



The Kern River Voice

The Monthly Newsletter of the
Sequoia Amateur Radio Group



Volume 15 Issue 5

May 2020

N6KRV – An ARRL Affiliated Club

PO Box 2446, Lake Isabella CA 93240

<http://www.n6krv.org>



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Past President

Bill Hesse N6TF
.....

ARES Net

Monday – 6:45 PM
145.450 (-) PL 156.7

Club Nets

HF Net –Tue / Thu & Sat 8 PM
3.773 MHz

VHF Net – Friday 7PM
145.450 (-) PL 156.7

Prune Juice & BS Net

Daily (exc. Sunday) 9AM
145.450 (-) PL 156.7

SARG Monthly Meetings

2nd Sat. (exc. Dec.) 9:30AM
KRV Elk's Lodge
6708 Wofford Blvd.,
Wofford Heights, CA 93285



The Prez Sez:

Well here it is time to write another "The Prez Says" and we're still confined to our homes. Although we are slowly starting to open America back up it's going to be a long and slow process. It's pretty clear now that there will be no meeting at the Elks club in May! I hope the fog clears soon so we'll be able to get back together. When we do I suspect it will really be a great one. Especially with the computer and a couple of radios to be auctioned off. There should be a field day report too. I'm not sure who the speaker will be, but I have faith in Cheryl to have a great one to start us going again.

Meanwhile Prune Juice and baloney is still served at 09:00 each morning and serves very well to break up the monotony. Those of us who participate always go away with a smile to start the day. Remember the frequency is 145.45 negative off set and a PL of 156.7 Hertz.

I hope and pray that our country can recover and reopen soon.

73

Don Jefferson KC6OCA



VE Exams

In view of many factors it has become necessary to suspend any upcoming examination sessions. I did not wish to have to do this, but it would be unsafe for everyone involved to ignore the obvious risks associated with the close social contact that would be required to properly hold and monitor a license examination session. As soon as possible after the COVID-19 infection and death rate has peaked and begun to decline, a session, or sessions, will be scheduled to obtain or upgrade your license. It is anticipated that this will not occur until after the Governor lifts his travel and stay at home restrictions. If you would like to be placed on a "waiting list" please email mike@n6krv.org and you will be contacted as soon as sessions are once again available. These sessions will not necessarily be on the normal second Saturday of the month, so if you have a preferred day of the

OUR NEXT MEETING: Our next meeting has been canceled as have all future meetings due to the Covid-19 crisis, along with the popular Prune Juice Luncheons.

When meetings and luncheons are resumed you will be notified by email as well as in this newsletter.

Please stay safe, well and at home. -Editor-



“Exams” continued.....
week and time of day please let me know in your email. The team of examiners will try our best to get going as soon as practical and hold as many sessions as needed until things return to “normal”, whenever and whatever that turns out to be. Mike KA6IYS – Lead Examiner

Some upcoming Events:

Annual Swap Meet and Potluck..(Canceled)
ARRL Field Day (June 27-28)
Ice Cream Social..(July meeting)



SICKNESS AND DISTRESS

If you hear of any of our members who aren't feeling so well, please let Christine Hesse KK6AZQ know so she can get a card out to them. Keep those prayers going.....

Knock! Knock!

Who's there?
Tad
Tad who?
Tad's all folks!

This month in History

May 1st - Observed as *May Day*, a holiday and spring festival since ancient times, also observed in socialist countries as a workers' holiday or Labor Day.

May 4, 1886 - The Haymarket Square Riot occurred in Chicago after 180 police officers advanced on 1,300 persons gathered in the square listening to speeches of labor activists and anarchists. A bomb was thrown. Seven policemen were killed and over 50 wounded. Four anarchists were then charged with conspiracy to kill, convicted and hanged while another committed suicide in jail. Three others were given lengthy jail terms.

May 7, 1992 - The 27th Amendment to the U.S. Constitution was ratified, prohibiting Congress from giving itself pay raises.

Birthdays May 7 - Composer Johannes Brahms (1833-1897) was born in Hamburg, Germany. He composed over 300 songs and numerous orchestral, choral, piano, and chamber works, including his *German Requiem* commemorating the death of his mother.

