



GARS
Glenn Amateur Radio Society

KJ6HCG



The Prez Says:

Prez Says for May 2018

Welcome home Dorothy and John. We trust you folks found everything in order when you returned and that you are now caught up with chores, email, and phone messages. You were sorely missed!

The ARRL has posted the new rules for this years Field Day, 2018. I have downloaded a copy and will have it at our next membership meeting for all to peruse. We will be discussing this event and formalizing plans during the membership meeting. We have been granted access again this year to the Providence Christian Center site on Highway 32, just east of Orland.

The 'Run Your Tail Off 2018 5K/10K' event which was held on 14th of April, 2018, at the Buckhorn Camp ground, Black Butte lake, was a success. We had the Disaster Response Trailer (DTR) on site to use as the net control station, and to show it off to all event participants. The DTR was operated in battery mode using one of its new Anytone 5888UV III Tri-band FM transceivers and one of the new antennas. This all worked out very well! We also had several participants visit and walk through the DTR so the visibility the DTR had was a true success.

Last month at the GARS membership meeting I had a new NANO-SPOT operating and preformed a short demonstration. The NANO-SPOT is a completely self-contained digital hot spot that supports DMR, Dstar, P25 and System Fusion communications. Fully assembled and tested in a rugged extruded aluminum enclosure. All that's required for operation is a power source and a WiFi based internet connection.

This month I will also will have the NANO-SPOT at the meeting for another demo. I have not had much time to play with it but it holds much promise in future communication work. Also it is hopped Albert, N6YCK, will be present to talk to us about his adventures using new digital technologies and how he plans to interface them to the analog repeater world.

From now through the month of September we as a club will be busy planning for various happenings. As mentioned above, next month, there is the ARRL Field Day event. Then we have this years Steakbake in September (September 8th). Finalized plans are to hold this event at the Lutheran Fellowship Hall and or its adjoining park in Artois, CA. Start time we are embracing is around 12 noon.

A raffle prize has been donated to the club. We will begin selling raffle tickets during our membership meeting this month. Tickets are one for \$5.00 or 5 tickets for \$20.00. The donated prize is the AnyTone AT-D868UV, Digital DMR / Analog Radio. Will have the radio for all to see at this months meeting.

At this time I thank all for their support at the Run Your Tail Off event and look forward to your continued support and help in advancing the art of radio.

We will be meeting at the Artois Lutheran Fellowship Hall at 6:30pm, on Thursday, the 10th of May. 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, KF6OBIm .President, GARS

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Glenn Amateur Radio Society

“GAR’s mission is to promote the science of radio communications in all its forms, encourage the public service use of radio, and engage in radio experimentation.”

Thursday, May 10, 2018, 6:30 PM, Lutheran Hall, Artois, CA

Type of Meeting: Regular Monthly Meeting

Attendees: Mike, Phil,

Moderator: Mike Ellithorp, President (KF6OBI)

Items 1 thru 10 are to be completed within the first :30 of the meeting. Item 11 to continue about an hour.

	Topic	Responsible
1	Pledge of Allegiance to the Flag	All
2	Previous Meeting Minutes-- reading & approval	Phil, KI6SMN, Secty/Treas.
3	Financial Report— P.O. Box pd thru 3/31/19 \$62 Thrivent Choice Deposit: \$46	Phil, KI6SMN, Secty/Treas.
4	Old Business Disaster Trailer Report	KI6SMN & KF6OBI
5	Possible DRT Exercise: Ian Turnbull (AF6OA) 5/5-6	update by KI6SMN
6	Field Day 6/22 – 24, 2018	
7	Web Page Discussion —Jimdo account terminates 4/28	The Club Rick’s suggestion: terminate, register domain with Mike Go Daddy \$11.99 + \$.99
8	Run Your Tail Off:	
9	Youth Outreach —contact with 4H	Mike & Dj use WordPress platform for The Club HTML generation
10	Steak Bake	
11	New Business DRT MoU	
12	Future Club: Programs of Interest	
13	Fun Project or Presentation for the Evening	“Show & tell” – anyone who has brought an item or idea
	Station Practice	
	Hardware (antennas, radios, mesh, test eq)	
	Emergency Communications Center	
	UHF/VHF	
	HF	
	Digital: DMR/Winlink/Packet	
12	Other updates:	

