

# THE REPEATER

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## FEBRUARY 2018

Dedicated to serving the communities in and surrounding Butts County, working hand-in-hand with local and state governments, the Red Cross, and other non-profit community-service organizations.

# CHANGING OF THE GUARD

THE BCECA WELCOMES OUR NEW PRESIDENT

ELAINE STACHOWIAK, KW4AQ

2—Calendar

3—WHIT'S WISDOM

6—A Noobie's Guide

9—NOTES FROM THE BUZZO

10—REPORTS

12—CLUB DIRECTORY

13—Georgia State ARES Meeting

14—QRM Remembering Ed

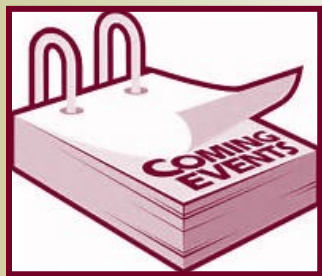


Butts County

348 Patrick Circle  
Jenkinsburg, Georgia  
30234

770-957-0779  
wx4bca@arrl.net





### FEBRUARY

**3 — Tech License Class and Special VE Session (Station 7)**

**5— Monthly Club Meeting ; Exchange Club; Jeff Cantor, K1ZN - Adventures in DXing and IOTA**

**17— Tech Saturday—group trip to the National Weather Service located in Peachtree City. Meet in the NWS parking lot at 1600 that day.**



### MARCH

**5— Monthly Club Meeting ; Exchange Club; W2NP - FT8 and Other JT Digital Modes**

**17— VE Session**

**18— Georgia Publix Marathon Sunday, March 18, 2018**



### APRIL

**2— Monthly Club Meeting ; Exchange Club ; SDR Receivers - Greg Mann (?)**



### MAY

**7 — Monthly Club Meeting ; Exchange Club; ECHO-LINK - John Lipscomb, KA3SME**

**19— VE Session**

**\*\*Hungry Hams meet on the 3rd Saturday at the Lunchbox restaurant in Jackson (07:30)\*\***

# Tech Notes

Whit

## WHIT'S WISDOM

Whit Smith—WA4VBX



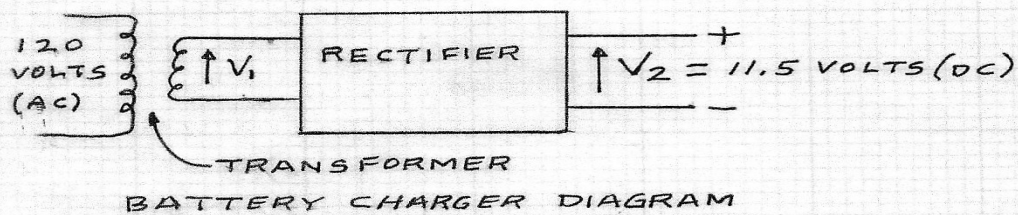
### My Battery Charger Reads 11.5 Volts, How Can It Charge My 12 Volt Battery?

The answer to this question is not simple. Hopefully, the information below will shed some light on the subject.

First, let's make a look at how DC (Direct current) and AC (Alternating current) relate. 12 volts DC and 12 volts AC produce the same heating effect in a resistor. This is true for our house current which is a sine wave (60 hertz or cycles per second). The peak, effective, and average for DC and AC are different. For a sine wave, the relationship between  $V_{pk}$  (voltage peak) and  $V_{rms}$  (voltage root mean square) is  $V_{rms} = V_{pk} \times .707$ . Other waveforms have a different relationship as shown in the chart below.

volts	Volts peak	Volts average	Volts R.M.S.
12 DC	12.0	12.0	12.0
12 AC sine wave	16.266	$V_{peak} \times .637$ $= 10.361$	$V_{peak} \times .707$ $= 11.5$
12 AC square wave	12.0	12.0	12.0

Second, let's look at the diagram of a battery charger and its associated waveform. Notice the similarities and the differences of the two waveforms.



