

May, 2021

LARC NEWS & VIEWS

N4LNR



Lenoir Amateur Radio Club Newsletter

Events

June LARC Meeting

Thu. Jun. 10, 7:00 pm
Webex Online Meeting
Field Day Prep

Contest University

Thur. May 20th
Online 09:00 am EST
www.contestuniversity.com

SEA-PAC Convention

June 5th-6th
Sat. 09:00 am - Sun. 03:00 pm
PDT
www.seapac.org

ARRL Field Day 2021

June 26th-27th
Sat. 02:00 pm - Sun. 05:00 pm
EST
www.arrl.org/field-day

Waynesville Hamfest

Sat. July 24, 2021
08:00 am - 02:00 pm EST
Smokey Mountain Event Center
wcars.org/hamfest-annual/docs/hfnotice.pdf

POTA & SOTA

At the last Lenoir Amateur Radio Club meeting, *Zach Thompson KM4BLG* gave a presentation on portable operating POTA and SOTA.

Zach got interested in Amateur Radio at a young age and received his license at age 18. Since then he has dabbled in many aspects of Ham and he is especially passionate about portable operating, digital modes, and public service & auxiliary communication. To date, he has completed 60 SOTA activations in 5 different states and 2 POTA activations.



Why go portable?

- Many Hams are unable to operate from home due to housing restriction where they have limited antenna options or there are noise from power lines.
- Hams who regularly operate portable are more prepared for emergencies.
- It's a way to enjoy the great outdoors and to have fun.

So get up and GOTA (Get on the air)! Let's do some POTA and SOTA!
Pack your portable radio and head out to the parks and mountains!





POTA Parks On The Air started in 2016 as an Amateur Radio Relay League (ARRL) Program called National Parks On The Air (NPOTA), designed to encourage people into the national parks while simultaneously giving amateur radio a broader exposure to the public.

The program was highly successful, and once the one-year program ended, the Parks on the Air program was born in the wake of the National program.

The principle of POTA is that Activators go to a state or national park, which is pre-approved with a designation number assigned by the POTA system. All the parks can be found on the [POTA Map](#). Activators may set up their radio gear and operate from any location in the park, as long as they are within the park boundaries. POTA has a [system](#) in place for announcing Activators' location and their frequencies. Hunters are radio operators who listen for the Activators. Whether from home or from another park (called a Park to Park contact), Hunters try to collect as many park contacts from across the country and around the world. It is the Activator's responsibility to submit their log to the POTA regional coordinators for the contacts to count. The operating [Rules](#) can be found on [POTA website](#).



SOTA Summits On The Air is an amateur radio operating award program that started in Great Britain in 2002 and has become popular worldwide. [SOTA's](#) aim is to encourage amateur radio operators to operate from mountainous locations, combining hiking and mountain climbing with operating their radios from the summits.



The [SOTA Database](#) has all of the summits identified and are separated into "associations" based on location (often by State in the US). Each summit is defined and scored in the Association Reference Manual (ARM) for the association they belong to. SOTA is fully operational in nearly a hundred countries across the world. Each country has its own recognized SOTA summits within their associations.

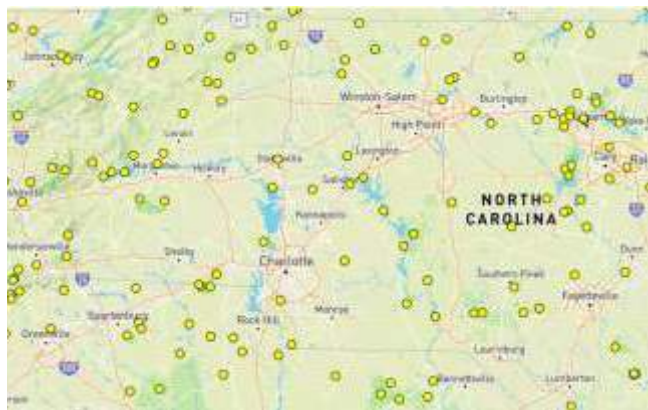


Activators are radio operators on a summit. They "activate" the peak by making at least four contacts from within the activation zone. The Activation Zone (AZ) for the [Pacific Northwest \(PNW\) Associations](#) for example, includes the area below the designated summit by 25 meters or 82 feet, except Oregon, which specifies 80 feet. Review the ARM for a detailed description of the AZ you'll be working. Chasers can operate from anywhere listening for an Activator on a summit.

