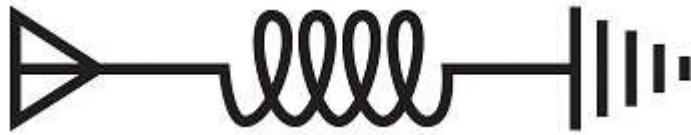


November 2019





Starting out this month I want to let you know about the new SkyhubLink website at: <http://skyhublink.com/>. You can get all the information now about the linking system, real time monitors and control, net schedules and more including interactive coverage maps of the main repeaters. Thanks to Skyler for setting it up and getting it active. Look for more additions and editing coming up. Check it often and pass it around!



Many of us are using hotspots to fill in for when we are out of communication with repeaters with our portable and mobile radio's. One of the functions of the Pi-Star dashboard screen shows a bit error rate display. This is where a lot of folks have a difficult time tuning the hotspot especially with a DMR handheld. I haven't seen it so much be out of tolerance with the Fusion radios. The pictures below show the dashboard in transmit and then the bit error rate after you let go of the PTT.

Hostname: pi-star Pi-Star:3.4.17 / Dashboard: 20191105

Pi-Star Digital Voice Dashboard for KE0VH

Dashboard | Admin | Configuration

Modes Enabled	
D-Star	DMR
YSF	P25
YSF XMode	NXDN
DMR XMode	POCSAG

Gateway Activity								
Time (MST)	Mode	Callsign	Target	Src	Dur(s)	Loss	BER	
11:42:42 Nov 7th	YSF	KE0VH	ALL	RF	TX			
11:36:26 Nov 7th	YSF	W0SKY	ALL at KE0VH	Net	2.7	0%	0.0%	
09:10:54 Nov 7th	YSF	KA0AAI	ALL at KE0VH	Net	0.5	0%	0.0%	
08:06:30 Nov 7th	YSF	KE0VH	ALL at KE0VH	Net	14.2	0%	0.0%	
07:24:10 Nov 7th	YSF	KE0LNU	ALL at KE0LNU	Net	18.3	0%	0.0%	
07:19:23 Nov 7th	YSF	KY3DY	ALL at KE0VH	Net	0.6	0%	0.0%	

After I transmitted above using my C4FM Fusion FT 3027 radio, I see my bit error rate in green below.

Hostname: pi-star Pi-Star:3.4.17 / Dashboard: 20191105

Pi-Star Digital Voice Dashboard for KE0VH

Dashboard | Admin | Configuration

Modes Enabled	
D-Star	DMR
YSF	P25
YSF XMode	NXDN
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Gateway Activity								
Time (MST)	Mode	Callsign	Target	Src	Dur(s)	Loss	BER	
11:42:42 Nov 7th	YSF	KE0VH	ALL	RF	13.8	0%	0.5%	
11:36:26 Nov 7th	YSF	W0SKY	ALL at KE0VH	Net	2.7	0%	0.0%	
09:10:54 Nov 7th	YSF	KA0AAI	ALL at KE0VH	Net	0.5	0%	0.0%	
08:06:30 Nov 7th	YSF	KE0VH	ALL at KE0VH	Net	14.2	0%	0.0%	

A BER of .5%! That's GREAT. When it starts to be >1% the hotspot will have trouble receiving the transmission from your radio. A VERY EASY tuning procedure can be found at this website:

<http://www.k9npix.com/2019/02/hotspot-offset-calibration.html?m=1>

K9NPX does a great job showing how to do this procedure on your Pi-Star software with your hotspot. This always seems to be one of the more difficult area's of operating a hotspot that people have difficulties with. When I was starting I was really glad when some of these descriptions became available via the amateur digital community. Of course, someone figured it out. So I hope this information will be helpful!

One other note on the SkyHubLink system, we have thru the help and equipment provided by the DWARC now have a local server computer that Skyler is configuring for deployment at the 449.625 KEØVH Repeater site. This is a totally new system with the "HBLink" protocol. (see <https://www.chrishoodblog.com/make-your-own-dmr-server/> for more information and description.) This will allow connections for DMR bridging without having to be dependant on Brandmeister links. AU Wireless of Golden is providing our internet fiber connection and Mark NØXRX and Scott KDØSIY from DWARC have of course provided the Fusion repeater there. The node radio is my FTM-100 DR fusion mobile that links the repeater to the HRI-200 and the network providing links to the Fusion Wires-X network. I wanted to thank everyone for the help, loaning and/or donations made to the SkyHubLink system, and invite any and all interested amateurs to use the system. There are some general operating guidelines though we ask that you follow. This will include ALL repeaters linked to the system, including 449.450 analog. I wanted to publish these here in the newsletter as well on our webpage so they could be seen as well. It is very important in today's digital communications "age" that we modify our operating practices just a bit so that everyone can join in and have FUN, which is what it is all about anyway!

