

Charles
County
Amateur Radio
Club

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Smoke Signals



Volume 23
issue 2

February 2020

THE PRESIDENT'S WORKBENCH

By Bob, NW3M

The coldest month of the year is arriving. You might not know it looking at the weather forecast for the first week of the month. I'm sure it goes without saying that long range, even 10 day, forecasts are subject to change. A shift in the polar winds or westerlies can send a polar front plunging down our way. It doesn't hurt to plan ahead now. Make sure you have jumper cables handy in your vehicle as bitter cold is no friend of batteries, yours or other peoples. It doesn't hurt to have a bag of kitty litter in the truck just in case you encounter some slippery conditions and your tires just can't get a bite on the road.

If you find the weather keeping you inside there are still some radio activities to help stave off cabin fever. February brings us the School Club Roundup contest. The idea of

the contest is to make contacts with elementary, middle, high school and college stations from February 10-14. Non-school clubs and individuals are encouraged to participate. This is an opportunity to support youth in amateur radio and help them earn a long log of contacts.

For those of you proficient in Morse code there is the International DX - CW contest on February 15-16. The ARRL's stated objective of the contest is "to encourage W/VE stations to expand knowledge of DX propagation on the HF and MF bands, improve operating skills, and improve station capability by creating a competition in which DX stations may only contact W/VE stations." If you're not very proficient with Morse code, there is a voice version of this contest a couple weeks later.

(Continued on page 2)

CALENDAR

February

05 Net 2030

07 VE session &
Club meeting

12 Net 2030

15 Regional Robotics

19 Arduino Class
Net 2030

26 Net 2030

News articles due

29 STEM FEST

March

04 Net 2030

06 meeting

11 Net 2030

18 Net 2030

25 Net 2030 & News
articles due

(Continued from page 1)

This contest is a great way to add a large number of countries to your logbook.

If you do feel like getting out of the cabin and need a day off from work as well, there is the CCARC Arduino Class. This class is Wednesday, February 19, and runs all day from 9:00 AM to 5:00 PM, at the Marbury Baptist Church. The class is using a specific kit of assorted sensors so if you are interested in attending contact either Charles, AA3WS, or myself for details. It takes a couple days to get the sensor kit delivered from Amazon.

To kick off the month, however, we'll be taking nominations for club officers at the February 7, meeting. You will have the opportunity to nominate someone, or volunteer yourself, to be on the ballot for any club officer position. We will vote on the nominees at the March meeting.

I hope to see you at the meeting on Friday, February 7, at 7:00 PM. We will also be conducting a test session prior to the meeting at 5:30 PM.



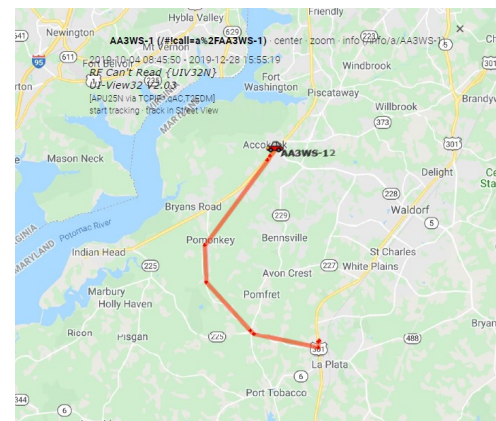
by Bob, NW3M

CCARC weekly net

Charles County Amateur Radio Club will start a
147.195 MHz, + 600 offset, PL 156.7 Hz. each
Wednesday 2030 local time

Nets will be roundtable type with a question of the
week for discussion. All amateur radio operators
are welcome; please join in the fun!

APRS



We are planning to add tracking by APRS to the communication services we offer at the Indian Head 100 bike ride in September. Automatic Packet Reporting System (APRS) provides real time digital information and can help with choosing the closest SAG wagon when needed.

Our meeting this month will further some of the preparation, so bring your APRS trackers, radios and questions. If you are interested in getting your radio set up to support APRS, can you please send an email to rdavidson@aceweb.com with the model and type of radio you have that you'd be interested in trying APRS on. This information will be consolidated and research done on what cables may be needed to allow a tracker to connect to your specific radio.

Already have a radio set up for APRS? if so, and you're willing to help others who may have the same type or radio, let us know if you're willing to help anyone else with the same type of radio.

Check out <https://aprs.fi/>



Wireless on the Web



Hello CCARC and welcome to February!

Hello CCARC and welcome to February!

After taking a few months hiatus it's time to jump "back in the saddle", or in my case behind the keyboard to add my musings to February's newsletter.

Before I get started, I'd like to offer a sincere "Thank you!" to all of those CCARC members who played a part in putting on another great Christmas dinner on December 6th. Your efforts are greatly appreciated

I mentioned to a clerk at the La Plata post office that she was probably happy that the Christmas rush was over. She replied that the spring catalog rush was just as bad, something that surprised me. Speaking of catalogs, I received a very nice 116 page catalog from Universal Radio in Worthington, Ohio. If you're not familiar with Universal Radio, they've been around since 1942 and cater to the amateur radio operator as well as shortwave listeners and scanner enthusiasts. You can find them on the web at: <https://www.universal-radio.com/> If you'd like to request a catalog for yourself, you can email them at catalog@universal-radio.com

Another catalog that can be had for the asking is from C Crane Radio in Fortuna, California and have been in the radio business since 1983. I received one of their radios as a birthday gift and have been very happy with it thus far. You can receive their catalog by filling out a form at: <https://www.ccrane.com/catalogrequest>

As many of you know, if you've read past columns, my fascination with radio began in the mid-1960's listening to shortwave stations and AM DXing on a pre-war Zenith floor model radio. I had no idea, at the time, that there were other who shared my interest so I sequestered myself in my attic bedroom and would only learn, years later, that both SWLing and AM DXing had their own dedicated bands of devotees. 50+ years later, things have changed greatly. While I still enjoy tuning through the AM bands, both automation and syndication have cut down on the number of live broadcasts and opportunities to ID a distant station.

