS6M Section Emergency Coordinator, ARRL East Bay Section ARRL

Anyone who expects to serve as a responding volunteer in an emergency or disaster situation in the United States should obtain at least some training that covers the Incident Command System (ICS) and the National Incident Management System (NIMS), of which the ICS is a key feature. This training is offered on line at no cost in the Federal Emergency Management Agency Emergency Management Institute's Independent Study Program (FEMA EMI ISP). Successful completion of each course results in a personalized certificate from FEMA. Most of the government and other public agencies and volunteer organizations active in disasters (VOADs) under whose supervision a volunteer might serve either require proof of such training or will soon require it.

Required or highly recommended for all volunteers

- [IS-100.b Introduction to the Incident Command System \(ICS\)](#)
- [IS-700.a NIMS: An Introduction](#)
- **Required or recommended for supervisory or other experienced volunteers**
- [IS-200.b ICS for Single Resources and Initial Action Incidents](#)
- [IS-250 Emergency Support Function 15 \(ESF 15\) External Affairs](#)
- [IS-288 The Role of Voluntary Agencies in Emergency Management](#)
- [IS-800.b National Response Framework, An Introduction](#)
- **Other useful EMI ISP courses**
- [IS-317 Introduction to CERT](#)
- [IS-802 ESF #2 Communications](#)
- **Related Resources**
- [FEMA EMI Independent Study Program](#) home page
- FEMA EMI Independent Study Program [course list](#)
- [FEMA Incident Command System Resource Center](#)

Training for volunteer Amateur Radio operators

As an Amateur Radio operator who wants to serve in time of disaster, you have several challenges to overcome, but there are many resources available to you to help you overcome the challenges. The challenges include gaining and maintaining:

- operating techniques that are effective, efficient, courteous, and compliant with the federal regulations that govern Amateur Radio,
- proficiency in composing and routing both formal and tactical message traffic, and
- proficiency in using your radio equipment under field conditions.

Some radio operators are under the impression that the federal regulations that govern Amateur Radio are suspended during emergencies or disasters. You may hear them say something like "In an emergency, anything goes." This is not true. In emergency and disaster situations, certain provisions of the regulations go into effect, and certain prohibitions are suspended, but the remaining provisions remain fully in effect. We Amateur Radio operators should, in fact, expect and prepare to govern ourselves with the utmost discipline, compliance, and courtesy during emergencies and disasters in order to achieve our mission of serving the public at those times.

For most Amateur Radio operators, conveniently-located actual disasters utilizing Amateur Radio's services are rare, so skills must be gained and maintained in other ways. Activities that will help you meet these challenges include:

- Learn from operators who have experience and good operating practices.
- Join a local Amateur Radio club and attend its meetings.
- Join the American Radio Relay League (ARRL)
- Participate in your area's Amateur Radio disaster-preparedness nets. These nets, managed by local clubs, are often held weekly on weekday evenings. Most Amateur Radio operators participate from their homes.
- Register in the Amateur Radio Emergency Service® (ARES®)
- Register in your community's Auxiliary Communications Service (ACS) or Radio Amateur Civil Emergency Service (RACES) program, if any.
- Read the monthly ARES E-Letter. It is available on the ARRL Web site, and ARRL members can have it sent to them by email.
- Study the operator's manual for your transceiver, and practice changing your transceiver's settings
- Learn how Amateur Radio operators handle both formal and tactical message traffic, and practice sending and receiving messages.
- Participate on an Amateur Radio team in support of a local event such as a walkathon, run, hike, or bike ride. Working at these public service events is fun and a valuable service to the public, and the skills used are very similar to those used in emergency communications. You can often learn of a need for Amateur Radio operators at such events on the Web sites of local Amateur Radio clubs.
- Participate in the annual ARRL Field Day in late June with your club or on your own.
- Participate in the ARRL Simulated Emergency Test (SET) annually in the fall with your local Amateur Radio group.
- Look for opportunities to gain related skills and certifications.
- Encourage and train less-experienced Amateur Radio licensees in emergency communications skills.