SKYHUB GENERAL GOOD OPERATING PRACTICES

We ask that as you are using the system on one of the associated repeaters that due to digital linking, (see what's linked normally at: <http://skyhublink.com/repeaters/> and in real time at: <http://skyhublink.com/status/> please leave spaces between transmissions to allow someone on another mode repeater to be able to break in. Ask frequently if there is anyone else who would like to break in or join the conversation. Being too tight with the PTT can exclude someone trying to get in from another mode. Don't be quick on the trigger as it were or others may not be able to join in. While we encourage rag chews on the system, please observe this operating practice to allow others to join in or in case of any urgent or emergency traffic. Thank you.

ALSO, it is very important that you do not "KERCHUNK" the repeaters on the system. This causes issues with the BRANDMEISTER DMR links and will lock out the DMR system which is bridged into the AllStar system. Please DO a full call and ask for a radio check. The DMR and Fusion repeaters have

virtually no squelch tail to hear. Thank you for your attention to this matter. It's good amateur operating practice and very helpful!

By the way, on the 449.625 KEØVH Lookout Mountain Fusion repeater above Golden most Saturday nights you can hear the The International Wires X Fusion NET in Room —America-Link- (21080)*** reminder

When: Saturday, 09:00 PM to 12:00 AM

(GMT-05:00) Eastern Time (US & Canada) Either myself or Bernie N3ZF will link up "625" if it isn't already connected. This "Wires-X "Room" has many operators from all over the world on frequently. If you are in range of the repeater you can use it to make contacts all over the world and have a lot of fun doing so. ALSO, "625" is our "play" around with Fusion repeater able to access any Wires-X room you can find, so get on and have fun if you can get into it! See the America Link facebook page at:

<https://www.facebook.com/groups/302566576932533/>



Back in the early 90's I had the great honor and opportunity to be able to be in contact with Joe WB2JKJ and his "crew" of kids at the NYC PS 22 amateur radio club. Joe has now for 39 years been using amateur radio in the classroom to bring "Education thru Communication" to inner city school kids. I had a great time talking to his kids and Joe about different happenings of the day and what I was doing as a radio DJ (the kids loved that!) and in my ham radio hobby. This was such a great way to reach out to kids and help teach them science and the radio art, and today it is still going strong! They are a 501 c3 charity and could always use donations of radio's, and can turn any excess radio's or related gear into a tax credit for you. GREAT JOB JOE AND KIDS! Check out their website at

<http://www.wb2jkj.org/>!

