

The Compass!

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

Oct-Nov-Dec 2020

Volume 48

#10, 11 & 12

**ALL MEETINGS, OPEN HOUSES, CLASSES AND
VE SESSIONS REMAIN CANCELLED DUE TO THE
CORONAVIRUS**

**PLEASE FOLLOW CDC, FEDERAL AND STATE GUIDELINES FOR SOCIAL DISTANCING
AND DISINFECTING**

WATCH YOUR EMAIL FOR ANY CHANGES AND/OR UPDATES

**STAY SAFE AND KEEP YOUR FAMILIES AND FRIENDS SAFE—WE WILL RETURN WHEN
THINGS ARE BACK TO NORMAL**

Inside this issue:

- **Remote Station Update & Photos**
- **Working Direct on Repeater Frequencies**
- **From the Archives: Dec 1977 Compass Front Page**



Long Island's Friendliest Amateur Radio Club!



President's Message



Well, as you know, times are different for sure with the COVID-19 pandemic still here. It has been rough for me with my job as wearing a mask is tough when I am working on heavy equipment. It is to the point now that I had a sign made up at work: “Stay away from this operating engineer or your machine is not getting repaired.” Along with one that says “he will smack with a 6-foot pry bar if you approach him.”

Our Zoom meetings and open houses have been a great success. Here is the link for our general meetings <https://us02web.zoom.us/j/4992515313?pwd=VjBTTVVkQi9aZmNRemN5ZVpmRDQ5QT09>. We begin to gather at 7:45 p.m. then officially start at 8 p.m.

Being president of this great club has been a pleasure and I would like to thank all the executive board members, directors, chair people and you the members. Great South Bay Amateur Radio Club is once again making improvements to our club station. Right now, we have two HF stations and soon there will be three. It will be a remote station for all to try from the EOC. The big rebar cage and concrete base were installed (see the separate write-up and pictures).

I hope that you all have been busy on the HF bands as there really aren't many other safe things to do. Since the weather is starting to change, I think we should all be checking our antenna systems. I know I have to. I had a problem with my OFC and I thought I fixed it but it is horrible on 80 meters and kind of deaf also. So someone heard me on a Sunday morning net and guess what someone sent me? A Buckmaster OFC so once the leaves fall I am getting outside no matter how cold it is and putting it up to see the difference. I will let you all know how it works out.

Fall is here for sure so let's all be cautious while driving in the late afternoon. It is getting darker earlier so please turn on your headlights and watch out for kids and also the dummies who don't watch where they are walking, running, and biking. Trust me: As I drive hundreds of miles a week, I see a lot of things that could have been avoided. Stopping my service truck can be a challenge at times. Everyone must get in front of the big red truck; then they slow down. Tons of fun but we have a rule: Lift off the pedal and let them go.

Pretty soon we will be able to open the EOC for classes and testing. We will be doing some work getting the HDX 572 tower ready as well as the antenna and testing out a donated Flex radio for the remote station. Once that is all done, we will do the install of the remote station. Plus, we have work to do in the EOC. So, we hope we get a small work crew together to help us out with some of the projects.

On Oct. 14th we got a call from the Town of Babylon. We had to take down our HF antennas. Why? They have a contractor working on the roof installing the new AC system. What does mean for us? We have to see about moving some of our other antennas once all the equipment is installed. Once they are done, we can do what we have to do. Then later in 2021 they are going to install AC in the EOC. Before they do that, we have to get down there and move all our stuff out of the EOC. The contractor must remove the ceiling. They are doing a demo of the ceiling. We will need a good size team to do what we need to do. All our cables in the ceilings have to be secured together so they are as one. Is it a lot of work? Yes. So, with the room empty I am campaigning to have the room painted, including the floor.

The Town of Babylon will contact me as to when we need to empty out the room. They even offered up a secure area to store our expensive equipment. I am urging all RACES members to be active on the RACES net for updates on our operating procedures while the EOC is dark. Will it be a big job for us? Yes, it will. So please if you can help in any way that would be great. I will be communicating with the town to get an exact start date for the contractor. The best part is when it is all done the EOC will be like new – with air conditioning.

So what's coming up for club activities? We love to do Winter Field Day which is on Jan. 30th and 31st. To learn more about it, click here <https://www.winterfieldday.com/> We are not sure what's going to happen with the rules for Winter Field Day with the pandemic still upon us.

A reminder: when competing in contests always make sure you fill out the club affiliation with Great South Bay ARC.

