



# SQUELCH TALES



**Newsletter from the Merrymeeting Amateur Radio Association  
for March 2024**



## **The First Ham Radio Station on the Moon, JS1YMG, is Now Transmitting**

From Feb.1 ARRL Newsletter

The Japan Aerospace Exploration Agency (JAXA) successfully landed their Smart Lander for Investigating Moon (SLIM) on January 19, 2024. Just before touchdown, SLIM released two small lunar surface probes, LEV-1 and LEV-2.

LEV-2 collects data while moving on the lunar surface, and LEV-1 receives the data.

The JAXA Ham Radio Club (JHRC), JQ1ZVI, secured amateur radio license JS1YMG for LEV-1, which has been transmitting Morse code on 437.41 MHz since January 19. The probe uses a 1 W UHF antenna with circular polarization and is transmitting "matters related to amateur business."

Radio amateurs have been busy analyzing JS1YMG's signal, with [Daniel Estévez's, EA4GPZ, blog](#) introducing the method and extraction results for demodulating Morse code from the signal, as well as extracting the code string.

It's unclear how long signals will be heard. JAXA has said that SLIM was not designed to

survive a lunar night, which lasts about 14 days, and is due to return in a few days.



SLIM was launched on September 6, 2023, and landed on January 19, 2024, with the mission of analyzing the composition of rocks to aid research about the origin of the moon. SLIM's landing made Japan the fifth country to achieve a soft touchdown on the moon. The landing was achieved with exceptional precision - within 180 feet of its targeted touchdown location.

Additional information at:

<https://forum.nasaspaceflight.com/index.php?topic=37353.300>



# Duplexer Repair, a success this time?

By Donnie Dauphin, WD1F

## My mistakes from 2022

When I first heard of Joe's, W1SK plan to put D-Star on Streaked Mountain I was pretty excited to help. I happened to be going to the NEARfest in Deerfield, NH so while there I found the following gems. Joe then purchased them for his project.



I told Joe I could get them tuned in for him. I can't say I felt 100% confident due to my lack of experience but was pretty sure I could get the job done. Once the frequencies were finalized I started tuning. One of the 4 cavities I had a real hard time with. I would tune and tighten the lock nut only to have the tuning off again. I could tap the side of the can with a screw driver and the tuning would be all over the place. After fighting this battle for a long time I gave up and took the duplexer apart to see what was going on inside.

I found that the internal parts were covered with oxidation so I cleaned them up and re-assembled. After this process tuning went perfectly. I had this feeling I needed to take the rest of them apart but chose not to. I didn't have enough rivets, the other cavities were tuning just fine so I called it good enough. This was a mistake.

## Disaster

So the duplexers made the trip to Streaked Mtn where they performed very badly. The duplexers

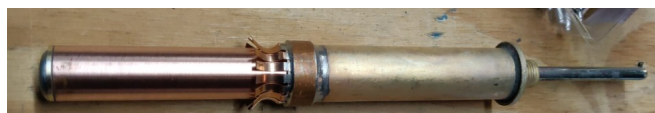
being the problem wasn't immediately known so it caused lots of frustration and speculation. It also cost time and money. Eventually the equipment had to be removed for troubleshooting.

Cory KU1U delivered them to Randall K1XI who is a pro. He determined the duplexers, one cavity in particular, was bad. Once I got this word I felt responsible. I would say I was responsible. I had a brand new TX/RX duplexers that had just arrived here for the KS1R D-Star repeater and I insisted they take them in exchange. The new duplexers were delivered to K1XI for a professional tuning, which was successful, and they are waiting to be put into service.

## Another Repair Attempt

I asked for the duplexers back so I could try and repair them a second time. I also asked if the duplexer that was indicated as bad was the one I had attempted to repair but nobody knew that. My repair had gone very smooth and it was tough to tell. Once I had them in my hands I found that the one marked bad was NOT the one I had been inside and cleaned. This was good news and seemed to me to indicate I could clean the rest and have a working set of duplexers. Time to try.

It seems important that the connection between the copper plunger and the little copper fingers be as perfect as possible.



Here is a before and after picture showing just how much I was able to clean these things up.



