



# SHORT SKIP

Volume 65 Issue 11

November 2017

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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



What if? and Why not?

When a problem gets in our way. How often have we thought: "wouldn't it be great if... or, I wish we could...?" But, what if we actually could?

As humans we have three fears holding us back; fear of failure, fear of the weight of success, and fear of rejection. These action stopping fears get ingrained over the years. Many a young person has tackled a problem that seemed unsolvable to most of us (we call it youthful enthusiasm) but then solved it. We all need to lead the way, fight complacency, make noise, rather than stay safe in the dull middle of the road.

If you have a dream or challenge, focus your energy on how to solve the obstacles. Keep asking yourself "Why not?". Formulate and write an action plan to your goal.

The next few paragraphs is news about a new AM-STAT CubeSat. The students who designed and built it got their engineering spark and later NASA internships from their High School science STEM classes that taught model rocketry projects.

Locally, we have a Hobart school balloon launch coming up in a few weeks. Other local middle and high

school students are getting their "spark" from; affordable drones, wireless networks, leaning to program Arduino computers, robotic STEM classes, 3D printing, writing phone apps, fiber optics, solar and wind power generation, as well as studying the Earth's bio system.

I feel Amateur Radio and our Club can be a spark to help launch local technical careers. Technology advances are happening rapidly in HR. Let's give it a try, after all why not? New things are fun, ham radio is fun, let's explore the possibilities.

ARLS011 RadFxCat (Fox-1B) FM Satellite Set to Launch in November

The next AMSAT Fox-1 satellite, RadFxCat (Fox-1B), is scheduled to launch on November 10 at 0947 UTC. RadFxCat (Fox-1B), is one of four CubeSats making up the NASA ELaNa XIV mission, riding aboard the Joint Polar Satellite System-1 (JPSS-1) mission.

RadFxCat is a partnership with Vanderbilt University Institute for Space and Defense Electronics (ISDE) and hosts four payloads for the study of radiation effects on commercial off-the-shelf components. It will carry a Fox-1 style FM U/V repeater with an uplink on 435.250 MHz (67.0 Hz CTCSS) and a downlink on 145.960 MHz. Satellite and experiment telemetry will be downlinked via the DUV subaudible telemetry stream, decoded using FoxTelem software.

The FoxTelem software;

<https://www.amsat.org/fox-telem-software-for-windows-mac-linux/>.

Educational Launch of Nanosatellites (ELaNa) is an exciting initiative created by NASA to attract and retain students in the science, technology, engineering and mathematics (STEM) disciplines. Managed by the Launch Services Program (LSP) at NASA's Kennedy Space Center in Florida, ELaNa reaches students by introducing educational spaceflight in high schools and colleges across the United States.

Students are heavily involved in all aspects of the mission from developing, assembling, and testing payloads to working with NASA and the launch vehicle integration teams. The ELaNa nanosatellites, or CubeSats,

CubeSats are designed in standard units of 10x10x10 cm, about 4 inches cubed. CubeSats can be built in a single unit, or combined in units of two, three or six. A single unit must weigh less than 1.33 kg, or 3 pounds. The tiny satellites are deployed one after another by (P-POD), a CubeSat carrier system designed and built by Cal Poly students.

A Radio Shack in Tennessee has reopened and partnered with a local Ham Radio Club. The store and Club are offering; ham radio licensing classes, a maker's space, classes on soldering, drone technology,

*continued on page5*

## MEETING MINUTES

October 13, 2017

Introductions made with 17 attending  
INPOTA discussions were made and how to improve the club event.

### New Business

Treasury's report was read by Kenny KE9TC

Nick made motion to donate \$25.00 to Red Cross and \$25.00 to the Salvation Army.

Motion seconded by W9WY John and motion carried with 1 nay.

Mark W9MQ is assisting a high altitude balloon launch where 2 balloons will be launched at the same time. November 2 is the date set for the launch. Mark will not require help but anyone wanting to see the launch and help will be welcome.

W8FIB spoke about Porter County Amateur Radio Club having a VE session at the Valparaiso Library and if any VE's that hold an ARRL VE card may come out and help.

Also Tom spoke about the Field day operations at Shelby and how they have been doing. He is hoping to get some more help operating the phone station overnight.

### DX report

Nick has said that S9YY and VK9CI Christmas IS. and VU7TT is another island on the air.

