The Compass!

Official Newsletter of the Great South Bay Amateur Radio Club, INC.

November 2017 Volume 45 #11

2017 Hope For the Warriors Run Saturday November 18th!!!

Next General Membership Meeting: Thurs., Nov. 30, 8 PM
Election for Club Officers!
Be sure to come down and vote!

GSBARC Free Ham Radio License Classes!
General License Class begins
Tuesday, Nov. 21st at 7 p.m.

ARRL Introduces New Gridsquare Challenge Contest

On the cover: The Great South Bay Amateur Radio Club held its second one day Technician License Class. The one-day, 9 hour class is a misnomer because the students get their license manuals at least a month before the class and have to read and study it, along with taking the practice exams before the class. The one day class ties everything together and answers questions that may arise.

Long Island's Friendliest Amateur Radio Club!

President's Message

–––.– ... – –––.– ... – –––.– ... – –... .

.–– ..––– .... –.–. –... –...– .–– ..––– ––. ... –...

It's November and fall has started. Now I go to work in the dark and come home in the dark.

So what's going on? First I want to thank all the members and nonmembers who have stepped up to help with the Hope for the Warriors run. It is a fun event and gets done quickly so thank you again. See you on the 18th!

Elections for club officers are being held this month. Our meeting will be on the 30th and we hope to have a good turnout.

Our "Winter Night Out" will be held on January 20th and it's a different venue. This one is easier for everyone to get into – it has no stairs! The cost is $50 per person and includes everything. We hope to have a large turnout. We always have a great time.

As you know, we have been talking a lot about how important digital communications are but we still only have a very small handful up on digital. Don't wait till the emergency happens.

Pay attention too to keeping your antennas and feed lines in good shape. It's a lot of work but winter is coming so if you have not yet taken care of that, what are you waiting for?

Thanks to everyone who came out to help with the Suffolk County Marathon. You all did a great job!

You might have heard by now that we had to put new tires on the club trailer. We purchased that trailer seven years ago. It was time: dry rot and leaks took their toll. We will be doing some more work to the club trailer so that it will be like a "Go Kit" – ready for anything! We will be adding two Icom IC7100 radios for digital emergency communications

Continued on page 3

Another operating event for 2018?

By Bob K2TV

Year-long operating events have been very popular since the ARRL Centennial. We had the W1AW/ portable operation, the National Parks on the Air and this year the Parks on the Air (POTA).

All these year-long events have proved to be a lot of fun for many amateurs. Our bands are alive with activity.

What to do for 2018? How can we come up with another year-long event that would be interesting and challenging?

Well leave it to the "brain trust" at the ARRL to come up with something. The ARRL International Grid Chase! Building on the success of the National Parks on the Air event, the object of this event is to work as many Maidenhead Grid Squares as possible.

Most weak signal VHF-UHF operators are familiar

with grid squares as they are necessary for the VHF-UHF Century Club Award which is similar to DXCC except they collect a minimum of 100 grid squares on the VHF

Continued on page 3

President's Message... cont'd from page 2

and also a laser printer.

We send our best wishes to Lenny W2FX who is recovering after having been in a car accident.

If you did not hear yet K2RYD Salli had her cast cut off and she is almost ready to start running around again and riding her beloved horse. But no worries -- she has been rocking the HF bands, chasing parks and working on DXCC (but no QSOS are confirmed as of yet).

There's another success to report: We had another one-day Tech Class and this time we had five kids from Kellenberg High School pass. Bob K2TV got very excited when they said they want to learn CW, how about that?

I hope everyone has a great Thanksgiving and I hope to see you all at the general meeting on November 30th