(Continued on page 5)

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CCARC member and coworker Tom, N2HLJ, provided me with this link discussing AM radio and the effect it had with folks of a certain age: <https://jacobsmedia.com/rekindling-our-fading-romance-with-am-radio/>

AM band DXing still has an organized following. The National Radio Club can be found on the Internet at: <http://nationalradioclub.org/> For those of you with Facebook accounts, they can also be found at: <https://www.facebook.com/RadioClubOfAmerica/>

How many of you ever lived up to the stereotype of actually building a crystal radio by wrapping a coil around a circular Quaker Oat Meal container? Tom and I were discussing this at work one evening. I recall instructions in the Cub Scouts "Bear" book on constructing a radio in this fashion however, residing in a small town in northwestern Pennsylvania I had no idea where I'd ever find a germanium diode and this was one of many projects that I never followed through on. A web search reveals a number of sources for crystal radio kits including this one: <https://www.mtcradio.com/the-pickard-crystal-set-radio-kit/> In fact, the entire MTC Radio web site might be of interest: <https://www.mtcradio.com/>

I also recall Boy Scout Bob (KB3KOW) discussing a "foxhole radio" at a club meeting a few years ago. A description can be found here: https://en.wikipedia.org/wiki/Foxhole_radio You can find directions for building a Foxhole Radio here: https://cdn.makezine.com/make/wp_foxholeradio.pdf Or, if you'd like a kit, check out Borden Radio Company: <http://xtalman.com/kits.html> (Scroll down to find the Foxhole Radio).

Some of these might make for a good indoor weekend project for yourself, your children or grandchildren, assuming you can tear them away from their video games and get them off the couch. 😊

Until March, 73! de AA3RT

Advanced Technical Information Online

By Bob, NW3M

This month we're going to step back a bit and offer something a bit less advanced. In the spirit of the Arduino class that Charles will be running I'm going to offer something of benefit to new Arduino users and those that are more experienced and just trying something new.

Some of you likely won't be able to take a day off work to attend Charles' class. That's okay because learning to use an Arduino is actually quite easy. If you purchased the Arduino and sensor kit that was recommended for the class you have all you need to start using your Arduino. The reason is that the sensor kit comes with pre-written programs for each sensor in the kit, all you have to do is upload them to the Arduino. If you follow the tutorials that come with the sensor kit, they even show you how to modify the programs. But the bottom line is that you won't actually need to learn how to program in order to use them.

For those of you that might want to then strike out on your own and do more with an Arduino, you will likely have to learn how to do some amount of programming. Sure, you can modify someone else's program, but sometimes the syntax and necessary commands might be confusing.

Not to fear. The folks at Arduino have thought of that. Included in the program writing and uploading software, called an Integrated Development Environment, or IDE for short, are a number of prewritten examples. You can open those examples, then copy and paste them into the program you're writing or modifying.

The same information and examples that is built-in to the IDE is also available on the Arduino website. I find this a handy reference, especially when troubleshooting a program that isn't working quite correctly. Often times I'm not in need of a whole program, or even a whole major block of program code. I just need to check that I wrote or edited something with the correct syntax. That's when the website comes in really handy.

Here's a link to the info about the Built-In Examples for writing program code for the Arduino.

<https://www.arduino.cc/en/Tutorial/BuiltInExamples>

FCC Amends RF Exposure Safety Rules

<http://www.arrl.org/news/fcc-amending-amateur-radio-rf-exposure-safety-rules>

In a lengthy document (<https://docs.fcc.gov/public/attachments/FCC-19-126A1.pdf>) released December 4, the FCC said current amateur radio RF exposure safety limits will remain unchanged, but that the amateur-specific exemption from having to conduct an RF exposure evaluation will be replaced by the FCC's general exemption criteria. The Commission indicated that, if an RF source was "categorically excluded" from routine evaluation under the old rules, it will most likely still be exempt under the new rules.

"The sky is not falling here," ARRL Lab Manager Ed Hare, W1RFI, commented; "though, the devil may be in the details, so the ARRL technical staff, legal staff, and the experts on the ARRL RF Safety Committee are carefully evaluating this FCC document."

Under the revised Section 97.13(c)(1), "In lieu of evaluation with the general population/uncontrolled exposure limits, amateur licensees may evaluate their operation with respect to members of his or her immediate household using the occupational/controlled exposure limits in Section 1.1310, provided appropriate training and information has been accessed by the amateur licensee and members of his/her household," the amended rule says. "RF exposure of other nearby persons who are not members of the amateur licensee's household must be evaluated with respect to the general population/uncontrolled exposure limits.

Appropriate methodologies and guidance for evaluating Amateur Radio Service operation is described in the Office of Engineering and Technology (OET) Bulletin 65, Supplement B," (<https://transition.fcc.gov/bureaus/oet/info/documents/bulletins/oet65/oet65b.pdf>) the revised rule concludes.

ARRL asked the FCC to make available on the internet a calculator (preferable to unofficial third-party calculators which might not be accorded the same degree of deference in local disputes), to facilitate making the correct calculations the rules require. Several software programs were suggested as models. The rules affect multiple services; exemptions for other services were also deleted as part of a broader policy driven by a proliferation of RF devices, some resulting in situations where gain antennas are sited much closer to people than was expected in 1996 when the rules were last revised.

The next exam session is February 7

The new Amateur Extra-class license examination question pool, effective from July 1, 2020, through June 30, 2024, has been released and is available at the National Conference of Volunteer Coordinators (NCVEC) website at, <http://www.ncvec.org/> .

The number of questions in the pool was reduced from 712 to 622. The result was 239 modified questions, 49 new questions, and 139 questions removed due to changes in what was felt to be an abundance of outdated questions, while areas of new technology and subjects were added. In addition, an effort was made to balance the difficulty level, removing or replacing some questions deemed too easy or too difficult compared to the rest of the pool. The 2020 pool has 10 diagrams, which have been renumbered because the new question pool has two fewer than the 2016 question pool.

