



Short Skip

Volume 68 Issue 7

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REPEATERS

Freq	Location
147.000	Merrillville
147.240	St. John
442.075	Merrillville

All Lake County ARC Repeaters are open to all amateurs. All repeaters must have a PL of 131.8 set in order to access.

FROM THE PARADE STAND

by Tim, N9CA, LCARC President



The next LCARC meeting is Friday July 12th at 7:30pm. The program will be; “Weak Signal Propagation Reporter Network” or WSPR.

WSPR is yet another one of Joe Taylor’s K1JT clever digital mode software programs. Using the program on your computer will quickly show you what ham bands are open – and to where - in real time. It will also help you with your antenna experiments. Come find out how WSPR works and how to use this free program to help save yourself both time and some frustration.

Growing up, many of us might remember the Dick Tracy cartoon character and his fantasy “wrist radio” helping him fight crime. As time marched on, Dick traded in his wrist watch radio for an even more impossible to believe (at the time) wrist watch video phone. As a kid, I also remember a display called “World of Tomorrow” at the Chicago Museum of Science and Industry. There was a prototype of how we would not only talk to our friends by telephone but have live video too. Today Apple and Samsung smart watches and smart phones make those “are you kidding me” futuristic dreams an everyday reality we pretty much now take for granted.

On the subject of Science Fiction come to reality, is the recently launched “LightSail 2 CubeSat”. With the help of Bill Nye (the science guy) and the citizen funded Planetary Society, LightSail 2 was lifted into space aboard the private rocket company SpaceX Falcon heavy rocket on June 25th. The SpaceX rocket also carried a payload of 2 dozen spacecraft for the US Air Force and US Navy.

LightSail 2 is orbiting 446 miles up protected inside a washing machine sized space vehicle built by Georgia Tech students called Prox-1. LightSail2 will be released from Prox-1 on July 2nd. Two weeks after being released, LightSail 2 will open it’s aluminized Mylar wings. Photons of light from the Sun will hit and push the CubeSat’s wings giving it propulsion. This is something dreamed about by many a space travel science fiction author.

Once released, LightSail 2 will be transmitting telemetry every few seconds plus a CW beacon every 45 seconds signing “LS2” on 437.025 MHz within our 70cm band.

Some of other student built satellites being released from the same launch will transmit; telemetry, APRS, DTMF, and SSTV! Uplinks on 10 meters, 2 meters, and downlinks on 70cm. More details at www.planetary.org. Move over Sputnik!

73, Tim/N9CA



Member Mark, K9MQ, forwarded this picture to me. — ed

He says “ You might want to let everyone know in Short Skip that the former Crown Point Radio Shack is now a Hemp/ CBD store. I am sure most of our members could benefit from some CBD.

Be advised that CBD oil is made from HEMP not Marijuana. It is NOT hallucinogenic and does not give one a “high”. Some folks claim it does reduce pain. This is not an endorsement just for your edification. — ed.

MEETING MINUTES

April 12, 2019— Russ, KB9HO

- Meeting called to order at 7:34PM at Tyler's Tender.
- Introductions were made with 22 attending the meeting
- Minutes were read and accepted as read.
- Treasury's report was read by Russ KB9HO for Jim.

Tower Inspection was brought up. Ken said that Bartronics did the last inspection and was questioning how much it cost. It is believed that the lightening rod at the top needs to be replaced.

The members only password for the club web site has been updated. This will get members into being able to find out what members phone number or address are so people may be contacted. The website manager John, W9WY broke his arm (right of course) so there is not June Short Skip.

And I am struggling to get this one out!! --ed

Tim went to the St. John repeater site and has pictures of what the antenna site is at and what can be seen. He was able to access the repeater without any problems. The agreement between the Crystal Lake repeater and our club has been made. The agreement has been that the Crystal repeater will cause no interference and they will be the ones to correct any problems. Tim has done a plot analyzes which show a very low probability of any interference between repeaters. The St. John repeater will stay in operation now as it can still be used.

The club will not have a field day but Bill will set up for field day at the site the Lake County Club normally did the setup. Tom W8FIB has setup a Field day site in Shelby and will need operators to work the night time schedules. He is also looking for GOTA operators. Operators that have not been on the air for over 2 years or new operators.