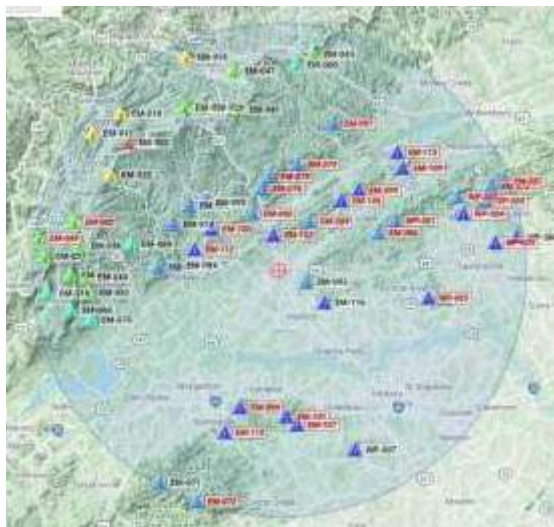
There are many tools available for researching summits and planning access routes. [Google Earth](#) provides information about elevation, topology, roads and trails, etc. [SOTLAS](#) provides maps and other excellent SOTA planning tools. Activators have added information to the [SOTAwatch](#) summit database containing access details and other information about a summit. Activators can alert Chasers ahead of time by adding an "alert" to the SOTAwatch Alerts list. If you have a GPS, take a look at trail maps. There are free downloadable trail and topographical map data for GPS devices.

Activators and Chasers enter their logs in the SOTA Database system. This system keeps track of all activation and chasing activities and calculates scores for the participants. There are awards for both Activators and Chasers. Activators aspire to achieve the "Mountain Goat" status and Chasers the "Shack Sloth".

There are many parks or peaks in North Carolina to keep an outdoors adventurer occupied. Here are some parks shown on the [POTA Map](#).



There are over 50 SOTA summits within 25 miles of Le- noir, North Carolina shown on [SOTAmaps](#).



What equipment would you need?

Portable Radio – HF/ VHF/ UHF All-Mode mobile or QRP transceiver

Some examples are:

- *Yaesu FT-857D*
- *Icom IC-7100*
- *Yaesu FT-817ND/FT-818*
- *Icom IC-705*

Antenna

- *HF* – Linked Dipoles; End fed; Vertical; Magnetic Loops
- *VHF/UHF* – Roll-Up J-Pole (ladder line; twin lead)

Batteries – Lightweight such as Lithium Ion or LiFePO4 (Lithium Iron Phosphate)

Planning is the key to a successful POTA or SOTA activity. Always keep safety in mind. Study the terrain of the area you are going. Know when parks are open and if they're accessible. Some land are private properties you may not have permission to trek on. Carry the proper supplies for your trip. Then go on and have fun!

Here are a few POTA and SOTA videos to explore:

[What is POTA? Parks On The Air Ham Radio](#)

[Getting started in Parks on the Air](#)

[What is Summits On The Air SOTA - Ham Radio Minute](#)

[Everything You Need to Know About Summits on the Air \(SOTA\) - Ask An Elmer](#)

[Ham Radio SOTA Camping Meetup Pacifico Mountain W6/CT-015](#)

[My Overnight Backpacking & SOTA Ham Radio Gear](#)

OTAs

If POTA and SOTA are not your Amateur Radio interests, there are other “On The Air” activities an Amateur may enjoy participating.

COTA is *Castles On The Air*.

This program has been initiated by the **World Castle Award** Program in 2012. COTA is an international program in which hams from all over the world can participate to highlight historical places of their countries.



IOTA is *Islands On The Air*.

This program caught the interest of thousands of radio amateurs worldwide. Established in 1964, it promotes radio contacts with stations located on islands around the world. It is administered by Islands On The Air Ltd (IOTA Management) in partnership with the Radio Society of Great Britain (RSGB).



BOTA is *Beaches On The Air*.

This is a program for radio amateurs operating from beaches. You can participate from any beach, country or region around the world. BOTA does not impose any restriction on how you get to the activation point or on the power source you can use for your station.



These of course require some traveling to certain locations due to the specific feature of the destination. Unless you go to a castle on an island with a beach which could qualify for all of these activities at once.

