



# THE COMPASS

Official Newsletter of the Great South Bay Amateur Radio Club

June 2015

Volume 43

Issue #6

## Upcoming Club Events

### Next General Meeting:

Thursday, June 25th,  
8 PM at the EOC

Field Day Planning  
All Saturday Open  
Houses are Field  
Day Work Parties

Thursday Nights are  
being used for Setup of  
Logging Computers and  
Training

GSBARC's FREE  
license classes are on  
Tuesday evenings from  
7:30 to 9:30 PM. We  
are Currently Running  
the Technicians License  
Class

Visit us on Facebook at  
[www.facebook.com/gsbarc](http://www.facebook.com/gsbarc)



Mike Mazzola, KC2OLA and Phil Jacobs, KD2GFO Operating the club station, W2GSB, at the American Air Power Museum Special Event Station at Republic Airport in Farmingdale during Armed Forces Day Weekend

## Inside this issue of The Compass...

- Sad Farewell to 2 GSBARC Members
- Diode protection for coils
- COS mod for Allstar-IRLP-Echolink
- KB6NU's Guest Column
- Inside the Squirrel Cage (a column)
- Field Day Rules

## Upcoming Special Events

Field Day  
June 27th & 28th

Maggie Fisher Cross Bay Swim  
July 17th

Fire Island Lighthouse  
August 15th & 16th

Babylon Village Fair  
September 13th

Hope for the Warriors Run  
November 7th (Sat)

# President's Message



As we get ready for field day and I write this month's message I do it with a heavy heart. We lost two members: Bero, KA2DZR and Bud, WA2QAV.

Bero had been a past member who had come back to GSBARC a few years ago. Among my fond memories of Bero, one that stands out happened during one of our special event stations at the *Air Power Museum*. While exploring the many aircraft on display Bero had discovered one with the image of a witch riding a broom. Like an excited child Bero had me follow him over to it so I could take a picture of him with the plane and its witch so he could send it to his sister in law.

Bud was a long time member of GSBARC who was always a gentleman and just a fun guy to be around. Bud served in the Air Force and he was the driving force for the Armed Forces Day Weekend/Air Power Museum Special Event Station that we all love to do.

Bud was truly amazing to watch operate as he'd sit down at a radio, put on his headset, and start making contacts one after the other. Bud had received the nickname "*Magic Ears*" and it was well earned as he pulled station after station out of the noise. The GSBARC crew will never forget the fun times we had with Bero and Bud. And so it is with a heavy heart that we send a final 73 to KA2DZR and WA2QAV.

**Field day:** We have been working hard to get ready for field day. As usual there has been a lot to do. Ed, KD2ADC and Bob, W2YW have been very busy refurbishing the tower trailer and our two beam antennas. The tower trailer is in better shape than its ever been and I'm happy to be able to report that both antennas are tuned up and are now

in better condition than when they were bought.

On the 6th we had a work party and checked out the 40, 80, and 160 meter dipoles. The antennas all checked out and they've been matched to their own individual runs of coax.

We still have more work to do so that set up on field day morning will go smoothly and hopefully without any surprises. So please try to make it down for the work parties.

If you are lending the use of a laptop to the club for field day we have to check it out and make sure you have *NIMM plus* installed correctly. We will be doing this Thursday the 11th so please stop down to the EOC with your laptop.

Thank you to everyone that's showed up at the work parties so far to help out. Team work always gets the job done.

Welcome to all the new members who signed up at the LIMARC hamfest last weekend.

As we get closer to field day I hope you all are preparing for a great time. If you are planning to be in attendance for the duration, we have decided to have breakfast for Sunday morning catered. I have contacted a local bagel & deli business and have arranged for their *Executive Hot Breakfast* to be delivered at 9 a.m. Sunday morning. Cost for this breakfast is \$12 per person which we need to collect by the general meeting on June 25th. If you would like to be included in this catered breakfast be sure to send an email to me at [radiatorights@gmail.com](mailto:radiatorights@gmail.com) by Wednesday the 24th.

This year field day is being sponsored ICOM who are providing all of the HF radios and power supplies. The models being supplied are as follows: SSB crew will be using ICOM IC-7600's, please familiarized yourselves with this radio by reading the basic operations covered in the first few pages of the manual. The SSB crew will have a 40 foot tower with one of our totally refurbished A3 tri-band beams along with 40 and 80 meter dipoles. The sideband stations power will be provided by the clubs 3000 watt generator.

For the CW crew here is your list of radios: ICOM IC-7851, IC-7700 and an IC-7800. CW side will be using the refurbished tower trailer and A3 tri-bander along with a 40 meter wire beam, an 80 meter wire dipole and a 160 meter inverted vee dipole.