ARRL launched "On the Air" podcast January 16, with a new episode posted each month as a companion to the magazine (bimonthly). Both the podcast and the magazine are aimed at offering new and beginner-to-intermediate-level radio amateurs a fresh approach to exploring radio communication. Find with a search for "On the Air " on your phone. Episodes will be archived on the ARRL website. <http://www.arrl.org/on-the-air-podcast>

Special Event Calls

N4C	29-Feb-1-Mar-20	20	NC QSO PARTY
N4R	29-Feb-29-Feb-20	20	2020 Rare Disease Day Special Event
N4H	29-Feb-2-Mar-20	20	North Carolina QSO Party
W1N	29-Feb-2-Mar-20	20	NAQP RTTY
K6B	28-Feb-2-Mar-20	20	Leap Day celebration
K4M	28-Feb-2-Mar-20	20	Samuel Morse's First Transmission in Puerto Rico
K9C	26-Feb-3-Mar-20	20	Copper Dog 150 dog sled race
K7T	22-Feb-23-Feb-20	20	Titan Missile Museum anniversary
W1M	15-Feb-15-Feb-20	20	WHOA Weekend/SCOTA
W2W	14-Feb-26-Feb-20	20	Dey Mansion Special Event
K4A	10-Feb-17-Feb-20	20	Antarctic Activity Week
K4C	10-Feb-17-Feb-20	20	17th Antarctic Activity Week
W4M	9-Feb-9-Feb-20	20	2020 Life Time Miami Marathon and Half Marathon presented by cbdMD
W1K	1-Feb-3-Feb-20	20	VT QSO Party

Practice questions

1. Which amateur band are you using when your station is transmitting on 146.52 MHz?

- A. 2 meter band
- B. 20 meter band
- C. 14 meter band
- D. 6 meter band

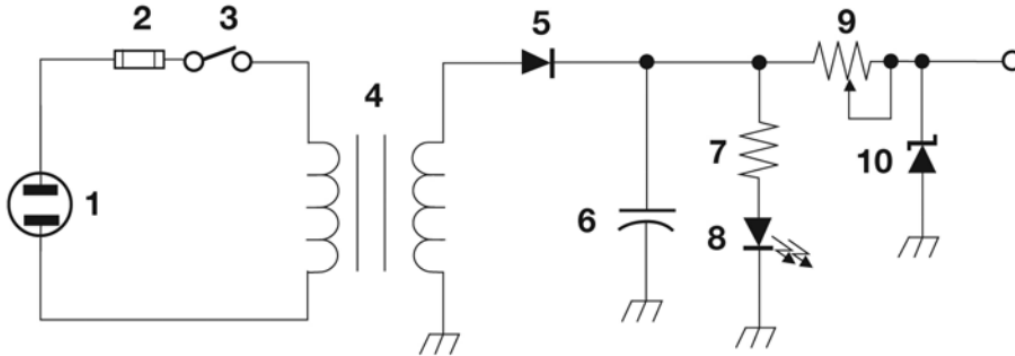


Figure T-2

2. What is component 4 in figure T2?

- A. Variable inductor
- B. Double-pole switch
- C. Potentiometer
- D. Transformer

3. What usually happens to radio waves with frequencies below the LUF?

- A. They are bent back to the Earth
- B. They pass through the ionosphere
- C. They are completely absorbed by the ionosphere
- D. They are bent and trapped in the ionosphere to circle the Earth

4. How can the true power be determined in an AC circuit where the voltage and current are out of phase?

- A. By multiplying the apparent power times the power factor
- B. By dividing the reactive power by the power factor
- C. By dividing the apparent power by the power factor
- D. By multiplying the reactive power times the power factor

CCARC Activities

7 February 2020 - Test Session at 5:30 PM followed by Monthly CCARC Meeting @7:00 PM. Solicitation of nominations for Officer Positions. Activity: Configuring radios and trackers for APRS and using CHIRP to program radios.

19 February 2020 - Arduino Class, 9:00 AM to 5:00 PM at Marbury Baptist Church, 4670 Bicknell Rd, Marbury, MD 20658. Presenter: Charles-AA3WS, selbynet@hotmail.com

6 March 2020 - Monthly CCARC meeting at 7:00 PM. Election of Officers.

3 April 2020 - Test Session at 5:30 PM followed by Monthly CCARC Meeting at 7:00 PM.

26 April 2020 - 5th Annual Connector Workshop with linked dipole antenna build.

1:00 PM to 5:00 PM, QTH of Jeff - KB3SPH and Pam - KB3SWS

1 May 2020 - Test Session at 5:30 PM followed by Monthly CCARC Meeting at 7:00 PM. Activity: 4 element, 2M Yagi building.

And from some of the local youth groups

4H

Our Regional Robotics Day is **February 15, 2020** if you want to put that in your calendar as well. This will be a day of learning (no real commitment on your part) for Lego and VEX. We will also use SuGO Bots if you are familiar. This will be all day at Charles County Extension.

April 4, 2020 as the 4-H Robotics & REC In-Service. Denise and I attended this a few years back and it was an interactive presentation of both challenges that will be used at State Fair. More details to come. Time and location TBD

Boy Scouts

March 27-29, 2020, is the Spring Camporee for the Scouts in Western Shore District and it will be held at the Dr. Mudd home in Charles County. I attended a meeting between Mr. Eddie Roberts, who I think some of you may remember, and Scouting members who are organizing the event. From a ham radio aspect, my plans/goals are a simple HF radio and antenna and trying to make some contacts during the day, however, I've also been asked to lead the 'Communications' aspect, which means having groups come by and visit. Since the theme is Civil War related, both CW and Wig-Wag were prominent methods of communications during the era, so I suspect a focus on those areas would better fit the theme. Dr. Mudd event and some fox hunting are a prelude to the 'Fall Camporee' in October. If you are interested in helping out, please mark your calendars as the more the merrier, Contact Bob KB3KOW

STEM

Stem Fest taking place at the Pax River NAS Museum on 29 Feb starting at 1000. See website: <http://www.paxmuseum.com/events.php>

A Challenge!

When we go to the STEM festivals, we have the opportunity to meet with kids who are interested in science, technology, engineering and math. We want to share with the kids about radio.

There are many other booths and activities, so first we need something to draw them to allow us to share the wonders & uses of radio.

That's our challenge– what can we do to attract them?

I made the suggestion of lighting up the Morse code of their name. This isn't working out it's hard to get an accurate read on "sloppy" signals.

So I'm throwing out the call for a help...a challenge if you will...

What can we do to impress STEM kids?

Give us ideas on the reflector and the nets!



Challenge

Arduino Class

Charles AA3WS is offering an Arduino class, February 19 0900 to 1700 Hours at Marbury Baptist Church. If you want to sign up for the class, please email Charles at selbynet@hotmail.com .

For the class we want to make sure everyone is working with the same hardware. You will need an Arduino Uno R3, a plug in breadboard and a sensors kit. If you already own an Arduino Uno R3, you're already part way there. If not, we have found one that is very reasonably priced and comes with a plug in breadboard for building the projects covered in the class. The sensor kit we have found is also very reasonably priced and comes with everything you will need for the class.

These are the two items you will need to purchase. Both items are available with Amazon Prime, so no shipping charges.