YOTA *Youth On The Air* is a program for and by young amateur radio operators 25 years old or younger living in IARU Region 2 (the Americas). It is closely modeled after the Youngsters on the Air program in IARU Region 1 (Europe, Africa & Middle East). The goal of the program is to



build skills and foster lasting friendships and mentors with younger hams.

There is a **YOTA summer camp** for youth 15-25 years of age. The camp was postponed in 2020 due to the coronavirus pandemic, but will now take place July 11-16 this year. It will be at the National Voice of America Museum of Broadcasting in West Chester, Ohio. The program accept only a certain number of youths to participate in camp, so registration fills up quick.

ARRL Field Day 2021

Field Day is the most popular event in ham radio held annually on the fourth weekend of June. Amateurs Radio Operators throughout North America gather with their clubs or groups to set up temporary transmitting stations in public places to demonstrate ham radio's science, skill and service to their communities. It combines public service, emergency preparedness, community outreach, and technical skills all in a single event. Field Day has been an annual event since 1933.



The **Lenoir Amateur Radio Club** will participate in Field Day activities June 26-27. LARC members will be camping out at Redwood Park in Hudson, NC. They will be ready to get on the air at 2pm EST on Saturday and will stay overnight all weekend until 5pm EST Sunday. All Hams and non-Hams are welcome to participate and come see LARC in action in our communication trailer.

The COVID-19 pandemic-modified ARRL Field Day **rules** from 2020 will continue this June with the addition of a power limit imposed on Class D (Home Stations) and Class E (Home Stations-Emergency Power) participants.

Class D stations may work all other Field Day stations, including other Class D stations, for points. This year, however, Class D and Class E stations will be limited to 150 W PEP output.

An aggregate club score will be published. The aggregate score will be a sum of all individual entries that attributed their score to that of a specific club.

Upcoming Hamfests & Conventions FRN For New Hams

Dayton Hamvention / Contest University

May 20-21, 2021 (Online)

Sponsor: Dayton Amateur Radio Association

<http://hamvention.org>

<https://www.contestuniversity.com/>

SEA-PAC

ARRL Northwestern Division Convention

June 5-6, 2021 (Online)

Sponsor: Oregon Tualatin Valley ARC,
Clark County ARC

<http://www.seapac.org>

Waynesville Hamfest

July 24, 2021 (In-Person)

Sponsor: Western Carolina Amateur Radio Society
(**WCARS**)

Smokey Mountain Event Center

(Haywood County Fairgrounds)

758 Crabtree Rd in Waynesville, NC

Tickets- \$6 advance; \$8 at the door

Visit [The Ham Badgers](#) website for more info.

<http://www.arrl.org/hamfests/waynesville-wcars-hamfest>

<http://wcars.org/hamfest-annual/docs/hfnotice.pdf>
(link currently not available, wcars.org site is down)



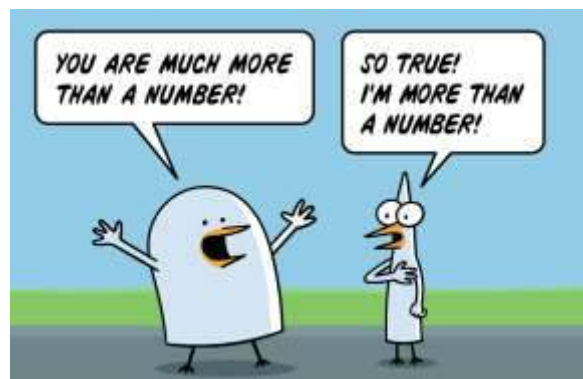
Beginning May 20, 2021, the Federal Communications Commission (FCC) requires all amateur examination applicants to have a FCC Registration Number (FRN) to provide to Volunteer Examiners (VEs) before taking an exam. For first time applicants, they must obtain a FRN through the FCC's **COMmission REGistration System (CORES)**. For those who already have a FCC license, you already have the FRN and may use the same number. There is an instructional [video](#) from the FCC website that provides step-by-step instructions on how to obtain the FRN through CORES.

The FRN is needed to access one's license document from the FCC Universal Licensing System (ULS), upgrade the license, apply for a vanity call sign, and to submit administrative updates (such as address and email changes) and renewal applications. In addition, after June 29th, all applications must include an email address for FCC correspondence so that applicants can receive an email to access their new license or other documents. The FCC no longer provides paper documents.

