THE SPLITROCK TIMES

The newsletter of the Splitrock Amateur Radio Association.

August 2022 edition.

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

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

'The Splitrock Times'.

OFFICERS

President Ed W2EJR

Vice Pres. Bob K2RFH

Treasurer Bruce N2OXQ

Secretary Tracey KD2ISX

Trustee Bruce N2XP

Member at Large Fred W2ABE.

Important note: club election nominations are in August and elections in October!

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 either live at the meeting or on zoom!

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.

From the

Club President:

Welcome to the new Splitrock Amateur Radio Association newsletter. It has been a while since the club published one. I and the board of directors hope you enjoy the read.

When Fred, W2ABE, asked me to pen something for the President's corner I had to think about a subject that would be fitting for the first newsletter. Here goes!

Amateur radio operators are known for their love of experimentation. Think of some of the antennas we use on a regular basis today, G5RV and the Carolina Windom to name a few. The folks who designed these antennas did so out of necessity for space constraints (G5RV) and terrain (Carolina Windom) since there wasn't a HRO or DxEngineering store a phone call away with overnight shipping!

There were no NanoVNA's or CAD systems in those days, so they cut, twisted, soldered, and raised the wire, took readings over and over again until they achieved the desired results. Now, today with their experiments the Carolina Windom (OCF dipole) allows me to work the world on 100W from the comfort of my home.

Now I'm not saying to go out and develop a new antenna, but don't let me stop you if you want to. Too often technology gets in the way of getting us to think about doing something different since there is already something available in the marketplace. My message is simply this. Try, try and try again. If you first don't succeed neither did someone else. But they persevered and the entire ham community benefitted from it.

Don't be afraid to step outside the box. When you discover something or learn a brand-new technology share it with your fellow club members. Our local ham community, Splitrock, will benefit from it.

Ed W2EJR

Member Profile:

Michael Smith, KD2ZSW.

Michael is our newest member and a new ham just having gotten his new call sign. We are looking forward to seeing him at our meeting and Elmering him as a new ham in the hobby. See his profile on PAGE. FIVE

Coming up:

The October 1ST hamfest.

Stay tuned for more information! See future newsletters or the website for updated information.

Reminder: there is a $35.00 fee paid directly to the FCC for new calls, vanity calls, and renewals.

THEORETICS DEMYSTIFIED

Theoretics is 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 subject this time is:

ELECTRICITY!

Electricity, we cannot easily live without it but what is it? It is loose electrons jumping from one outer electron orbit to another in a conductor such as copper, which has outer electron orbits around the atom such as to let the electrons jump from one atom to the next. For this to happen there has to be a pressure that we call voltage, and this pressure pushes the electrons along the conducting path. When the amount of push is greater, this is interpreted as a higher voltage. As in most scientific discoveries the unit of measure is named after the discoverer! Next, we have amperage which is the number of electrons measured as passing a given point in a specific amount of time. Note however that you cannot have amperage, the number of electrons flowing, without the push which is delineated as voltage! When you take the measured amperage and multiply it's value by the measured voltage, you get watts. The electric company measures usage in kilowatt hours as watts alone is to small a measure to deal with.

That leads us to control of electricity. Conductors as the name implies, have atoms which the electrons in the outer shell can more easily jump to the next adjacent electron in the presence of voltage (the push again) or more properly electromotive force. Insulators, on the other hand, are materials where the electrons cannot jump between atoms thereby no current can flow. Without these two types of material our electronic world could not exist. Switches are merely devices where the conductor elements can be separated by mechanical action. Relays carry this one step further by having the actuating contacts controlled by a magnetically activated assembly. How? There is a coil of wire through which a voltage and current is supplied, and that causes a magnetic field to be generated and this operates a magnetically sensitive mechanical assembly. Aha! You say, what is this? Electricity can be 'created by chemical action, photovoltaic (solar) cells and most importantly by passing a wire through a magnetic field. The magnetic part works both ways, passing a conductor (it has to be moving) through a magnetic field will cause a resultant current to flow in the wire and conversely applying a voltage to a conductor will produce a corresponding magnetic field. This is how a generator works (the first instance) and how a relay works, (the second instance). This also how a transformer works. The primary input is energized by a changing/alternating current and this creates a changing magnetic 'flux' which in turn induces a corresponding alternating current in the second-ary winding. Changing the ratio of turns between the primary input and the secondary output determines if the resulting voltage is more or less than the input voltage.

Transformers are used for power, audio, and radio circuits. I jumped ahead about transformers but anyway.

The next basic is circuits. For current electricity to work there must be a circuit or loop. Typically, a source of current electricity (as opposed to static electricity) a battery or another source, a load such as a good old incandescent bulb and conductors (wires) to connect them. The path is from the source, say a battery, through a conductor to the load, a bulb and back to the source which has out and in. There can also be a way to interrupt the current flow and that would be a type of switch. The source has a plus and minus. In the old days it was thought that current, the electrons flowed from plus to minus, but it actually is the other way around. As far as electronics engineering goes that convention is necessary, but for all practical purposes, the older convention works just fine.

A basic circuit is a series circuit meaning one component after another. The next type is a parallel circuit where you take a basic series circuit and add devices next to and wired just as if they were in the series circuit alone. That is where parallel comes in. If you have a series circuit with many bulbs wired one after another and one burns out the whole circuit becomes inoperative since no current can flow. With the parallel circuit, if one bulb burns out, the rest stay lit! Remember this just the basics. One other way to control electricity is with resistors, as the name says, they impede the flow of current. How? By giving up the lost energy as heat! One of the older and still used ways for control of electricity is using relays where a current is introduced into a coil causing a mechanical piece or armature to move completing or breaking a flow of current in a circuit or a vacuum tube as a current control.