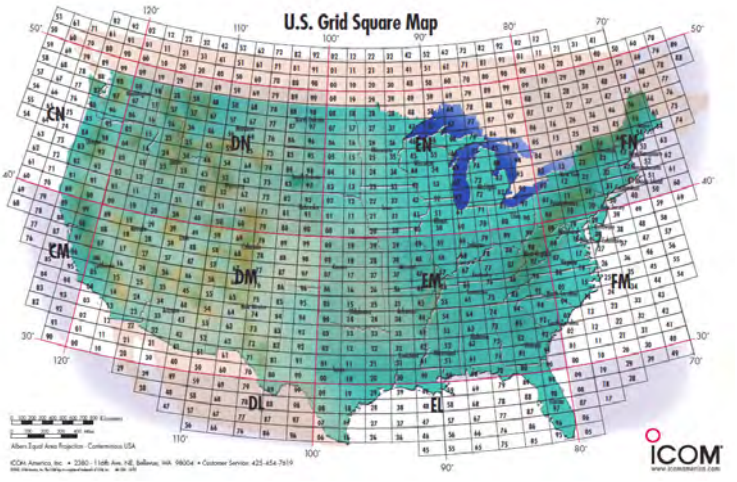
73, John Melfi, W2HCB

Another Operating Event... cont'd from page 2

and UHF bands. This time around, we can use any and all bands or modes with the exception of the channelized 60-meter band. Even contest QSOs will count toward your total. You must be registered on Log Book of The World (LOTW) to participate. Starting Jan. 1, 2018 at 0000Z, all contacts you make and log including contests, rag chewing and grid square chasing should be uploaded to LOTW every month. All contacts with other stations that have an account on LOTW and upload their logs will count even if they are not actively participating. LOTW will tally up the number of grid squares that you work each month and add it to the leader board. The tally will be done on a monthly basis. New grid squares worked will also count for other awards such as VUCC for VHF-UHF contacts.

If you don't know your grid square, look it up on QRZ.COM. If this sounds like fun -- and it is -- then go to the ARRL website: http://www.arrl.org/news/announcing-the-arrl-international-grid-chase for more information.

Remember you don't have to be an ARRL member to use the Log Book of The World. Log on to LOTW at http://www.arrl.org/LOTW and see for yourself.



Field Day 2017 Update

The results for this year's Field Day are in and GSBARC was number one in the 6F category.

Number 1 in NLI and in the top 10 overall at number 9.

Great job everyone!

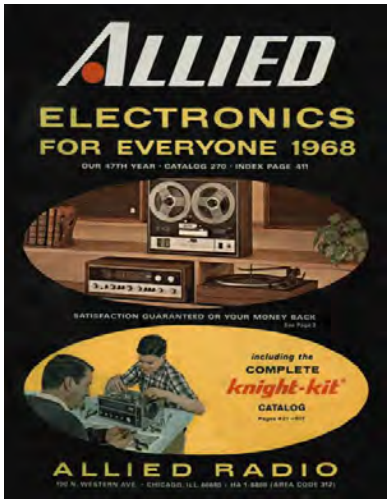
Catalogs are about possibilities

By Dan Romanchik, KB6NU

When I was a kid, I used to regularly get catalogs, such as the Allied Radio and Lafayette Radio catalogs shown below, and pore over them for hours. Even if I couldn't afford to buy the latest Knight-Kit or Lafayette shortwave radio, I could imagine what it would be like. These catalogs were chock full of possibilities.

I spent many hours poring over the Allied and Lafayette catalogs as a kid. These two are from 1968, when I was 13 years old.

So, you can imagine how I felt when, last Thursday, I found both the Autumn/Winter 2017 DX Engineering catalog and the 2018-2019 Newark Electronics/element14 catalog in my mailbox.



DX Engineering has really taken the amateur radio world by storm over the last ten years or so. I probably don't have to tell you about that. If you're an active amateur radio operator, I'm sure that you have heard about—and probably ordered from—DX Engineering.

I think that DX Engineering did a very smart thing by investing the money in a print catalog. There's something about browsing a print catalog that is just more satisfying than browsing online.

DX Engineering has just about everything you need to have fun with amateur radio. The one glaring omission? They still don't carry my study guides!

The Newark/element14 2018-2019 catalog is a completely different beast. Amateur radio operators are only a small part of Newark/element14's market, but one nonetheless. They have, for example, attended the Dayton Hamvention for many years.

As such, the catalog is not a "ham radio" catalog, but if you build stuff at all you'll find something of interest in its 1,799 pages. It includes nearly any kind of electronic part that you might need.

The section that might you might want to start with is the "makerspace" section. In this section, you'll find Raspberry Pis, BeagleBones, and even micro:bits. They really have everything, though, including passive and active components, connectors, cable, and enclosures.

Like I say, these catalogs are all about possibilities. You can search each company's website and find the parts they carry quickly and easily, but that experience is just not the same as browsing a print catalog and daydreaming about what you might find there.