Here's another video about CORES:

Updated Commission Registration System (CORES II) Webinar

For those who already have their FRN, it shows you how to get a CORES User account and Associates your Username to an Existing FRN.



NC QSO Party 2021 Results

By: Ro Maddox K4HRM

The North Carolina QSO Party was held February 28, 2021, 10 am until 8 PM, and the [results](#) have been posted on the [NC QSO Party website](#). This year 598 logs were accepted, making this the highest participation ever! The QSO Party chairman commented that 2021 was the first-year log submissions exceeded 500.

The Lenoir Amateur Radio Club had 4 members participating in the Category: In-State, Phone, Low Power (under 150 watts). A total of 51 participants submitted logs in this category. The following were the results for our Club members:

	Total Score	Total QSOs	NC Counties	Non-States -Prov	Rank
John AG4ZL	17,360	155	22	34	12
Keith KD2TJD	9,512	116	11	30	22
Ro K4HRM	4,496	53	34	7	31
Buck N4PGW	2,250	44	11	14	39

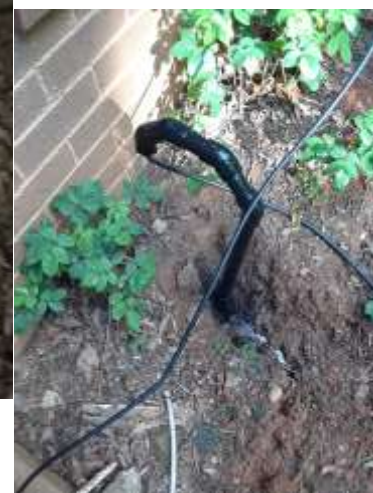
Congratulations to all! See you next February 27, 2022 for NC QSO Party time!



Ham Helping Ham

Digging Up Ed's Yard

Ed KB2KHR, Mitch KN4AYD, and Bryce dug the ground across Ed's yard. Then they buried super flex coax threaded through 3/4" schedule-40 PVC pipe for Ed's Maxcon Antenna to be installed later.



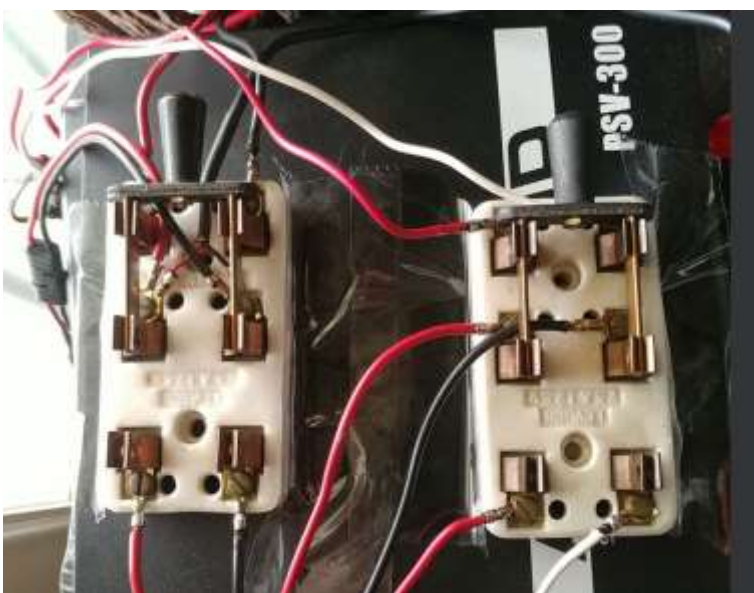
Power Switch

By Ken KE2EP

An easy to live with Solar Battery Setup with Dual Fallbacks.

I used 2 old style knife switches both **Double Pole Double Throw**.

The first switch had the 2-meter radio, a **Yaesu FT-2980** connected to the center connections along with a cheap tiny voltmeter. On one side of the switch was the battery. The other side of the switch went to the **AC power supply**. Thus, I could choose battery or AC power to the Yaesu.



A second DPDT switch controlled the source of charging the battery. One side went to the **Solar panel** (after the **solar controller**). The other side of switch two went to a 110 AC battery charger. Now I could just move the knife switch to choose how the battery would be recharged.