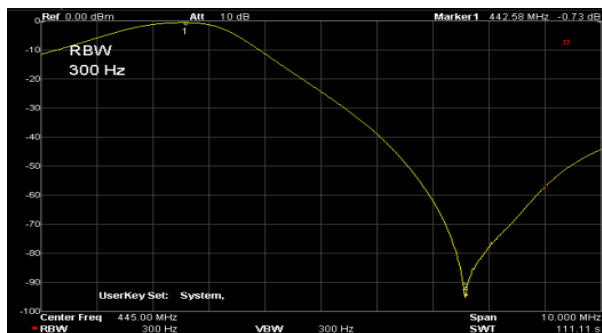
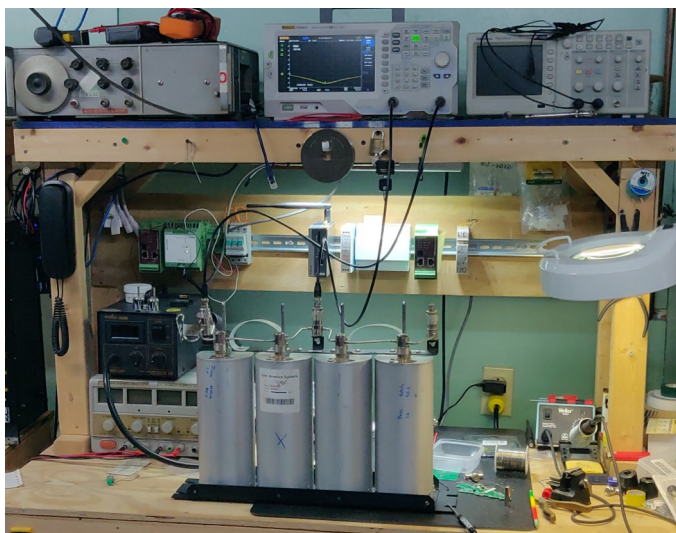
Now you want to talk about a pain in the A%^(&@)S. Getting the bottoms off of a couple of these made me think I was not going to be successful. It required a lot of pounding and

prying, drilling, etc. I even had to wait for KB1IEF the XYL to get home to help.



## Success ??

They have now been reassembled, tuned, and installed. They seem to be working fine. Tuning went very quick and easy. I believe this to be a very good sign but I'm not calling success until more testing has been done and some time has passed. After putting them into service on our KS1R D-Star repeater I did a quick road trip and all went well.



## Closing Thoughts

When dealing with a repeater, especially one that will be in a difficult to reach location, it has to be perfect. The price of less than perfect in anxiety, time, money, etc is just too high. I am happy with how this repair went but not sure I would want to see these duplexers headed for a difficult to reach repeater site. I would want someone in the business, like K1XI to have a look first. *this is my story and I'm sticking to it.* 73, WD1F



## BOAT ANCHOR HAMFEST A WHOPPING SUCCESS



With sunshine and an outside temperature approaching 50 degrees helped to make the mid winter Boat Anchor Hamfest a big success with the highest attendance. George Szadis, K1GDI the event organizer for the Augusta club said, "We had 300 attendees up from 150 last year. The event raised over \$300 for Good Shepherd food bank." In addition he advised that the event's VE test session had 15 folks taking exams with 13 getting a ham license or upgrade. All in all a very enjoyable mid winter event.







## MAINE QCWA PINE TREE CHAPTER PARTICIPATED IN THE AUGUSTA BOAT ANCHOR HAMFEST

On February 11<sup>th</sup> the Maine Pine Tree Chapter setup a table at Boat Anchor Hamfest in Augusta to tell folks about the QCWA and it's local Chapter 134.



Photo taken of Chapter President Jerry Burns (K1GUP), Net Manager Bill Woodhead (N1KAT) and Sec/Tress Bruce Randall, (W1ZE)

The chapter's participation met with success with one new member who got on line with Roberta at QCWA HQ and signed up on the spot. Two folks who were licensed for over 25 years took applications and QCWA information sheets and said they would do mail-in membership and also join the Maine Chapter 134.

In addition, several Chapter members who were in attendance renewed their Chapter membership.



## Senators Roger Wicker and Richard Blumenthal Introduce S.3690 to Eliminate Private Land Use Restrictions on Amateur Radio

This column from Feb. 15<sup>th</sup> ARRL letter



On January 30, 2024, US Senators Roger Wicker (MS) and Richard Blumenthal (CT) introduced [S.3690](#), the Senate companion bill to H.R.4006, [introduced last June](#). Both bills reflect the Congressional campaign efforts by [ARRL](#) to eliminate homeowner association land use restrictions that prohibit, restrict, or impair the ability of an Amateur Radio Operator to install and operate amateur station antennas on residential properties they own.

