



**GARS**  
Glenn Amateur Radio Society

**KJ6HCG**



## *The Prez Says:*

*March, 2018*

Prez Says for March 2018

Thought I would get this issue out a few days early so that the John and Dorothy Post can be free to make their travels to Port Angeles, Washington. We will miss them while they are away and we wish them safe travels and a safe return to us.

As I understand it, the ARRL will be posting the new rules for this years Field Day. This posting is to happen the first week of March. It is hopeful then that I will have a downloaded a copy and have it at our next membership meeting for all to peruse. We will be discussing this event and start formal planning during the meeting.

Also coming up is the 'Run Your Tail Off 2018 5K/10K' event and which will be held on the 14<sup>th</sup> of April, 2018. Time of event to be announced soon! Please mark your calendars and come out and support this event. GARS provides communications and safety support on the trail. The plan is to have the Disaster Response Trailer (DTR) on site to use as the net control station, and to show it off to all the participants.

For those that wish to help and support this event please respond to me your desires. We have a minimum need for six communicators and I need to turn names in for the gate pass.

A Nano-Spot, a Multi-Mode Digital Hot Spot, Designed for Pi-Star / MMDVM Open Source Firmware Compatibility, was ordered over a month ago, for testing and then use while traveling around the North State. Well I have it on authority that it will be shipped out on the 26<sup>th</sup> of this month. This may mean that I will have it in time for show and tell at our next membership meeting. Here is the link to the Micor-Node web site. < [www.micro-node.com](http://www.micro-node.com) >> Here are some highlights of this hot spot.

***NANO-SPOT is a completely self-contained digital hot spot supporting DMR, Dstar, P25 and System Fusion communications. Fully assembled and tested in a ruggedized extruded aluminum enclosure. All that's required for operation is a power source and a WiFi based internet connection.***

***Nano-Spot User Manual Available Here: [http://micro-node.com/nano-spot\\_user.pdf](http://micro-node.com/nano-spot_user.pdf)  
Pi-Star Digital Voice Software pre-loaded and easily upgraded via software.***

### **Product Features:**

- ***Supports PI-STAR's web based digital voice dashboard and configuration tool***
- ***Supports all four digital amateur modes DMR, D-Star, P25 and System Fusion***
- ***Built-in WiFi: 802.11b/g/n and Bluetooth 4.0***
- ***Built-in OLED system status display indicating Mode, Talk Group and Call Sign***
- ***Built-in LED indicators for status of Power, PTT, COS and Mode (con't page 2)***



Prez Says continued”

- *USB Accessory port for optional external Nextion display*
- *USB Console port for hardware root level access to the operating system*
- *Quad Core A7 1.2GHz Processor, 512mb DDR3 RAM and 8gb eMMC Flash*
- *Durable extruded aluminum enclosure (L 86mm x W 57mm x H 26mm )*

**Package Includes:**

- *Fully assembled and tested Nano-Spot*
- *UHF and Wifi antennas*
- *USB hardware console port cable*
- *USB Power cable*
- *100-240VAC wall wart power supply*
- *Quick start guide*
- *One year warranty*

**Free USPS Domestic Priority Mail shipping**

We will be meeting at the Artois Lutheran Fellowship Hall at 6:30pm, on Thursday, the 8<sup>th</sup> of March. Late arrivals and guests are always welcome. So be safe in all you do and may you all have many blessings in the days ahead!

Mike Ellithorpe –kf6obi

President GARS

[kilofox6obi@yandex.com](mailto:kilofox6obi@yandex.com)

530-518-3730

2/08/18

**Present:** Mike, Phil, Bob (KC6UIS), and Howard.

**President Mike Ellithorp , KF6OBI, opened the meeting with the pledge at 18:50.**

**The January minutes were approved. They were included with the February agenda. Moved: Howard   Seconded: Bob**

**Treasurer Phil reported the account balance is now \$2,408.94. The only expense was the \$20 filing fee required with the SI-100 for the CA Secretary of State's "Statement of Information" for domestic nonprofits. This form is due in the even numbered years, so the next filing will not be until 2020.**

**Along with the SI-100 the other three (990N, 199N, and RRF-1 annual forms have been filed. The report was received by acclamation.**

**Old Business:**

**Disaster Trailer Report: Nothing to report.**

**Possible DRT Exercise: Nothing to report. Phil will follow up with Ian Turnbull (AF6OA) to establish plans.**

**Web Page Discussion: Mike talked with Rick (KI6VOS) who is presently swamped with professional duties and has also been fighting a cold and possibly the flu. Because the Club Web site currently consists of photos of pages of the original Web site, it is impossible to change the content by manipulating the HTML. Rick is going to engage his daughter in translating the current content into actual HTML. This will make future site editing much easier.**