Resources

- Operator's manual for your transceiver
- Federal Communications Commission:
- [Amateur Radio Service](#)
- [American Radio Relay League \(ARRL\)](#)
- [Emergency Communications](#)
- [Emergency Communications Training](#)
- [The ARRL Introduction to Emergency Communication \(EC-001\)](#), available as an online course, as classroom training, and as self-study using the course transcript
- [Public Service Communications Manual](#)
- [Amateur Radio Emergency Service® \(ARES®\)](#)
- [ARES registration in the ARRL East Bay Section](#)
- [ARES registration elsewhere](#)
- [ARES E-Letter](#)
- [Current and back issues](#)
- [ARES Field Resources Manual](#) (Adobe file)
- [National Traffic System Methods and Practices Guidelines](#)
- See especially [Chapter 2, "Sending Messages on Voice"](#) (Adobe file)

Additional Resources for volunteer Personal Radio Services operators

The [Personal Radio Services](#) of the Federal Communications Commission include the Family Radio Service (FRS), the Multi-Use Radio Service (MURS), the Citizens Band (CB) Radio Service, and the General Mobile Radio Service (GMRS). Transceivers using these services can be useful in emergency and disaster response situations. They may especially useful for very short range communications, such

as within and among urban and suburban neighborhoods during CERT operations. Unlicensed FRS, MURS, and CB operators and licensed GMRS operators are encouraged to make use of the training resources designed for Amateur Radio operators. Here are some additional resources:

- [FRS/GMRS frequency/channel table](#) (Adobe PDF file)
- Operator's manual for your transceiver
- Emergency Communications Training
- [The ARRL Introduction to Emergency Communication \(EC-001\)](#), available as an online course, as classroom training, and as self-study using the course transcript. This course is designed for licensed Amateur Radio operators, but it is open to all and is of significant value to all volunteer emergency communicators.
- Federal Communications Commission:
- [Family Radio Service \(FRS\)](#)
- [Multi-Use Radio Service \(MURS\)](#)
- [Citizens Band \(CB\) Radio Service](#)
- [General Mobile Radio Service \(GMRS\)](#)

AMATEUR LICENSE INFORMATION

Don't Let Your License Expire!

Renewing your Amateur Radio License

by Bruce Ferry, AK8B

Although this web page is directed at renewing your license, you can use the same process to change your address.

You can renew your license if it will expire within the next 90 days or any time within the 2 year grace period after your license has expired.

Past the 4year grace period you cannot renew your license. You can retest for the Technician License to restore your license.

See <http://www.ak8b.us/ve/formercredit.html> for the details.

This page is ONLY for individuals of regular (not vanity) licenses wishing to renew their license.

You can check your callsign at the FCC's ULS Lookup

Page: <http://wireless2.fcc.gov/ULSApp/ULSSearch/searchLicense.jsp>

You can verify that your callsign is indeed due to expire soon (or has expired) and verify that you have an FRN (FCC Registration Number). You can't do business directly with the FCC any more without an

FRN. Depending on how you renew your license, you may need to obtain an FRN before you can file any other forms with the FCC.

You have several options to renew your license:

1. [Renew Online](#) - You can do it online through the FCC. This is the fastest and is zero cost.
2. [Through the ARRL](#) - If you are an ARRL member, you can use the NCVEC 605 form and mail your renewal to the ARRL.
3. [Through the FCC](#) - You can mail the official FCC forms directly to the FCC.
4. [At a VE Test Session](#) - You can upgrade your license at any ARRL VE test session and at the same time renew your license (even if you don't actually earn an upgrade) for no additional cost.
5. You can pay someone at one of the VECs to file the renewal for you. You will get notices in the mail soliciting this type of offer. I personally think this is a mean trick to get you to pay money to someone to do what should be free. I strongly suggest you avoid this route.

Renewing Online

Now that I've actually done it I can easily say this is the BEST way to do it. It's quick and easy - if you have your ULS password.

1. Go to the main ULS page at: <http://wireless.fcc.gov/uls>
2. Click on "Log In" under "Online Filing"
3. Enter your FRN and password
4. Once you are logged in you can renew your license. You can do a variety of other things here too like change your address and request a duplicate license.