If you have noticed, issues of The Compass have been coming out every two or three months. If you have an

interesting thing you would like to have in our newsletter please email it first to one of our Compass editors (there is a list on our club website) for editing and then let Kevin kmorgan6@optonline.net know to expect it. It must be ready for print so he doesn't have to edit it.

A reminder for RACES members: Please check in to the New York State RACES net on Sunday mornings on 3.993.50. The net starts at 9 a.m. local time. Please listen to net control and follow all directions. This is a good test of HF conditions and good practice on copying messages on HF. The digital drill message comes out on 3.583.50 USB a few minutes after the phone portion of the net.

Here is a link to the standard operating procedure you can download and read

<http://www.dhSES.ny.gov/oiec/races/documents/races-operating-procedure.pdf>

If you would like to get involved in RACES, here is what you need to get started. The training is free!

Complete ICS 100,200,700 and 800

<https://training.fema.gov/is/courseoverview.aspx?code=IS-100.c>

<https://training.fema.gov/is/courseoverview.aspx?code=IS-200.c>

<https://training.fema.gov/is/courseoverview.aspx?code=IS-700.b>

<https://training.fema.gov/is/courseoverview.aspx?code=IS-800.d>

Once you have completed the above training courses please let me know and send me an email @ w2hcb@arrl.net with the completed certificate or transcript.

Did I mention the training is all free? Yes, FREE! We all like free stuff so why not free training?

I know this year has been a very weird one for us at GSBARC. We all missed the fun of the Air Power Museum, Field Day and the International Lighthouse/Lightship Weekend at the Fire Island Lighthouse. The Suffolk County Marathon will be virtual as will the Hope for the Warriors run. Kevin AB2ZI states that classes will resume at the EOC in January. I am sure Kevin will set a capacity limit for the classes and CDC protocols will be in place.

I have no idea what 2021 will look and I don't think any of our national leaders do either. As for us, we will have a ton to do with the work going on at the EOC. I hope you all been staying safe and healthy. I know the mask-wearing can get to you but please if you go out, wear a mask. We want our members to be able to all see each other in the future.

Thank goodness for amateur radio. I know many of you have been playing radio and that is why this hobby is a great thing. Lots of things to do: antenna projects, operating DX, contesting, digital, CW, SSB and HF nets and local nets. How many of you got time to clean your shack? I had some time, and I found the actual work bench under all the junk that was on top. Now that the bench is clean got to play with my IC9700 and the SAT Tracker built by AC2MI. Man what great device; once it's set up, you will have a ball. You can access it with a cellphone, tablet or computer. The device needs no internet when you're out at the event. It controls the radio and rotator so you can focus on making the contact. The only time you need the internet is for firmware upgrades and to update the TLEs. if you're interested in this for your satellite setup please visit this website: <http://www.igatemi.com/sat> .

Nominations for our club officers were done via our October general meeting on Zoom. If you missed it here is the link again for our general meetings:

<https://us02web.zoom.us/j/4992515313?pwd=VjBTTVUkQi9aZmNRemN5ZVpmRDQ5QT09>

Once again, I was re-elected after running unopposed for president. However, we will have a change in vice president. Bob K2TV opted not to run for re-election and he nominated Mike KC2SYF who became vice president after running unopposed. Kevin AB2ZI decided not to run for re-election. Art WA2KXE ran unopposed for secretary and Bob W2YW ran unopposed for treasurer.

There were two director positions and three candidates. (Since Mike KC2SYF was nominated for vice president, that position became open.) Bill WB2QGZ ran for re-election and both Lou NO2C and Pres W2PW were nominated for director spots as well.

I would like to congratulate Art WA2KXE secretary welcome to board of our great club. I also would like to congratulate Bill WB2QGZ for being re-elected as a director as well as Lou NO2C. Welcome to the board.

I would like to thank Bob K2TV for his many years of dedication as an officer and founder of the Great South Bay Amateur Radio club. Your help in the running of the club has been a tremendous benefit and will not be forgotten.

I would like to thank Pres W2PW for all his work with ALLSTAR and IRLP with linking our repeaters and D-STAR for all of us to enjoy. Pres spends countless hours coming up with a lot of new ideas to advance amateur radio.

As you know there was an election for our ARRL Section leader and we would to congratulate Jim Mezey W2KFV on being re-elected. Jim has been a voice of support for all

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GSBARC REMOTE STATION PROJECT UPDATE OCTOBER 2020

By John Melfi, W2HCB



First, I would like to thank everyone who has been involved with the remote station project: Town Supervisor Rich Schaffer and Vincent Piccoli, deputy commissioner of public works, and the rest of the Town of Babylon board for allowing us to proceed with our improving our capabilities for emergency communications.