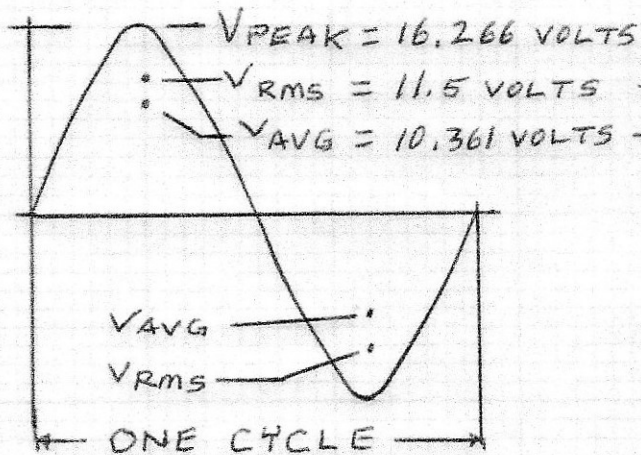


# Tech Notes

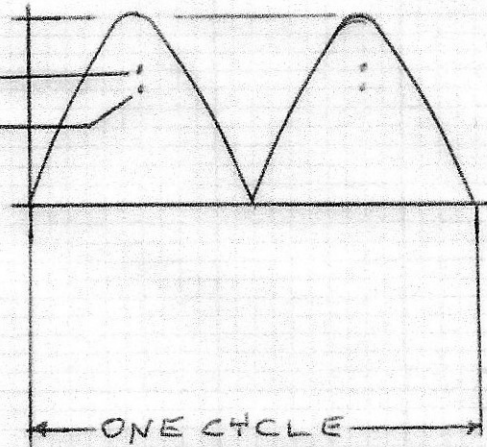
Whit

## WHIT'S WISDOM

Whit Smith—WA4VBX

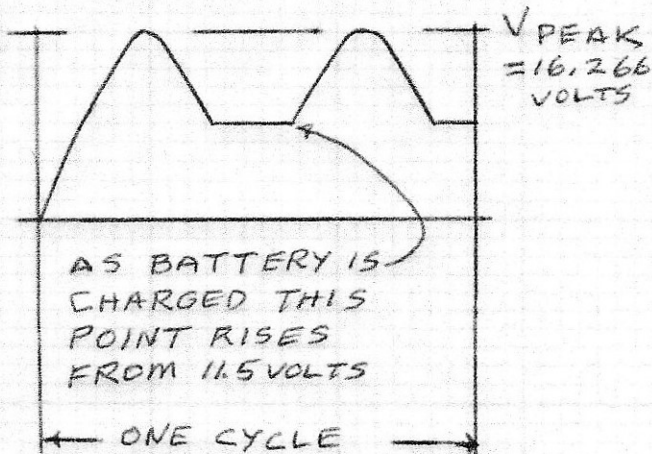


WAVE FORM OF  $V_1$   
BEFORE RECTIFICATION

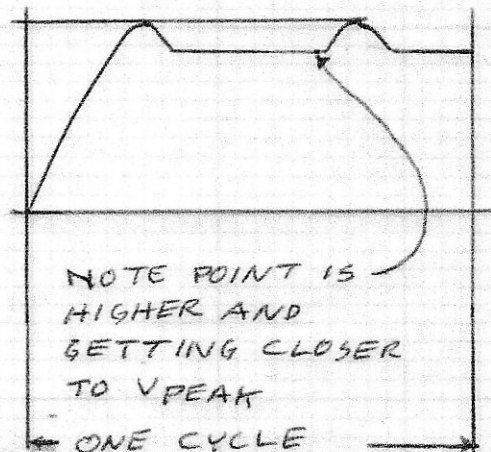


WAVE FORM OF  $V_2$   
AFTER RECTIFICATION

Third, lets look at the waveform when a battery is added to the circuit.



WAVE FORM AFTER  
LOW BATTERY IS  
FIRST CONNECTED  
TO CHARGER



WAVE FORM AFTER  
BATTERY HAS  
BEEN CHARGING  
FOR A WHILE

# Tech Notes

Whit

## WHIT'S WISDOM

**Whit Smith—WA4VBX**

This process will continue as long as the battery charger is connected to the battery. If you charge too long, the battery will be overcharged and will tend to ruin your battery. This non-regulated battery charger works well but it has a limited time to be in use. The length of use will depend on the charge level of the battery and could be up to several hours.