Ckg Acct Balance: \$2,192.94

Additional information:

Notes

Next Meeting: 06/14/18 Date 18:30 Time Lutheran Hall in Artois Place

4/12/18

Present: Mike, Phil, Bob (KC6UIS), Hank, Howard, Lester, Tracy, Bob (BLT), and new member Mike Madalena (KJ6KIZ). [John & Dj continue to be out of town following a death in the family]
President Mike Ellithorp, KF6OBI, opened the meeting with the pledge at 18:45.

The **March minutes** were approved. They were included with the April agenda. **Moved:** Lester **Seconded:** Howard

Treasurer Phil reported the account balance is now \$2,192.94. The only expense was the \$62 for an annual renewal of the Club PO Box. It is now paid up thru 3/31/19. \$46 was received due to a Thrivent Choice selection by KI6SMN. Received by acclamation.

Old Business:

Disaster Trailer Report: KF6OBI reported the DMR firmware has been updated on the Motorola. VHF will be operational for the DRT's deployment to Saturday's Run Your Tail Off event. He is currently working on routing cabling and DC wiring for set up lighting and a third station to be located at the workbench. While 6 solar panels were donated for use on the trailer, the trailer roof only has room for three. A future decision will need to be made as to how to use the remaining three panels.

DRT Exercise, 5/5-6/18: Phil asked meeting attendees to continue to save the dates for the slow scan TV exercise with Ian Turnbull (AF6OA). Once final word is received concerning organization for the day, Phil will dispatch a post to the Club membership.

Field Day 6/22 – 24, 2018: Phil is still awaiting confirmation from Gordon Wiems, principal of Providence Christian School. If needed, Lutheran Hall will be the backup location for Field Day.

Web Page Discussion: After some discussion which included a note that there is a Club gmail account, it was **moved** by **Hank** and **seconded** by **Howard** that we close our account and domain registration with Jimdo effective with the current termination date of 4/28. In accordance with guidance by Rick (KI6VOS), establish domain registration with GoDaddy setting up either a .com or .club domain name. Under Rick's direction and action a new site will be created mirroring the current site using the WordPress platform.

In conjunction with this KJ6KIZ volunteered to create a Club FaceBook and MeWe account. The Club gmail account will be tied in with these two social media outlets.

Run Your Tail Off 4/14/18, 7am: Deployment of the DRT will take place such that all will be ready to go at the Buckhorn Campground boat ramp by 0730. All operators (Mike, Phil, Bob & Bob, and Hank) are asked to meet at the DRT at 0730. When arriving at the gate, simply ID selves as members of the Club and you will be provided with the necessary pass. All were cautioned to wear boots and long pants as the rattle snakes have begun to make their appearance. The N6YCK repeater will be used to handle the event traffic. The 10k er's will start the run at 0800 with the 5k er's at 0830. N6JOA, Charlie Porter from Davis, may join us as a visitor at 0930. He is significantly involved with the C.A.R.L.A. system and also has been doing some repeater work on 900cm. He is also a member of the Tri-Lutheran Emergency Response Team (Tri-LERT) and serves as net control for a Monday night DMR net at 1930 on TG 310703. Guests are welcome to check into this controlled net. It is reasonable to expect all will be able to be on their way home by late morning.

Youth Outreach: Nothing new. Mike did note he had done a zip code search concerning licensed hams in Glenn County & identified 31 operators with two of those being SK's. He also noted some are relatively new as they have "KK" call signs.

Steak Bake: The date is 9/8 at Lutheran Hall. Calendar conflicts precluded scheduling the event later in the month. Mike passed around the Anytone 868 dual bander for all to see what one of the raffle prizes will be. Raffle tickets will be \$5 @ or 5 for \$20. Phil is arranging for food to be provided and prepared for the day as one of his Thrivent Action Team events.

New Business:

DRT Memo of Understanding: This is a work in progress which will be brought to a future meeting.

Future Club Programs: Members were encouraged to continue to think of topics/presentations for future meetings.

