



The Compass!

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

February 2018

Volume 46

#2



Next General Membership Meeting: Thurs., Feb. 22nd, 8 PM

**GSBARC Free Ham Radio License Classes!
Amateur Extra License Class Begins Feb. 6th, Tuesdays from 7 - 9:30 p.m.**



Long Island's Friendliest Amateur Radio Club!

President's Message



I hope you enjoyed our annual Winter Night Out. Congratulations to all the prize winners. A total of 37 door prizes were given away, all of them donated -- six by Quick Silver radio and two from DX Engineering. The rest of the prizes were donated by Ed KD2ADC and Jean and my wonderful wife Michelle and me. We hope everyone who won puts their prize to good use.

At our general meeting we had a discussion of how to raise some much-needed funds for our repeaters and club equipment and such. Every year we have expenses that keep our club running. There are also costs for insurance for club equipment and liability as well as the internet service we use when at the EOC. As you can see we also have been doing more work on the club trailer too. Our dues help cover much of the yearly costs. But membership goes up and down over the years – we lose members who move out of the area and other who become Silent Keys.

Well, we've decided to hold another fundraiser. After several debates we all decided that the 2018 raffle prizes will be a Yaesu FT891HF all-mode mobile transceiver for 1st prize and an ICOM 5100A UHF/VHF/DSTAR FM XCVR for second prize. The winner may choose the cash value in lieu of prize. Tickets will be \$5 each or a book of five for \$20. The drawing will be held June 23rd 2018 at our Field Day site at Babylon Town Hall Park.

Speaking of Field Day, I hope you are all excited again: Once again we will have six stations plus a GOTA station as well as the VHF station and 6 meter stations. I know we have a lot of new operators. We would love to see you all take part in Field Day this year. If you did not know, we have a great set-up and always do very well in the standings. The reason we always do well is because of you, our members.

I would like to thank Howard WB2UZE and Rich KD2UPS for starting up the Long Island CW club and

training. I have heard a lot of very positive feedback about the great job that they are doing.

We took part in Winter Field Day on the 27th and 28th of January. Thank you to Lou NO2C, Salli K2RYD and everyone else who helped with set-up and operations. I would like to thank Mike KC2SYF for doing the late shift and John W2JGH for getting things started early on the 28th. John W2JGH and I also cleaned up the inner room which was out of control. We still have some more to do to it. I would like to thank Mike KC2OLA for donating the newest addition to the inner room: a TV with multiple inputs. We will be adding the MARS station to the inner room as well as two HF feedlines. The IC-7100 in the inner room is set up for digital VHF/UHF and HF when needed. Ed KD2ADC is looking into why the packet station stopped working.



The inner room is to be kept clean. Bill WB2QGZ and Ed KD2ADC along with Pres W2PW have spent hundreds of hours getting the new 2 meter repeater all set. Bob W2YMM located what we needed for the remote receive site to help the south side along the water have portable coverage. Yes, if you live by the water and cannot use your HT if all goes well that shouldn't be a problem in the near future.

Once again, as you can see we have a lot going on. But wait – there is more! If you have the itch to go to Hamvention in May talk with Mike KC2SYF and Lou NO2C. I know they are thinking of going. Congratulations to Kevin AB2ZI he has been recognized for his achievement of his 100 plus hours of sharing his knowledge and expertise to amateur radio community. Once again this shows how committed our members are to this great club.

Great South Bay Amateur Radio Club does a tremendous amount of activities from antenna work parties to special event stations, public service and emergency communications. We strive on making sure you the members get the most out of our club. If you need help

with anything related to amateur radio -- no problem, there is always an Elmer around. Our open house days and nights are a great place to get advice or operate the club's HF station. A note to all our members: We have noticed that some email addresses have bounced. If you know someone who is not getting our newsletter, please let us know. If you changed your email address, please let us know so we can update our database.

To all our members in emergency communications I can't stress enough the need for backup power and digital modes! Please make sure that you can be part of the whole package when needed. As weather events that cause major damage can knock out power you should be prepared to be on the air. Much of our area is subject to flooding. Never ever put yourself in harm's way. Thank you to all of you who have always been there when needed. Going forward we will need committed radio operators to be ready. Be ready for what?