If you want to continuously run a battery charger connected to a battery, the charger should be a regulated type. An example of this is in your car where the voltage is regulated to approximately 13.8 to 14.2 volts depending on the manufacturer. For most amateur stations, a regulated supply of approximately 13.8 volts is desired, and it could or could not have a battery connected.

## 2018 ARRL Field Day is June 23-24





# A Noobie's Guide – KN4FRG

## A Noobie's Guide

KN4FRG

Hello, my name is Jeff, and in March of 2017, I started the progression of becoming an official Technician qualified operator and then moved on to gain the licensing to operate an HF amateur radio using all bands and modes. For those of you who are following the same path, I will lend to the group a few of my experiences a year after becoming a Technician. I hope that this will provide some thought processes for those in the same boat to at least have some forethought to use in your path to operating an HF radio and therefore choosing the radio(s) made for you, if that is even possible as a new HAM.

Upfront, if you fall into this category, you probably have hundreds of questions, because the amateur radio hobby offers an immense amount of opportunity in hundreds of different fields of study and use. Let us first begin with two general types of HF radios. First, there is the all-in-one offering the new operator generally all the bands and modes all in one single transceiver or as many call it "the shack in a box," mobile/shack rig. Many name brand manufacturers offer such a radio and examples are Yaesu FT-857D, Yaesu FT-817ND (portable/QRP), ICOM IC-7100, Yaesu FT-991A (shack type), and others. The second is an HF/6meter rig and a dual bander for those local repeaters – essentially, it has two transceivers. My first thought process was I needed a mobile "shack in the box," but how much money do I have to spend?

As I started the search for the ideal Ham Radio, I pondered a few points, first, how much money can I spend (budget), and second what are my plans for use of the system. These are important aspects and one you should decide upon before taking the leap and buying that radio. I will not focus on the budget much, but as an informative point, there are new and used radios ranging from a mere \$350 up into the thousands. There are several outlets offering a secure and monitored means for individuals to purchase used equipment. An example is QRZ.com. QRZ is an amateur radio web site offering news, technical articles, web logging, look-up capability (cost to you), practice exams, Ham equipment for sale (swap meet), and other resources. Another example is swap.qth.com offering a wide variety of used related gear for the seasoned or new operator. Finally, there are several outlets for purchasing that new radio. Some examples are Ham Radio Outlet, DX Engineering, GigaParts, Quick Silver Radio, and many others and most offer used equipment for sale. There are other buying sites just a click away using "Google." Now for the hard question, how do I plan to use the HF radio?

Many seasoned Ham operators or Elmers (mentors) will offer their opinion based upon your questions and/or of what worked best for them. Many Elmers have decades of operating experience along with many years discovering *how* to operate and know *why* they enjoy amateur radio. Either way, I would definitely invest time in finding several Elmers to help guide you through this process – a gathering of opinions. The best place to start is finding an Amateur Radio Club within your local area to seek out these smart folk. As an example, the Butts County Club (Butts County Emergency Communications Auxiliary/bcgaares.org) is a great organization to find your answers and feel a part of a team of professionals. Now, some might think I may be biased, but due to my situation, residing in Missouri, other clubs might not be as generous to your needs as a beginner in amateur radio. The key point is, find a club that is right for your interest, but find a club! The club can provide a single point of a group of Elmer's who have already experienced your same dilemmas and can provide their opinions and many offer it without issue. Be prepared, some of these Elmers are stuck in their ways and believe there is only one avenue for a given question/solution, i.e. there is no such thing as a multi-band wire antenna (G5RV). Remember, conduct your own research, decide your interests, and focus questions to your Elmer's based upon your interest(s) and of course with a little research. The question

## A Noobie's Guide – KN4FRG

*for me, is it mobile/portable or a base station (in the shack) HF radio?*

As many others before me, I thought the mobile “shack in the box” would be the best solution. My opinion before discussing with my Elmers was I need a radio, not two, for the truck and the house. I will travel and maybe operate portable and need a system to use in either location. Therefore, the mobile “shack in the box” was my initial thought and guided my research. The next series of points are my opinion. They could help in your decision making process. As I discussed these questions with many Elmers, they provided their opinions and thoughts on the matter. The first hard question is *are you really going to spend more time using the radio in a mobile scenario or more in a shack environment?* This is really the hard question, but as I came to realize, I would use the radio at the shack a lot more than in a mobile or portable situation. Therefore, for me, the portable/mobile “shack in the box” was more of a *nice-to-have*, than as a primary. A secondary question, *is there a good, reasonable, and decent antenna for a mobile environment?* Of course, they are several, but through my research, a good decent single automatically tuning antenna was not that reasonable - \$1000, again the budget constraints. Now that I had narrowed down the choices, I focused on an *in-the-shack* radio.