Program started at 8:02PM about the ARRL 100 anniversary. Program for July is needed.

Meeting adjourned at 8:35PM

NEED HELP? CALL ON THESE ELMERS

Tim N9CA
Bill N4GIX
Bill Young N9QLS
Russ KB9HO
Andy W9FXT.

Also it was mentioned Mark K9MQ is an ARRL Tech Specialist and can be called on.

The club has been informed that Bowman Electronics in Valparaiso will do tower climbing and antenna repair. Give them a call at: (219) 462-7933 or stop and see them at: 504 Marquette St, Valparaiso, IN 46383

HAMS HELP TRACE MYSTERY SIGNAL DISRUPTING KEYLESS ENTRY DEVICES IN OHIO

ARRL Letter 5/7/2019



A recent article in The New York Times reported that many garage door openers and keyless vehicle entry fobs in an Ohio town near Cleveland mysteriously stopped working. While the article invoked The X-Files and hinted initially that a NASA research center some-

how could be involved, the cause was not so much mystifying as arcane.

"Garage door repair people, local ham radio enthusiasts, and other volunteer investigators descended on the neighborhood with various meters," the May 4 article by Heather Murphy recounted. "Everyone agreed that something powerful was interfering with the radio frequency that many fobs rely on, but no one could identify the source."

More than a dozen residents reported intermittent issues getting their key fobs and garage door openers to operate, and most lived within a few blocks of each other. At one point, the local power utility started shutting off power to areas where the strongest RF signal was detected, but the signal persisted. Dan Dalessandro, WB8ZQH, a TV repairer, was among several hams who investigated. He initially picked up "little blips" on a signal detector, but finally, on one block and at a particular house, the signal was quite loud.

"The source of the problem was a homebrew, battery-operated device designed by a local resident to alert him if someone was upstairs when he was working in his basement," the Times reported. "It did so by turning off a light." The individual, who, the article said, has special needs, was not identified for privacy concerns. The inventor, who had no malicious intent, had no inkling that his device was wreaking havoc on the neighborhood until a North Olmstead City Council member and a volunteer knocked on his door. The device operated on 315 MHz, the frequency many keyless-entry devices use under FCC Part 15 rules. The device's battery was removed, the signal stopped, and all who were involved breathed sighs of relief.

JULY PROGRAM

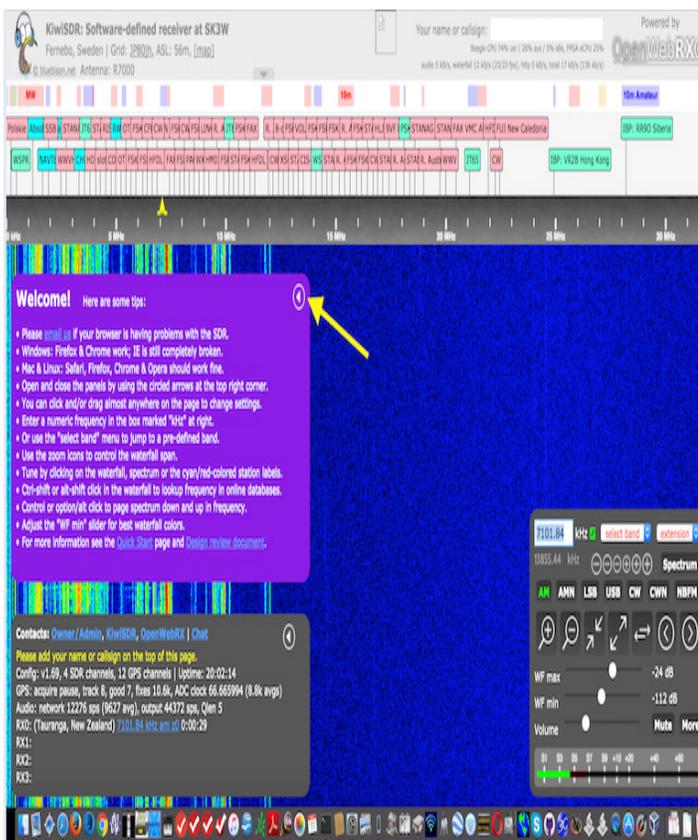
"Weak Signal Propagation Reporter Network" or WSPR.



