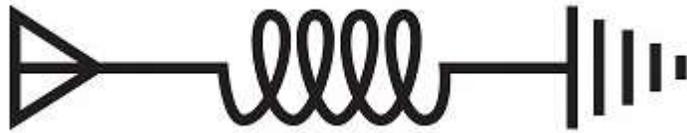


*May 2019*



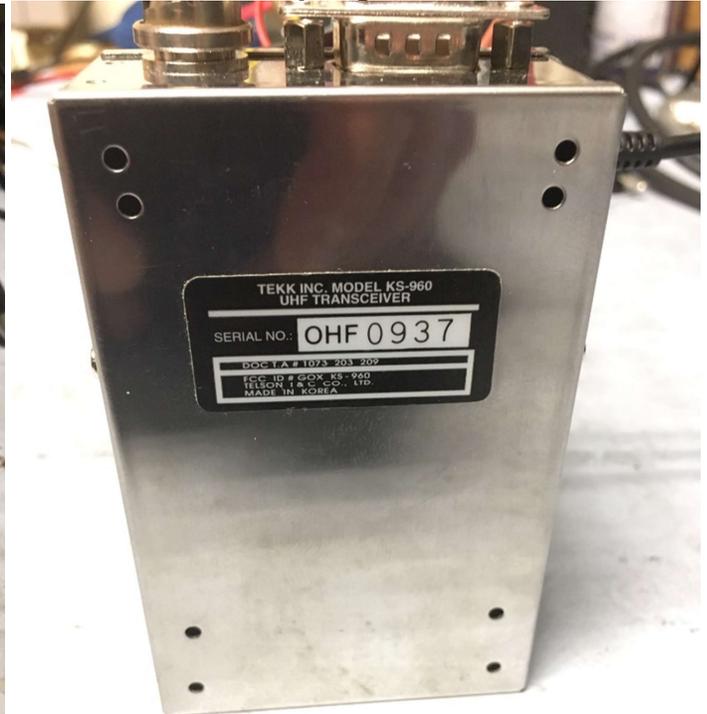
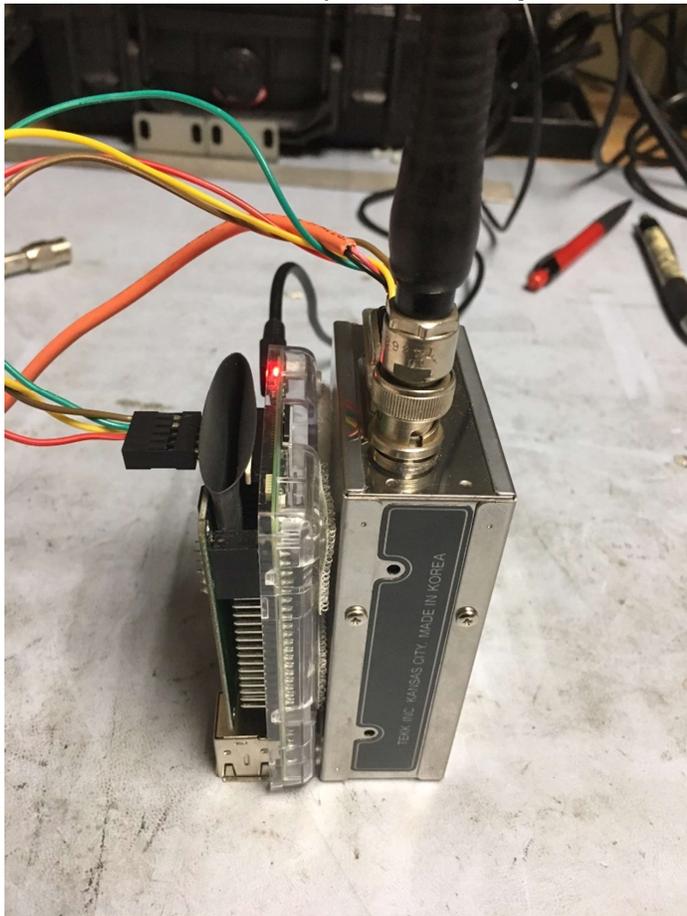


**Welcome to almost SUMMER!**

As of the beginning to write this article we get a couple of days of warmer weather and then 3 or 4 days of wet cold and some snow. Cannot wait for summer to come and STAY! PLEASE!