Upfront, a shack radio can be a mobile or a larger more shack-like HF radio. The shack system could have a “shack in the box” larger system like the FT-991A (all bands/all modes) from Yaesu or a single HF/6 meter (ICOM IC-7300) with an additional VHF/UHF transceiver attached to good antennas with appropriate grounding. With either choice, many Elmers will argue the benefits of two transceivers versus an integrated all band system. The answer is, it depends. I started as a Technician and I wanted to talk to the local repeaters, so, I started with a dual band transceiver for both VHF/UHF along with a good handheld HT system – this was a decision based upon what I wanted to operate with now and of course budgetary concerns. Even the choice of what VHF/UHF transceiver is not an easy one. It takes research and a general understanding of what you want to accomplish. Based upon my research, I chose an IC-2730A. The IC-2730A is a dual band cross repeating radio with a large display and more attributable for use in a mobile environment. It is easy to operate and program, but it is not as easy or a little more complicated to operate in digital modes, especially as a tool used in emergency communications. For example, a better-suited radio for digital operations may be the Kenwood TM-V71A, or a now replaced – yet still very popular -- ICOM ID-880H. Either transceiver offers a data port providing smoother transition to a soundcard that ultimately connects to your personal computer. Ham radio offers many choices along with magnitudes of research by you, dependent upon your choice as part of the hobby. Up next is choices for an HF transceiver.

The main choices are a “shack in the box” mobile (i.e. FT-857D) or a shack-like larger system (i.e. FT-991A) or both an HF/6 meter and a dual band transceiver. I will not delve in the pros and cons of a “shack in the box,” but one Elmer did state, if your “shack in the box” fails, you could no longer operate. My opinion, if you are going to operate more in a mobile/portable environment using primarily battery power, arguably the mobile all band system is the best answer, but mobile radios have many caveats. Mobile radios are generally smaller than their larger counterpart, and therefore, have many ergonomic deficiencies. Controls are very close together, smaller screens, limited control of menu functions on the outside of the transceiver, and many functions hidden deep with the system's menu selection. In addition, performance of a mobile system is usually a few tiers lower than a comparable shack rig. With this in mind, a mobile rig is hundreds of dollars cheaper and provides the same opportunity for that new Ham to use as the shack rigs offer. An individual can use the transceiver in the shack or on the go in your vehicle. Again, choices are dependent upon your type of use and any answer is the user's choice. I personally purchased an IC-7300 as my shack HF transceiver, but it did take

## A Noobie's Guide – KN4FRG

months for me to make that decision. Personally, it was worth the wait.

Bottom-line, take your time and make a decision based upon your individual need after much needed research. There are several types of radios available, new or used, that fall all along the cost scale. Many used radios can provide all your wanted features to meet your designated use, but be careful, if that is your choice. Make sure the used system powers up and do not be afraid to ask the seller to provide proof that it operates across the bands and modes, radios cost money, so ensure the radio functions as advertised. Vendors offer many new radios to meet you individual needs and come with a manufacturer's warranty and many offer an extended warranty, if needed. Remember mobile systems are smaller, less ergonomic, and are less costly. Shack radios cost more, but usually offer more features and are easier on the eyes. The mobile radio is easier to operate portably [Parks on the Air/Summits on the Air], and will consume less battery power, especially for longer periods of use. The choice for a HF radio is not easy and does require research and definitely join a club to seek advice from an Elmer (s). Lastly, most HF radios hold their value. If you are unhappy with your first choice, sell it, and buy a different one more attuned to your updated needed features.