Amateur Radio Operators repeatedly are relied upon to provide essential communications when disaster strikes, but their ability to do so is being impaired by the exponential growth of residential private land use restrictions that hinder their ability to establish stations in their homes with which to train and provide emergency communications when called upon.

In announcing the introduction of S.3690, Senator Wicker said: "Because communication during natural disasters is often hindered, we should be making every attempt to give folks more options. Reliable

access can make the difference between life and death in an emergency. Our legislation removes roadblocks for amateur radio operators looking to help their friends, families, and neighbors."

In a similar announcement, Senator Blumenthal stated: "Our measure will help clarify the rules so ham radio enthusiasts can successfully continue their communications.

In the face of emergency or crisis, they help provide vital, life-saving information that allow listeners to properly and safely respond, but prohibitive home association rules and confusing approval processes for installing antennas have been an unnecessary impediment. The Amateur Radio Emergency Preparedness Act resolves these bottlenecks and ensures that radio operators can function successfully."

ARRL President Rick Roderick, K5UR, and Director John Robert Stratton, N5AUS, Chair of the ARRL's Government Affairs Committee, both extended on behalf of ARRL, its Members, and the Amateur Radio community their thanks and appreciation for the leadership of Senator Wicker and Senator Blumenthal in their continuing efforts to support and protect the rights of all Amateur Radio Operators.



# KS1R DStar Repeater Has Increased Activity

Feb 20, 2024 by Donnie Dauphin, WD1F

## DStar Links to dashboards

[DStar KS1R Dash](#)  
[DStar Reflector 39C](#)

Well the cavity repair was a pretty big success, at least so far. Here is a recent heard list from the repeater. It shows stations that have worked the repeater locally using RF.

Callsign	Last TX on	Date-Time
N1URA	KS1R B	2024-02-19 18:07:56 EST
W1DLZ	KS1R B	2024-02-19 18:01:30 EST
WD1F	KS1R B	2024-02-19 17:29:28 EST
K1IMA	KS1R B	2024-02-19 17:16:36 EST
KE4UCW	KS1R B	2024-02-19 13:32:36 EST
W1ZE	KS1R B	2024-02-19 10:21:03 EST
N1MA	KS1R B	2024-02-18 13:50:14 EST
KU1U	KS1R B	2024-02-17 17:46:11 EST
NG1P	KS1R B	2024-02-17 11:18:01 EST
KB1TOM	KS1R B	2024-02-16 13:32:52 EST

## Initial Testing

The initial testing was a very quick road test down toward Popham Beach state park. All went well but this was a long way from a thorough test. In the following days as I did whatever it is I do when I do what I do, I kept testing. A trip to my son's house went well. I could hear the repeater and can get into it. That is an improvement. Then came a trip to Portland for work. Another success. I'm not saying you can work the repeater easily all the way to my office in Portland but in most places its usable. For me the hardest part seemed to be hearing the repeater. If I could hear it, I was into it.

Soon Louise, KB1IEF and myself did a walk on Popham Beach. I brought along my handheld but forgot to charge it. The battery was showing low. Past experience tells me I need to run high power so that is what I do. While walking I get a call from Cory KU1U. After the first transmission my battery is showing critical so I drop the power down to 1 Watt. Cory reports no change in signal. This is another really good sign.

## KU1U The Promoter

Cory KU1U was excited about the apparent success and started contacting people he knew had DStar to do some testing. Soon there are several others on the repeater trying from all

over the place with better then expected success.

### **A few more**

I had an old IC-91AD and dropped it off with Bruce W1ZE. He was on the air in no time. Next was N1MA Mike. Seems he has the IC-705 but hadn't used it on DStar yet. In no time at all he had it programmed and on the air.

### **Reflector 39 Charlie**

Reflector 39 Charlie has been set as the Maine Statewide D-Star reflector. I tend to keep our repeater connected to it. The reflector serves as a way to do Internet linking of repeaters. Another way in, is using a DStar access point or hotspot. With an AP or hotspot you can either connect directly to our repeater or more common is to connect to the reflector. We have had many others including Terry KA8SCP, Andrew N1MRE, W1DLO, and some from the Caribou DStar repeater joining in.