**Net report** August 17 had 7 check-ins, Sept. 7 had 9 check-ins, Sept. 21 had 7 check-ins, Oct 6 had 11 check-ins, next net is Oct. 20 will be the next net. Dan would like to do a WCAM contest again.

Bill had a note from Tim. The last class he did for Amateur Radio License he had a poor showing for taking the test after the class. Also noted that a lot of hams get their license and never get on the air or never get active. He would like to have Elmers in the club and VE testing. Tim would also like to get new blood in the club officers.

Nominations made for next year officers were made.

- Nick nominated Tim for President.
- Bill said he would be Vice President
- Jim said he would be Treasury for next year
- Kenny nominated Russ KB9HO for Secretary.

Nominations are closed.

Tom W8FIB gave an Antenna book for a raffle won by KA9HKA  
Nick donated 2 items to the club which gave the club \$10.00 donations.

Meeting adjourned at 8:24PM

I HATE BEING  
**SEXY**  
BUT I'M A  
**HAM RADIO**  
**OPERATOR**  
SO I CAN'T HELP IT

Check out the LCARC website at [www.w9lj.org](http://www.w9lj.org) and the Hoosier DMR Best Practices Guide at <http://tinyurl.com/nbvo7xh>

## NEW NRRL COMMUNICATIONS SPECIALIST MAKES MARK

a Ham Hijinks staff report

NEWINGSTEAD, VT — The new overseer of communications coming out of the National Radio Retransmission Legion (NRRL) is making significant changes, just hours after taking his post.

Davis Gerr's first action will be controlling expenses. "Subscriptions are down and we just can't afford 73 anymore," said Gerr.

The effort will be a multi-stage strategy. "We will use 72 immediately. If this budget trend continues, we will reduce to 57 and then 24 until things rebound."

While researching amateur radio prior to interviewing for the job, Gerr noticed other cost-savings opportunities as he listened to transmissions on a store-bought handheld shortwave receiver. "We certainly won't say '72s' as if it's plural. We'll do more with less and use the singular version going forward."

NRRL members can expect to see emails, bulletins and code practices sign off with "72" beginning this weekend.

Is this Nick, W9UM's new antenna?



Yagi-Uda for 160/80/40m belonging to Dave, G0EVY with crane rotor. The massive array is homebrew and tips the scales at over 1000 pounds! Photo by Dave, G0EVY.

**for Sale**

I have FOR SALE a like-new Yaesu G-1000DXA rotor, control box and some multi-conductor control wire. I took down the tower and the stuff is just sitting in my garage. The Yaesu rotor is a great unit, look it up on the web. Check it out at <https://www.yaesu.com/indexVS.cfm?cmd=DisplayProducts&ProdCatID=104&encProdID=60F24E075DF1D12D9CB5AD4A9C0A6855&DivisionID=65&isArchived=0>

## New Ham Bands Spring to Life

Veteran LF Experimenter Denied Amateur Access to 2200 Meters  
from ARRL Online

Amateur Radio's two newest bands came to life on Friday the 13th. Both 630 meters (472-479 kHz) and 2200 meters (135.7-137.8 kHz) now are available to radio amateurs who have notified the Utilities Technology Council (UTC) of their intention to operate and did not hear anything back during the ensuing 30 days.

"Many of us filed notices with the Utilities Technology Council on September 15, the day the notification procedure was announced," said Fritz Raab, W1FR, who coordinated the **ARRL WD2XSH 630-Meter Experiment**. "We did not expect to hear from the UTC unless they were objecting to amateur operation. Much to our surprise, on Friday, October 13, a number of operators received 'okay' notices. So, the first amateur operations commenced that night."

### Some Denied Access to 2200 Meters

UTC e-mails went out to an undermined number of US radio amateurs who had notified the Council, but not everyone got the thumbs up. One of those thwarted in his hopes of operating under his Amateur Radio license on 2200 meters was John Andrews, W1TAG, a long-wave veteran with thousands of hours on the band over the past 15 years or so under his FCC Part 5 Experimental license.

Andrews, who also participated in the ARRL's 630-Meter Experiment, said UTC denied his request because he was within 1 kilometer of a power line using PLC (power line communication). Raab said another who did not pass UTC muster for 2200 meters was Alabamian Dave Guthrie, KN4OK, who is hoping to give 630 meters a try. UTC also told Guthrie that he was within 1 kilometer of a power line using PLC, and that operation on 2200 meters could cause interference, but added, "We encourage you to reapply and select only the '472-479 kHz' range, as it is much more free of interference from utilities."

