THE SPLITROCK TIMES

The newsletter of the Splitrock Amateur Radio Association.

March 2023 edition.

Welcome to the eighth 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 the second Monday in January. 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.

See the Member Profile Later in this issue!!

This time by Rich Mobray KE2ANA!

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.

THE PRESIDENT'S MESSAGE

To Splitrock Members,

We'll be showing a Power Point presentation about some of the equipment, tools and supplies used for repairing your radio equipment. Also, there will be a demonstration of the oscilloscope and its uses in trouble shooting radio circuits.

One of our members Sid Markowitz K2GG is on the ARRLVEC Volunteer Examiner Honor Roll. He is in the top10 Examiners and has made 428 exam sessions for the Hudson Division. The Club wishes Sid Congratulations and Appreciation for doing a excellent job with the ARRL VEC Program.

March 2023 QST Pg.89.

If anyone has any ideas for topics, videos and guest speakers, send me an email at President@splitrockara.org.

73, Bruce N2XP

SARA President

ECLECTIC TECHNOLOGY

By: Fred Wawra, W2ABE.

This time INDUCTION

Induction is the term that came about because in the early days of electrical experimentation, it was discovered that passing a current through a wire produced

a magnetic field as shown by iron filings sprinkled on a piece of paper with a wire passing through it arranged themselves in an orderly pattern showing the magnetic flux field produced when current was passed through the wire. It was also later discovered that another wire nearby would have a current INDUCED in it by the magnetic field produced by the first wire. The key is that the magnetic FLUX FIELD must be changing to do so. What led to the early experimentation of induction was that, earlier, it was found that a magnet MOVING near a wire produced or induced a current in that wire. Many years earlier, it had been found that iron filings sprinkled on a piece of paper produced a pattern when placed near a piece of natural magnetic rock called originally a lead stone but is commonly referred to as a loadstone.

Self-induction is another thing that was discovered while experimenting with coils and batteries. Self-induction happens when the current in a coil decreases and the magnetic flux field collapses to some degree and that has the same effect as if you took a magnet and pulled it away from a coil. That is, the magnetic flux field changes, (the same as moving a magnet near a coil or wire). This is why and how spark coils in cars work. When the current to the coil is removed, the collapsing magnetic field cuts across adjacent turns of the coil and a much higher voltage is generated and is called BACK ELECTRO MOTIVE FORCE. This is why there is a diode across the coil of a relay in control circuits to keep the generated high voltage Back EMF from destroying other parts of the associated circuitry.

Inductors in radio circuits, when dealing with an alternating current of a given frequency, the effect of coil turns upon each other changes with the frequency applied and therefore inductors can be designed to eliminate or enhance, reject or pass certain frequencies. Inductors are called such because their earliest use was as a spark generator having a primary or ‘input’ coil usually of heavier wire with many turns of wire drawing a large current, and that coil created a magnetic field

which induced a current in a secondary coil with many more turns of thinner wire and thus produced a higher voltage in that secondary ‘output’ coil. When the power was removed, a large spark was caused to jump across the output coil terminals if they were close enough. This was the basis for early radio and automotive ignition systems.

The above description of ‘spark technology’ started out by pure experimentation. Later induction coils were used in telephones to provide larger current needed for the carbon microphones in the talk circuit and the lesser current and higher voltage used in the receiving circuit and that provided the side tone (you are hearing a bit of your voice in the earpiece as you talk). This was a transformer type of setup with one continuous winding with various taps. Early phone networks had a heavy winding for the early carbon microphones but in later years the wire winding was of all one thickness. In early phones your sidetone (hearing yourself) was quite loud giving rise to an anti-sidetone section of the winding of the network coil. This was accomplished by winding that part of the coil out of phase with the rest of the coil. This produced a partial canceling of the inducted sidetone thereby cutting its volume in the earpiece.

All of this is due to the fact that a magnet, or an energized coil, acting as a magnet, or a coil with an alternating current with the changing magnet field it induces, through its changing flux field generates corresponding currents in another coil or wire within its magnet field. These properties are used in radio circuits to enhance or diminish certain frequencies by changing the size, shape, number of turns of wire and it’s spacing depending on the radio frequencies to be controlled. Inductors can be like a transformer with many turns of wire like in a choke a device that is used to smooth out left over AC pulses in a power supply circuit, or a simple multi turn coil with wide spacing of turns used in high frequency RF circuits.

Transformers work because they are refined inventions of the simple spark gap coil. The

magnetic field changes in the transformer due to the alternating current so it produces a changing magnetic flux and that flux induces a changing current in the second(ary) coil. AC in and AC out! Inductors are everywhere, from the ferrite bar antennas in AM and shortwave radios, the transformers and other coils in your microwave oven, older 60 cycle transformers in those 'wall warts' we so often use and the switching circuitry in the new ones, and the computer and other electronics that use the newer switching supplies! By the way, the new switching supplies take 60 cycle AC rectify it to DC then generate high frequency pulses which are then passed through a much smaller and cheaper transformer and are the rectified to the desired DC potential. Old crystal radios and all radios use inductors in their tuned circuits. Hams sue inductors as filters in antenna circuits to improve reception and transmission of signals, to block out unwanted signals and to match antennas to their radios.