May 15, 1972 - George Wallace was shot while campaigning for the presidency in Laurel, Maryland. As a result, Wallace was permanently paralyzed from the waist down.

May 18, 1980 - Mount St. Helens volcano erupted in southwestern Washington State spewing steam and ash over 11 miles into the sky. This was the first major eruption since 1857.

May 22, 1972 - President Richard Nixon became the first American president to visit Moscow. Four days later, Nixon and Soviet Russia's leader Leonid Brezhnev signed a pact pledging to freeze nuclear arsenals at current levels.

May 24, 1844 - Telegraph inventor Samuel Morse sent the first official telegraph message, "What hath God wrought?" from the Capitol building in Washington, D.C., to Baltimore.

May 25, 1787 - The Constitutional Convention began in Philadelphia with delegates from seven states forming a quorum.

From the ARRL:

NOAA Updates Solar Cycle 25 Prediction

04/22/2020

Frank Donovan, W3LPL, notes that the National Oceanic and Atmospheric Administration (NOAA) Space Weather Prediction Center ([SWPC](#)) has published its official updated prediction of Solar Cycle 25 in new, interactive [Solar Cycle Progression graphs](#). The updated prediction is based on the results of NOAA's Solar Cycle 25 Prediction Panel.

"SWPC forecasts a solar maximum between 105 and 125, with the peak occurring between November 2024 and March 2026," Donovan said. "There is broad consensus that solar minimum is ongoing this year — or may have already occurred — and that Cycle 25 will have no major change in the level of solar activity compared to Cycle 24."

As Donovan explained, for many years the SWPC's solar cycle predictions have used the Royal Observatory of Belgium's International Sunspot Number. SWPC's official solar cycle prediction now uses the SWPC sunspot number. The International Sunspot Number is typically about one-third lower than the SWPC sunspot number.

"While this is SWPC's official Cycle 25 prediction, it's important to note there is still divergence among various forecasting methods and members of the space weather forecasting community," Donovan said. "Most forecasts and forecasters agree that the Cycle 25 peak is likely to be within $\pm 20\%$ of Cycle 24 and is likely to occur between 2024 and 2027."

[More information](#) is on the Springer Nature website. — Thanks to [The Daily DX](#)



Hams in India Provide Communication Assistance during COVID-19 Pandemic

According to a [report](#) in *The New Indian Express*, amateur radio operators in Kerala state have joined the fight against COVID-19. The newspaper said the district administration has enlisted radio amateurs to improve important communication between departments and offices.

Radio Amateur Society of Ananthapuri President Dr. Zakheer Hussain, VU3OOH, said using ham radio during the time of crisis would help coordinate crucial communication. "We have assigned our teams at the district medical office and taluk [administrative subdivision] offices," Hussain told the paper. "We have a team at the district administration, which is the center of all action." He said help lines now in operation receive many calls, including distress calls. "If anyone is in need of emergency medical care, we immediately inform the respective taluk office and the ambulance desk, so that help reaches in time," he said. *The Times of India* [reports](#) that a radio amateur in West Bengal drove 98 kilometers (61 miles) to deliver medicines to an elderly resident of Rahara. "We have been providing assistance to people ever since the lockdown was announced," said Ambarish Nag Biswas, VU2JFA, the secretary of the [West Bengal Radio Club](#).

-Q: What does a lion call a antelope?



A: Fast food.

Let me hear from you if you like or don't like what you've seen in this issue of *your* "Kern River Voice". EDITOR@N6KRV.ORG

Ham Radio Glossary

Editor's note:

Although I have run "Ham Radio Glossary" in past editions and have already covered it all "from A to Z" it is my intention to cover it all again. This is intended as a service to the new "Ham" as well as gentle reminders for the seasoned veteran.

O-

Ohm -- The basic unit of electrical resistance, used to describe the amount of opposition to current.

Ohm's Law -- A basic law of electronics. Ohm's Law gives a relationship between voltage (E), current (I) and resistance (R). The voltage applied to a circuit is equal to the current through the circuit times the resistance of the circuit ($E = IR$).