7.238

EDUCOM

21.395



Everything else is just regular radio

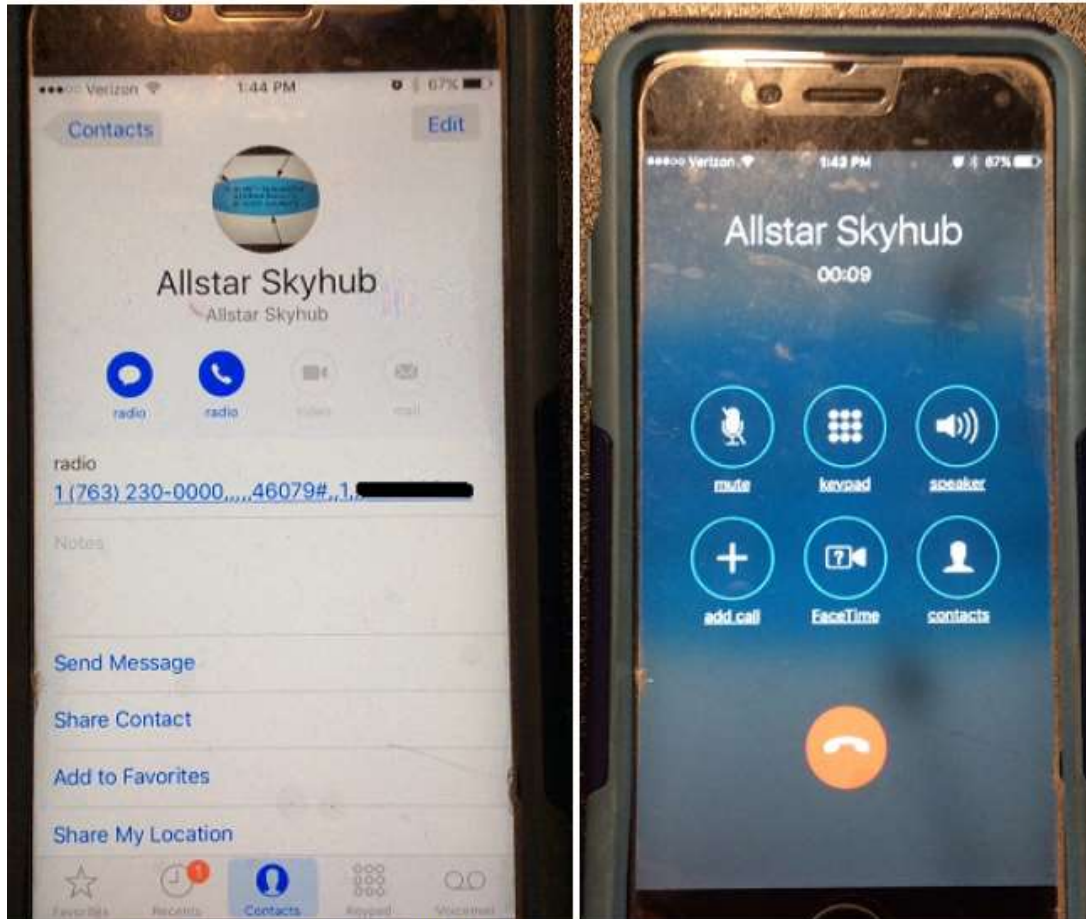
THE RADIO CLUB OF JUNIOR HIGH SCHOOL 22

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So I dug back to the August 2018 edition of "The Hamshack" and wanted to put this information in again to the article. Another way to connect into the AllStar system is thru your cell phone! It is a portal that will connect into whatever AllStar node/repeater you want to dial into. Just think of it as a remote audio link to your radio, repeater, or connection into the AllStar system. I have used this thru my motorcycle helmet blue tooth communicator into my iPhone to connect into the local Denver repeaters thru the Skyhub. Jeremy, N5JER showed me how to set up an automated dialer contact in my phone to one button dial like a regular phone number. When you dial into the phone portal you must tell it what node you wish to connect to, your personal PIN number (given to you when you register with AllStar) and whether or not you want to use VOX or a command to "PTT". You can program this into your cell phone contacts.