Arduino Uno R3 kit (\$8.88):

<https://www.amazon.com/gp/product/B01KZN2YPK>

37 in 1 Sensor kit (\$29.99):

<https://www.amazon.com/ELEGOO-Upgraded-Tutorial-Compatible-MEGA2560/dp/B01MG49ZQ5>

On the computer you are going to use for the class; make a file named: "37 Sensor Kit V2.0". Copy the contents of the disk that came with your 37 Sensor Kit to the file folder you made. [This is the kit you ordered from Amazon.]

From the file folder you made, open and preview the below PDF:

37 SENSOR KIT TUTORIAL FOR UNO AND MEGA v2.0.0.19.087

Next

If you can, down load the "Arduino IDE" program/app referenced on page 10 of the PDF to your computer.

You are now ready for the class or self study.

If I have already lost you, don't fret, we can do the task at the beginning of the class.

Lunch will be hotdogs. Coffee will be provided, else, bring your preferred soda pop.

HAMFESTS

44th
Annual

WINTERFEST!™

The National Capital Area Ham Radio Fair and AUXCOMM Conf

Inaugural AUXCOMM Conference
ARRL Leadership Presentations
ARES/VA; AREDN; SKYWARN; WINLINK
Over 60 Vendors, indoor and outside
Ham Radio, Electronics, Computer Parts,
Pieces, and Paraphernalia
Licensing Exams -- get licensed or upgrade at Winterfest
Large Indoor Exhibit Area
QSL checking for WAS, DXCC, VUCC
150 Paved tailgate spaces
Improved and expanded loading dock
FREE On-site parking

FEATURING

~ Tailgating ~ Tailgate area opens at 6:00 AM
~ Indoor Exhibit Area ~ 8:00 AM-1:00 PM
~ AUXCOMM Conference ~ 9:00 AM – 1:00 PM
~ License Exams ~ 11:00 AM – 12:30 PM
Walk-ins encouraged!



Sunday, March 29, 2020
Outdoor 6AM-1PM, Indoor 8AM-1PM

Northern Virginia Community College, Annandale Campus
Enter off Wakefield Chapel Road – Parking Lot B
8333 Little River Turnpike Annandale, VA
38.8333/-77.2362 or 18 S JU 0580/0056

Admission: \$10.00 per person

**Tailgate spaces: \$20 for one space (includes one admission)
+\$10/each additional space**

Talk-in 146.91 MHz -- Courtesy of Fairfax ARES and the NVFMA

More Information at <http://www.viennawireless.net/wp/events/winterfest>

Table Sales -Mike, WA8AHZ
tablesales2020@viennawireless.net
(703) 870-1730

Vienna Wireless Society
PO Box 418
Vienna, VA 22183

NVCC does not sponsor or endorse this event; Attendees shall follow all written policies of the College, as published at <https://www.nvcc.edu/policies/Default.aspx?cat=General%20Policies>

Winter Field Day Operations from Nanjemoy – After Action Report

Ten local area amateur radio operators participated in Winter Field Day (WFD) that was held 24 - 26 January 2020 at the Nanjemoy Creek Environmental Education Center, Nanjemoy, MD. Participants were:

Bill - W8BL
Bob - NW3M
Charles - AA3WS
Jeff - KB3SPH
Joe - KB3HNP
Kato - KB3LIB
Ken - KA3POX
Ken - W3XAF
Pam - KB3SWS
Steven - KC3DSO

The overall weekend plan was to play radio, eat, play radio, play radio, eat, sleep, play radio, eat some more, and then maybe play some more radio.

Set-up began on Friday afternoon in a slight drizzle with Charles, Ken (POX), Pam, and Jeff onsite around 1400.

Charles and Jeff put up a Carolina Windom 160 (Special) by selecting two trees about 150 feet apart and using a pneumatic antenna launcher to send the "pucks" over the trees. Being the crack shots that they are, all shots were perfect, going completely over the trees and down to ground without snagging on any limbs. The antenna, when stretched out and tied off, had its center point about 50' above the ground. Jeff also deployed a 2M/70cm Diamond X-50 on a Buddipole mast in a tripod on a picnic table, making the height about 23 feet. He also deployed a roll-up 2M/70cm J-Pole hanging from one of the Buddipole mast's guy ropes at 10 feet, just because.

Ken deployed his *40M-75M-80M linked dipole antenna in an NVIS configuration from his trailer hitch mounted mast.

*shameless plug - Ken will be leading a build party for the linked dipole antenna at the 5th Annual Connector Workshop on 26 April 2020. We have 11 builders signed-up so far. If you also want to attend, contact Jeff at humbert1js@gmail.com for more information.

Pam began preparing/coordinating the banquet-esque feasts that were going to be devoured during the breaks from playing radio. The rains tired of being mainly on the plains in Spain, moved over to Nanjemoy, and baptized the recently installed antennas with a deluge.

(Continued on page 16)

However, there were no worries for the Friday night crew as we played radio safely ensconced within the pavilion walls. We waddled over to the radios after the Friday night supper feast to pass the time before the Friday late night feast.

Ken deployed his POX Box with 2M/70cm mobile, HT, and HF radios. He held off on deploying his solar panel until later because of the H2O infestation.

Jeff deployed his table full o' stuff with 2m/70cm mobile, HT with amplifier, and HF radio. Ken made the remark that the HT cabling connecting it to the amplifier, power supply, and computer (for packet operations) made it look like the HT were in intensive care on life support.

Ken and Jeff both made Winlink Winmor HF gateway connections and multiple successful 80M Winmor Peer to Peer (P2P) connections with Jim - WB3KAS in Brandywine, MD.

Jeff was able to make Winlink Packet node connections with the mobile (Kenwood D710) on the Diamond X-50 and with the HT (Kenwood D-72) on the roll-up J-pole. Local repeaters were also accessible.

Ken and Jeff also experimented with packet "chat" using Simple Terminal in converse mode on VHF.

Then the late-night feast bell rang, and it was off to stuff ourselves.

Before we knew it, it was Saturday. There may have been some sleep in there, but it was not memorable. Kato arrived in time for the Ken and Pam sponsored breakfast gala and also managed to set-up his station with a Ziegu X5105 and Alex Loop antenna between bites of breakfast. Kato was mainly running FT-8 during the weekend.

Bob, Ken (XAF), Joe, Bill, and Steven arrived during the day on Saturday.

Bob took numerous photographs to document the activities of the day and commented that Jeff's HT on life support was receiving an infusion of electrons.

Ken made a number of successful WFD contacts from his vehicle mobile station.