**Youth Outreach: Mike and Dj worked on a letter to the head of the local 4H about establishing a liaison with them to stimulate a youth interest in radio. The letter has been mailed and we are awaiting a response. As discussion ensued about this, Mike noted a conversation he had had in which the topic of youth recruitment had come up and the comment was made that the way to connect with youth these days is via vehicles such as FaceBook. Club and group participation seems to be on the wane.**

**Field Day 6/22 – 24, 2018: Phil has contacted Gordon Wiems, principal of Providence Christian School who was very positive about our using the school grounds as the field day QTH once again. He needs to talk with some other school leaders before giving the go ahead, but was quite optimistic this would be able to happen. Phil also inquired whether they might have a science teacher willing to collaborate on using the DRT as part of their regular science curriculum and Wiems was going to talk with staff about this possibility.**

**Run Your Tail Off: Stay tuned for further information.**

**New Business:**

**Sad News: Mike reported that Dj's sister-in-law has died and she will most likely be up in WA three weeks helping her brother wrap up family affairs.**

**Steak Bake: Mike will follow up to look into the details as to whether we are to host this year and what needs to be put into place if we are.**

**Club DMR ID: Mike has applied.**

**ARRL Club Page: Mike has updated.**

**DRT Memo of Understanding: Due to the evolution of the mission of the DRT, the Club MoU needs to be updated.**

**Fun Projects: KI6SMN: Brought an SDRplay, which KA6IOD connected to a short wire antenna via an SMA to UHF fitting. While there were positive results, they were minimal until the unit was connected to the club's outdoor vertical (see after meeting note below). Some fun was then had tuning about the FQs.**

Minutes continued from page 3:

KA6IOD: Brought an 80's vintage TenTec Scout 555 which has a built in keyer. This radio was built around the concept of band modules which could be swapped by plugging them into the main consul. The modules were crystal driven.

Some general conversation then ensued on various topics from the Chico Air Museum, to air-time on various popular TV shows such as "Last Man Standing" and "Scorpion." It was noted that the accuracy of the story lines is not always up to par such as when the Scorpion show referred to 146.520 as the "Federal Emergency FQ" and not it's real name which is the National Simplex (calling) FQ. Mike also lamented the woes of W10 and how its updates can result in a wonky computer and then a day or two later create a peaceful world.

The meeting concluded around 19:45. (not noted who M, S closing meeting) The next meeting is scheduled for 3/08/18, 18:30.

After the meeting KA6IOD and KI6SMN continued to play with the SDRplay which had been connected to the club triband vertical which is mounted on the West end of Lutheran Hall. With minimal traffic on the HF bands, attention shifted to 2m. The Colusa County Sheriff's net and another net were tuned in

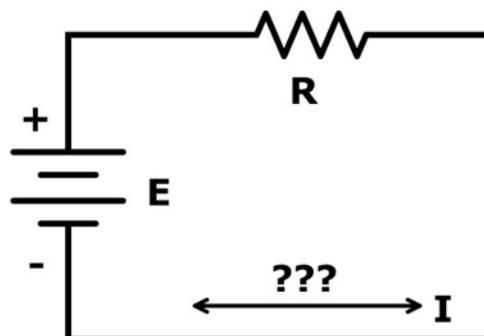
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## Which way does current really flow?

By Dan Romanchik, KB6NU

I was recently taken to task by one of my blog readers regarding my description of current flow in my *No Nonsense Technician Class License Study Guide*. He wrote:

"You casually say that current flows from Positive to Negative (with cool accompanying directional arrows), without any accompanying qualifying statement. Over the years I have looked at ALL the views on the subject. Positive to Negative is NOT what I was taught 48 years ago, and I have never seen a good reason to change my view."



In a subsequent email, he pointed me to a Nuts 'n Volts article, "[Which Way Does Current Really Flow?](#)" and asked my opinion. In the article, the author, who is a ham by the way, does a good job of explaining the various types of current flow.

I agree that in electronic circuits electrons flow from negative to positive, but it really doesn't matter. I agree with one of the article's commenters who says:  
(continued on page 5)

**“This is a silly argument. It’s like comparing apples and oranges and challenging people to take sides.**

**Electron flow is not current flow. Electron flow is easy to understand, an actual physical property, and a real help in understanding vacuum tube operation. But it falls apart when one needs to understand complex electronic systems.**

**[Conventional] current flow is a mathematical abstraction. It is defined as a net flow of positive charge, irrespective of the polarity of the physical charge carriers – whether electrons, holes, positive or negative ions, or whatever.**

**When looking at any circuit containing a resistance with a voltage across it, conventional current through that resistor says that the voltage drop occurs as the current through it meets resistance. On the other hand, in negative (electron) flow, a voltage INCREASE will correspond to the ‘current’ flow through it, clearly violating physical laws. Conventional current flow is consistent with the laws of physics and those of other engineering disciplines.”**