So, get your own copies—they're free—and page through them. I'd be surprised if you didn't run across something that you didn't know about before, and it gave you some ideas about your next amateur radio project.

Dan Romanchik, KB6NU, is the author of the "No Nonsense" amateur radio license study guides and blogs about amateur radio at KB6NU.Com. When he's not picking nits about the name of our hobby, he teaches ham radio classes and operates CW on the HF bands. You can email him at ***cwgeek@kb6nu.com***.

Inside the Squirrel Cage

by Caryn, KD2GUT

While my HF rig has been collecting QSOs, my HT has been collecting dust.

This is a confession of neglect I'm not especially proud of but yes, those QSL cards from my recent DX contacts have got me feeling pretty worldly. The humble but well-traveled 100 watts my station has been putting out have made my handheld's 5 watts seem like an afterthought. I'm ashamed to say I can't even remember the last time the battery was fully charged.

I love that my RF signal has been such a globe-trotter lately, in spite of the on-again, off-again band conditions. Is this how Alexander the Great felt when he set out (admittedly, sans radio) to conquer the world? Today it's a card from the land of ZL call signs.....tomorrow....the globe!

And then another call comes in – this one by email, not by radio - the Hope for the Warriors needs volunteers. Suddenly, I'm remembering our amateur radio roots. Without public service, there's no glory of DX, there are no special event stations and no chance for any of us to chat with the astronauts. Without community giveback, we're just takers - and that's not the ham radio spirit.

The HT is coming back to life on the weekend of Saturday, Nov. 18, it's going to make me proud as it does its part on behalf of all those veterans who once did their part for our nation. In fact, 5 watts is never going to feel so supercharged as on that day.

No, it's not DXing - it's just one very intensely local but very important event - and yet it is going to make all the difference in the world.

In the Classroom with AB2ZI

Just how much math DO you need?

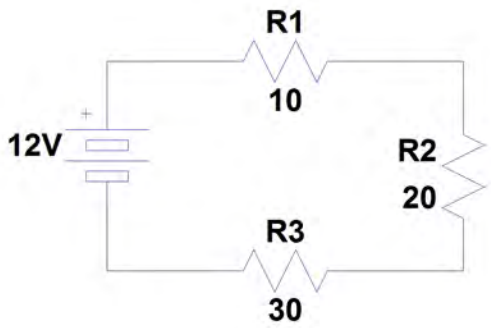
Kevin AB2ZI

I want to explore some of the thought processes that go into making calculations. These examples will be mainly for analyzing test questions. I am doing this because in many cases when we learn to do circuit analysis from the text books, we learn a series of calculations that may not always all need to be performed depending on the type of circuit and what information we are looking for.

Hopefully if you are reading this you at a minimum have a basic working understanding of Ohm's law and the basic power formulas introduced at the Technician level. You should also know how to rearrange those simple formulas to find any of the missing information depending on what is given to you in the problem.

For reference, Ohm's law is $E = I \times R$ and the power formulas are $P = E \times I$, $P = I^2 \times R$ and $P = E^2 / R$.

You should also know that current is the same through all components in series and that voltage is the same across parallel paths. For example, if you are given a series circuit with 3 resistors with values of 10, 20 and 30 Ohms respectively, and are told that the applied voltage is 12



Continued on page 6...

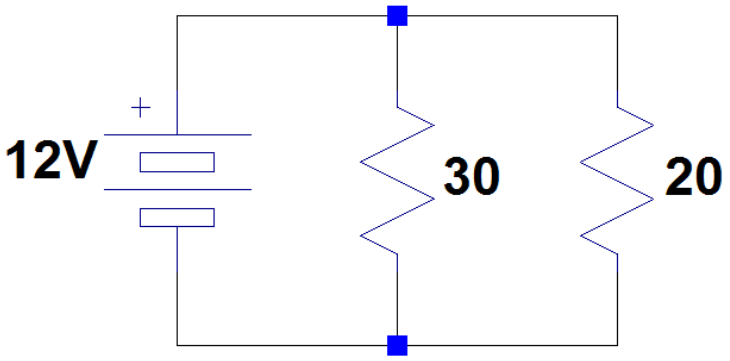
In the Classroom... cont'd from page 5

volts dc and are asked to find the total current you would rearrange Ohm's law to solve for current (I) like this: I = E / R.