VHF crew: You will be using the ICOM 9100 with a 2 meter, 6 meter and 70cm Beam on the 86 foot boom which will also have APRS beacon and a mesh node.

The *GOTA* station will have an ICOM IC-7410, antenna not determined as of yet.

Please go to the ICOM site and download the manuals you will need for the radios based on the mode you will be operating.

For the rest of June every Saturday open house and Thursday night will be all about field day. Let's make this the best field day ever!

73. John Melfi, W2HCB ☺

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## GSBARC Field Day Guide Lines

by Bob, K2TV



All contacts must be logged in the logging program.

Log on as the operator with your call or initials in the logging program.

Make sure you have the correct band and mode in the computer logging program. Check before operating.

Do not change bands or modes without checking with a coordinator. (147.535 Mhz / 110.9 PI if none are close by).

When changing a band you must have the proper bandpass filter installed on the output of the rig.

*Watch the band edges!*

On LSB on 160, 75 and 40 meters you should be 3 kHz or more above the band/mode edge.

On USB on 20, 15 and 10 meters you should be 3 kHz or more below the upper band edge.

CW operators should be at least a half a kilohertz away from the band edge.

If you need help please ask a coordinator or another operator for help. Do not assume anything.

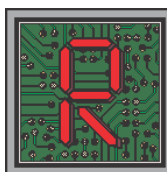
Field day is a lot of fun and a great learning experience.

Have fun! ☺

# In the Classroom with AB2ZI

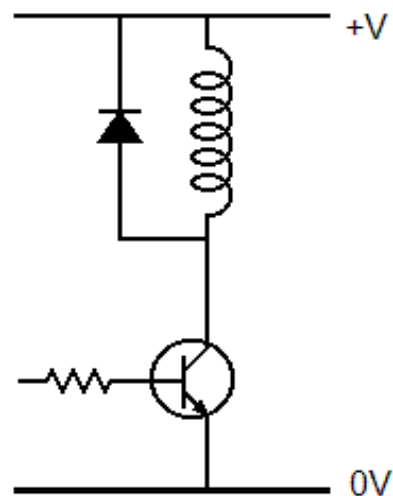
## Diode Protection for Inductive Loads

by Kevin, AB2ZI



Relays are controlled by a dc current which enters a coil of wire creating a magnetic field which pulls down a set of contacts to complete a circuit or circuits. When the relay is de-energized the magnetic field surrounding the coil collapses and in so doing tries to maintain the current flow in the direction it had been flowing previous to its cessation. This can be a problem if there's nowhere for the current to go and can result in very high voltages building up at a switch opening or on a transistor's lead if one is being used to switch the relay.

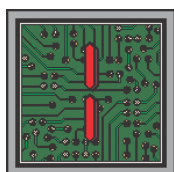
A solution to this problem is the addition of a diode across the relay's coil.



Here we see a coil on the collector of a transistor. When the transistor is conducting the voltage drop (a very small one) across the coil is reverse biasing the diode and all the current flows through the coil. When the transistor is turned off a large positive potential is applied at the collector of the transistor which now forward biases the diode and allows the current to safely discharge rather than releasing all the magic smoke stored inside the transistor. ☺

# COS mod for Allstar-IRLP-Echolink

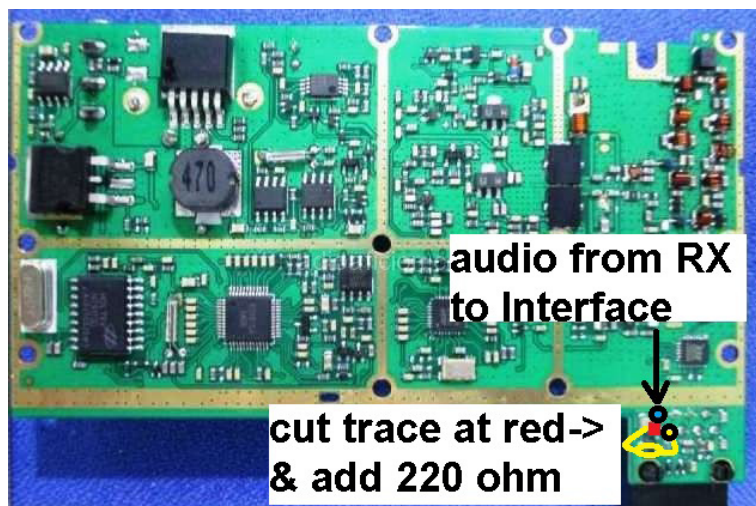
by Pres, W2PW



In the Leixen V V 898 and the Jetstream JT270, there is a unused pin on the mic socket, as well as a pin carrying 8v to the mic for its power supply. I have modified the radio to send receive audio and active low COS out the mic socket for IRLP-Allstar-Echolink node use. This will also be helpful for 1200 baud Packet use.