Fun Projects: The balance of the meeting consisted of general conversations regarding a number of topics as well as the following:

DMR: Mike brought his NanoSpot and KI6SMN held a QSO with N6JOA on TG 310703.

Mike also gave an update on progress (which is minimal—waiting on the Forest Service) with the DMR repeater. Due to , access to the repeater location will be very limited until late May or maybe even June. He is gradually getting things put together for the Internet link.

As the meeting drew to a close, Lester noted that they will be away during the whole month of May.

The meeting concluded around 20:10. Meeting adjourned by Pres. Mike.

The **next meeting** is scheduled for **5/10/18, 18:30.**

RE144

The RE144 is a triode with a mu of 10 made by Telefunken for use in battery sets.



Length = 3.81" Diameter = 1.62"

Max voltage = 100

Max current = .7 ma

Fil voltage = 4

Fil current = 17 amps

[GOTO INDEX](#)

N6JV Tube of the Month

N6JV.com

Norm Wilson

“Alexa, help me with ham radio”

By Dan Romanchik, KB6NU

I have had an Amazon Alexa for nearly a year now. Mostly, I just use it to listen to internet radio stations or tell me a joke, but I think it has more potential than that. For example, I’ve written before about how I’d like to develop an Alexa skill to control my IC-7300. I haven’t gotten around to that yet, but, Joe, N3HEE, has just published an Alexa skill called Continuous Wave. It’s designed to help you learn Morse Code.

To use this skill, you have to first enable it. Once enabled, say, “Alexa, open Continuous Wave.” This opens the skill at the main menu. You can then say any of the following at any voice prompt...

- Learn
- Practice
- Alphabet
- Common words
- Random words
- Words
- Sentences
- Call signs
- Contest
- Quick Brown Fox
- QSO
- Help
- Stop – To end your session.

I’ve just played around with this app for a short time, but I’ve found it to be quite entertaining. It does, however, have one big drawback. You can’t set the speed. It’s currently limited to sending at 20 words per minute only.

Also, the learn function could use a little refining. When you give the command “learn,” it asks you for a character, sends that character three times, and then asks you for another. If you could set the speed at which the skill sends characters, it could teach a character like the K7QO Code Course, first sending the character slowly, then ramping up the speed.

Overall, though, I think this is a great first shot at a usable Alexa skill for teaching Morse Code. I hope this is the first of many versions of this skill.

Other ham radio skills

While I was poking around on Amazon, I decided to see what other amateur radio skills might be available. Here are a few that I found:

Ham Exam. Ask Alexa to ask you questions from the Technician Class question pool.

Alexa continued from page 5:

Ham Lookup. Allows you to look up amateurs by call sign. Information is provided from the callbook.info database.

Ham Radio Propagation Forecast. Reports the latest forecasts directly from HamQSL (run by N0NBH).

ARRL Audio News. Adds ARRL Audio News to your Alexa flash briefing.

Building your own voice app

The Continuous Wave Alexa skill was developed using tools found at VoiceApps.Com. Two other websites—Pullstring and StoryLine—also have tools to help you build voice apps. And, Amazon has an online tutorial that will teach you how to build an Alexa app. I'm just getting started with these tools, so I can't recommend one over the others, but they do look like they'll make developing voice apps easier.

Since I'm currently in the process of updating my *No Nonsense Technician Class License Study Guide*, it occurs to me that I should also develop an Alexa skill for drilling students on test questions. I guess you could call them audio flashcards. Stay tuned for that.

When he's not trying to figure out how to build voice apps, 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 about the voice apps that you like at cwgeek@kb6nu.com.

Sunspots Vanishing Faster than Expected

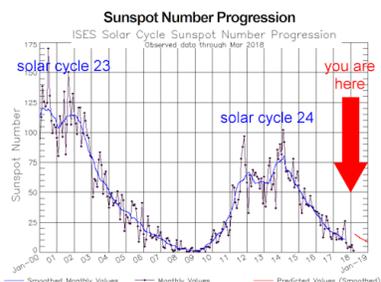
[May 1, 2018](#) / [Dr. Tony Phillips](#) (Spaceweather.com)

May 1, 2018: Sunspots are becoming scarce. Very scarce. So far in 2018 the sun has been blank almost 60% of the time, with whole weeks going by without sunspots. Today's sun, shown here in an image from NASA's Solar Dynamics Observatory, is typical of the feature-less solar disk:



The fact that sunspots are vanishing comes as no surprise. Forecasters have been saying for years that this would happen as the current solar cycle ("solar cycle 24") comes to an end. The surprise is how fast.