The newest way is to use solid state devices such as diodes, transistors, and silicon-controlled rectifiers. There are also solid-state relays which do the same thing a mechanical relays but using semiconductor technology.

Remember for current to flow there must be a complete circuit!

Fred Wawra, W2ABE.

FIELD DAY how was it?

Field day was a success as there were 29 [about HALF the club]! hams from the club who showed up to help with set up and preparation for the event.

Judith KC2LTM and I helped Ed with getting the food and supplies. AS I looked around, I saw hams working on feed lines and getting antennas up. Our technical coordinator Bruce N2XP was very busy getting things set up with help from the numerous others.

Our aggregate score was 4825 with help from Pete W2PJ and we got 950 bonus points for multiple activities. All in all, we had a good time, however more overnight operators would have been helpful. Field day is not a contest, it is a preparedness practice and a forum to attract new hams and hopefully they will become new members. Great job everyone!!!

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.

MEMBER PROFILE KD2ZSW

WHAT DO YOU DO/WHAT DID YOU DO FOR A LIVING?

Currently I'm retired. My prior career was as senior business executive and consultant for medium sized STEM companies. President of three companies: a management Consulting firm, chemical research & manufacturing company and a heat recovery design & fabrication company. Prior I managed the design and development of several large-scale enterprise software projects.

HOW DID YOU GET INTERESTED IN HAM RADIO?

Looking over my older brother's shoulder. I was eleven he was 18. He had an old Zenith SW radio with a straight wire antenna that I listen to for hours. I loved to hear foreign countries and hams talking about their radios. That all died out when I went to college, but in March of 2022, my older brother John (KJ7ZHG) in Tucson, told me he just got reinvolved four months prior, and has made almost 900 contacts with 50 entities (mostly digital radio FT-4 & FT-8, and contesting) and about 50 POTA contacts. So, on April Fool's Day I started my quest for a Technicians Class license. Amateur Radio is much different today then what I remembered, now digital radio is becoming more prevalent and SDR and software concepts may soon obsolete radios bult less than a decade ago.

WHAT PARTS OF THE HOBBY INTEREST YOU?

Researching and re-learning modern electronics and physics and doing short projects like Field Day and antenna erection.

WHAT DOES BELONGING TO SPLITROCK MEAN TO YOU?

Nothing yet, I'm too new and still learning the organization. So right now, Splitrock means hope – hope that I can learn, find meaning and fit- in.

WHAT SHOULD THE CLUB'S PRIORITIES BE NEXT YEAR?

1. Recruiting new and some young members

2. Retaining the members that we have (in-person) by being more active with (public) events such as open house, demonstrations, hamfest, partnering and alliances, etc., and more opportunities to get together in-person

3. Education: teaching/learning the what and how of Amateur Radio

4. Communicating / Engagement (handouts, newsletters, updated web site, public presence, etc.) what we are doing distributed to a wider audience, to attract their interest and increase our following.

WHAT OTHER HAM RELATED CLUBS OR ORGANIZATIONS DO YOU BELONG TO?

None – I've only been at this for about four months.

WHAT ARE YOUR OTHER HOBBIES OR INTERESTS?

I only do one hobby at a time but emersed myself deeply in its technology. Prior interests included motorsports (driving), photography, Aircraft (commercial level, multi-engine instrument pilot – owned three aircraft), Argentine Tango and probably several more.

SEE YOU NEXT MONTH!

The Swap N' Shop/Tech Net meets every Sunday night at 8pm on the repeater

SWAP'N SHOP TECH NET SCHEDULE

July 2022 – Dec 2022

IF YOU CAN'T MAKE IT PLEASE EMAIL Bob K2RFH at emergencymanagement@roxburynj.us

July 3 **N2XP** **HF Portable Operation**	**August 7** **K2AN** **Making a HF go Box**	**Sept. 4** **N2XP** **Dstar, DMR, P25 digital**	**Oct 2** **K2AN** **Building your own station accessories**	**Nov 6** **N2XP** **Power Supply Repair**	**Dec 4** **K2AN** **HF antenna in use**
July 10 **N2OQX** **Reviving Radios**	**August 14** **W2MHL** **Collecting Radios**	**Sept. 11** **N2OQX** **Building Antennas**	**Oct 9** **W2MHL** **Contesting**	**Nov 13** **N2OQX** **Repurposing Commercial Radios to ham**	**Dec 11** **W2MHL** **Buying Used Radio**
July 17 **KC2CSV** **Favorite Operating Mode**	**August 21** **W3CJD** **Coax Types and Characteris-tics**	**Sept. 18** **KC2CSV** **RTTY and Digital Modes**	**Oct 16** **W3CJD** **Loop Antennas Small and Large**	**Nov 20** **KC2CSV** **Repeater Stories**	**Dec 18** **W3CJD** **Power Supplies**

July 24 **NJ2U** **First Antenna Installation**	**August 28** **N2XP** **QRP portable Operation**	**Sept. 25** **NJ2U** **Antenna Construct-ion**	**Oct 23** **N2XP** **Lowest power use to obtain farest contact**	**Nov 27** **NJ2U** **2M SSB**	**Dec 25** **Holiday** **No net**
July 31 **K2RFH** **Net Op's Choice**			**Oct 30** **K2RFH** The best 160M Antennas		