A nice thing about the ancient knife switches is the center arm UP position that disconnects from either side, easy to see at a glance. And also disconnects the little voltmeter. Most hams now use power poles, I am sticking with the old SAE dual connectors.

The left switch in the photo has dual center connections, one pair is for the tiny **voltmeter** monitoring the voltage seen by the radio.



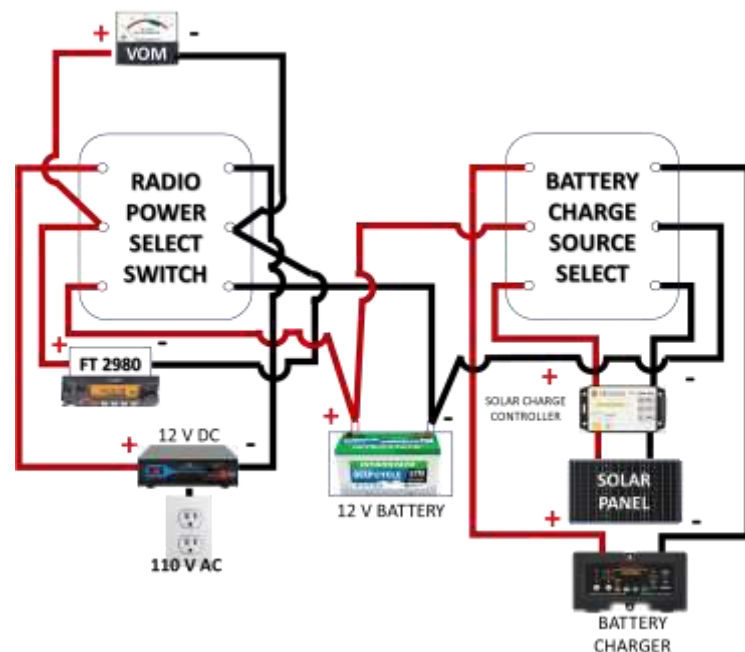
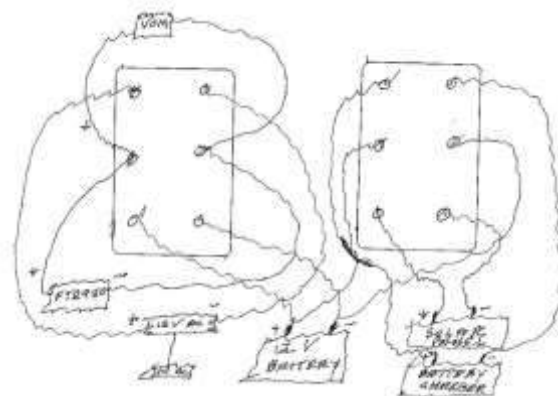
The right switch (by PSV 300) is set to select the **AC battery charger**. The left switch is set to select the AC power supply for Yaesu.

Both in the UP position as shown indicate the use of 110 AC for both radio and battery. When both are in the down position the battery charges from the solar panel and also supplies current to Yaesu.



Note that + is always on the left side of each switch with ground (-) on the right side. Take utmost care to voltmeter double check the polarity on each connection – the **battery** I am using can fry a wire in an instant!

Forgive my hand drawn circuit diagram, a bit sloppy; but accurate.



Original design and drawing by KE2EP. Update provided by KN4AYD in coordination with KE2EP.

Frequencies

146.625- 94.8

Club Repeater (N4LNR)

147.330+ 141.3

Hibriten Mountain Repeater
(KG4BCC)

145.535

Simplex

29.6

Simplex FM

28.374

Simplex USB

Nets

LARC Weekly Net

Tuesday, 7:00 PM

146.625 Minus PL 94.8

Alt. 147.330 Plus PL 141.3

Caldwell ARES Net

Sunday, 9:00 PM

147.330 Plus PL 141.3

DMR Digital Net

Tuesday, 8:00 PM

Lenoir Local DMR

Lenoir Amateur Radio Club, Inc

P O Box 3276

Lenoir, NC 28645

N4LNR.org

Serving Amateur Radio In Caldwell County Since 1986

Become a member or renew your membership

Pay your dues in person to the Treasurer or by mail

Full Member \$15/year

Family Member \$25/year

Ask about our Life Time memberships

Send comments concerning the LARC NEWSLETTER to

newsletter@n4lnr.com

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