Well, we can be used for all types of events such as point-to-point communications for shelters or logistical areas. You might have seen our portable "Go Boxes." We will be doing a show-and-tell on those boxes so you all will know what is inside and what the capabilities of the equipment are and how to set it up. We still have a lot of work to do but I know we will get it all done. To all our contesters out there -- go go go go!! -- I hope you all have a great time calling CQ, working pileups and running up those scores.

To all our DX chasers, I know it's been a little rough getting some of those rare call signs but keep on plugging away. I know someone who needs a certain country to complete working the whole world. I don't think that will happen, sorry to say, as that country with the prefix P5 most likely won't have a DXpedition visit them in the near future. There have been reports of a pirate station with the P5 prefix -- but pirates don't count.

To all who check into HF nets daily, I commend you. It can be rough with the conditions and other factors, including the other guy's lousy antenna. I know been there a few times myself trying to copy that weak station thinking it was conditions only to find out the other station's antenna was not working well at all.

Groundhogs!! Well let's see now -- Punxsutawney Phil predicted six more weeks of winter. That little wise guy has predicted more winter 200 times and an early spring maybe 16 times, they say. But here's the funny part: There were eight groundhogs and they all had different reports. So who do we believe? Well, I don't rely on what the ground hog says. It's Mother Nature and she's going to do whatever she wants. To those of you who work outside like me, you know the routine.

Enjoy the warmth of your shack and get on the air have some fun. Build something! I know John K2IZ and a few

others have been building all kinds of stuff to play with. Clean up your shack -- you all know what it looks like after a contest or nets. Trust me I need to do it again. All I know is I get it clean then boom, it's a mess again! Whatever you are doing, have fun doing it.

We welcome all your ideas so if you have one let us know. As I have said time and time again, we are a team and there is no "I" in the word team.

Stay warm and stay safe. The warmer weather will be here sometime.

73. John Melfi, W27CB

GSBARC 2018 Field Day Raffle

Tickets now available for our newest club fund raising raffle. Help keep our dues at their current level and have a chance at 2 great prizes.

*First prize is a Yaesu FT-891 HF/6M mobile transceiver**



*Second prize is an ICOM ID-5100A VHF/UHF/DSTAR mobile FM transceiver**



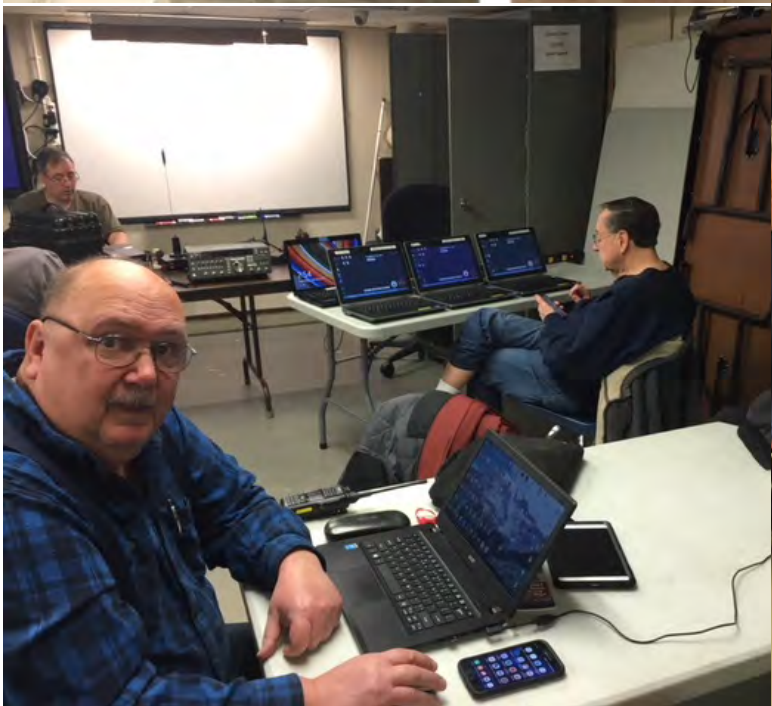
Donations are \$5 per ticket or a book of 5 tickets for \$20 — the best deal!

Drawing to be held during Field Day dinner barbecue on Saturday June 23rd.