73,

KN4FRG

**This is Jeff's (KN4FRG) second article for the Repeater. His contribution to our Newsletter is greatly appreciated. Articles by members are always welcome.**



## NOTES FROM THE BACKACRE – K3GWK



Well, January provided no rest for the weary. For a relatively small club we are certainly very busy. There was almost an activity every weekend, including TechFest and the Georgia ARES Convention held at GPSTC in Forsyth. Our Butts County AREA Team was well represented at the state meeting, with our members attending a wide range of classes and forums. TechFest was interesting, too. There was a forum on satellite operations by John Kludt (K4SQC). John will be attending one of our Tech Saturdays, demonstrating the magic of ham radio satellites.

Our January Technician License class kicked off last Saturday with three students in attendance. Cudos to our instructor group for their support of this “growth” effort. Thanks especially to those instructors who stepped up to cover several open sessions. BRAVO ZULU!

I’d like to take this opportunity to thank our, now, ex-president Ed Hoard (WX4ED) for his leadership and enthusiasm. Ed you will be missed. Florida’s gain is a big loss for our group. Now we need to get behind Elaine Stachowiak (KW4AQ) as she assumes the position of club president.

Last year I asked our “active” members who had not completed the required ICS courses to make a resolution to complete them in 2017, didn’t work. We are still at the same level of ICS completion as we were in January of 2017. ISC and NIMS is how the agencies we support do business. Public Health, GEMA, the EMA and Fire Department and our hospital all use the Incident Command System for planning and response. If we want to provide profession level support we *all* need professional level training. There are dozens of free GEMA classes available and hundreds of, also free, on-line courses from FEMA and we have a great training resource just “down the road” at GPSTC. Everyone who attended the GA ARES Convention is registered in the GEMA Training System and eligible to take courses at GPSTC.

I’m going to cut this edition of the *Backacre Report* a little short. David Ridgeway (KM4SUO) and I have

spent this week at GPSTC attending classes on, first ICS-300 and now ICS-400. Two pretty demanding courses on the Incident Command System and NIMS. My old brain is tired and I still have an article on the Katrina oil spill response to read. No FT8 tonight.

### ARES ACTIVITY FOR JANUARY:

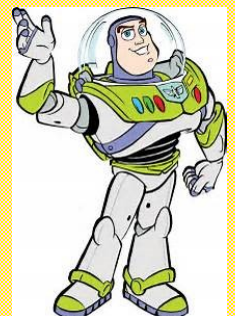
- NETS: 12 (4 Voice, 4 WL2K and 4 NBEMS) – Remember our FM nets have moved to Tuesdays at 19:30
- Public Service: 0 Events
- Drills, Tests and Training: 9 Events (285.5 Hours)
- Emergency Operations: 0
- Miscellaneous: 1 (25 Hours)
- Total Hours: 329.5 (Value Added \$7,954.13)

### MEMBERSHIP (01/31/2018):

- Deployable: 10
- Active: 15 (**All Basic ARES Requirements Complete: ONLY 2**)
- Pending: 6 (Need to complete Basic ARES, IS-100 and IS-700)
- Total: 31 (+1 from December)
- Inactive: 2 (No activity in the last 90 days – all it takes is a WL2K message)

That’s about it from Jenkinsburg Station. (Weather Underground ID: KGAJENKI2)

Thanks again for all you do for ARES and for Amateur Radio. 73, Buzz (K3GWK)





## REPORTS

Please send reports to NI2Y@arrl.net in advance of the publication of the Repeater.

### Net Manager's Report

January '18 was a good month for our BCECA, had over 150 net chk-ins, avg of 30+ per week. Really appreciate your efforts as some of y'all have a hard time makin' it home from work in time for the Weekly Trng Net.

We're still in need of Net Controllers; Buzz, K3GWK, is gonna handle February for us, but we still need to fill the sched each month for the rest of the year. For any of you thinkin' about takin' a turn at it, consider bein' the Alternate NCS for a session. In case the primary NCS goes off the air or has problems and can't complete the net, we need an Alt to step in and take over. Normally, just requires keepin' a log for the voice and digital chk-ins, then sendin' it to NCS on digital at the end of the digital portion of the net. Alt NCS is good practice for eventually takin' the NCS slot for a month. I can send you my 'macro' files that'll give you a head start for our net if you're interested. Lemme know.