This remote station will serve so many aspects of our club's activities. It all started with construction of the massive rebar cage. Bob W2YW, Mike KC2SYF and I built it in three sessions. It was wire-tied and welded for extra strength. I sourced out the J bolts which are bigger than the ones from U.S. Tower and cost much less. They are commercial grade for huge light poles and signs.

The town dug the hole on Oct. 5th and on Oct. 10th we met to install it in the ground. We started 8 a.m. with Dermot KD2EXL cad welding the grounding system for the tower and equipment. Not only did he do a great job, he donated all the supplies for the job. While that was going on, I ran to meet Bob W2YW and load up the rebar cage. We dropped off the rebar cage. We unloaded with the JCB 502 5K telehandler – and thank you to my employer Abel Equipment for helping us out as always when we need a piece of equipment.

Then we ran to Home Depot to pick up the wood for the form for the top of the tower base. We made three runs to Home Depot throughout the day. We then set the rebar cage in the hole we had to level it out which meant someone had to go in the hole. Guess who went in (the huge crickets and soft sand)? Yes it was me. The rest of the crew lowered the material down to me. Thank you to Dermot KD2EXL, Matt N2DBB, and Merrick K2TAX for lowering the 18-inch cement blocks to me and dropping down the smaller ones. Once that was done, we built the form for the top.

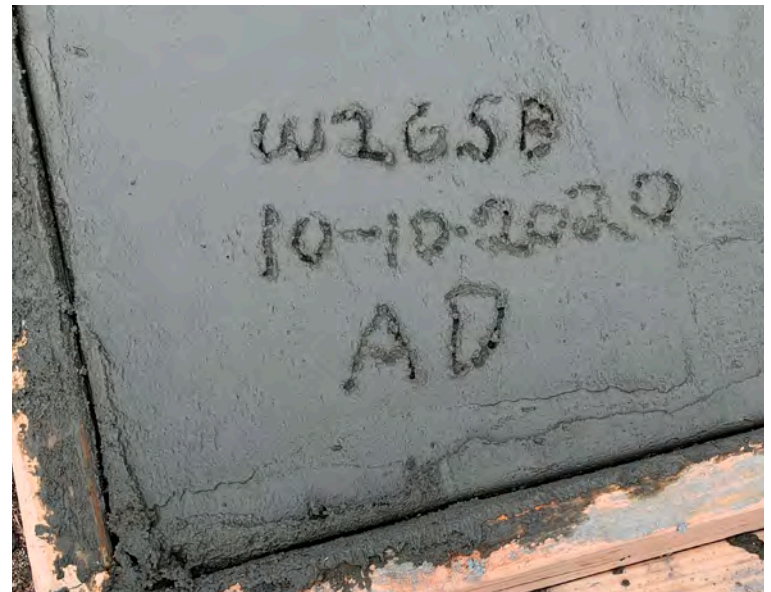
Many measurements were taken and checked twice. Then Bob W2YW cut the wood to size. We squared it all up and set the template for the tee base on top of the form. We then waited for the cement trucks – yes TWO trucks with 12 yards of 500 psi concrete each. The first truck arrived at 3:30pm. We had to wait for the second truck to arrive before starting the pour. The pour started at 3:45 pm and the cement was flowing. The trucks were rocking back and forth.

The second truck driver was our cheerleader, yelling out the window: “Start digging,” which meant to start moving the concrete up and down with 2x6 beams and poles so the concrete could settle and he could add more. The total amount was 22 and ¾ yards.

Bob W2YW and I performed the screening off then Merrick K2TAX and I performed the finishing touches. We were done at about 5:30 pm. I would like to thank Commercial Concrete for their great service and good fair price on the pour. I would also like to thank John K2IZ who stopped by to check out how everything was going and to Bob K2TV for coming down to take pictures of everything for you all to see.

Now that the concrete is in the hole, we must wait 28 days for it to cure. In about two weeks we can install the tee base. Next we have to order the parts for the tower and work on that then we will unpack the SteppIR beam to assess how long we will need to build it and see if we need to order anything before we install it on the tower.