Renewing Through the ARRL

If you are an ARRL member this is free and easy. Fill out the special NCVEC 605 form online at: <http://www.arrl.org/files/file/ncvec605-3.pdf> and print it out. Mail it to:

ARRL/VEC
225 Main Street
Newington, CT 06111

Note: You do not need to have an FRN to use this method. The ARRL will automatically obtain an FRN for you if you do not already have one.

Renewing through the FCC

If you are not an ARRL member, this is the best way to renew through the mail. There are some specific requirements though. First, you must have an FCC Registration Number (or FRN) to file a form 605. You can check to see if you have one with the callsign look above. If your license listing does NOT show an FRN then you must obtain one first by filing an FCC form 160. You will have to file this form and wait for the FCC to mail you back your FRN. Click [here](#) for the instructions for this form.

If you do have an FRN you can proceed to download and fill out the FCC form 605. There are two parts to the form, a main part and Schedule D. You should not need Schedule D but you can come back here to print it if you want to.

<http://www.fcc.gov/Forms/Form605/605main.pdf>

<http://www.fcc.gov/Forms/Form605/605d.pdf>

There are several pages to the main form. All but the last two are instructions and are not needed (unless you really like to read federal government written instructions). The actual form is on the last two pages. Print them out so you can fill them out as described in my simplified instructions:

[FCC 605 Instructions.pdf](#)

Note that these instructions apply to the June 2011 version of the FCC 605 form.

If you find you need Schedule D you will only need to print the last page.

Renewing at an ARRL VE Test Session

This can be one of the easiest ways to renew your license. If you are upgrading your license you get an opportunity to also renew.

If you are NOT upgrading but are an ARRL member you can also file an NCVEC 605 form with the examiners for free. Simply fill out the NCVEC 605 form (as [described above](#)) and bring it to any ARRL VE test session. The VE team can also provide you with a copy of the NCVEC 605 form at the test session for you to fill out. You will need proof of membership - a recent QST label or a copy of your membership card.

Contacting Me

If you still need help or have found a problem with this web page please contact me by email at: bruce@ak8b.us.

ARTICLES NEEDED!!!



If you have anything pertaining to ARES/RACES/SKYWARN that you would like to contribute to, and share with others, I would be happy to include your offering in any future edition. I am looking for articles that include hints and kinks, training articles, public service events, pictures, operating tips, ham humor or ham jokes etc.

All articles are to be camera ready. All articles must be in by the first Tuesday of every month. Copyright rules and permission apply to all submissions. Please send your submission to:

Robin / N4HHP Editor n4hhp@comcast.net



Radio Merit Badge

Resources http://www.scouting.org/jota/radio_merit_badge.aspx



If you're new or old timer to the hobby and you think that the test is difficult for you to pass, just, look at what the requirements are for a Boy Scout to become an amateur radio operator are. This article provides links and downloads to learn to pass the Technician Class test.

As you should know, there is no age limit in becoming an amateur radio operator. Take a look at what the Boy Scouts Radio Merit Badge study material consist of.

- [Requirement 1](#) Explain what radio is.
- [Requirement 2](#) Sketch a diagram of radio waves traveling & explain DX, FCC, and ITU.
- [Requirement 3](#) Draw EM spectrum chart, label it, and locate radio services on it.
- [Requirement 4](#) Explain how radio waves carry information.
- [Requirement 5](#) Explain & draw block diagram, schematic symbols, & circuits.
- [Requirement 6](#) Explain safety precautions with radio gear.
- [Requirement 7](#) Visit a radio station and discuss it.
- [Requirement 8](#) Find out about radio careers.
- [Requirement 9a](#) Amateur Radio Service.
- [Requirement 9b](#) Broadcast Radio Service.
- [Requirement 9c](#) Shortwave listening.

Other sources for learning the Technician level license is:

- The No-Nonsense, Technician Study Guide

By Dan Romanchik KB6NU

http://www.kb6nu.com/wp-content/uploads/2010/06/2010_Tech_Study_Guide.pdf



ARRL Study Materials

Additional resources to supplement your preparation are provided on our [online Ham Radio License Manual Support Page](#).