Since the calculation requires you to divide the voltage by the total resistance you need to add the resistors together first (resistors in series add): 10 + 20 + 30 = 60 Ohms total. Doing the math we find that total circuit current is 12 vdc / 60 Ohms = 0.2 amperes, or 200 milliamps.

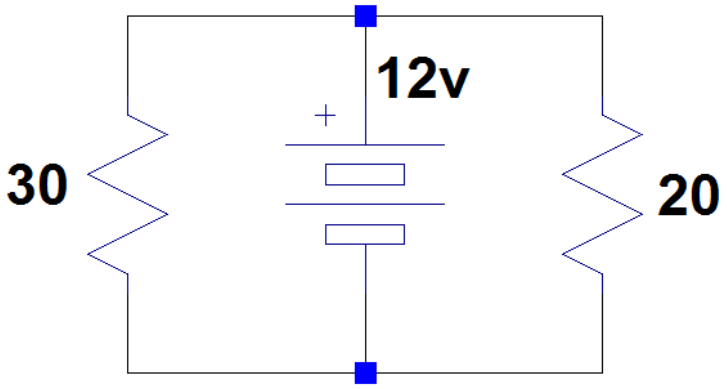
If that is all the problem was asking for you could stop here. However, if instead you were given the same information and asked to find the voltage drop across the 20 Ohm resistor you would need to go one step further and use E = I x R with "I" being the total circuit current we just calculated and the "R" in this case being the 20 Ohm resistor. Here we find that E = 0.2 x 20 = 4 volts. If you also calculate the other 2 resistor voltage drops you would find 0.2 x 10 = 2 volts for the 10 Ohm resistor and 0.2 x 30 = 6 volts across the 30 Ohms resistor. The 3 voltage drops should add up to the total applied voltage, 12 volts, and they do. 2v + 4v + 6v = 12 volts.

What information you are looking for depends on what you are given and on what you need to perform the calculation. As another example using the same circuit, if you were only told the value of the resistors and total current and were asked how much power was being dissipated by the 30 Ohms resistor—something you would need to know if you were building the circuit since too small a power handling capacity would cause the resistor to burn up—you would only need to use the power formula $P = I^2 \times R$: $P = (0.2)^2 \times 30 = 0.4 \times 30 = 1.2$ watts.



Power calculations are especially easy when the circuit is a simple parallel configuration like this:

It's important to understand that both of these circuits are identical. Wires represented by lines in a schematic or wiring diagram show the physical connections. The voltage across both resistors is 12 volts. I added the diagram on the right to illustrate why that is. The top of both resistors



are connected to the positive side of the battery, and the opposite ends are both connected to the negative side. Therefore there is 12 volts *across* each resistor. Each resistor will then have its own current flow. In the series circuit the voltage drops across the resistors added together while in a parallel circuit it is the currents in the individual branches that add.

This means you can calculate the total resistance either by using a parallel resistance formula like (R1xR2)/(R1+R2) or you can calculate the individual current in each branch, add them together for total circuit current, then use Ohm's law's R = E / I transposition to find it. Again, it all depends on what you need to find and what information is given to you.

These calculations are also made easy because they involve strictly resistors and so any power calculations are pretty straight forward. Since the individual currents are easy to calculate when given the voltage and resistance values, we can fine current through the 30 Ohm resistor as: I = E / R = 12 / 30 = 0.4 amperes. Current through the 20 Ohm resistor is 12 / 20 = 0.6 amperes, for a grand total of 1 ampere of current flow. Total circuit resistance then is R = E / I = 12 / 1 = 12 Ohms. We can double check with the product over sum equation: RTotal = (30 x 20) / (30 + 20) = 600/50 = 12 Ohms. If you want to go nuts you can also use the reciprocal of reciprocals equation as well but that would just be overkill.

Total power consumption (again, ONLY resistors here!) can then be calculated in several ways. P = E x I = 12 x 1 = 12 watts. The individual resistors consume 12V x 0.4 A (the current through the 30 Ohms resistor) = 4.8 watts and for the 20 Ohms resistor we get 12V x 0.6A = 7.2 watts. 7.2 plus 4.8 = 12 watts! You could also have calculated the power consumption using E^2 / R for each resistor as well. Try it yourself! Divide the voltage squared, here that's 12 x 12 = 144, by the individual resistance values and add them up. 144 / 30 = 4.8 watts, and 144 / 20 = 7.2 watts. Again we have arrived at total power consumption equal to 12 watts. See you all in class...