Joe, who was a first-time visitor to the field day site, was given a tour of the facility and talked to the operators of the various stations, getting tips on equipment and station/antenna configuration.

Bill set up his HF station inside the pavilion and hung a large loop antenna from a protruding tree limb about 12' high.

(Continued from page 16)

Steven set up his shack-in-a-box station in the pavilion and deployed a linked dipole antenna on a mast at about 25' in an adjacent field.

Most of the bands were devoid of activity until the magic hour of 1400 Local on Saturday. A switch must have been flipped because the bands suddenly became alive with activity. All Nanjemoy operators were using their personal call signs with 1I MDC as the exchange in accordance with WFD rules. The one is the number of transmitters capable of simultaneous use by that call sign's station. The India is for "Inside," which is defined as an inside station location away from home. The other categories are Hotel (for a home station) and Oscar (for an outside station). The MDC is for our ARRL section of Maryland/DC. Since there were five operators in the pavilion, most of us had to use headsets to keep our sanity. To anyone listening, it was a cacophony of "please copy One India, Mike Delta Charlie," "negative, it's Kilo Bravo Three" (not Kilo Papa Three), and "QSL, 73." Every one of the operators made at least one contact, with an average of 30 contacts each.

Because of the din of the operators, the dinner bell had to be replaced with taps-on-shoulders, upon which, the headsets were thrown off and the hams trundled over to the feeding station. We operated into the wee hours of Sunday morning before having to do that *sleep* thing.

Sunday morning had a nice Sunrise, which prompted Ken to towel off his solar panel and start receiving battery charging photons to replenish the POX box. More operating time ensued before another feast gong caused an interruption to break (the at least four hour) fast.

Station breakdowns started around 1200 Sunday by mutual agreement and we vacated the premises by about 1400 Sunday afternoon. WFD, filled with frequencies, food, friends, and fun, was deemed a success by all participants!

Winter Field Day photographs can be viewed online at:

<https://www.flickr.com/photos/182237098@N06/albums/72157712862892706>

73 Jeff / KB3SPH



NW3M Photos



Charles County Amateur Radio Club Meeting Minutes

January 3, 2020

Officers Present:

President – Bob Curran NW3M
Vice President – Unable to Attend
Secretary – Charles Hallock AA3WS
Treasurer – Bob Davison KB3KOW
Activities – Jeff Humbert KB3SPH

Members Present:

Pamela Humbert KB3SWS
Patrick Hinman KB3UYZ
Joe Boswell KB3HNP
Billy McConnell
Bill McConnell
Bill Luyster W8BL
Michelle Sack N3YRZ

Visitors:

Ken La Capria KA3POX
Jay Howard KC3MUV
Billy McConnell
Bill McConnell

Meeting opened 1927 Hours.

President Bob Curran NW3M welcomed the members and recognized the guests. Subsequently, The President had the members introduce themselves and describe each members Radio goals for 2020. Bob introduced the guest speaker Ken La Capria KA3POX.

Ken gave a presentation on his “Home Automation.” The presentation included the design concept, equipment used, and the connection to Amateur Radio. The system Ken designed and implemented in his home included the following systems: HAVC, Lighting, Audio, Phone, Security, and Video.

New Business

President Bob queried the Club members on the APRS equipment and the need for APRS equipment needed to support the Indian Head 100 Bike Ride on September 7, 2020. Bob advised the next meeting will entail the programming of trackers, radios and TNCs. Bob also request members to bring their cables and computers to assist in programming their equipment and others who may need to see what equipment they need for APRS. Also, Bob noted the need for APRS testing in Charles County to determine the temporary locations of digipeaters and gateways to support the Bike Ride. Hence, the topic of next month’s program will be Programming Radio and APRS Trackers, and use of the CHIRP Radio Programming software.

Bob Advised the next Amateur Radio Exam Session will be 1730 Hours on February 7, prior to our Club Meeting.

Activities Manager:

Jeff KB3SPH reported on the following upcoming activities:

7 February 2020 - Test Session at 5:30 PM followed by Monthly CCARC Meeting at 7:00 PM.

6 March 2020 - Monthly CCARC meeting at 7:00 PM

We’re always looking for presentations, demonstrations, guest speakers, etc., on various topics to be presented in conjunction with our club meetings. If you have a request for a specific topic, a point of contact for a presentation, and/or you would like to make a presentation yourself, please let Jeff – KB3SPH know at humbert1js@gmail.com.

Secretary:

Minutes for the Meeting are published in the Monthly New Letter.

Old Business

Pam KB3SWS reminded the Club of the Winter Field Day at Nanjemoy Creek Environmental Education Center. The event will start at 1400 Hours on January 24, and end at 1200 Hours on January 26. Cabins are available for those who wish to stay overnight. Food will be pot luck. Radio operations will be laissez faire'.

Charles AA3WS agreed to set up a basic Arduino class February 19, during the day. The class will be held at the Marbury Baptist Church Chow Hall. Charles will work with President Bob to select a sensor kit for people to order for class.

Members Comments:

Closing:

A motion was made and seconded to close the meeting. The motion passed at 2050 Hours.
Charles Hallock AA3WS Secretary

the
MINUTES



Fifth Annual Connector Workshop

(Red-Righting, Tongue-Upping the World since 2016) to be held at the home of Pam - KB3SWS and Jeff – KB3SPH on **Sunday, 4/26/2020**.

This year's festivities will also include a Linked Dipole (40M-75M-80M) Antenna Build. For planning purposes (group buy of components in advance), please let me know if you're interested in building an antenna at the workshop.

Sales Pitch: A few years ago, Ken – KA3POX and Jeff – KB3SPH each built the linked dipole and have deployed it numerous times at Field Days, ARES drills, and other events. We've used it successfully in the NVIS configuration and as a flat top. One changes bands by opening/closing the venerable Anderson PowerPole connectors. We've decided to build another copy to leave at the Fort Washington Medical Center (FWMC) for deployment during hospital drills/communications emergencies. Ken – KA3POX will lead the antenna build and show you how to construct the antenna and weatherproof the connections. **The cost for each antenna is roughly estimated at \$40.00** to include center dipole connection (Budwig), ~130' of wire, insulators, PowerPole connectors, and other miscellaneous parts. More information on ideas to customize your linked dipole on your own will be demonstrated at the antenna build to include paracord/bungee extensions, staking out the ends, hoisting, coax feedline examples, etc.

So far, the following list will take a crack at building their antenna. **Who else is in?** If your name is on the list and you no longer want it to be there, let me know.