**Winners need not be present to win and may choose the cash value of the prize in lieu of the prize itself.*

Winter Field Day at the EOC





In the Classroom with AB2ZI

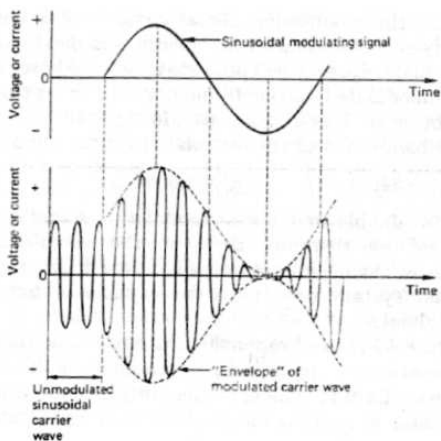
Making Sense of Fourier

By Kevin, AB2ZI

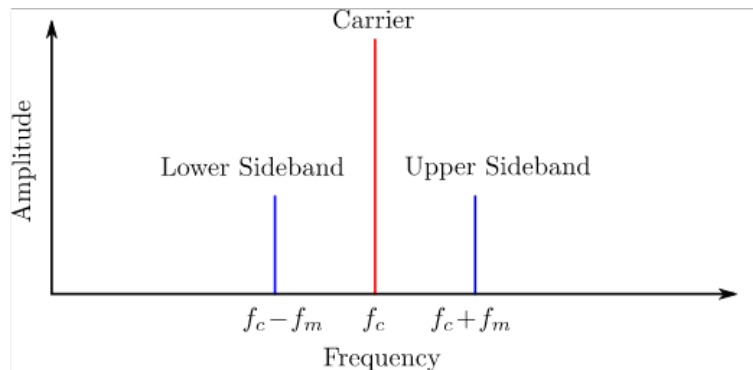


One of the more confusing things many of us face when learning about radio waves and modulation is trying to visualize what those signals look like when they are transmitted.

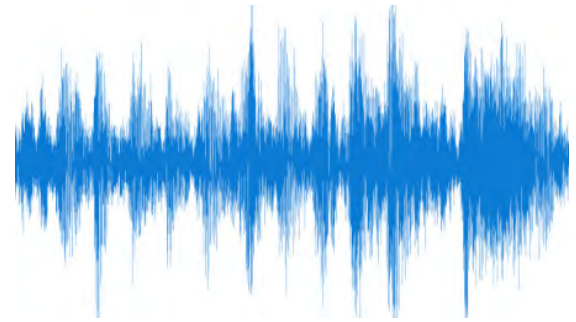
This is especially true when we see the illustration of a carrier being modulated by an audio tone and its resulting envelope is illustrated as a sine wave superimposed on the top and bottom of the carrier:



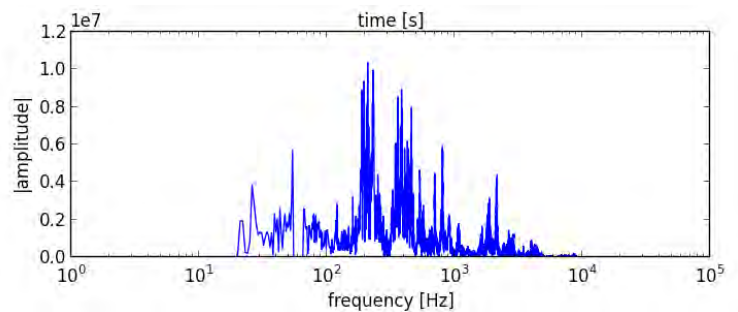
We are told that the top part of the envelope is the upper side band and the bottom half is the lower side band. Then we are shown the carrier and side bands in the frequency domain like this:



The concept that is hard for many to grasp is that a complex waveform, such as speech, is made up of many individual sine waves of different frequency and amplitude all of which combine to form those complex waveforms.



The human voice in the frequency domain looks like this:



It can be difficult for us to picture these discrete frequencies in our mind since we are not accustomed to thinking of our voices as originating from a musical device—our voice box—but we can picture it quite easily if we use something analogous that we can picture, for example a piano. We are all familiar with the piano, at least in that we know there are a bunch of white and black keys that strike strings with hammers to produce notes. Playing more than 1 note at a time (typically at least 3) we can form musical chords which sound fuller when played together than the individual notes played separately. This is what is known as a Fourier series. When we see a spectrum analyzer output of a waveform like a human voice (or musical instrument, digital transmission, etc.) we are seeing a graphical representation of those individual sine waves and their magnitudes—how much or how little—they contribute. More high frequency contributors will have a higher pitched sound overall and vice versa.