The mod involves 2 small 1/8w resistors, an NPN transistor (2n2222 or equivalent), and some wire-wrap wire. You will need a magnifying glass and a very small sharp cutter.

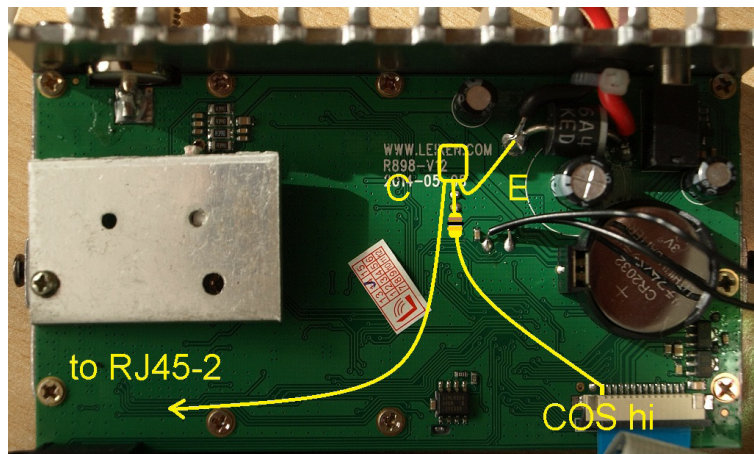
Open the radio with the screws on the side and top. Pull the front panel off and you will see the RJ-45 mic socket very easily accessible.



Cut the trace between the RJ45's second pin, which is the first one on the row closest to the front. It goes between a chip (capacitor?) and that pin. Replace that trace with a 220 ohm 1/8w resistor between the chip component and the second pin. This involves very small soldering, and a magnifying glass is recommended.

Connect the second pin also to the collector of the NPN

transistor, which you may wish to place on the other side of the PCB. Emitter goes to ground, base goes through a 10k 1/8w resistor to the last pin on the ribbon connector to the front panel.



When the transistor is connected, you will notice that the lights on the mic keyboard are lit without signal, and extinguished with signal present. This obeys CTCSS/DCTCSS parameters. When you unplug the mic and plug in the interface, you will have active-low COS on the second pin.

Theory: The second pin is pulled up to 8v by the 220 ohm resistor. It still passes the 8v to the mic through the 220 ohm resistor, unless shorted by the open collector that is activated by the COS line. So with no signal, the 8v is present (and the mic buttons are lit). With signal, the pin is now near ground.

The first pin is connected to receive audio. I did not remove the main board to snoop around for fixed-level audio. Feel free to look, as that would be better. I found a trace over by the earphone jack that contains variable-level audio. It is between the capacitor and the back panel, next to the earphone socket. Audio is also available on the aluminum case of that capacitor but I think it is dangerous to solder to the case of an electrolytic capacitor.

I set the volume to 5 and then set the interface level from there. That way I can hear local signals in the speaker, or plug in a dummy load of 8 ohms connected to a 1/8" 3.5mm plug in the speaker socket to quiet the racket. I'm strongly considering replacing the speaker with a fan.

Only "interesting" effects: When the squelch is open, the mic will no longer control frequency (since its power is cut off), so be sure you have a method to kill signal when trying to set frequency with the mic keyboard. Since this is a node radio I expect you will have only one channel programmed anyway. Also I noticed that the green RX light, and therefore COS, oddly enough comes on during TX in

*Continued on page 6...*

# In Memoriam

*Berislav (Bero) Pavlic KA2DZR SK*



*June 1945 - May 2015*

*Bero was born in Croatia and came to NY in 1968. He worked as a maintenance mechanic in various manufacturing plants. He retired as facility manager from a defense firm on Long Island. He received his novice license in 1977 along with his older brother Marco 9A7C who is also SK. Bero and I met on the air in 1978, when we were both novices tapping out CW. We reunited in 1991 and became very close friends. Bero was very active on HF, and echolink. He had weekly schedules with his 9A friends. He also is known as 9A7BP. Bero and 9A7K did a mini dxpedition to the Croatian lighthouses. His has many operating certificates and awards along with DXCC, WAS, WAZ.*

*Bero was a long time member of GSBARC, South Shore ARC, Radio Central and ARRL.*