### Awash with Signals

Raab said a few operators reported making contacts on 630 meters the first night, although noise levels were high, and a geomagnetic storm was in progress. Saturday night, October 14, "was a bust," he said. The next evening, however, things broke open. "The band was awash with CW and digital signals," Raab said. "Operating modes included CW, JT9, SSB, and WSPR. Many operators were new to the band and not previously experimental licensees."

Various Reverse Beacon Network (RBN) nodes heard W7IUV, AH6EZ/W7, N6TV, N6LF, KB5NJD, AA4VV, WZ7I, WA1ZMS, K4EJQ, K4LY VE6WZ, VE6JY, VE7AB, VE9WZ, and VE7CNE, among others. W0YSE/7 reported making JT9 QSOs with W7IUV, VE7CNE, W7RNB, and VE7VV, and CW QSOs with W7IUV, K7SE, N6LF, and VE7CNE.

WA1ZMS: SSB QSOs with NO3M and KL4Y. NO3M: CW: K4LY, K4EJQ, N4PY, WA1ZMS, K9MRI, KB5NJD, W0RW, WA9ETW (cross band 1805) JT9: K4LY, K2BLA FT8: K3RWR, VE3CIQ SSB: K4LY, WA1ZMS.

"Many were on 630 meters last night [October 15], and one highlight for me was an SSB QSO with K4LY," Brian Justin, WA1ZMS, told ARRL. He and K4LY both worked NO3M, who also reported working K4EJQ, N4PY, K9MRI, KB5NJD, W0RW, and WA9ETW on CW. He made some JT9 and FT8 contacts too.

On October 17, W7IUV and VK4YB completed a JT9 contact,

## Tips for Communicating After a Disaster

by Brian McDaniel · Published September 6, 2017

### Tips from a Ham Radio operator for communicating after a disaster if all you have is a cell phone.

1. If your cell service goes down, your phone is a brick.

Your phone is not designed to work in a peer-to-peer environment. No app (Zello, etc) will change it. You cannot turn a cell phone into a walkie-talkie. Only walkie-talkies work that way.

Turn on Airplane Mode. Save your battery. If power is out, ever amp-hour counts.

If you have cell service, use text messaging FIRST. Text messaging takes up much less network capacity than voice. If you have limited service, a text message has the best chance of reaching the other end. Don't expect reliable two-way communication, though. Sometimes a system can get out but cannot rout inbound.

If your internet access goes down, see Number 1 plus your tablet.

But I have WiFi! My apps will work! No, they won't. You might connect to a router or hot spot, but those devices may not have connectivity. Don't count on email.

Have one family spokesman outside the disaster area. If you live in an area hit by a disaster (or if you evacuate), identify one person living outside your zone. That person is your point of contact for everyone else. Relay messages through this person.

Let your spokesman know your plan. Have them communicate it to everyone else. Use either social media or a good old-fashioned phone trees to communicate.

possibly the first US-to-DX contact between radio amateurs on 630 meters.

### No Interference Reported

Andrews said he was an early applicant for a Part 5 license in 2003, after the FCC turned away from its own proposal to allocate a band on 2200 meters. He's renewed his WD2XES license every 2 years since, operating "extensively" on 2200 meters between 2004 and 2016 and estimates that he has racked up 11,000 hours of transmit time. His license specified 1 W ERP, and his antenna was a 500-foot perimeter loop in the vertical plane, which he called "horribly inefficient." Andrews told ARRL that it took about 500 W of transmitter output to generate the 1 W ERP, based on actual field-strength measurements.

Andrews said that national grid distribution lines feed and traverse his town of Holden, Massachusetts. "I was never notified of any interference problem other than a neighbor trying to run outdoor security cameras with CAT 3 network cable," he said. "While 2200 meters is a pretty tortured part of the radio spectrum for receiving over-the-air signals, there was nothing audible that suggested PLC use."

He said he responded to the UTC indicating that he would comply with their denial, and he included information about his many hours of WD2XES operation. He plans to apply for permission to operate on 630 meters from Massachusetts, and his notification for permission to operate on both bands at his summer home in Maine has not been denied.

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# THE KIWISDR ONLINE NETWORK

By Steve VE7SL

Online SDRs (Software Defined Radio) continue to grow in numbers and popularity.