Scan this code to go
directly to our web page
w9lj.org

K9MQ KiwiSDR Receiver now online!

by Mark, K9MQ



I would like to announce the public availability of my KiwiSDR online receiver, the second one in Indiana and the first in North-west Indiana.

This receiver supports up to four simultaneous users covering 0 thru 30mhz. No additional software to install, everything works right from your web browser (while it works on a mobile phone, it's not the best way to access the receiver) with a beautiful pan adapter. The receiver is connected to a 62ft loop vertically oriented.

KiwiSDR has built in decoders (extensions) for CW, Fax, FSK, Navtek, SSTV, and WSPR. It is also capable of doing TDoA (direction finding) in conjunction with other KiwiSDR's on the cloud.

You can access the K9MQ KiwiSDR at: <http://kiwisdr.k9mq.com>

User Guide: http://kiwisdr.com/ks/using_Kiwi.html

Other KiwiSDR's can be accessed at: <http://ve3sun.com/KiwiSDR/>

I have also obtained the 44.48.190.0/29 subnet from AMPRnet. It is my hope for my KiwiSDR to eventually have a Network 44 Public IP. While I was able to establish connectivity with my subnet, I did not have enough bandwidth using the tunnel method to support a KiwiSDR connection.

73 Mark, K9MQ

The Spectrum Monitor is Online

Check out this issue and consider subscribing. Old Magazine with great articles about radio monitoring. - ed

Stories you'll find in our July, 2019 issue:

Superpower AM Radio in the United States: Why it Failed
By John F. Schneider W9FGH

The term "superpower" was used frequently in the early years of American radio broadcasting, but its exact definition was continually evolving. In 1923, superpower referred to the newly-authorized 1,000 watt "Class B" stations. By 1926 WGY, Schenectady, New York, conducted the first ever test at 50,000 watts. By 1930 WGY had conducted tests at 200 kW, a signal heard in Alaska and Hawaii. But that station was not alone. Many others were eager to explore the possibilities of even higher power: 500 kW! What happened to all that enthusiasm for superpower? John goes deep into this engineering and regulatory jungle that saw broadcast titans trying to use the FCC to dominate America's airwaves.

Rocking the Stasi

By Scott A. Caldwell

In June 1961, Berlin was a divided city. Viewed from the outside, East Germany, which surrounded Berlin, represented a closed society, dominated by the secret police known universally as the Stasi. But East Germany was vulnerable to Western culture and political ideology through the medium of radio that could not be regulated by the Stasi or the ruling Socialist Unity Party, which resulted in an electronic war of the ether. Scott traces the course of this battle of the airwaves that lasted from the end of World War II to the 1980s and the end of the Cold War.

Overlooked Radio Heroine: The Life, Work and Inventions of Hedy Lamarr

By Georg Wiessala

Hedy Lamarr was born in Austria in 1914 and rose to stellar fame in Hollywood as a film actress and as a multi-talented inventor. Georg looks at the life and work as his most favorite (and most overlooked) radio heroines, without whom today's Wi-Fi, GPS and Bluetooth technologies would be impossible. He explains why The Guardian claimed, "Lamarr's story is one of a brilliant woman who was consistently underestimated."

Inside the VTVM: Lafayette KT-174 and PACO V-70

By Rich Post KB8TAD

The VTVM (vacuum tube voltmeter) was the standard instrument for measuring DC and AC for radio and television service shops from the late 1940s to the end of the vacuum tube era in the 1970s. The sensitivity of the typical service VTVM on DC measurement was 11 megohms regardless of scale. Specialty VTVMs such as the Hewlett-Packard HP-410 offered much higher sensitivity but were high-priced lab-quality instruments and not typically found in radio-TV service shops. Rich takes a close look at two amateur favorites from the era.

Scanning America

By Dan Veeneman

continued on page4

FOR SALE: Got some radio gear for sale? Looking for some radio gear to purchase? Check out the new FOR SALE page on the club's website — <https://lcarc.weebly.com/> -sale. Scroll down to see the most current items or click on the ARCHIVE section to see items for sale in previous months. If you have something that has been sold, be sure to contact John, W9WY for information to have your listing removed. There is no charge for club members to list their items. This is a service for members.