"Solar cycle 24 is declining more quickly than forecast," [announced](#) NOAA's Space Weather Prediction Center on April 26th. This plot shows observed sunspot numbers in blue vs. the official forecast in red:

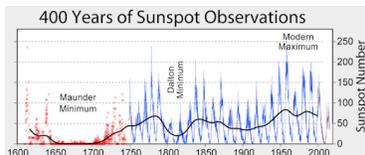


"The smoothed, predicted sunspot number for April-May 2018 is about 15," says NOAA.

"However, the actual monthly values have been [significantly] lower."

"Official" forecasts of the solar cycle come from NOAA's Solar Cycle Prediction Panel—a group of experts from NOAA, NASA, the US Air Force, universities and other research organizations. They have been convening at intervals since 1989 to predict the timing and intensity of Solar Max. The problem is, no one really knows how to predict the solar cycle. The most recent iteration of the panel in 2006-2008 compared [54 different methods](#) ranging from empirical extrapolations of historical data to cutting-edge supercomputer models of the sun's magnetic dynamo. None fully described what is happening now.

It's important to note that solar minimum is a normal part of the sunspot cycle. Sunspots have been disappearing (or nearly so) every ~11 years since 1843 when German astronomer Samuel Heinrich Schwabe discovered the periodic nature of solar activity. Sometimes they go away for decades, as happened during the Maunder Minimum of the 17th century. We've seen it all before. Or have we....?



Researchers are keeping a wary eye on the sun now because of what happened the last time sunspots disappeared. The solar minimum of 2008-2009 was unusually deep. The sun set Space Age records for low sunspot number, weak solar wind, and depressed solar irradiance. When the sun finally woke up a few years later, it seemed to have "solar minimum hangover."

The bounce-back Solar Max of 2012-2015 was the weakest solar maximum of the Space Age, prompting some to wonder if solar activity is entering a phase of sustained quiet. The faster-than-expected decline of the sunspot cycle now may support that idea.

Newcomers to the field are often surprised to learn that a lot happens during solar minimum: [The sun dims](#), albeit slightly. NASA recently launched a new sensor (TSIS-1) to the International Space Station to monitor this effect. With less extreme UV radiation coming from the sun, Earth's upper atmosphere cools and shrinks. This allows space junk to accumulate in low Earth orbit.



Above: A neutron bubble chamber in an airplane 35,000 feet above Greenland. Spaceweather.com and the students of Earth to Sky Calculus are flying these sensors to measure aviation radiation during solar minimum.

The most important change, however, may be the increase in cosmic rays. Flagging solar wind pressure during solar minimum allows cosmic rays from deep space to penetrate the inner solar system. Right now, space weather balloons and NASA spacecraft are measuring [an uptick in radiation](#) due to this effect. Cosmic rays may alter the chemistry of Earth's upper atmosphere, trigger lightning, and seed clouds.

Air travelers are affected, too. It is well known that cosmic rays penetrate airplanes. Passengers on long commercial flights receive doses similar to dental X-rays during a single trip, while pilots have been classified as occupational radiation workers by the International Commission on Radiological Protection (ICRP). Ongoing measurements by Spaceweather.com and Earth to Sky Calculus show that dose rates at cruising altitudes of 35,000 feet are currently ~40 times greater than on the ground below, values which could increase as the solar cycle wanes. Solar minimum is just getting started.

Stay tuned for updates.

Club Officers: (Board of Directors)

PresidentMike 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.

**EditorDorothy Post
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Please send all submission for publication through the fol-
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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
May 10, 2018
565 Main street
Artois, Ca.**

Future Meeting Dates for 2018

May 10

June 14

July 12

August 9

September 13

October 11

November 8

December 13

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