Listening on a receiver that is running in another state, province or country can fulfill a number of functions for you, depending on your particular interest.

The network that I have explored several times and one that works nicely with most web browsers (no software to download or 'extras' required) is the SDR.HU network of Kiwi SDRs ... just choose your receiver and away you go in a matter of seconds. It's all very slick and if you have never played with an SDR before, it affords a nice introduction to this amazing technology. Although it won't work with my ancient version of Internet Explorer running on Vista, it did fine with Firefox and even worked very well on my old I-Pad! Here is a 30-second YouTube video to give you an idea of what it looks like. (click pic for website)



There are a huge number of choices from all over the world available on the Kiwi network. As I write this, there are presently 199 receivers online! Any particular receiver can support a maximum of four users at a time so if the one you want is full, simply check back later or go to your second choice.

Although all receivers have the same appearance online, not all will offer the same performance. Although most seem to cover 0-30MHz, I see at least one that is limited to the VHF range and several that don't go all the way to the bottom of the VLF band. The antennas used seem to favor wideband loops, both large wire styles

and smaller active versions as well as active e-probes.

The best way to determine any particular receiver's operating performance is to try it out using test target signals that might indicate good performance from that location. If you're interested in BCB capability, test some of the European ones to see if they can hear any TA signals around sunrise in Europe. Many SWLs will use these receivers to compare what they are hearing at home with a receiver located closer to the suspected DX target signal. I myself found the network particularly handy for listening to my Tri-Tet-Ten transmitter on 10m CW a couple of years ago when the muf was much higher than it is nowadays. I'll be trying a few of them out this winter, listening for my 630m CW signal, at various locations.

Some of the receivers appear to offer good, low noise reception on LF, MF and the BCB but the vast majority are not DX machines oriented for this part of the spectrum ... this was the opinion of one notable BCB DXer who checked many of those in eastern NA as well as western EU. The jury is still out on the western NA receivers and those in the Pacific / Far East ... a worthwhile listening project when there is some spare time. Even though the receivers used on these lower frequencies did not usually offer stellar performance, they may be real workhorses within the ham bands or on the international shortwave bands.

It would be worthwhile to see some form of 'performance rating' or feedback page for each individual receiver. Although there is a 'vote' tally associated with each receiver it's not clear what this actually represents as receivers that have been online for longer periods would naturally have a higher tally.

A lot of additional information about the KiwiSDR network can be found here.

No doubt you can think of your own good reason to have a remote listen to some of the network's growing list of online receivers and put them to the test ... there may be some real treasures to be found.

Steve McDonald, VE7SL, is a regular contributor to AmateurRadio.com and writes from British Columbia, Canada. Contact him at [ve7sl@shaw.ca](mailto:ve7sl@shaw.ca).

# RADIO HANDBOOK GOING BACK TO BASICS

By K5KVN, on the scene

NEWINGSTEAD, VT - The National Radio Retransmission Legion (NRRL) will release next week an updated version of its popular "Ham Radio Operator's Manual of Operating." This edition will be a departure from its usually highly technical subject matter. Instead, the NRRL says the authors decided to "get back to the basics."

"We need to stop being overly presumptuous about what the average amateur radio operator knows about using a radio," said NRRL spokesman Johnson Longfellow.

The operating manual begins with a simple "How To Get Started" list:

1. Obtain a radio
2. Connect a microphone to the radio\*
3. Connect an antenna to the radio
4. Ensure the radio is connected to electricity

5. Find and activate the power or "on" button
6. Turn the big knob to make the numbers start changing\*\*
7. Stop turning the big knob when you hear a signal\*\*
8. Push the button that activates a transmission and begin to speak; release button when you want to hear their reply; repeat

\* Applicable only if you want to actually talk with someone  
\*\* Not applicable if you are using a software-defined radio without knobs

"Yeah, there's a lot more to it than that. We especially hope this helps new hams, who usually feel like they know everything after having memorized the answers of an exam," said Longfellow.