Charles – AA3WS

Dan – KC3NKF

Jayne – W4VJU

Jim – KA3LXM

Joe – W0JRJ

JT – KC3OOZ

Kato – KB3LIB

Larry – W3RL

Rebecca – KM4RDS

Steven – KC3DSO

Ken – KA3POX (to build the FWMC antenna)

If you are interested in attending the workshop, please let me know via return email (humbert1js@gmail.com) & include the number of people you're bringing with you.

Details:

Who: Any interested person. This email is being sent to local area Hams. **Please feel free to forward this email to any individual/group that may have an interest.**

What: Free Connector Workshop (except for the Antenna Build portion ☺) focusing on learning about and constructing power cable assemblies using Anderson PowerPole connectors and other crimp-on connectors, PL-259 connector installation, fellow Ham interaction, etc. **No experience or bringing of equipment is necessary**, come and learn from others!

When: Sunday, 26 April 2020 from 1300 – 1700 (1:00 PM – 5:00 PM). We will also provide snacks during the afternoon, and supper beginning at 1700 for those who want to stay.

(Continued on page 21)

Where: Pam - KB3SWS and Jeff - KB3SPH location in Indian Head, MD (South of Smallwood State Park). Specific directions to be provided to attendees later. For planning purposes, driving times to the workshop location are: 35 minutes from the routes 210/495 intersection, 25 minutes from the routes 6/301 intersection, and 40 minutes from North Waldorf. The workshop will be held indoors, so we don't have to worry about the weather. The antenna build will be outside. If it's raining, we'll still find a way to make the antenna build work.

How (To): Briefs on how to use Anderson PowerPole connectors (the ARES/RACES standard) and demonstrations on various configurations to assemble

Hands on use of PowerPole crimpers and insulated connector crimpers to assemble cables

Briefs and demonstrations on preparation of cables and soldering various connectors and Crimp-the-Shield/Solder-the-Pin connectors

Hands on use of soldering equipment

Note: If you have a situation where you need assistance in getting a connector/advice on equipment, please bring that equipment to the workshop and let the "Brain Trust" have a crack at solving the issue.

Why: Get the creative juices flowing!

Again, if you are interested in attending, please let me know via return email (humbert1js@gmail.com) as soon as possible and include the number of people. Family members, friends, etc. are also welcome to attend.

Available at the workshop:

Work table space

Various tools such as a set of PowerPole crimpers (with 15, 30 and 45 amp dies) and insulated connector crimpers for others to use. If you have crimpers, too, please bring them to share.

15 amp, 30 amp, and 45 amp PowerPole connector sets.

14 gauge, 12 gauge, and 10 gauge cable.

Soldering station equipment. If you want to bring your own, please do.

We envision those who have experience with the various connectors helping those who do not, for a fun time for everyone.

Here are some ideas on what materials to bring to and gadgets you may want to construct at the Connector Workshop.

Materials:

12 Gauge wire (works well with 30 amp PowerPoles)

(Continued from page 21)

Heat shrink tubing

Cable ties

Electrical tape

PowerPole Connectors

Insulated ring connectors

Gadgets to make:

PowerPole extension cords

12V socket/plug

12V power supply “wall wart”

Radio pigtails (cut the power cord for a radio about 8 inches from the radio-specific plug and put PowerPoles on the other end)

Ring end pigtails (to connect to power supplies)

Bare wire pigtails (to connect to power supplies/batteries)

Alligator clips

“Y” extension adapters

Fuse holders

Battery box connections

Solar panel system interfaces

Basically anything that uses DC in my shack or deployable gear gets PowerPole connectors installed. The sky’s the limit!

Testimonials from past workshops:

*Before the workshop, I couldn’t even spell PoowurPull; still can’t, but I had fun!

*My XYL wonders why I keep mumbling in my sleep, “Red Right, Tongue Up!”

*Nice location, are you sure I’m still in Maryland?

*I didn’t think an old dog could learn new tricks; I was wrong.

*Now I want yellow PowerPole connector housings for my solar panel.

*I only came for the food, but ended up being a connector fanatic.

Again, if you are interested in attending, please let me know via return email (humbert1js@gmail.com). Cell: 301-848-8043 (leave message, if no answer

73 Jeff / KB3SPH

Contests in February

1-Feb	Vermont QSO Party	12-Feb	Phone Fray
	10-10 Int. Winter Contest, SSB		CWops Mini-CWT Test
	Black Sea Cup International		RSGB 80m Club Championship, Data
	F9AA Cup, CW	14-Feb	PODXS 070 Club Valentine Sprint
	Mexico RTTY International Contest		NCCC RTTY Sprint
	FYBO Winter QRP Sprint		QRP Fox Hunt
	Minnesota QSO Party		NCCC Sprint
	British Columbia QSO Party	15-Feb	ARRL Inter. DX Contest, CW
	AGCW Straight Key Party		Russian PSK WW Contest
	FISTS Winter Slow Speed Sprint		Feld Hell Sprint
2-Feb	North American Sprint, CW		AWA Amplitude Modulation QSO Party
3-Feb	RSGB 80m Club Championship, SSB	17-Feb	Run for the Bacon QRP Contest
4-Feb	ARS Spartan Sprint	19-Feb	QRP Fox Hunt
5-Feb	QRP Fox Hunt		Phone Fray
	Phone Fray		CWops Mini-CWT Test
	CWops Mini-CWT Test		AGCW Semi-Automatic Key Evening
	UKEICC 80m Contest	21-Feb	NCCC RTTY Sprint
6-Feb	NRAU 10m Activity Contest		QRP Fox Hunt
	SKCC Sprint Europe		NCCC Sprint
7-Feb	NCCC RTTY Sprint		CQ 160-Meter Contest, SSB
	QRP Fox Hunt	22-Feb	REF Contest, SSB
	NCCC Sprint		UK/EI DX Contest, CW
8-Feb	CQ WW RTTY WPX Contest	23-Feb	SARL Digital Contest
	SARL Field Day Contest		High Speed Club CW Contest
	Asia-Pacific Spring Sprint, CW	24-Feb	QCX Challenge
	Dutch PACC Contest	26-Feb	SKCC Sprint
	SKCC Weekend Sprintathon		QRP Fox Hunt
	KCJ Topband Contest		Phone Fray
	YLRL YL-OM Contest		CWops Mini-CWT Test
	OMISS QSO Party		UKEICC 80m Contest
	FISTS Winter Unlimited Sprint	27-Feb	RSGB 80m Club Championship, CW
	RSGB 1.8 MHz Contest	28-Feb	NCCC RTTY Sprint
9-Feb	Balkan HF Contest		QRP Fox Hunt
	Classic Exchange, Phone		NCCC Sprint
10-Feb	CQC Winter QSO Party	29-Feb	Feld Hell Sprint
	4 States QRP Group Second Sunday Sprint		UBA DX Contest, CW
	ARRL School Club Roundup		South Carolina QSO Party
12-Feb	NAQCC CW Sprint		NA Collegiate Championship, RTTY
	QRP Fox Hunt		North American QSO Party, RTTY

Hams in Action

In Puerto Rico, Red Cross requested assistance of Amateur Radio Emergency Service (ARES) to identify undeclared refugee camps, closed or damaged roadways, and bridges from the earthquakes. Herb Perez, WP4ZZ, reports "Today, we were able to occupy our space with no major incident other than the usual shaking >10 of the entire structure.

