THE SPLITROCK TIMES

The newsletter of the Splitrock Amateur Radio Association.

November 2022 edition.

Welcome to the fourth edition of the Splitrock newsletter with its new name.

Editor: Fred Wawra W2ABE. [contact W2ABE@arrl.net]

'The Splitrock Times'.

OFFICERS

President Bruce N2XP

Vice Pres. Bob K2RFH

Treasurer Bruce N2OQX

Secretary Tracey KD2ISX

Trustee Bruce N2XP

Member at Large/'assistant to the President', Fred W2ABE.

Important note: VE testing will be on November14th due to voting on the 8th.the Club meeting will be on the 15th!!! VE testing is usually on the second Monday of the month at the Mount Arlington Civic Center-7pm registration.

Remember if you are a member of ARRL [and you should be] then subscribe to the weekly email update to keep aware of conditions and activities on the bands and League announcements.

The Club Meets every second Tuesday at 7:30 at the Mount Arlington Civic Center [the log cabin building at the west end of Fern Place]. Come join us for fellowship and learning.

The Club's mailing address is: S.A.R.A. PO Box 528 Lake Hopatcong, NJ 07849 You can also contact us at: www.splitrockara.org OR

membership@splitrockara.org

The repeater is on 146.985, the offset is -600, and the PL is 131.8 hz.

Member Profile for this month:

Larry Stewart W2SWX

Later in this issue!!

NOTICE: There will be NO zoom at the meetings for the time being due to WIFI issues

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Reminder….

Submissions for the newsletter need to be in word format or an email.

Reminder: there is a $35.00 fee paid directly to the FCC for new calls, vanity calls, and renewals. There is no FCC charge for upgrades.

To Splitrock Members,

It is a great honor and privilege to serve as Splitrock ARA President again and a big thank you to all who were able to participate voting at the meeting and by email.

Our business meetings will be kept short and to the point and

I will be asking all the members what their favorite program topics, guest speakers and activities that all of you would enjoy and have some Amateur radio fun.

We will have a video at the November meeting

"Empires of the Air" it is the history of how radio started.

Also, a big thanks to Ed Ruping, W2EJR, for your dedication serving the club as President.

73,

Bruce N2XP President

THEORETICS DEMYSTIFIED or

ECLECTIC TECHNOLOGY

Theoretics was a name that I coined to describe a column that takes a complicated subject and boils it down into language that the average person with no radio or electronics experience can understand without all the complications that often discourage a new person from delving further into the fascinating world of electronics and ham radio.

The name change and the subject this time is:

ECLECTIC TECHNOLOGY BATTERIES OLD and NEW

Electric cars are not new! Thomas Edison had one built over a hundred years ago and it used a battery that could not be overcharged, could be completely discharged, left for extended periods of time unused and would not explode and used commonly available materials for manufacture and you only had to replace the electrolyte every 20 or 30 years! Of course, the energy density may not have been what we are used too but it still works [and so does the car] to this day. This leads us to the topic of batteries which properly put is a series of cells hooked together but the term battery has become commonly accepted to mean any current producing cell or combination of cells.

First came the wet cells which consisted of two dissimilar electrodes immersed in an acid or salt solution called electrolyte. If a wire be connected from the positive pole, say copper, to the negative pole, zinc in this case the current will flow from the positive to the negative pole but inside the cell charges will flow from the negative pole to the positive, completing the circuit. Keep in mind that this follows the 'conventional' theory of current flow. Also keep in mind that this information is as it was about a hundred years ago. [The author has an Edison single fluid cell which is suitable for ignition and signal work. The cell is well over a hundred years old and quite rare!] Early cells that used a copper electrode [wet cells] had the problem of hydrogen forming on the copper thereby diminishing cell output. This was called polarization. Because of this the cells were provided with a substance which functioned as a depolarizer to help prevent the accumulation of hydrogen on the copper electrode.

Next came the 'dry' cells which were composed of a zinc can and a central carbon electrode with a liquid electrolyte. There as blotting paper or other absorbing material which kept the electrolyte from leaking out, thus they were called dry cells even though the electrolyte was a liquid albeit a small amount compared to a glass jar filled with acid. Batteries are still made using the same technique of electrodes and electrolyte, but the construction details have varied greatly as have the chemical combinations used.

We have gone from wet cells to 'dry cells' of the earlier day to the once common #6 dry cell used in early telephone work, to the familiar 'D' cells and 'C' cells to the more common 'AA' cells or 'AA' batteries as we now call all of them to the 'AAA' cells and a myriad of others. Next, we have the ubiquitous alkaline battery which delivers greater performance than the lead acid dry cells of old. A few can be recharged but almost all are not. Among the rechargeable types we have nickel cadmium batteries which have a higher current density during discharge but have a memory effect if not cycled properly. Next is nickel metal hydride which has less of a memory effect but a lower current density.