One-way communications -- Transmissions that are not intended to be answered. The FCC strictly limits the types of one-way communications allowed on the amateur bands.

Open circuit -- An electrical circuit that does not have a complete path, so current can't flow through the circuit.

Open repeater -- A repeater that can be used by all hams who have a license that authorizes operation on the repeater frequencies.

Operator/primary station license -- An amateur license actually includes two licenses in one. The operator license is that portion of an Amateur Radio license that gives permission to operate an amateur station. The primary station license is that portion of an Amateur Radio license that authorizes an amateur station at a specific location. The station license also lists the call sign of that station.

Output frequency -- A repeater's transmitting frequency. To use a repeater, transmit on the input frequency and receive on the output frequency.

P-

Packet radio -- A system of digital communication whereby information is broken into short bursts. The

bursts ("packets") also contain addressing and error-detection information.

Parallel circuit -- An electrical circuit in which the electrons follow more than one path in going from the negative supply terminal to the positive terminal.

Parasitic beam antenna -- Another name for the beam antenna.

Parasitic element -- Part of a directive antenna that derives energy from mutual coupling with the driven element. Parasitic elements are not connected directly to the feed line.

Peak envelope power (PEP) -- The average power of a signal at its largest amplitude peak.

Pecuniary -- Payment of any type, whether money or other goods. Amateurs may not operate their stations in return for any type of payment.

Phone -- Another name for voice communications.

Phone emission -- The FCC name for voice or other sound transmissions.

Phonetic alphabet -- Standard words used on voice modes to make it easier to understand letters of the alphabet, such as those in call signs. The call sign KA6LMN stated phonetically is Kilo Alfa Six Lima Mike November.

Pico -- The metric prefix for 10^{-12} , or divide by 1,000,000,000,000. PL (see CTCSS)

PL -- (Also known as CTCSS - Continuous Tone-Coded Squelch System) A sub-audible tone system used on some repeaters. When added to a carrier, a CTCSS tone allows a receiver to accept a signal.

PNP transistor -- A transistor that has a layer of N-type semiconductor material sandwiched between layers of P-type semiconductor material.

Polarization -- The electrical-field characteristic of a radio wave. An antenna that is parallel to the surface of the earth, such as a dipole, produces horizontally polarized waves. One that is perpendicular to the earth's surface, such as a quarter-wave vertical, produces vertically polarized waves. An antenna that has both horizontal and vertical polarization is said to be circularly polarized.

Also from the ARRL:

Emergency Ventilator Designed and Constructed by Hams Going to FDA

04/27/2020

Radio amateurs have succeeded in providing a complete, working ventilator system to University of Florida researchers who are in the process of applying to the Food and Drug Administration for an Emergency Use Authorization (EUA). A successful submission would blaze the way for volunteers and manufacturers around the world to create low-cost, highly functional Intensive Care Unit (ICU) or anesthesia-care ventilators that offer many of the features of modern ventilators at a fraction of the typical cost. Dr. Gordon Gibby, KX4Z, who is associated with the project, said efforts to further improve the device are ongoing.

“We made a stunning improvement in accuracy of the system and measuring volumes last night at about 1 AM,” he told ARRL. “Accuracy of that particular alarm measurement went from about 300%, down to about 10%. The FDA submission is being readied, but we keep making engineering improvements.”

Gibby credited some of the primary volunteers. “Bob Benedict, KD8CGH, has provided incredible volunteer testing, now exceeding 1.6 million cycles on one crucial valve and 300,000 on another. Jack Purdum, W8TEE, is the main ‘code-cleaner’ for one of multiple teams building software, following the initial lead of Marcelo Varanda, VA3MVB. Ashhar Farhan, VU2ESE, not only created the ventilator controller schematic but the printed circuit board layout that will be part of an expected University of Florida submission.” Farhan was among the founding code writers of what we now know as Voice over Internet Protocol (VoIP).

Other hams worked on mechanical designs for flow measurements and retooled potential manufacturing capabilities otherwise used to produce transceivers.