ARRL's Tech Q&A – third Edition

Your Quick & Easy Path to your FIRST Ham Radio License

Includes the latest question pool with answer key

<http://www.arrl.org/studying-for-a-technician-license>

Pass the 35-question test.

So why not pass this page with this information onto a friend or acquaintance and help them get into amateur radio. Check out this news story on a new young ham learning the ropes of emergency communications and the overall joy of being a ham.

<http://www.9news.com/story/news/local/2015/01/23/5-year-old-passes-ham-radio-exam/22247015/>

Mobile Antenna Mounting Consideration

Taken from Pinterest

A **VERY** common misconception is confusing the electrical ground (the return for the load on your final's amplifier transistor) with the reflective surface that the RF energy needs to use for "launch". There are two parts to most antenna designs - the metal radiator and the ground plane. In a vehicle you can get a good electrical ground but you only have the size and shape of the vehicle and you're done for the RF ground plane. The near field reflection surface of the truck vary greatly on the frequency of the transmitter being pretty good for UHF, bad for VHF, and terrible for HF.

I made this up for a class I was teaching based on some Motorola research I had found.

NWS Norman Online Spotter Training

Presentation Material Written By the Norman NWS

Storm spotters help their local communities and the National Weather Service make critical warning decisions when dangerous storms threaten. Each year NWS the Miami Weather Service in Miami-Dade Florida conducts dozens of spotter training classes in their coverage area which includes Miami-Dade, Broward, Palm Beach, Mainland Monroe, Collier, Hendry and Glades counties, as well as Lake Okeechobee.

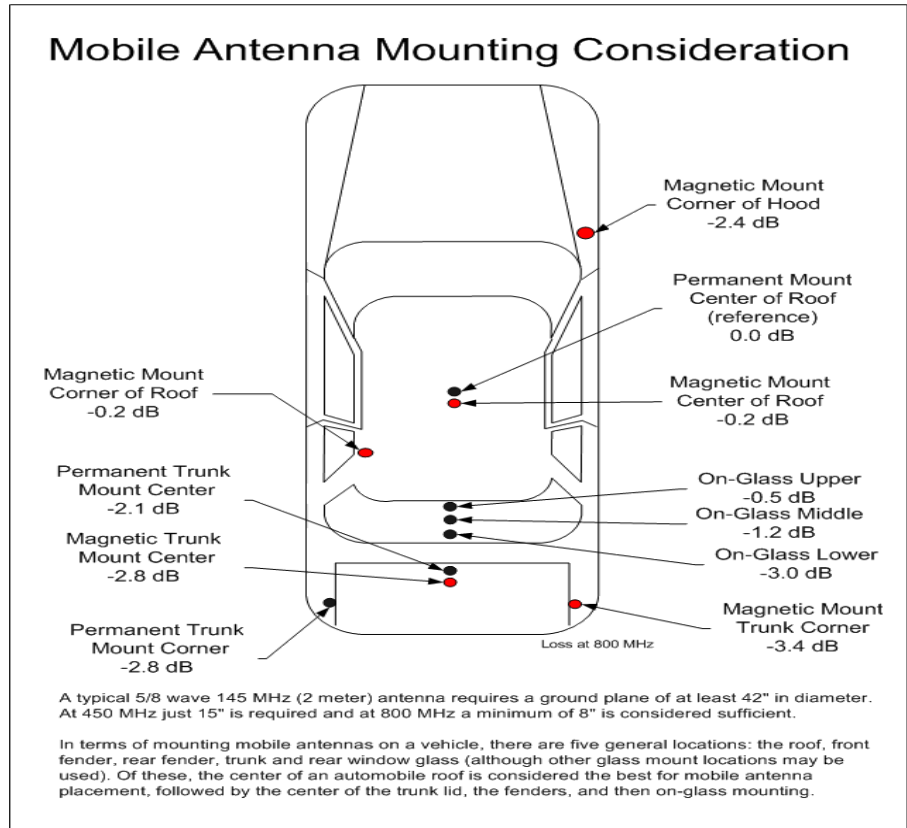
Skywarn Class presentations includes slides, pictures, and video, lasts about 4 hours including breaks. The class focuses on the weather knowledge that is vital to NWS, city, police and fire officials, and other local storm spotter groups looking to serve their community. Classes are open to the public and the National Weather Service welcomes storm reports from anyone who has enough interest to become trained in the Basic/Advanced Skywarn members. The class covers weather safety and storm spotting.