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We have been experimenting with several ways to link into the Skyhub AllStar/DMR/Fusion system we have operating here out of the Denver area. I put together a MMDVM audio board along with a RPi3, and the radio was a digital data TEKK Model KS-960. I have had this radio in a junk box for years with no real use for it until now and cannot remember where it came from. So, it made a great experiment! It will run off 12 volts thru its DB9 connector with the inputs and outputs to and from the Pi3 running Pi-Star software. Much better ops and easier than last months experiment with the Motorola GM-300. The system works very well, but the main problem in this case is the radio is crystal frequency controlled, and the crystals in the radio are reverse of a repeater pair here in Denver. However, if you can find the crystals made anymore it would be relatively easy to change the frequency ops. I am having fun learning and working with this system and how it all interconnects. Plus, it allows different modes of and portable operation to stay in touch no matter how or where you go!



**The MMDVM board, Raspberry Pi3 and TEKK KS-960 data radio**

And with that, here is the almost all FUSION Hamshack article this time around!

And I would like to introduce you to the latest edition to the KEØVH fleet of radios! The Yaesu FT-3207 UHF only mobile joins the handheld FT-70D and the FTM-100 used for the Fusion WiresX link from my home as seen in the March 2019 article

<http://www.ke0vh.com/hamshack/archives/TheKEOVHHamshack201903Mar.pdf> )

and the mobile FTM-400 XDR rig in the truck. This is a 50 watt C4FM/Analog Yaesu mobile that was on sale for only \$149 at Ham Radio Outlet. So, since I wanted a good radio to take over for the FTM-100

doing duty as the WiresX link for my office/backup/travel mobile rig, I found out about this one and had to try to pick one up. Its operation is the same as the dual band FT-7250 that my friend and across street neighbor Bernie N3ZF has, and the FT-70D handheld that we both have now. These radios operate on both analog and Yaesu's CF4M System Fusion digital and WiresX internet connectivity for worldwide linking of communications. It seems that HRO and other ham radio retailers are having frequent sales on these radios. They are selling like hotcakes and HRO is having trouble keeping them in stock. According to Eric KCØWOT at HRO Denver, the mobile FTM-400 is backordered for a month or so now. Eric says to get on the phone NOW and order as this sale price is the lowest he has seen and probably will ever be. It is in effect as a "Hamvention Special" until May 31. I am glad I got mine last November before the rush.

Eric also said the monoband 3207DR (UHF only) and 3200DR (2 meters only) are in stock a little bit more. Yaesu really hit a home run with these radio's as popularity has REALLY INCREASED and demand is VERY high. HRO Denver as of this writing has 50 of the FT-70D handheld so if you are thinking about it now is the time! In my opinion, I really like the ease of use of the Yaesu radio's as you can program them easily from the front panel (ADMS programming software is available on the Yaesu website and was free for the FT-70D handheld) without having to use a DMR codeplug, plus the digital audio to me anyway is more robust and sounds less "digital" than the DMR systems. Connecting the radios to the different Fusion "Rooms" (as compared to DMR "Talkgroups") is also easy from the front panel. All in all I am really sold on the Yaesu radios, can you tell? 😊