Just got the Ga ARES Digital Net sched for February and it looks like we're doin' both of 'em, 'chk-in' and 'Traffic' nets again, concurrently. Both at 1600L on 3.583 USB, using BPSK-125 w/ the 'chk-in' net at 1000 Hz on the waterfall and the 'Traffic' net (using ICS forms) up at 1500 Hz on the waterfall. Don't forget the Ga ARES 'voice' net at 1700L on 3.975 LSB. ALL these nets are open to anybody and everybody, you don't have to be an ARES type to participate in any of 'em, ALL chk-ins are welcome and appreciated.

All for now, y'all have a GREAT month, Ken, KM4HOS, Butts Co Net Mgr

#### VE Report:

The VE team conducted a session on Saturday, 3 Feb with 5 people testing. End results was 1 Extra, 1 General and 3 Technicians passed. 100 %. Thanks to the VE Team members who joined me to make this a success: Buzz K3GWK, Greg KI4NWD, Ken KM4HOS, Nancy K4NEP, Tony N4TZY, and John Reynolds W4TXA. Our next VE Session will be 17 March, 9 AM at the Butts County Recreation Center.

#### Hospital Report:

The monthly Hospital Net held on 4 Feb. was very successful. Contacts were made via DStar and HF. Entries were made into the GHA911 WebEOC database. Our only problem was Winlink. We were not successful in sending WinLink message. I have asked Mike AJ4GU to check the station and determine the cause of our problem. Thanks to Darlene KK4BKF, Ken KM4HOS, Glenn KK4GNO and Mark KM4NRP who joined me to make this happen.

Next Hospital Net is scheduled for 4 March. We are always looking for new members for the Hospital Team. Let me know if you would like to join the team. Dan Darsey W4DED.

### News that is definitely not HAM; more like Groundhog

**Special Note—General Beauregard now lives in Butts County at Dauset Trails. He officially saw his shadow so bundle up a few more weeks.**



## REPORTS

Please send reports to NI2Y@arrl.net in advance of the publication of the Repeater.

### FEBRUARY BCARES REPORT

Total number of ARES members in your group is: 31

Change since last month: 1

Name of your Local ARES Net: BUTTS COUNTY ARES TRAINING NET

Net Frequency: 147.285 PL 131.8

Day of the week: Tuesday

Time of the Net: 19:30 LOCA

Total of Nets this month: 8

NTS Liaison: GA ARES, GA SSB

Drills, Tests and Training sessions: 9

Drills, Tests and Training Man Hours: 286

Public Service Events: 0

Public Service Man Hours: 0

Emergency Operations: 0

Emergency Operations Man Hours: 0

Misc Activities: 1

Misc man hours: 25

TOTAL ARES OPERATIONS: 10

TOTAL ARES MAN HOURS: 310

Comments: Monthly training was a presentation on HIPAA and the Wellstar Volunteer program by Mark Austin, Wellstar Area EC. Four Voice Nets and four WL2K Tests were held using the ICS-213 form on Telnet, Winnor and Packet. Four NBEMS training sessions were held following the Tuesday evening nets. Three BCECA team members attended the GARS Tech Fest. Fourteen members attended the GA ARES Convention. There were two antenna party activities held in January, one was for a 91 year old Air Force Veteran who is now back on the air. The first session of our January 2018 Technician Class was held with three students attending. Our Public Health Team continues to support the GADPH D-Star Net on Thursday mornings. Membership: 10 Deployable, 15 Active and 6 Pending. Value of January hours \$9,981.89



Visit our website: [www.bcgaares.org](http://www.bcgaares.org)

Butts County Emergency  
Communications Auxiliary

348 Patrick Circle  
Jenkinsburg, Georgia  
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770-957-0779  
[wx4bca@arrl.net](mailto:wx4bca@arrl.net)

### Net Control Station Roster

If you'd like to serve as NCS, please email  
Ken (KM4HOS), Net Manager:

[kawallis@charter.net](mailto:kawallis@charter.net)

### BUTTS COUNTY AMATEUR COMMUNICATIONS AUXILIARY

#### President

Elaine Stachowiak  
KW4AQ

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#### Vice-president

#### Secretary

Darlene Ragon KK4BKF  
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#### Treasurer

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KA3SME  
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#### Club Photographer

J.D. Van Sickle KM4DHS

#### Emergency Coordina- tor / E.C.

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#### A.E.C. / V.E. Team Ad- min.