**You are correct that engineers, professors and scientists use conventional current flow. That is not because they are too obtuse to understand electron flow; I assure you they fully understand it. It is because in their world they have to solve more general problems involving complex math and science, and, again, conventional current flow is consistent with physical laws.**

**It is unfortunate that electron flow and current flow are so often confused. They both have their place.**

**After reading that article, I thought I’d see what the ARRL Handbook has to say about current. In the 1963 edition, they don’t mention electron flow at all. They have one diagram showing the direction of current flow in both series and parallel circuits, but the voltage source has no polarity. It’s simply labelled “Source of E.M.F.” Diagrams giving practical examples of series and parallel circuits do include a battery, and if the reader were to mash up the two diagrams, they would conclude that current flows from the positive terminal to the negative terminal. The most recent edition of the Handbook that I have is the 2005 edition (it might be time to get another copy!). It says,**

**(continued on page 6)**

Electrons move from the negative to the positive side of the voltage, or EMF, source. Conventional current has the opposite direction, from positive to negative. This comes from an arbitrary decision made by Benjamin Franklin in the 18th century. The conventional current direction is important in establishing the proper polarity sign for many electronics calculations. Conventional current is used in much of the technical literature. The arrows in schematic symbols point in the direction of conventional current, for example.

Having said all that, I really don't see that there's much of a controversy here. I did learn to think of current as conventional current in college, although it was mentioned that electrons actually flow in the opposite direction. Using the concept of conventional current has never seemed to hold me back. I've been able to design circuits and repair electronic equipment thinking that current flows from positive to negative.

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Although it's a departure from my "no nonsense" style, I am thinking of including a sidebar, similar to the paragraph above from the 2005 Handbook explaining the two ways of looking at current flow. What do you think?

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When he's not trying to figure out which way current flows, Dan blogs about amateur radio at KB6NU.Com, teaches ham radio classes, and operates CW on the HF bands. Look for him on 30m, 40m, and 80m. You can email him at cwgeek@kb6nu.com.

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**ALERT                      ALERT                      ALERT**

**DAYLIGHT SAVINGS TIME IS HERE AGAIN!**

**IT WILL NOT BE IGNORED, SO,**

**MARCH 11, 2018. SET YOUR TIME PIECES FORWARD                      ONE  
HOUR!**

**####**

**Club Officers: (Board of Directors)**

President .....Mike Ellithorpe– kf6obi  
Vice President..... Tracy Pitts—ki6uqd  
Secretary /Treasurer\*..... Phil Zabell-ki6smn  
Past President..... Albert Leyva-n6yck  
Board ..... John Post-ag7j  
Board ..... Bob Wirth-kc6uis  
Training.....Bob Wirth-kc6uis  
Publications..... Rick Hubbard--ki6vos  
Radio Officer ..... Phil Zabell—ki6smn

**Club Meetings: Lutheran Church Hall  
565 Main St., Artois CA**

**General Meeting 2nd Thursday 6:30 PM  
Board Meeting 2nd Thursday 6:30 PM**

**GARS Net: Monday, 7:00 p.m. Primary 147.105  
(+110.9 PL); secondary: 146.850 MHz-PL 110.9**

**GEARS Club Net  
Tuesday, 7:30 PM 146.850 MHz-PL 110.9**

**Sacramento Valley Traffic Net  
Nightly 9:00 PM 146.850 MHz-PL 110.9**

**ARES Nets:  
Butte Mondays 20:00 146.850 MHz-PL 110.9  
Yuba Sutter Thursdays 19:00 146.085+MHz PL 127.3**

**Other Nets:  
Sac Valley Section Net—7:00 PM 2nd Wed of the month  
146.085 MHz+PL 127.3**

**440 Wed. Night 8:00 PM Wednesday 440.650 MHz**

**Golden Bear 7:00 PM Daily 3975 kHz**

**Willie Net 8:00 PM Mondays 1930 kHz**

**Western Public Service System (WPSS)  
7:30 PM 3952 kHz**

**ARISS (International Space Station) Uplink 144.490  
MHz Downlink 145.800 MHz**

**Hope-1 satellite: all uplinks are in 145Mhz band:  
All downlinks are in 435Mhz band**

**...California Traffic Net: 3906 KHz nightly @6:00 pm  
For traffic listing & @6:30 p.m. for roll call.  
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**Editor .....Dorothy Post  
Distribution—via e mail—monthly (hopefully)\_  
Please send all submission for publication through the fol-  
lowing medium: E-mail: dj@posthouse.us ; All submis-  
sions must be in good taste, relevant to amateur radio; Edi-  
tor reserves final determination as to publication.**

**GLENN AMATEUR RADIO  
SOCIETY NEXT MEETING IS:**

**THURSDAY  
March 8, 2018  
565 Main street  
Artois, Ca.**

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**Future Meeting Dates for 2018**

**March 8**

**April 12**

**May 10**

**June 14**

**July 12**

**August 9**

**September 13**

**October 11**

**November 8**

**December 13**