This project has been under discussion for a long time, and I am pleased to see it come to life. It will put our club in a very special place. This will give us three HF stations to use at the EOC. Please be patient. As I always say: “Rome was not built in a day.” If you would like to help with any part, keep a look out for postings from the gsbarc.io group where we send out requests for help when it is needed. Once again, to everyone who helped with this project at any stage so far, thank you. 🙏



Photos from Remote Station Tower Base Installation



W2YW Welding the rebar cage for the HDX 572 tower



Here it is standing 7 ft. 6 inches tall. It is 4 ft. 6 inches square.





Use Of Direct Mode For Point-To-Point; Why It Works To Your Advantage

By Donn Edwards N2TBH



When I was working in NYC in the early '80s, the department upgraded their portable radio fleet to the latest Motorola model, the MX-360. The MX-360 had eight channels, 5W out in the 476.xxxx MHz range. It had an interesting feature we utilized extensively and which enabled spectrum efficiency on the crowded dispatch channels. A small toggle switch was mounted on the top of the radio, next to the channel selector switch, labeled "R/D." As I found out, this meant repeater/direct.

In the "repeat mode" the radio talked to the repeater on one frequency and listened to the dispatcher on the other frequency. You had two-way communications with the division dispatcher, and all the portables in that radio division could hear you.

In the "direct mode" you talked on the output frequency of the repeater. This mode is also called "Talk-Around," and "Tac" as in "Tactical Channel" means "Talk Around Channel" because you're talking around the repeater input. Using direct mode allowed operators to talk to all the portables within range, but the dispatcher could not hear the operators themselves; my agency bosses wouldn't appreciate hearing requests for pizza, coffee and ballgame scores on the crowded division dispatch channels.

The main problem was the dispatcher always overpowered the portables. That actually made operators take full advantage of the brevity [10] codes, and pare their traffic down to the minimum. You even learned that by using the monitor key to hold open the squelch, you could wring the last bit of range out of its 5W. Range was about one-quarter of a mile, inside a building, to five-eighths of a mile, if you were on the roof, and about a half-mile on the street in the core of Manhattan or downtown Brooklyn. When I worked in Far Rockaway though, it was not unusual for the base radio which was located at Beach 100th Street, to have almost DFQ reception when I was on the boardwalk down at Beach 50th Street, about 2.5 miles away. It was perfect for short-range incident and event control.

So what is the difference between direct mode and simplex mode? Direct or "Talk-Around" mode is communicating on the repeater output frequency. Simplex is communicating on a recognized discrete frequency from an approved band plan. The federal government has embraced the concept in their Federal Interoperability Radio plans; The Incident Response & Law Enforcement plans have more direct mode channels than discrete simplex mode channels.

Why does using direct mode make the club repeater more efficient? Simple. You can use your 50W mobile for your medium-range comms., and your 5W portable for short range comms. This way the club repeater, or any other repeater, is left open for operators too far to communicate on direct, and you have that situational awareness. If you want to switch back to repeat mode to communicate with another amateur or club member further out, switch back to the repeater channel.

Here's an example that happened a few years ago. I was in Bay Shore and I heard a club member calling W2HCB on the club VHF frequency. He only had a portable and couldn't make the VHF machine. I had been on the UHF frequency but heard him calling on the VHF side of my IC 2820 dual-band mobile.

Since I had already programmed the club VHF and UHF output frequencies as a direct channel in my radio, I called him on direct and told him to come up on the club UHF machine, which he could reach. He was a little confused as to how he was hearing my signal because he couldn't raise the machine, and I made a quick explanation. Then I told him to switch to the club UHF machine and alerted John to stand by for traffic as he was about to go QRT.

I routinely switch over to direct mode after making initial contact with a mobile or fixed station on the club machine if I know the operator is in range or we are traveling in the same direction. Sometimes the other op stays the repeater, and I have to wait for the tail to stop. The other day I was in the mobile, and made contact with an operator in Deer Park. We were on the 440.7000 machine which is on a national reflector. I asked the other op to switch to a UHF simplex channel so we could free up the repeater for what it was really meant for.

All three of my radios are set up this way. I have a channel 01 programmed for W2GSB repeater operation and channel 02 is programmed for W2GSB direct operation. The direct channel also has the repeater tone enabled, in case a station is using the PL tone on both the transmit and receive. This is not uncommon, especially in metro areas, to cut down on intermod.

There's another benefit to the users of the club machines. It gives you an idea of how radio propagation at VHF and

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President's Message, cont'd from page 3

our clubs on Long Island and New York City and I would like to thank Jim for his support of our club over the years.

The board of GSBARC once again will do whatever we can to advance our great club and help all our members and newcomers. We welcome everyone.