With the creation of an online presentation that you can view at work or at home, it just became easier than ever to learn the basics! If you are unable to attend a class, or just want to review concepts, this online training course is for you.

These modules will not replace the live training sessions, but they will give you the very basic information you need to safely observe storms and make good reports.

You can also find more training resources and references here.

- [NWS Norman Spotter Reference Handout PDF](#)
- [NWS Norman Severe Weather Safety Handout PDF](#)
- [NWS Basic Spotter's Field Guide PDF](#)
- [NWS Advanced Spotter's Field Guide PDF](#)
- [NWS Norman - Introduction to Storm Spotting](#)
- [Cloud Identification Charts PDF \(slower\) JPEG \(faster\)](#)



Emergency Communications Devices

Written permission by [Luke Huebner](#) @ ZipScanners



Modern technology has completely transformed communication & we live in a society where everyone is a tweet/text/call/email away. During emergencies such as Katrina, 9/11 & the 2011 Japanese Tsunami all or parts of the traditional communication systems (landline/cell/web) failed, leaving those in devastated areas without information or a way to communicate.

Communication & gathering information during an emergency is important to survival & preparing for this could save your life. Having an emergency communication plan is important & choosing the correct communication device(s) is a big part of planning. There are 7 types of emergency communication devices (aside from radio & TV) to choose from, and while none are perfect, below we compare each.

							
DEVICE	Police Scanner Radio	HAM Radio	CB Radio	Walkie-Talkie (FRS/GMRS)	Marine Radio	Weather Radio	Satellite Phone
MODEL	Uniden BCD436HP	Icom ID-51A	Cobra HH 38 WX ST	Uniden GMR 5089 -2CKHS	ICOM M92D	Ambient Weather WR-112	Iridium 9575
PRICE	\$470	\$545	\$100	\$110	\$300	\$60	\$1,700
WEIGHT (oz.)	12	9	9	16	11	8	9
SIZE (H x W x D in.)	2.5 6.5 1	2.3 4.2 1.1	2.25 1.7 7.2	15 3.5 8.5	2.4 5.6 1.7	5.5 3 2	5.5 2.4 1.1
BATTERY	AA	1150mAh	AA	NIMH Pack	1150mAh	800mAh	Proprietary
RANGE¹ (MI.)	30	30	2	2	3	40	All
2-WAY COMM	NO	YES	YES	YES	YES	NO	YES
NOAA WEATHER	YES	YES	YES	YES	YES	YES	NO
Monitor Emergency Communication	YES	YES	NO	NO	NO	NO	NO
LICENSE REQUIRED	NO ²	YES	NO	YES ³	NO ⁴	NO	NO
BATTERY LIFE⁵ (hrs)	8	8	8	8	8	8	3.5

¹ Range varies greatly depending on topography

² Regional restrictions exist, see all here: ZipScanners.com/resources/are-police-scanners-legal/

³ GMRS only

⁴ Some restrictions apply

⁵ Talk/use time on single charge

Zip Scanners is a retailer of police scanner radios & accessories. Visit our Resources & Learning Center to find out more about scanners.