**The Yaesu FT-3207DR and Power Supply**

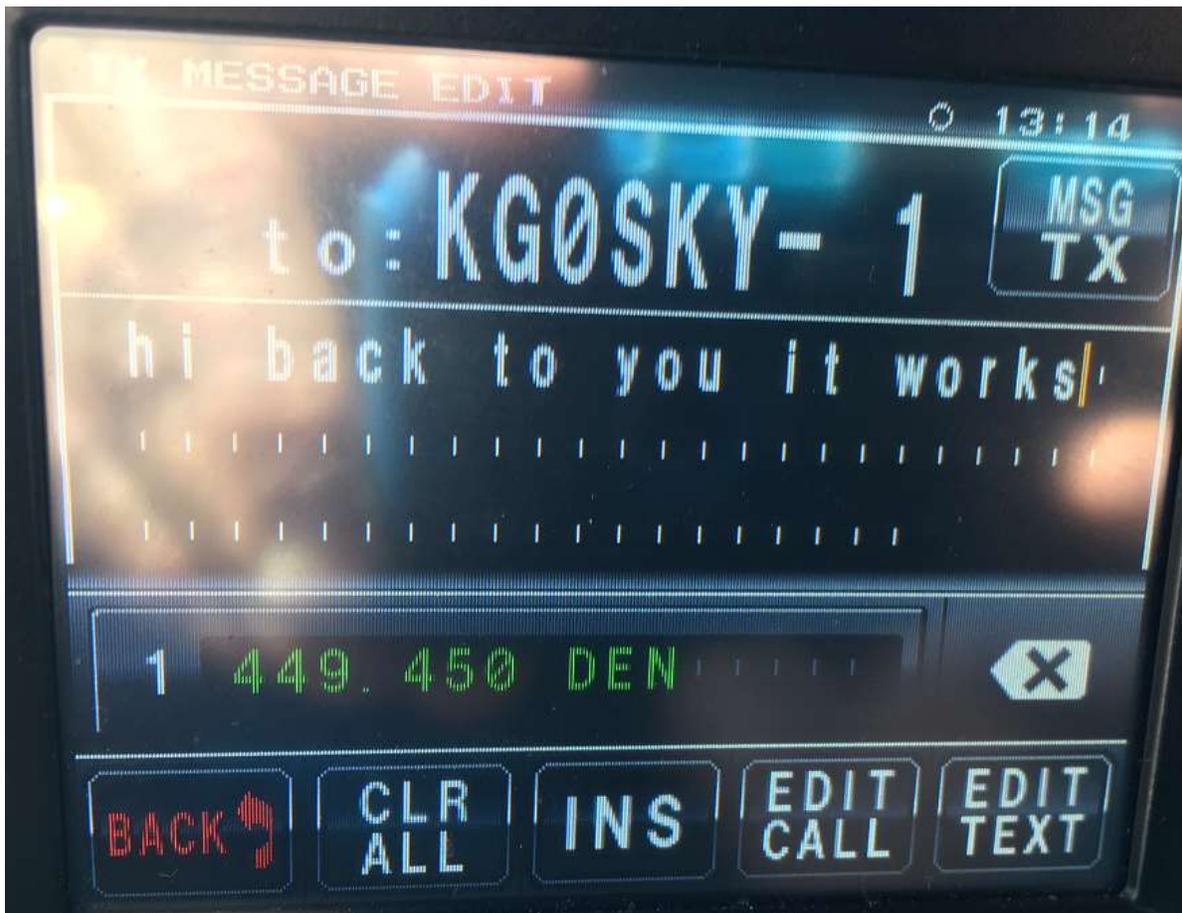
Another cool experiment this month was the sending of messages via APRS that Skyler KGØSKY wanted to try. Using his RPi3 APRS rig (that he homebrewed by the way) and his cell phone to SSH into his APRS mobile system, he and I were able to send messages back and forth to and from my FTM-400. APRS was originally designed not just to transmit and display location beacons, but to be able to message back and forth too. Another reason to contemplate a '400 as your next mobile rig. True dual band/mode capabilities at the same time. I use one side of mine to beacon my location via APRS, (<https://aprs.fi/#!mt=roadmap&z=11&call=a%2FKE0VH-2&timerange=3600&tail=3600>) and the other to communicate voice. But you can also transmit data (with the camera microphone) and messaging via APRS.