Fourier analysis is one of the topics we cover in the Amateur Extra class. If you are interested in learning about Fourier come on down or check out this play list on the education [YouTube channel here](#).

Inside the Squirrel Cage

by Caryn, KD2GUT



IF seems to have been hibernating lately, not unlike the celebrated Pennsylvania groundhog. The bands' Punxsutawney Phil imitation extends even as far as my most reliable winter go-to band, 80 meters. I usually park myself there whenever the QRN elsewhere makes me think the very universe itself is in a deep sleep – and that loud snoring simply cranks up the noise floor to unbearable levels.

Prognosticating rodents can try to herald an early spring or an extended winter, but they can't tell us very much about solar weather. For one thing, they're underground and at this time of the year, they don't know day from night. Plus, they're terrestrial beings and don't care much about the sun. Fortunately, we have scientists instead of rodents to track those patterns for us.

It's unfortunate, however, that even the special event station operated by the Punxsutawney Area Amateur Radio Club, celebrating Groundhog Day, didn't get some special dispensation. Apparently 20 and 40 meters were so under the shadow of bad conditions that only 9 successful contacts were made on Saturday, Feb. 3, the day after Groundhog Day. Having a celebrity right there in town apparently doesn't count when it comes to granting waivers from bad propagation.

If Phil can be startled from sleep, can't we find a way to rouse 20, 40, 80 and the other bands from noisy slumber? I don't mean in six weeks. I mean now. Otherwise this winter of our discontent is likely to continue well past spring. ☺

SharkRF OPENSPOT Hotspot For Digital Modes

By Bob Myers K2TV



I have an Icom ID-31A that is used mostly around the shack for accessing the W2TOB UHF D-STAR repeater. Now the W2TOB repeater stays on Reflector 20A as do most of the other UHF repeaters in the New York metropolitan area. Wanting the ability to move to different D-STAR reflectors, I looked around at the available "hot spot" type devices to allow me to access other reflectors from my hand-held radio.

After checking the various catalogs and literature I came upon the SharkRF "openspot." It is a standalone unit that has everything you need to access any RF D-STAR node when you are in the immediate



area of your house. Actually the RF output of the unit is adjustable from 1 mW to 20 mW of power giving you a range of several hundred feet. Everything is built into the tiny unit and it connects to your internet router and power is supplied by separate power supply that comes with the unit. The only thing that is not supplied is a Wi-Fi connection but with the addition of an inexpensive TP-Link wireless N Nano router, that problem is solved.

The unit works out of the box with no other hardware needed. Now one of the great features of this unit is that it will also do DMR, System Fusion, and others. This unit is manufactured in Estonia and is available from several distributors in the U.S. Another great feature is that they are constantly upgrading the firmware, adding new features and modes. The website is <http://www.sharkrf.com> and an excellent article about the unit is on page 54 of October 2017 QST. ☺

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 Casco, 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 (136.5 PL)

Alternate Frequency—146.820 (136.5 PL)

New York State

RACES Net (HF)

Sundays 0900 Local, 3993.5 KHz LSB

2018 VE Session Dates

- 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](http://www.fcc.gov) to register for an FRN number to use on the paperwork.

The GSBARC Repeater List

- 146.685 W2GSB - shift 110.9 Hz Enc/Dec
- 223.860 W2GSB - shift 110.9 Hz Enc/Dec w/ ECHOLINK
- 223.860 - shift 156.7 Hz Enc/Dec Local use
- 440.850 W2GSB + shift 110.9 Hz Enc/Dec
- 446.775 KB2UR - shift 110.9 Hz Enc/Dec
- 927.3125 W2YMM - shift D606 Enc/Dec
- 440.250 W2TOB/B + shift DSTAR REF020A Babylon
- 445.725 WD2NY/B - shift DSTAR REF020A Selden

Grow Giant Vegetables with **MAGIC MANURE**, manufactured daily on the farm. 40-50lb bags free for the taking, already bagged. Pick-up or Delivery to EOC available. References available upon request. Contact Salli at:

k2ryd@arrl.net.



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GSBARC Free License Class Schedule:

Amateur Extra Classes begin Tuesday, February 6th at 7 p.m.

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