(above) Deer Park Fire Department Open House Event

Uncle Sam visits the GSBARC operators at the Northport Veterans Administration Harvest Festival

YAHOO!

GSBARC has a New Yahoo Group and the old one has been deleted

If you are a member in good standing and want to join the club's new Yahoo group, go to:

https://groups.yahoo.com/neo/groups/gsb-arc/info

and click on "Join Group" Be sure to add a note when filling out your information with your call sign so we know who you are!

Club Apparel

Want a shirt, jacket, hat, sweatshirt or t-shirt with a Great South Bay club logo? We now use *Mr. Shirt*, located at 80 East Montauk Hwy in Lindenhurst (***www.mrshirt.com***). Now you can get color matched backgrounds on your logo too. Check them out...

ARES/RACES Information

Div. 1—Town of Babylon ARES/RACES
Net: 146.685/R, Mondays 8:15 PM
EC/RO: John Melfi, W2HCB, (631) 669-6321
Div. 2—Town of Huntington ARES/RACES
Net: 147.210 MHz +600/ PL 136.5, Mondays 7:00 PM
EC/RO Steven W. Hines, N2PQJ,
http://www.huntingtonnyaresraces.org/
Div. 3—Town of Islip ARES/RACES
Mondays 8:30 PM
EC/RO: John J Blowsky, KB2SCS, 631-467-2410
Div. 4—Town of Smithtown ARES/RACES
Net: 145.430 MHz, PL136.5, Mondays 7:30 PM
EC/RO: Rich Johnston, KC2TON, 631-872-4039
Div. 5—Town of Brookhaven ARES/RACES
EC/RO: Ted Debowy, AC2IR, 631-751-6576
Div. 6—Riverhead ARES/RACES
EC/RO: Steve Casko, W2SFC, 917-701-3919
Div. 7—Southampton ARES/RACES
EC/RO: Dennis O'Rourke, KB2ZWW, 631-728-5424
Div. 8—Southold ARES/RACES
EC: Don Fisher, N2QHV, 631-765-2757
RO: Charles Burnham, K2GLP, 516-779-4983
Div. 9—East Hampton ARES/RACES
EC/RO: Nat Raynor, N2NEI, 631-324-3738
Div. 10—Shelter Island ARES/RACES
EC/RO: Neal Raymond, N2QZA, 631-749-9330

Suffolk County ARES/RACES Net:
Mondays 2100 Local—145.330/R (136.5PL)
Alternate Frequency—146.820 (136.5 PL)

New York State RACES Net (HF)
Sundays 0900 Local, 3993.5 KHz LSB

2017 VE Session Dates

- November 25th
- December 23rd

2018 VE Dates

- January 27
- February 24th
- March 24th
- April 28th
- May 26th
- June 16th
- July 28th
- August 25th
- September 22nd
- October 27th
- November 24th
- December 22nd

All sessions are at the Town of Babylon EOC at 10 a.m., located in the basement in the rear of town hall. Please bring photo ID, a copy and your original amateur radio license (if you have one), and any CSCE's you may have. Non programmable calculators are allowed. The exam fee is $15 payable by cash or a check made out to "ARRL VEC".

Visit FCC Universal Licensing System site to register for an FRN number to use on the paperwork.

The GSBARC Repeater List

146.685 - shift, 110.9 PL Enc/Dec
223.860 - shift, 110.9 PL Enc
440.850 + shift, 110.9 PL Enc/Dec
440.250 + shift, DSTAR
444.2375 + shift, DSTAR
445.700 + shift, 114.8 PL Enc/Dec
446.775 - shift, 110.9 PL Enc
*927.3125 - shift, D606

****Affiliated repeater, not owned by club.***

Club Name Badges

Club name badges are available from ***The Sign Man (www.thesignman.com)*** of Baton Rouge, LA.

The badges which are 1-3/4 in. x 3 in. If you visit The Sign Man's webpage you can order the badges by using a drop down selection on the orders page and clicking on "Great South Bay ARC—NY"

GSBARC Free License Class Schedule:

General: November 21 thru January 30, 2018

Note: All Classes Tuesday evenings from 7 to 9:30 PM. Class text book is the current ARRL License Manual for that level. For more info email Kevin, AB2ZI at kmorgan6@optonline.net