Monitoring Times — Continued from page 4

Oakland County (MI); Jasper County (MO)
Federal Wavelengths
By Chris Parris
NIH Trunked System Update
Milcom
By Larry Van Horn N5FPW
Monitoring Air Route Traffic Control Centers
Utility Planet
By Hugh Stegman
Chasing German Weather RTTY
Shortwave Utility Logs
By Hugh Stegman and Mike Chace-Ortiz
VHF and Above
By Joe Lynch N6CL
Opensource Picosatellite Development
Digitally Speaking
By Cory Sickles WA3UVV
The Network is the Repeater
Amateur Radio Insights
By Kirk Kleinschmidt NT0Z
100 Years from Now
Radio 101
By Ken Reitz KS4ZR
Emergency Preparations
Radio Propagation
By Tomas Hood NW7US
Current Rough Shortwave

Conditions
The World of Shortwave Listening
By Ken Reitz KS4ZR
Digital Radio Mondiale: Testing, Testing, Testing
The Shortwave Listener
By Fred Waterer
World Sport Coverage on Shortwave; July Shortwave Programming Update
Maritime Monitoring
By Ron Walsh VE3GO
Water, Water, Everywhere!
Adventures in Radio Restoration
By Rich Post KB8TAD
Introducing the National HRO
Antenna Connections
By Dan Farber AC0LW
Magic Band: Antennas for Six Meters
The Spectrum Monitor is available in PDF format which can be read on any desktop, laptop, iPad®, Kindle® Fire, or other device capable of opening a PDF file. Annual subscription is \$24. Individual monthly issues are available for \$3 each.

Hollywood Star or Radio Scientist?

by Laura Schneider



Why not both? A big name in MGM's "Golden Age", Hedy Lamarr starred in many films as an actress (Ecstasy, Samson and Delilah), but also contributed to one of the most crucial scientific developments of our time.

Along with many other clever solutions, she co-invented an early technique for spread spectrum communications. This was crucial to the many wireless com-

munications of our present day.

According to Melanie Phillips (2018), Hedy referred to her project as the "secret communications system" and began developing it around World War II. Her "SCS" was originally designed to help ships fire torpedoes.

These are powerful but difficult to control weapons, and they could often go off course and damage the wrong target. There was a desperate need for a system that could reliably control these torpedoes.

She found her answer in radio systems. At first, radio contact was used between the torpedo and the ship that it was sent from. This allowed for a great deal of control. However, if the opposing forces figured out what frequency the torpedo and the ship were communicating on, they could just block that frequency. Control would be lost, and the torpedo would go off course.

Hedy and a composer called George Antheil solved this issue and created a system that allows the two vessels to communicate by jumping between different radio frequencies. Due to the ever-changing frequencies the connection became impossible to intercept, and the problem was solved!

At first, her idea was laughed at, and people told her to "go back to being an actress." However, everyone came around as they realized just how invaluable her invention truly was.

Hedy proves that anyone can be an inventor, if you have the drive and passion to make it work! Her system allowed for the much-needed security during World War II, but over time it became the foundation of military communications, cellphones and bluetooth!

Our wireless lives are all thanks to Hedy Lamarr and the power of the radio!

Article adapted from <https://www.womenshistory.org/education-resources/biographies/hedy-lamarr>

Do not confuse this Hedy Lamarr with HEDLY LAMAR, the character in "Blazing Saddles" -- ed

WEBSITE OF INTEREST

Click on the highlighted links to go to the website

Check out the West Mountain Radio Website at <http://www.westmountainradio.com/pdf/Quarter-2-2019.pdf>. Lots of good information not just on their products but ham radio topics as well.

Interested in DX? Join (FREE) the NWI DX Club and/or read the monthly newsletter. See them on the web at: <http://nwidx-club.weebly.com/>

FREE!!!

For LCARC members,

I was cleaning my shack the other night (it needed it!) and found an unopened/sealed package of #564 ink cartridges.

These are for an HP scanner/printer/copier that I no longer own.

If you can use a set of #564 HP (color/b & w) ink cartridges, let me know.

They're free/gratis/on the house/ or "nothing down and nothing a month."

Bill, N9QLS