In another example of ham radio ingenuity, Marc Winzenried, WA9ZCO, modified a readily available lawn sprinkler to serve as a durable expiratory valve. This development enabled the ventilator to go more than 1 million breaths before significant valve issues developed, and the part can be replaced for less than \$15.

The completed prototype in Florida was built using typical tools by a radio amateur, and assembled boards provided by LifeMech, a manufacturer working with the project. Farhan crafted an extendable menu structure for the Arduino Nano-based controller, and gas-flow measurements are made every few milliseconds by an I2C-based differential pressure transducer that can measure down to tiny PSI fractions, allowing the design to accurately track patient-induced variations in the volume of delivered gasses.

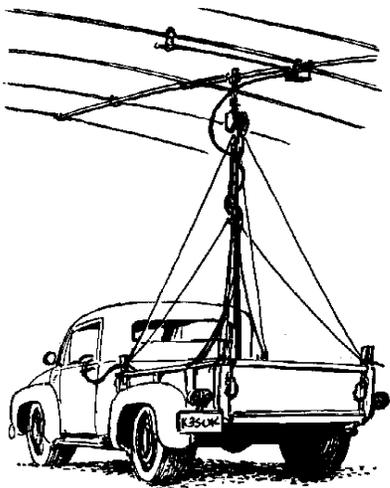
“Using Winzenried’s expiratory valve, electronic on-off control at the rate of 30 Hz allows modulation of the valve to set the continuous airway pressure used to keep the patient’s lung alveoli open against virus-induced water-logging of the connective tissue,” Gibby explained. An improved software design allows faster monitoring that accurately measures patient breaths despite gas flow perturbations, with the only valve component showing wear after nearly a million cycles is the nitrile diaphragm.

“Perhaps the most surprising development was the addition of the ability to sense patient effort to take a breath and immediately switch to assisting the patient with that breath, known as ‘assist-control’ ventilation,” Gibby said. “This is expected to allow far lighter sedation of patients — potentially even no sedation — and allows patients’ crucial respiratory muscles to keep up their strength.” He said the current design goes far beyond the FDA’s guidance document for emergency ventilator development.

Radio amateurs delivered the operational control system, basic manufacturing instructions, software, and software explanation to the University of Florida on April 24.

Too Much Praise

Once there was a guy named Bill who wanted a horse. On Craigslist, Bill saw a Christian horse so he went to check it out. When Bill got to the ranch, the horse's owner said "It's easy to ride him. Just say 'praise the Lord' to make him go, and 'amen' to make him stop." Bill got on the horse and said "praise the Lord." the horse started to walk. "Praise the Lord, praise the Lord, praise the Lord" and the horse is running. Now Bill sees the cliff and says: "AMEN." The horse stops and Bill says: "Whew! Praise the lord!"



***I rang the doctor and said,
“Quick! My pregnant wife’s
going into labor, what should
I do?” He said, “Is this her
first child?” I said, “No, this
is her husband!”***

Recent Email received from Pete, W6SV:

Subject: “Le Sag du Mousse”

To: William Hesse, Mike Higgins, Chuck Caudell
Tue, Apr 21 at 8:55 AM

Okay, yesterday afternoon I was outside. On returning I noticed a trail of dog food leading from my dog dish next to the bar, across the front room and into the dining room. I picked up a handful of kibbles and cursed the dogs. Then it struck, why would the dogs take food into the dining room, they had no guests. Eating at the bar was normal, why the dining room. I opened up the cupboard in which we store our old record collection. Yeah in the dining room cupboard. Where else would you stash several hundred albums. The cupboard was full of mouse droppings and spider webs, had not been opened in YEARS. YUCK. Cleaned out said mess and headed for the trash can with the cleaning stuff dirtied.

My trash can has a foot step to open the top. With hands full I stepped on the pedal and the lid barely opened. Strange. Opened it by hand and dumped in the rot. Stepped on the pedal and nothing.

Huh? Picked up the trash can to check out the foot pedal mechanism and there they were. Two traps complete with dead mice!

Call off the search my traps are back in action!

M.P. "Pete" Higginbotham
Walker Basin, Ca. ? W6SV (reprinted by permission)





MAY 2020

Serving the Kern River Valley and Walker Basin



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