SOURCES:
Companies



www.zipscanners.com

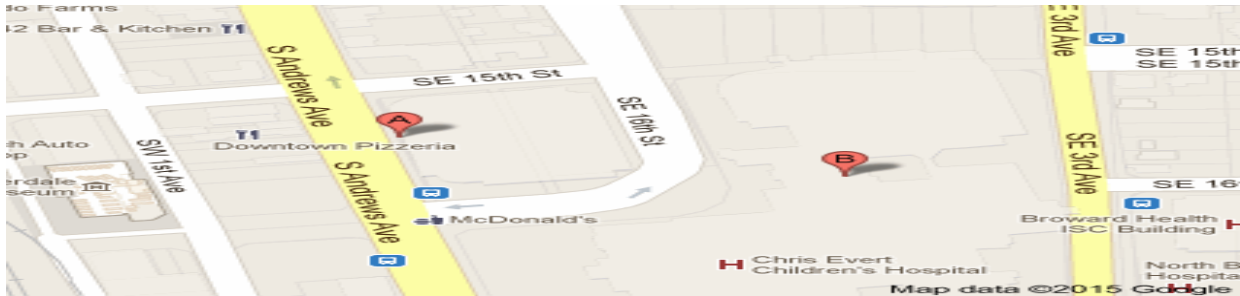
763.200.1157

<h2 style="margin: 0;">Broward Emergency Management ARES / RACES Membership Application</h2> <p style="margin: 10px 0 0 0;">Please type or print clearly</p>	<p>EOC Use Only</p> <p>RACES # _____ RACES POSITION _____</p> <p>Effective _____</p> <p>Expires _____ Approved by _____</p>																																																																																																																																																																					
<p>Name _____</p> <p>Address _____</p> <p>City _____ Zip Code _____ County _____</p> <p>Home Phone _____ Work _____ Cell _____</p> <p>Amateur Call _____ License Class _____ Expiration Date _____ Date of Birth _____</p> <p>Emergency Contact _____ Phone _____</p> <p>Email Address to receive Broward County ARES / RACES Alerts / Bulletins _____</p>	<p>Completion of this Application DOES NOT OBLIGATE YOU</p> <p>Enrollment in RACES qualifies you for County insurance in the event RACES is activated, and you are performing duties.</p> <p>This information provides a database of qualified Amateur Radio operators available for ARES/RACES emergency activation.</p> <p>ARES/RACES participation is voluntary.</p> <p>By submitting this application you consent to a background check.</p>																																																																																																																																																																					
<p>You reside at the above address during what months? From _____ To _____</p> <p>Are you capable of setting up a station in the field? Indicate what, below, if yes YES NO</p> <p>What languages are you fluent in? _____</p>																																																																																																																																																																						
<p>In the event of an emergency do you have family members you must assist? YES NO</p> <p>Are you willing to Staff a shelter during a hurricane? YES NO</p> <p>Is your home station capable of operation without commercial power? YES NO</p> <p>Could you serve another area in Florida by joining the Communications Away Team (CAT)? YES NO MILES AWAY _____</p>																																																																																																																																																																						
<p>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.</p> <table border="1" style="width: 100%; border-collapse: collapse; text-align: center;"> <thead> <tr> <th>Modes</th> <th>160</th> <th>80</th> <th>40</th> <th>30</th> <th>20</th> <th>17</th> <th>15</th> <th>12</th> <th>10</th> <th>6</th> <th>2</th> <th>1.25cm</th> <th>70cm</th> <th>Add. Bands/ Comments</th> </tr> </thead> <tbody> <tr> <td>SSB- Power in Watts</td> <td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td> </tr> <tr> <td>CW- WPM</td> <td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td> </tr> <tr> <td>TOR- RTTY, PSK31, WinLink, Pactor II, etc.</td> <td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td> </tr> <tr> <td>SSTV, DSSTV, NBTV</td> <td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td> </tr> <tr> <td>Mobile / RV- Modes and Power in Watts</td> <td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td> </tr> <tr> <td>Packet- Baud 300, 1k2, 9k6</td> <td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td> </tr> <tr> <td>APRS- GPS, WX, DF, Tracker</td> <td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td> </tr> <tr> <td>ATV- AM, FM</td> <td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td> </tr> <tr> <td>FM- Power in Watts</td> <td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td> </tr> <tr> <td>Satellite- AO, FO, RS, SO etc.</td> <td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td> </tr> </tbody> </table>		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.														
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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. 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



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

Remember that our ARES/RACES meeting is on February 17th