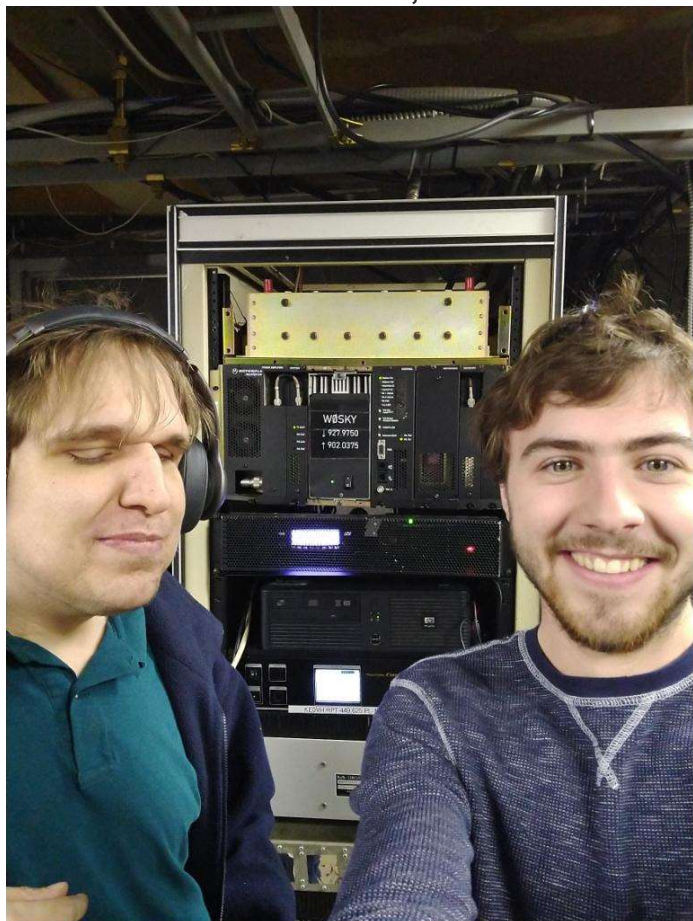


My cellphone dialed into the AllStar SkyHub (Node 46079). You can see part of the automated dialing process, (my pin blocked out) easily done on a cell phone. Once again, just think of it as a "long mic cord" to a radio system! To use the phone portal, you must register with AllStar and have a PIN number. You don't have to setup a node or do anything other than register if you want. Then even where there is no coverage by radio, repeater, or AllStar repeater you can get into whatever node you wish. I can help you with the script when you get registered with AllStar at <https://web-tpa.allstarlink.org/>. This makes operating into whatever AllStar link node you want simple and easy. Plus I would recommend this over EchoLink for ease of use. You don't have to have a laptop or computer available. VERY COOL SYSTEM! When I was on my 3006 mile journey this past summer on the motorcycle I used this linkup to keep in touch back home and to talk to Kenny K4KR as I was coming into Chattanooga Tennessee. Again if you need help setting this up for your phone, this is the script to enter into your dialer:

1 (763) 230-0000,,,,,,,,46079#,,1,,,1234567890,,1

The phone number, commas are pauses, the Skyhub Node Number, more pause, 1 for node access, pause, your ten digit Pin number, pause then another 1 for VOX operation. You will edit in your pin number in place of 1 thru 0. Call me if you need help!

BTW, the 2 architects of the SkyHubLink System!



Jeremy WØJRL, and Skyler WØSKY seen here with the 900 Mhz repeater and the Fusion Wires-X 449.625 repeater and system in the Lookout Mountain Rack and the repeaters yagi antenna.



And say hello to Clark MM7CEH from Bathgate W. Lothian Scotland! Clark is an almost daily regular on the SkyHub Link system. He's a great guy and lots of fun to chat with. Listen for Clark and say hello!



And here is Paul MM6ZHC and Clark MM7CEH at the shack of the mid-Lanark Amateur Radio Society meeting near his home in Scotland. Hey Clark, get Paul and more friends to check in with us on the SkyHubLink system!



MORE PROJECTS. The KE0VH Office node utilizing an empty Linksys box as a case for a Raspberry Pi3 and MMDVM modem board running the Pi-Star software. The shiny box in the middle is a small Tekk data radio on 442.700 Mhz. So if you talk to me while I am in Lakewood, this is the setup being used to link into the SkyHubLink system.



Another project! A duplex MMDVM Modem board awaiting another RPi-3. This will be a possible linking radio to the YSF Reflector on the SkyHubLink. Stand by for more on this!

And the latest edition to the Hamshack “toolbox”!



This is the NanoVna Network Analyzer for HF VHF UHF UV VNA for 50Khz to 900Mhz measuring S-Parameter, Voltage, SWR, Phase delay, and Smith Chart functions. \$60 on Amazon!

As of this writing I just ordered it after reading reviews and seeing that there are many YouTube videos on it already. Looks like fun to try out, and I will let you know in the December “Hamshack” what I think!

Free software too for interfacing. Will let you know!

OMG! A NEW FLIGHT SIMULATOR DUE OUT IN 2020!
Check this out: <https://www.youtube.com/watch?v=MOPljzzH1G8>
You WON'T BELIEVE IT!



Hamshack Archives

<http://www.ke0vh.com/hamshack/archives/TheKE0VHHamshack201701Jan.pdf>
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The SBE Chapter 73 of the air DENVERSKYHUBLINK Hamnet is every Monday at 9 p.m. ET (6 p.m. PT) worldwide via Echolink KG0SKY-L, node 985839 (available via computer and radio), Allstar node 46079, DMR Talkgroup 310847, AND try it with your hotspot on YSFtoDMR then TalkGroup 310847. The SBE UHF/VHF Hamnet is based in Denver on 449.450, pl 103.5, KDØSSP-RPT 448.350, Fusion/Wires-X and the 449.625 Fusion repeater, linked to WiresX room "DenverSkyhubLink" node 46361

You can listen on the LIVE STREAM thru Broadcastify at:

<https://www.broadcastify.com/listen/feed/25448/web>

or <https://hose.brandmeister.network/group/310847/>

We hope you'll join us.

**See the latest edition of "The KE0VH Hamshack" for more information
at www.ke0vh.com.**

The Society of Broadcast Engineers

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