*His is survived by his wife Gloria.*

*73 my good friend—Tom KA2D*



*July 1, 1930 — June 3, 2015*

*During Bud's Air Force career he attained the pinnacle of an enlisted person's career earning the rank of Chief Master Sergeant.*

*Bud was a very active member and served GSBARC for many years as our QSL manager. As a volunteer for the American Air Power Museum in Farmingdale he was the organizer of our Annual W2GSB/APM special event station every Armed Forces Day weekend and our liaison at the museum.*

*His passing leaves a hole that cannot be filled...<sup>®</sup>*



*The Insignia of an Air Force Chief Master Sergeant*

# Dayton was a Blast this Year

By Dan Romanchik, KB6NU



couple of weeks ago, I made my annual pilgrimage to Dayton for the 2015 Hamvention. This year, I had even more fun than in the past, and that's saying a lot.

I started Dayton 2015 on Thursday by attending the QRP-ARCI's Four Days in May (<http://www.qrparci.org/fdim/>) seminar. George Dobbs, G3RJV, gave a very nice talk that not only talked about circuits, but also the people he's met over the years and the places he's been. Paul, M0XPD, gave an interesting talk on crystal filters and using an Arduino to control a QRP rig. The final talk, by Glen, KW5GP, was also about using an Arduino to control a QRP rig. Other talks covered transmission lines and SWR and adventures in PCB making. I learned something in every single one.

That evening, I participated in Vendor's Night. I sold quite a few copies of my CW Geek's Guide to Having Fun with Morse Code and gave out quite a few "I'm a CW Geek" buttons and "Hams Obey Ohm's Law" stickers.

Friday and Saturday were all about the Hamvention. As far as new products go, there were a couple of interesting announcements. Elecraft introduced the K3S, an updated and upgraded K3 HF Transceiver, and FlexRadio introduced the Maestro, a "front end" with knobs, dials, and LCD screen for their software-driven radios. Apparently, hams like knobs and dials after all.

It seemed to me that there were more people at this year's Hamvention. There were certainly more sellers out in the flea market. And deals were to be had. I picked up a Bencher BY-1 for only \$50. I also found a Hallicrafters HA-1 T.O. Keyer ([http://www.ai4fr.com/main/page\\_ham\\_radio\\_hallicrafters\\_ha1.html](http://www.ai4fr.com/main/page_ham_radio_hallicrafters_ha1.html)), which I believe to be the first commercially-available electronic keyer. Produced in the 1960s, it uses tubes to generate dots and dashes.

Dayton usually has a great lineup of forums, but aside from perhaps the TAPR forum, the Antennas forum, and maybe the ATV forum, none of them really called to me. Also, I was really busy talking to people I know, meeting readers, and trying to get the dealers to carry my books, so I didn't get to a single one.

Being the CW geek that I am, I'm hoping to hold a CW forum at next year's Hamvention. I've already contacted the forum people, and while they haven't committed to giving me time, I did get a very positive response. C U THR? ☺

*When he's not attending the Dayton Hamvention, Dan, KB6NU enjoys working CW on the HF bands and teaching ham radio classes. For more information about his operating activities and his "No-Nonsense" series of amateur radio license study guides, go to [KB6NU.Com](http://KB6NU.Com) or e-mail [cwgeek@kb6nu.com](mailto:cwgeek@kb6nu.com).*

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## COS mod for Allstar..., cont'd from page 4...

certain conditions. Be sure your interface is not thinking you are duplex capable. I highly recommend using DTCSS ("DPL") as sometimes the CTCSS hangs open.

When connecting the radio to DMK Engineering's URI, I used COS on pin 8, inverted to active low in Allstar's rpt. conf file. I fed the URI's outgoing audio from 22 through a 600-ohm audio isolation transformer to the radio's mic in, which dramatically improved the TX audio. Removed a bunch of "whizzy" noise.

### ALTERNATIVE plan:

Untested, but theoretically sounds good. Basically reverse the purpose of the 2 pins. The first pin will be COS, and the second would be audio (w/DC bias). Connect a 10uF non polarized electrolytic from that second pin to the audio source in the radio. The outgoing audio will then be riding on the 8V DC, so it will need to be isolated with another capacitor at the destination. No traces are cut.

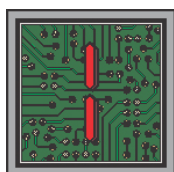
Connect the first pin to either the NPN transistor's collector (which should be pulled up with a resistor) OR skip the transistor altogether, and you will have active high COS. You probably should place a medium value (1K) resistor in series to protect the radio from short circuits.