Dan Darsey W4DED  
[w4ded@arrl.com](mailto:w4ded@arrl.com)

#### A.E.C. / CERT Team Li- aison

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[dpridgeway@  
bellsouth.net](mailto:dpridgeway@bellsouth.net)

#### A.E.C. / Sheriff's Dept. Liaison / PIO

Mark Clark NI2Y  
[NI2Y@arrl.net](mailto:NI2Y@arrl.net)

#### A.E.C.

David Burnham  
AK4EM

### Weekly Training Net:

FM Tuesday 7:30 PM

### BUTTS COUNTY/SOUTHERN CRESCENT HF/VHF/ UHF NETS

**Sunday (4:30 PM)** GA ARES Digital Net — September: Program: D-RATS - send ICS-213 to port: [gaares.ratflector.com:9000](http://gaares.ratflector.com:9000) RMS Express/Winlink - send ICS-213 to WX4GMA ([WX4GMA@Winlink.org](mailto:WX4GMA@Winlink.org)) RF WINMOOR preferred over Telnet

**Sunday** afternoon BCARES WL2K ICS-213, Include a weekly Digital Report to the attention of the Net Manager, KM4HOS RF WINMOOR preferred over Telnet

**Sunday (5:30 PM)** GA ARES D-RATS - send ICS-213 to port: [gaares.ratflector.com:9000](http://gaares.ratflector.com:9000)

**Tuesday (7:30 PM)** Butts CO FM Training Net and Digital Training — 147.285 MHz (131.8 PL) Net begins with voice check-ins followed by an NBEMS Digital Practice Net. WL2K test messages using an ICS-213 form will be accepted. Winlink: WX4BCA, RF WINMOOR preferred over Telnet

**Sunday (22:00Z)** GA ARES SSB Net — 3975 KHz (LSB)

**Sunday (9:00 PM)** SE Weather Net on D-Rats

**Monday (9:00 PM)** Southern Crescent FM Net — 145.170 MHz (146.2 PL) & 444.875 MHz (123.0 PL)

**Monday (8:30 PM)** Central GA District Digital Net — 3583 KHz (PSK-63/125) Center 1000 Hz

**Tuesday (7:30 pm)** NW GA Digital Net — 3853 KHz (USB) or 7042 (PSK-125) Center 1000 Hz

**Tuesday (8:00 pm)** GA CERT FM Net — 146.805 MHz (100.0 PL)

**Wednesday (9:00 pm)** SE Metro Digital Net — 146.925 MHz (88.5 PL) (MT63-2KL) Center 1500 Hz

**Thursday (8:00 pm)** NCRC/ARES/RACES FM Net — 146.925 & 444.800 MHz (88.5 PL) Winlink: K4NCR

**Thursday (9:00 PM)** Barnesville/Lamar County W8JI Repeater Net — 147.225 (no tone)

**Saturday (11:00 am)** \*SATERN Net (Southern Section) — 7262 KHz

#### METRO ARES FM NET

**1st Sunday (4:00 pm)** Metro ARES FM Net — 145.430 MHz (107.2 PL)

Also on EchoLink at WB4NWS-R (Node: 593209)

## BCECA Members Attend the State GAARES Annual Meeting in Force



**OUR DEDICATED FELLOW HAMS ATTENDED THE STATE GAARES MEETING IN FORCE**

2018 marks a new year and format for the GAARES annual state meeting.

This year there was no weather warning of tornadic activity to interrupt the meeting.

Despite a new registration system and some bumps in the road, the meeting accepted ARES members who sought to hone their skills in a variety of areas. Hurricane Irma set the background to this years focus on emergency operations and communication.

Topics included: advanced storm spotting, emergency management incident and the incident command post, emergency power sources, digital text messaging in order to relay messages without internet access, first aid, ICS forms instruction, and hospital operations.



## Editor's Ramblings—NI2Y

### Time to Think About the Rest of the Year and a Bit of the Past

As spring approaches we can all remember how the activities of the year build momentum toward Field day in early summer.

In the meantime let's reflect on our times with Dr. Ed Hoard, our most recent past president. 73s to Dr. Ed Hoard. We all appreciate your years of service to our club and dedication. Enjoy your retirement in sunny Florida.