### **KU1U from Old Orchard Beach**

Probably the best report we have had so far is when Cory, KU1U was working the repeater from a handheld radio while walking on Old Orchard Beach. In the world of digital communications you are either in or not. In this case Cory was in.

### **Summary:**

All this recent activity has me using our KS1R DStar repeater more then any others. Soon there will be another DStar repeater on Streaked Mountain that is expected to have a very large RF footprint. DStar in general is an easy mode as there isn't much radio programming that needs to be done beyond your call and the repeater you want to work. I hope to see even more traffic on our D-Star system in the coming days.



## **MAINE 2 METER FM SIMPLEX CHALLENGE MARCH 16**

Mark your calendars for some 2 meter FM simplex fun! Saturday, March 16, is the date for the annual Maine 2 Meter FM simplex challenge, which is sponsored by the Wireless Society of Southern Maine (WSSM). The challenge runs from Noon to 4 PM on nearly all available 2 meter FM simplex frequencies.

Suggested frequencies are: 146.475, 146.490, 146.505, 146.550, 146.565, 146.580, 147.420, 147.435, 147.450, 147.465, 147.480, 147.495, 147.510, 147.525, 147.540, 147.555, 147.570. If you, like me, can never remember all the steps to program your radio memory, this is a great opportunity to become an expert in programming radio memory frequencies.

Omitted from the list are frequencies that have a potential conflict with repeater inputs on the low end of 146 MHZ as well as the National Calling Frequency, 146.52 MHZ.

The event sponsors, WSSM, point out that depending on your location, some of the suggested frequencies may be shared by Echolink nodes across the state. This does not mean that these frequencies are off-limits to contesting, but they do ask that you give priority to users of these services as a matter of good operating practice, and also refrain from using Echolink in any way to advance your score in the contest.

The exchange for contacts is very easy: your call, your town or city, and your power category as set forth below:

- QRP - 5 watts or less
- Medium Power - greater than 5 watts, but less than 100
- High Power - 100 watts or more

Note that if you are operating from a "served agency" station (such as the MARA club station at the Red Cross Center in Topsham!), you should also specify which agency you serve, for example, "SKYWARN," "EOC," or "Red Cross." On the log sheets, however, there will only be a place to notate whether or not the station is operating from a served agency so the town would be omitted from the log.



Most stations participating fall into the medium power category, but there are some adventurous mobile operators who regularly participate in the QRP power class with great results. So, operate with whatever radio or HT you might normally use. Just make some noise on FM simplex however you can!

If you operate 2 meter FM from home, this is a good opportunity to check your FM simplex range. While there will be other fellow hams operating in the challenge from home, there are mobile stations (also called "rovers") who will be traveling through various towns, activating them for the challenge. If you only have 2 meter mobile capability or just like the idea of getting out on the open road, this could be a great opportunity to get out for a ride and make some contacts! I know some mobile operators in the past have made it a good excuse to also fit in a stop at their favorite restaurant or just make the trip to even just highest hill accessible by their vehicle to increase their range.

There is a club competition aspect to this as well, so the more Merrymeeting ARA members who participate, the better are our chances of winning the club competition. We won the club competition in 2021 (with five logs submitted), so 2024 could be our year once again! Last year, the Pine State Amateur Radio Club won the club competition with eight club members submitting logs.

The WSSM website (<http://www.ws1sm.com>) has a full description of the event, including a printable four-page summary of the rules (don't worry! It's big print and wide spacing! The rules are not that complicated!), the summary entry form, and additional links for printing official log sheets for handwritten log submissions (<http://www.ws1sm.com/2-Meter-Challenge.html>). If you use electronic logging, WSSM will accept Cabrillo formatted electronic logs, but not printouts of electronic logs.

Be sure to specify on your log summary sheet that you are a member of the Merrymeeting ARA so that it will count towards the club competition.

Handwritten paper logs should be mailed to: WSSM 2 Meter Contest, P.O. Box 6833, Scarborough, ME 04074. Email PDF logs or electronic Cabrillo-formatted logs to: [mainchamradio@gmail.com](mailto:mainchamradio@gmail.com)

Hope to catch you on the air for the event! If I can

help with any questions, send an email to me at [dick.beam@yahoo.com](mailto:dick.beam@yahoo.com)

73,  
Dick, K1HC Harpswell