Jared Martinez, KP4LCO, near his hometown of Lajas was able to locate more than 10 campsites enabling the Red Cross to provide necessary assistance to those left homeless. Perez said volunteers distributed food from a church-run food pantry in Sabana Grande to isolated communities in the mountain region. He said local members of the General Mobile Radio Service (GMRS) and Citizens Band radio communities have also helped.

Operations have been on VHF and UHF, although commercial telecommunication services remain in operation; Puerto Rico Section Manager Oscar Resto, KP4RF, said the stations are operating as a backbone, in the event of new or stronger earthquakes. HF equipment has been safely stowed if communications fail. ARRL is shipping six VHF/UHF base/repeater antennas and six 50- foot rolls of LMR-400 coax through the Ham Aid Fund (<http://www.arrl.org/ham-aid>).

In case of an EARTHQUAKE

FEMA

An earthquake is a sudden, rapid shaking of the earth, caused by the breaking and shifting of underground rock. Earthquakes can cause buildings to collapse and heavy items to fall, resulting in injuries and property damage.

- If you are in a car**
Stop in an area away from buildings, trees, overpasses, underpasses, or utility wires.
- If you are in the mountains**
Watch alert for falling rocks and landslides.
- If you are outdoors**
Stay outdoors
- If you are in your home**
Stay there until the shaking stops. **DO NOT** run outside.
- If you are in bed**
Stay there and cover your head and neck with a pillow.
- If you are in a building**
Expect fire alarms and sprinklers to go off. Do not use elevators.

For more information go to: www.ready.gov/earthquakes

DXpedition Ditties

Across

1. Call heard during November
5. Bygone
10. CQ DX ____ of fame
14. "Hurry!"
15. Deleted HK0 last name
16. Hebrew month
17. Org. not for OMs
18. Less inept
19. KH6 root
20. VP6 air space?
23. News manager
25. Listened attentively
26. The missing ones for your DXCC #1, say
27. Suffix with MOS or J
30. Engine sounds
31. W8 - VE3 separator
32. Provides weapons again
34. What it costs to get to BS7?
40. Less fat
41. Three-ply cookie
42. Kind of finish, on a front panel, say
46. Modern alternative to a #47, e.g.
47. Navigation radio
48. "We got ____!" - early ham radio headline
50. S, SWR and others
51. Bad WX on KH8?
55. Suffix with posi-
56. "E pluribus unum," e.g.
57. Elevator guy
60. Lunar effect
61. Plate

1	2	3	4		5	6	7	8	9		10	11	12	13
14					15						16			
17					18						19			
		20		21						22				
23	24								25					
26						27	28	29		30				
31					32				33					
34				35							36	37	38	39
				40							41			
42	43	44	45			46				47				
48					49				50					
51						52	53	54						
55						56					57		58	59
60						61					62			
63						64					65			

62. Plenty
63. Midmonth time
64. Temporary guys
65. EI language, e.g.

Down

1. IOTA item
2. "Got it"
3. IS-land island
4. Talk incoherently
5. Hamshack sign, when transmitting
6. Grease
7. Where to find a hero
8. Fifty-fifty
9. 0 or 360
10. Prefix with -dyne
11. KL7

12. Listener to a QSO, say

13. Belonging to dx-peditioner Colvin

21. Sin minus 90

22. Severe

23. She sheep

24. DL org.

27. Wild

28. Spanish PX

29. Aligned

32. Future fish

33. Buro alt., sometimes

35. Grace word

36. A little number?

37. Word with lightning, for hams especially

38. Kind of admiral

39. Geologic periods

42. DX-peditioner Laine

43. Tick or mite cousin

44. 3-500Z, for example

45. Metric 62-across

47. KH6 garland

49. Winds of propagation

50. Long tresses

52. Billionth: Prefix

53. Last bit, in RTTY, say

54. Like a splattering SSB signal

58. PC key

59. VP6 heading from KH6

Member Column



Joe Boswell
KB3HNP



Joe Boswell KB3HNP was born in Cincinnati, OH. His family moved here as his paternal grandmother owned the Spring Lake Motel located in Waldorf. This brings us to one of Joe's interests- history. He is well versed in the history of Charles county and would love to learn more. Want to know the original county seat...he knows (and no it wasn't Nanjemoy) ...or more about the slots in Waldorf...Joe can point out many of those...and Charles County's role in the confederacy.

His job is administrative assistant for the Board of Education at McDonough High School. He does some substitute teaching. He has taught classes at the College of Southern Maryland- English Literature, Hospitality management, and History (from the reconstruction to the present), through many of those classes are no longer offered at night so he's not currently teaching these classes. He also teaches disaster preparedness for Family Campers and RVers

Joe got his technician license in the fall of 2001 after talking with club members Mike Tackish & Rob Hoyt at the booth at the fair. He had a Radio Shack radio and didn't know what he had. He relates that lots of folks in the club have been Elmers for him to name a few: Lee N3YWZ, Chuck AA3WS, Rob N2OMC, Bob KB3KOW, Art AA3RT, Mike KA3GRW, and even me N3YRZ. He gets lots of info from the magazines that Bill W3CII passes on at the meetings. And the best advice he's gotten-came during his most memorable radio experience-the tornado a few months after he was licensed. He knew the Methodist Church had youth group meetings on Sunday evening and relayed that. Someone asked for confirmation and offered his best advice be accurate & sure of the situation before broadcasting. This prevents sending resources that would be better utilized elsewhere. Another piece of advice is to use tape to make each part of a radio set up to keep things matched up (that take is so expensive). Instead... he used colored star stickers. He has an "extra" book someone gave him, but he needs general first. Camaraderie is his favorite part of the club meetings.