Benefits/effects: COS will be active high, can be inverted externally, or internally with a transistor. No loss of 8V to the mic ever. You will need to isolate the DC from the audio with an external blocking capacitor unless your interface is ready to strip the DC.

Enjoy ☺

# Inside the Squirrel Cage

by Caryn, KD2GUT



It was during my fourth, and final, on-air shift as Special Event Station N2L, commemorating the 1915 sinking of the RMS Lusitania, when I was overcome by an unlikely kinship with the ill-fated passenger liner: I had been on the air no more than 10 or 15 minutes, and already I was sinking fast.

During my previous three shifts, I'd enjoyed decent QSOs with hams in Estonia, Newfoundland, Germany, Venezuela and Copiague (thanks, K2TV!) But by May 14, I'd already missed the chance to connect with Ireland's EI100MFA, which had ceased operations a few days earlier. There was still time, however, to work GB100MFA in Liverpool, England, the city of the ship's historic departure for New York on May 1, 1915, a trip truncated 6 days later by a German U-boat's torpedo.

My own interrupted sail across the airwaves was the result of something far less violent, but it blindsided and unsettled this rookie nonetheless: Until the Lusitania commemorative event, my only experience with abominable band conditions was at a wedding where my assigned table was too close to the dance floor.

Apparently even seasoned hams, knowing the value of reading sunspot reports in advance of choosing their bands, struggled with poor performance too. But they somehow handled the rough waters of the event while I remained adrift, battered by the unforgiving waves on 10 meters.

In fact, every time I called CQ it might as well have been an SOS.

I pictured myself as the solitary protagonist in the debut episode of Rod Serling's original Twilight Zone, "Is Anybody There?" (Turns out there were plenty of somebodies there -- but the poor soul calling out repeatedly

into the void was simply getting no response.) Another vintage Twilight Zone carried equal weight for me that day: "No Time Like the Past," in which a time traveler from the future, knowing there's a torpedo enroute, attempts to divert the course of the Lusitania and spare it from its historic fate.

In the end, of course, the time traveler couldn't change history - and neither can we, no more than we can alter the principles of science. Band conditions will be what they are, contests and commemorative events notwithstanding. Let history record this certainty, then: In ham radio, sometimes you can set sail for glory but you may end up landing in the Twilight Zone. ☺

## *Help Support Great South Bay ARC by purchasing a book of raffle tickets.*

Money raised from our yearly raffles helps to pay for food at work parties, supplies and parts for the trailer, antennas and extra radio gear.

This year's raffle has 5 prize levels with the winner's choice of cash or HRO Gift Certificate. Every ticket bought has 5 chances to win! Tickets are \$5 each or a book of 5 tickets for \$20. Prize levels are:

<b>Grand Prize</b>	<b>\$250</b>
<b>2nd Prize</b>	<b>\$200</b>
<b>3rd Prize</b>	<b>\$150</b>
<b>4th Prize</b>	<b>\$100</b>
<b>5th Prize</b>	<b>\$50</b>

***Tickets available at any meeting or open house.***

# 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:**

<http://groups.yahoo.com/neo/groups/gsb-arc/>

**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](http://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, (###) ###-####

### Div. 3—Town of Islip ARES/RACES

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: Joe Albertus, KB2IOE, 631-664-6709

### Div. 5—Town of Brookhaven ARES/RACES

EC/RO: Ted Debowy, AC2IR, 631-751-6576

### Div. 6—Riverhead ARES/RACES

EC/RO: Donald Rollock, W2EUL, 631-929-0705

### 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 - 145.370 (136.5 PL)

## New York State

### RACES Net (HF)

Sundays 0900 Local, 3993.5 KHz LSB

## 2015 VE Session Dates

- June 20th (3rd Sat. due to Field Day following weekend)
- July 25th
- August 22nd
- September 26th
- October 24th
- November 28th

All sessions are at the Town of Babylon EOC, 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".



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## Need Antenna Work?

Sign-up on the list at the EOC. Please supply as much information about your situation so the committee can be properly prepared with assistance and tools when they come to your QTH.

## Club Name Badges

Club name badges are available from *The Sign Man* ([www.thesignman.com](http://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"



# W2GSB

## ELMER

GREAT SOUTH BAY A.R.C.

## June Birthdays

**Otto, KB2MBZ**

**Mike, W2BRJ**

**Adele, KD2CYL**

**Glenn, KC2VVQ**

**Donn, N2TBH**

**Rich, N2PPN**

**Rich, KC2NMJ**

**Tony, N2JZW,**

**Pat, N2IEN**



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