I know not meeting in person due to the pandemic is frustrating and is driving everyone crazy, but it is better to be safe than sorry. To all of the club members who have been working on our repeaters, tower project, EOC project and other projects I want to thank you all very much.

Please come to our Wednesday open houses. We meet on Zoom. Use this link on Wednesday nights:

<https://us02web.zoom.us/j/296419825?pwd=TWJLUzhpMVRPTzdWeUpFNkdOSDNEQT09>

Our Saturday open houses are also on Zoom. Use this link on Saturdays and have some fun: <https://us02web.zoom.us/j/83231588181?pwd=M2RPanhiWXY5M1pIRyt3eDlqZXRYdz09#success>

The Compass has been coming out as a bimonthly newsletter so I will take this time to wish everyone the absolute best for the holiday season ahead. So from the W2HCB family to all our members and friends around the world. We hope you all had a great Thanksgiving. We know all too well what happens when we overstuff ourselves, right? (Nap time, then wake up and eat again.) To all our turkey chefs -- I deep-fried ours. It came out great: 20 pounds, 70 minutes and absolute perfection. I hope yours came out awesome as well.

I know we all had to scale it down this year. We would also like to wish all everyone a very Merry Christmas, Happy Hanukkah, Happy Kwanzaa and Happy Festivus to all. I hope you get something for your shack or tower as a gift or gifts. Here is looking forward to better year ahead. We wish everyone a happy new year.

As 2021 starts let us hope this pandemic starts to go away and our lives can get back to some sort of normal. Ham Radio University is Saturday January 9th 2021 it is going to be a virtual event. Registration starts December 15th 2020. Go to <http://hamradiouniversity.org/forums/> and there will be a link for each forum so make sure you register for the ones you want to attend.

This year's Ham Radio University is being held in memory of Phil Lewis N2MUN who was a member of our club and the founder of Ham Radio University. Unfortunately Phil N2NUM became a silent key on March 5th 2020. Most recently the net control for the net at noon on Tuesdays, Paul Clifford WA2AXO, became a silent key. If you had your radio on Tuesdays at noon there, he was calling up the

net and the fun would soon follow. I really hope someone takes over that net on 146.685 on Tuesdays. I hate when I must give sad news. I hope everyone stays safe, healthy and please wear a mask or stay home. Heck, we have amateur radio to play with! Stay home and ragchew, contest, learn CW, play with new modes or toys -- there are so many wonderful things in this hobby of ours!

So, what whatever you like to do in amateur radio please enjoy and have fun with one of the greatest hobbies in the world.

73, John Melfi, W2HCB 📡

Using Direct Mode... cont'd from page 6

UHF is affected in your everyday operating environment. I've been operating this way for years, and I know where the local dead zones and areas of enhanced propagation are. For instance, there are areas east of Bay Shore on Routes 27 and 27A where you can't get a signal out at 50W into W2GSB. When I'm fishing, the ID-51A with 5W on the 440 machine gives me DFQ on the bay from Amityville to Ocean Beach.

There are also areas as far north as Routes 25 and 25A from Mt. Sinai to Northport where the 440 machine is almost DFQ. There's also an area in West Islip from the area around my QTH and the High School North to the shopping village along Union Boulevard where my ID-51A can hit W2GSB, but only during the winter. In the summer the large trees by the schools have enough foliage to attenuate the signal at VHF.

So if you want to make the club repeaters more efficient, see how VHF and UHF propagation is affected by the local environment, challenge your operating skills, go direct! 📡

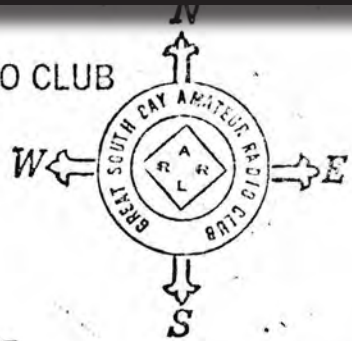
ATTENTION ALL MEMBERS IN GOOD STANDING!

**IMPORTANT MOTION TO BE VOTED
ON AT NEXT GENERAL MEMBERSHIP
MEETING, SCHEDULED TO BE HELD VIA
ZOOM.**

- ***A motion to confer Lifetime Membership status to Bob Myers, K2TV and his XYL Marge, KA2NIE for their long years of service to, and founding of, The Great South Bay Amateur Radio Club.***

From The Compass Archives:

'T'HE GREAT SOUTH BAY AMATEUR RADIO CLUB COMPASS



CLUB REPEATER - WR2AKV 146./085/685 CLUB CALL WB2FKZ

DECEMBER 1, 1977

If you received this publication and are not a member of the Great South Bay Amateur Radio Club, it was no accident. Please consider it a invitation to join "WE CAN BE VERY FRIENDLY".