Currently he's only on 2 meter and 440, he does have a keyer with a sound board (a flea market treasure), a Baofeng, Radio Shack HTX 202, TYG Dual, ICON W32A and 2720 radios which he uses with the rubber duck antennas. He does have a j pole, G5RV and a tracker, we

made during a club meeting.

He overall big interest is to travel. He has a 34 foot 5th Wheel RV with double slides. He like to camp see nature, enjoy the solitude, sit around a fire and roast hot dogs and marshmallows.

Although he's done the east coast, he hasn't been west of the Mississippi. He takes his radios when he travels and has used them to report impaired rivers. He's like to get to the Grand Canyon and also visit sites in the civil war history. A memorable trip he's taken was to Stowe, VT to the Von Trappe Lodge where he got a tour from a member of the family.

He once received a QSL card and it had one to fill out and return. He's also received a radiogram once. His cousin Daniel w3DF is also a ham.

When he answers a request for help, it's usually to assist with setup or cleanup. He also assists with the bike ride communications. He helps with the Choral Arts Society but says he hasn't sung with them in a long time, helps in other ways. He does prefer not to be asked "what did they say" so he can give his attention to the speaker. He wants to learn about the frequencies, especially the HF bands. He would like to see a presentation on the history of radio, from this area with its role in the World Wars.



Proven Ways to Kill yourself with Amateur Radio!

Towers.

Climb without a harness.

Climb with a lanyard that does not have double latching safety hooks.

Climb with a belt, not a harness.

Don't bother with arresting gear - it just gets in your way - you are going for style points when you fall.

Climb temporary field day towers.

Climb towers without inspecting them first.

Don't wear a helmet when your are climbing.

Don't wear a hard hat when you are on the ground crew.

Using a lanyard when climbing or descending is for sissies. Real men free-climb.

Don't inspect your climbing harness and rigging prior to climbing.

Climb a telescoping tower when it is extended. This is a particularly good way to give yourself a manicure down to about the third knuckle....

Electrical.

Don't ground your station

Disable safety interlocks when you work on your amplifier

Cross polarity on electrical connections

Handheld mobile radio

Don't secure your batteries in an insulated container. They start nifty fires when they short out against metal objects.

Be sure that you have the antenna directly in front of your eyes when you are talking so you are properly injecting RF into your brainpan. Speaker microphones are for sissies.

Install your radio in a secret location that requires you to take your eyes off the road when you change frequencies

Install your radio in a location where it is nice and easy to wrap the microphone cord around the steering wheel when making sudden turns.

Mount your radio in plain sight on the dashboard. This makes it easier for thieves to check it out, and also will cook the radio in the sun so you can go buy a new one. It also increases the chances that you will smack it with your head in an accident.

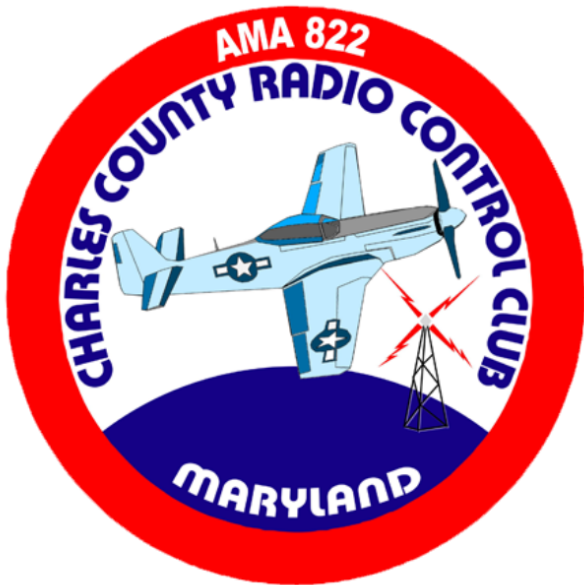
Don't secure your mobile radio so in an accident it can become a metal projectile

ANSWERS

C	Q	S	S		O	L	D	E	N		H	A	L	L	
A	S	A	P		N	U	E	V	O		E	L	U	L	
Y	L	R	L		A	B	L	E	R		T	A	R	O	
		D	U	C	I	E	I	N	T	H	E	S	K	Y	
E	D	I	T	O	R					H	A	R	K	E	D
W	A	N	T	S		F	E	T		R	O	A	R	S	
E	R	I	E		R	E	A	R	M	S					
S	C	A	R	B	O	R	O	U	G	H	F	A	R	E	
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M	A	T	T	E		L	E	D		L	O	R	A	N	
A	C	R	O	S	S					M	E	T	E	R	S
R	A	I	N	S	O	N	S	W	A	I	N	S			
T	R	O	N		L	A	T	I	N		O	T	I	S	
T	I	D	E		A	N	O	D	E		T	O	N	S	
I	D	E	S		R	O	P	E	S		E	R	S	E	

Answers to practice questions
1A 2D 3C 4A

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Interested in joining
the fascinating hobby
of RC airplanes?

The Charles County
Radio Control Club
is ready to help you
get started.

Visit us on the web:
charlescountyrc.com



**Southern Maryland
Astronomical Society**

Explore the night sky with
us at our observatory, or
use your own telescope.

New to astronomy? We'll
help you learn.

For information, visit us at
<http://smas.us>

We're on
the web

[http://
k3smd.net](http://k3smd.net)

This is where I will post want ads, for sale or trade items, & Public service announcements: Just send the info to Michelle (editor) msack@verizon.net Or PO Box 1182 Waldorf, MD 20604

K3SMD



Charles County Amateur
Radio Club

Service Club

Meetings, nets, & contacts

First Friday- Monthly meeting @ 7 PM/1900 Charles
County Rescue Squad 2 Calvert Street, LaPlata, MD

Net-Wednesdays 8:30 PM local: 146.490 Simplex

PO BOX 169, La Plata, MD 20646

President: Bob Curran NW3M flyingham@verizon.net

Vice-president: Tom Abernethy W3TOM w3tom@arrl.org

Secretary: Charles Hallock AA3WS selbynet@hotmail.com

Treasure/member Bob Davidson rdavidson@acweb.com

Activities Jeff Humbert KB3SPH humbert1js@gmail.com

Newsletter Michelle Sack N3YRZ msack@verizon.net

VE Coordinator Bob Curran NW3M

Leave laughing



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