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.

There is also the 'Awful Awful Ugly net on 3855, with check ins and rag chewing at 8pm and net starting at 9pm.

REMINDER: VE sessions are back on schedule being the second Monday of the month!

Don't forget the 'Swap n' Shop/Tech net every Sunday night at 8 pm!

MEMBER PROFILE:

Rich Mobray KE2ANA

I grew up in the Morristown area where I met my wife Lynne at Morristown High School. We have been married for 39 years and have

2 children and 3 grandchildren. We lived in Massachusetts for 13 years before moving back to New Jersey in 1999. We now have been living in Flanders for the last 24 years. I have worked as a diesel mechanic for various companies through the years before becoming a service technician and the service manager at our family pool business.

I became interested in ham radio since I was a young boy. I learned about ham radio from a neighbor who was an inventor. He taught me about basic electronics and mechanics. The parts of the hobby that I am most interested in is being able to talk to hams radio operators near and far.

Belonging to Splitrock means that now I am part of a community of people who share the love of the hobby of ham radio! Since becoming a member, I have made many new friends who are always there with a helping hand.

The priorities of the club next year should be to continue to welcome new members and assist in educating them in the ins and outs of ham radio.

This is the first Ham Radio Club I have joined as they have helped me obtain my technician license.

My other hobbies and interests are restoring antique cars, target shooting at various gun ranges and riding my motorcycle with my wife.

Rich Mobray KE2ANA.

The Following is an article submitted by:

Angelo DePalma KD2HPQ.

73?
By Angelo DePalma, KD2HPQ

Like most hobbies amateur radio has its own buzzwords, acronyms, and abbreviations -- a subset of the English language that helps us communicate precisely and

economically. One expression that everyone learns early on is “73.”

If you “Google” the term the most common definition is “best regards,” similar to what you might type at the end of a letter. You’ll recall from 2nd grade that the term for this sign-off is “complimentary close,” or a polite way to say goodbye.

Anyone who has spent any time on the high frequency bands knows, however, that operators interpret 73 in many different ways. While some callers take the hint and come back with something like, “73, thanks” or just “73,” others interpret 73 as an invitation to begin an entirely new conversation, or to perorate on any topic that happens to be floating through their heads at the time.

This can be frustrating, not only to the original caller who may be on a time budget or is simply not interested in the price of hog feed in Kansas, but to operators who are waiting to break in with their call. Sometimes, when you can only hear the station calling CQ, there are ten, twenty, thirty seconds of silence -- radio limbo when stations are waiting to call. Nobody knows if the QSO is over, if the CQ op has turned off his radio (aka gone QRT), burst into flames, or been abducted by aliens. Even more frustrating is when you’re able to hear both sides of the call.

The other day on 10 meters I heard the following exchange after what should have been a short, sweet QSO:
Italian station: “KD2XXX from IK4XXX, thanks for the QSO and hope to see you down the log. 73.”

US station: “Yeah Lorenzo, like I was sayin’, this new Heil microphone is really doing the job. When I bought my first one, in 1997, I thought wow what a great mike. But my wife...” on and on and on.

When I hear conversations like this, I usually reach for the VFO (tuning) knob, but this exchange was a real thriller. The Italian station interrupted several times with “OK, thanks” but the KD2 station insisted on telling his life story…….

73 does indeed mean many things, for example:

This conversation is over,
I’m not interested in continuing,
please let’s end this QSO now,
I have heard enough, Stop!

This month's member profile is from Rick Mobray. If you missed it, it is a couple of pages back!

THE SPLITROCK TIMES IS ALWAYS LOOKING FOR ARTICLES on kit builds, GO BOX builds, or an article about your shack or another electronic project. Ham radio experiences are also welcome. Thank YOU! Please submit them in WORD format so they can be added into the newsletter. They may be edited for space [so they fit] or clarity.

Do not forget to go to the ARRL website and look at the 100-year handbook that is offered for sale! See You at the Club meeting on the second Tuesday of each month.

Meeting honor roll of attendance, present were:

KD2ZSW	**Michael Smith,**
N2ELC	**George Hedinger**
KD2CRI	**Nino DeNino & Alice**
KD2YIK	**Rick Rodin**
KE2ANA	**Rick Mowbray**
K2GG	**Sid Markowitz**
N2OQX	**Bruce Adamo**
N2XP	**Bruce Lordi**
KD2ISX	**Tracey Neidel**
K2RFH	**Bob Hackett**
KC2LTM	**Judith Shaw**
W2ABE	**Fred Wawra**
N2GPH	**Jack Knott**
WA2IMS	**Steve Weinerman**
KB2UNZ	**Ed Donnelly**
KD2HPQ	**Angelo DePalma**
K2BJC	**Brent Connelly**
KC2CSV	**Mike Srsich**
KB2VZI	**Hugo Kleinhans**

SEE YOU AT THE NEXT MEETING!