Most recently in the last 40 years or so is the lithium-ion battery which now powers most all our portable devices now in use. The problem here is that they can and do catch fire and in the case of electric cars that use the, once the fire starts, there is no extinguishing it! These lithium batteries are designed to be charged repeatedly, keeping in mind it is better to let them run down till the device advises a charge or you can keep the charge state between 20 and 80%. The worst thing to do is to keep them on charge indefinitely as this tends to 'fry' the battery. Many a laptop owner can attest to this]. Some newer devices circumvent this problem using a power management system. Best is when a device is charged, unplug it from the charger.

Some newer technologies have eliminated this problem such as lithium iron phosphate which you can drive a nail through without causing a fire. [who would want to do that?] This type of battery is now frequently used by hams to power their portable equipment as it is much lighter and has a better power delivery than the sealed lead acid [SLA] batteries which is just a larger version of original dry cells. The SLA batteries are designed to be recharged and some are for deep discharges and others are for float service where the battery is part of the power system, not just backup.

On the horizon is sodium ion batteries which use more common materials and do not catch fire as has been touted by manufacturers. As a side note: Tesla is rumored to be switching from lithium-ion batteries to lithium iron phosphate batteries next year. The problem with lithium-ion batteries in cars is that because of the manufacturing techniques required to get and process the lithium used in the battery packs in cars, the carbon footprint over the life of the care is much greater than that of an ICE car. Aside from this lithium is extremely toxic. Needless to say, battery design and discoveries will continue to advance greatly in the future.

Fred Wawra, W2ABE, 73

IF you are up early in the morning and want to get on the air there is the 'friendly net' on 7.235 from 7am to 8am 365 days a year. It is a non-political "G' rated net open to all.

REMINDER: VE session on the 14th and Club meeting on the 15th due to voting on the 8th .

Honor roll of club attendees September:

Bob K2RFH, Tracey KD2ISX,

Bruce N2OQX, N2XP Bruce,

Fred W2ABE, Judith Kc2LTM,

Ed KB2UNZ, Sid K2GG

Mike KC2CSV, Hugo KB2VZI,

Tom WB2UFF, Pete WI2R,

Joe AC2U, Darryl KD@MNN.

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October Honor Roll:

N2XP Bruce, N2OQX Bruce, K2GG Sid, K2RFH Bob, KD2ISX Tracey, W2ABE Fred, KC2LTM Judith, KB2UNZ Ed, N2GPH Jack, K2AN Lou, WI2R Pete, KD2ZSW Mike, KD2CRI Nino, N2ELC George, N2IFA Steve, KB2UZI Hugo, AC2IJ Joe, WI2Q Dave,W2EJR ED, KB2VZI Hugo KE2RG Uwe.

THIS MONTH'S MEMBER PROFILE:

LARRY STEWART, W2SWX.

MEMBER PROFILE

What do you do for a living?

I am an entertainment sales associate for Walmart - sales and service, customer service.

What else have you done for a living?

I ran a website business, I was a data processing manager, an MVS computer operator/production control, an IT specialist at IBM global services also Prudential insurance.

How did you get interested in ham radio?

I started listening to ham radio on shortwave and on the ham radio repeaters.

What parts of the hobby most interest you?

Shortwave radio listening to contests and nets. Using 2 Meter mobiles on our club's repeater and DMR digital radio.

What does belonging to Splitrock mean to you?

Being part a local ham radio club.

What should the club's priorities be for next year?

Creating more Club Involvement through activities. [ED]

What else can you tell us about yourself?

I served in my church as a Royal Ranger commander and ran the annual ham radio station during annual campout. Introducing the boys to HF ham radio and DMR. I am a family-oriented person married for 50 years. Two grown children and one grandchild.

What are your other hobbies or interests?

My hobbies are Audio books. Music, Chess, Computers, Ham radio, Shortwave listening, and Weather.

Lou K2AM gobox revisited.

At a previous club meeting Lou, K2AN had a presentation on a 'GO BOX' that he built for portable use and following is how he did it!!

There is a slight correction,

The two 6-volt batteries are wired in series to give 12 volts for the radio!

Criteria for the build:

1. Use parts available
2. No drilling in the Box to keep it waterproof
3. Have a separate switch for power on and fan control
4. Use a small radio that will fit in the box
5. Find batteries that will allow for at least 2 hours of operation

Parts for the build

1] A toolbox, Size the box for your radio, batteries, and other accessories.
1] Baofeng 25X4 Radio with
2] 6 V 7.5 ah Batteries in Series for 12 V radio.
A fuse and holder to protect the radio- Most likely provided with radio.
1] Volt/USB/Cig lighter accessory.
2] Red, and 2] Black power poles.
2] Single pole switches - Main power and Fan On/Off.
A fan from an old computer- [Optional]
One Can of Red Spray paint for the wood.

LOOKING FOR ARTICLES on kit builds, GO BOX builds, an article about your shack or another electronic project!!