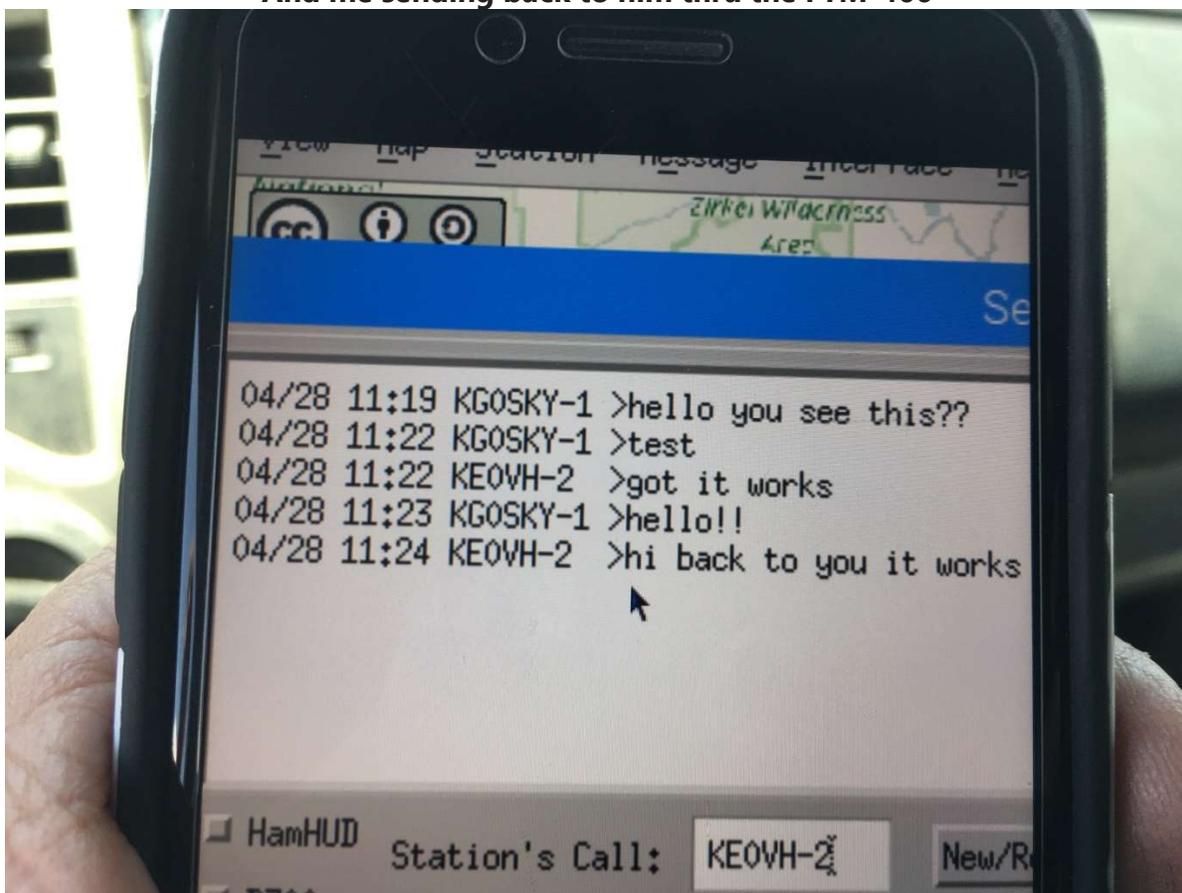
Skyler KGØSKY sending an APRS message thru his mobile/cell system



And his message coming thru to the FTM-400



And me sending back to him thru the FTM-400



And him receiving my message back! SO COOL!

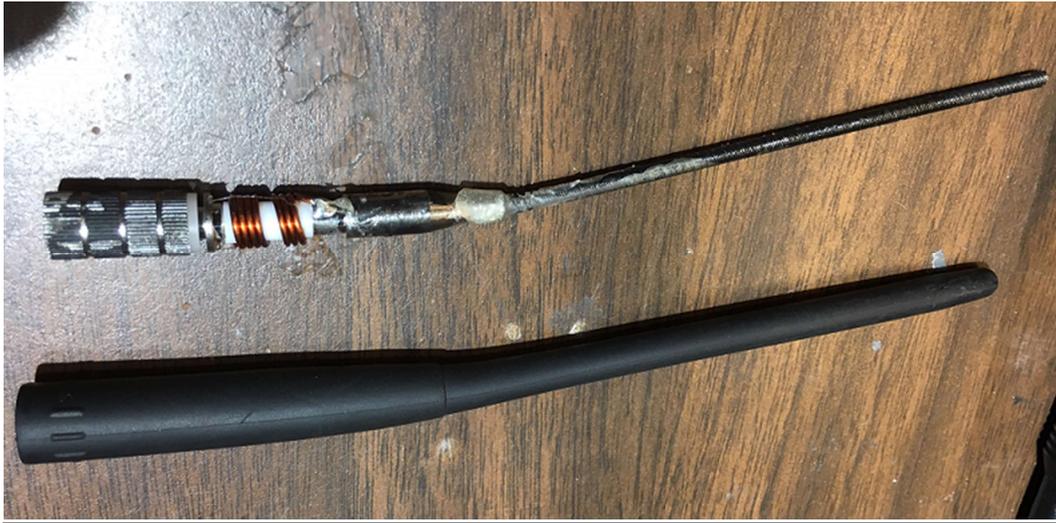
As you may have seen in my previous emails via the SBE Monday Night Net announcements, soon we will have the 449.625 repeater on Lookout Mountain again as it is having to move from its current site (it is dark at this writing, but hopefully will be back in operation soon) to the site above the Clear Channel complex and below Buffalo Bills grave & museum above Golden CO. When it is back on the air it will be doing double duty for both analog as always, plus now it will be on Fusion digital too. The Denver Water Amateur radio club is upgrading its current Fusion repeater seen in last months Hamshack article to the latest greatest DR-2X system. The current DR-1X will be assigned over to me for deployment on Lookout Mountain, will be WiresX capable, act as a backup in emergencies for DWARC, and will of course resume its duties as an analog machine that has served for many many years in the Denver area. Stand by for an update next month.