2 Meter FM ARES Net: Monday 1930 local via WR2AKV Control K2TV

15 Meter SSB ARES Net: Thursday 1900 local 21.430 Mhz Control WB2PRT

In an emergency monitor 2 Meters on the half hour
15 Meters on the hour

MESSAGE FROM THE CLUB PRESIDENT

WOW! Our club is celebrating it's third anniversary this December. It seems as only yesterday we had our uncertain start and first meeting of a handful of people in my small dining room.

We sure have grown quite a bit in three years from ten original charter members to a club of over 70. Our course has been rocky at times, but to our benifit for we have a strong sturdy club or newcomers, oldtimers, novices, techs, generals, advanced, and extras all working together towards a goal of fellowship and public service.

Our club boasts a repeater, a new club station, ham radio classes, an ARES organization that is second to none, and best of all a group of terrific people. Our club picnic and fieldday exercise is one of the best. When other clubs are dying because of lack of activity, ours is young and strong and growing. We offer something for everyone unlike many repeater only "clubs"

Yes it sure is nice to stand back a little and see our fine club and it was certainly an honor to be the first club president. Taking over in January as president will be Walt Grosser, W2TE. Walt is an original charter member and I'm sure he will make a fine president. Please show him the cooperation you've shown me and he will be able to do a terrific job.

As far as myself, I'll return to the ranks as an ordinary member, as if there exists an ordinary member in our club, because in my opinion each and everyone of you is extra ordinary. Anyway I'll still be active as a member, and I will have more time to devote to the ARES as emergency coordinator.

In case your wondering why I stepped down as president, it was mainly because, as many of you know, I have a very busy work schedule and find that I am spreading myself far too thin. Between job, family, club, ARES, school etc., I feel like the fellow in the circus who has these dinner plates and sticks, and he spins and balances the plates on the sticks. One by one he adds more sticks and plates until he reaches a point where he can't add anymore plates because if he



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: Philip Jacobs, W2UV, 631-838-2500

Div. 4—Town of Smithtown ARES/RACES

Net: 145.430 MHz, PL136.5, Mondays 7:30 PM
EC/RO: Rich Johnston, K2GTON, 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: Removed & Currently Vacant

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: Eddie Schnell, WZ2Y, 864-973-9250

Div. 10—Shelter Island ARES/RACES

EC/RO: Vacant (Neal Raymond, N2QZA, SK)

Suffolk County

ARES/RACES Net:

Mondays 2100 Local—145.330/R (136.5 PL)

Alternate Frequency—146.820 (136.5 PL)

New York State

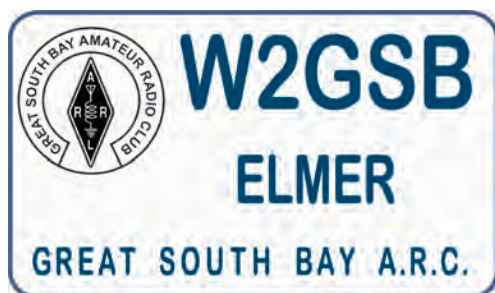
RACES Net (HF)

Sundays 0900 Local, 3993.5 KHz LSB

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" ☎



2020 VE

Session Dates

- March 28th
- April 25th
- May 23rd
- June 20th
- July 25th
- August 22nd
- September 26th
- October 24th
- November 28th
- December 26th

CANCELLED

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 CSCEs 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

146.685 -shift 127.3 PL (south input
LINKED to 146.685)

438.475 WB2QGZ -shift 110.9 PL
LINKED TO 146.685

223.860 W2GSB -shift 110.9 PL Enc/
Dec w/ECHOLINK

223.860 -shift 156.7 PL Enc/Dec
Local use

440.850 W2GSB + shift 110.9 PL
Enc/Dec

446.775 KB2UR -shift 110.9 PL
Enc/Dec Fusion Steerable

927.3125 W2YMM -shift D606 Enc/
Dec

440.250 W2TOB/B + shift DSTAR
REF020A Babylon

147.255 WB2TOB/C + shift DSTAR
Steerable

445.725 WD2NY/B -shift DSTAR
REF020A Selden



Fire Island Lighthouse Event, 2014