### HamHijinks.com

# TYTERA MD-380 TOOLS

By Bob KONR

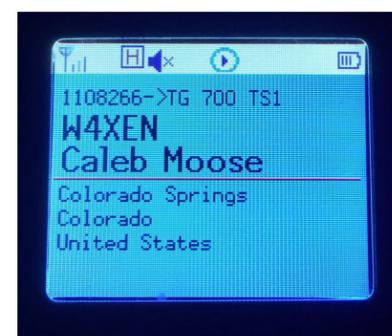


The Tytera MD-380 is a low cost radio for analog FM and DMR on the 70cm band ([see video here](#)). One of the limitations with the radio is that it only holds 1000 contacts...which seems like a lot of contacts but it fills up quickly. With DMR, each radio or user has a unique 7-digit radio ID number. For ham radio use, the DMR-MARC organization maintains a [database that maps radio ID number to user name and callsign](#). If a user is in your contact list, the user's name and callsign pops up in your radio's display. Otherwise, you just see the radio ID which is not very helpful. There are over 63,000 users in the database with more being added on a daily basis.

There are a number of firmware updates to the MD380 and I have not checked them all out. I heard some guys talking about the TyMD380Tools on one of the DMR talkgroups, so I decided to give it a try. This software was developed by KG5RKI ([go here](#)) and is easily installed from Windows without a lot of messing around. [This firmware upgrade loads the entire DMR-MARC database into the radio.](#)

Now that I have the worldwide database of DMR users loaded onto the radio, it's like having caller ID on my HT ([see photo below](#)). Actually, it's better than that, it pulls up the other ham's full name, callsign and location information.

This may not seem like a big deal but I've found it to be surprisingly useful. I am often scanning a few channels or talkgroups with my radio and just listening casually. I may not be tracking who's talking but I can just look at the radio to see who's



on the air. It's one of those convenience features that makes me think "why don't all of my radios do this?"

The TyMD380Tools implements a bunch of other features but increasing the number of contacts has been the most important one for me. This is a great example of radio amateurs adapting ("hacking") commercial gear with improvements for ham radio use. KK4VCZ, DL4YHF and others contributed to this code. Check out the software...seems to work great.

The post TyMD380tools for Tytera MD-380 appeared first on The KONR Radio Site.

Bob Witte, KONR, is a regular contributor to AmateurRadio.com and writes from Colorado, USA. Contact him at [bob@k0nr.com](mailto:bob@k0nr.com).

Click the link below for a 30 second Dilbert video. Do you know anyone, or perhaps you are one, who suffers from this malady?

<https://www.pinterest.com/pin/54113632999408380/>

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## FCC Rules

Section 97.313(g)(2) of the Amateur Service rules requires that, prior to starting operation on either band, radio amateurs must **notify** UTC that they intend to operate by submitting their call signs, intended band(s) of operation, and the coordinates of their antenna's fixed location. The new rules do not permit any mobile operation.

"Amateur stations will be permitted to commence operations after a 30-day period, unless UTC notifies the station that its fixed location is located within 1 kilometer [approximately 0.62 mile] of power line carrier (PLC) systems operating on the same or overlapping frequencies," the FCC said in announcing approval of the notification system on September 15.

## More Information

Laurence Howell, [KL7L](#), in Wasilla, Alaska, who holds FCC Part 5 Experimental license WE2XPQ, has posted [a video](#) that walks through his 630-meter station. It discusses the various components he uses to get a decent signal on the new band and includes some pointers on equipment that newcomers might use, and the conditions that could influence operating on this band.

Online discussions prepared by Andrews and Jay Rusgrove, W1VD, offer test data and suggestions on repurposing AF amplifiers (in this case, Hafler stereo amps) for use on both **2200 meters** and **630 meters**. The principles can be applied to other AF amplifiers, and the conversion involves removing audio transformers and low-pass filters.

# DOLLAR TREE \$1 LED BULBS

By Dave K7Z

Dollar Tree has some LED bulbs on sale, 60W, Warm White for a buck each. The batch I bought are dead quiet for RFI.

I bought enough to relamp my entire home. Lost about half, to an full S unit of RFI as a result! :)

If you decide to relamp your home, buy a test LED lamp first, test it, then buy your lights from the same store, so you get the same lot numbers.

I suspect they are all quiet, but paranoia is your friend. There is a take apart review of these lights at:

<https://www.youtube.com/watch?v=zJWssuCGkC8>

After watching the review, I think I can see why they are so quiet.

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73s and thanks,

Dave, NK7Z

<http://www.nk7z.net>

## From the Parade Stand

Continued from page 1

how-to set up a Face

Book page, smart phone configuration and app usage. Hmmm

Our 7:30 Friday November 10th program will be on the new USA HR LowFer bands 630 meters and 2200meters. There are some strings attached, but the FCC said "OK" October 13th 2017.