**My FTM-400 monitoring the DWARC KDØSSP Fusion repeater in WiresX mode on "SBENETCOM"**



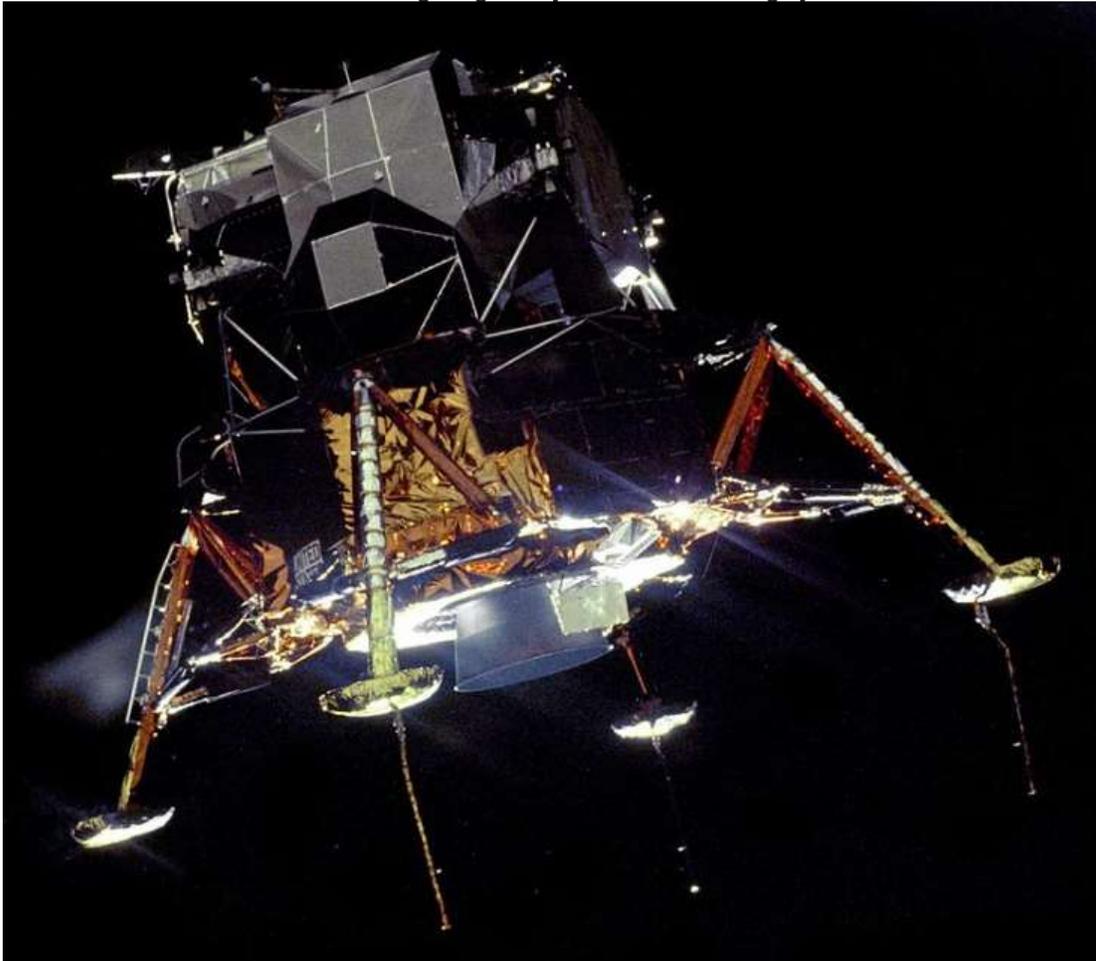
**Hey! A Trifecta of Engineer/Ham Vehicles! KC8GPD, KGØSKY, and KEØVH mobile antenna farms. KC8GPD wins!**



**So here is what a handie-talkie antenna looks like when the cover comes off due to glue failure. Fortunately, some super glue and slipping it back on fixed this issue. Never seen this one before!**

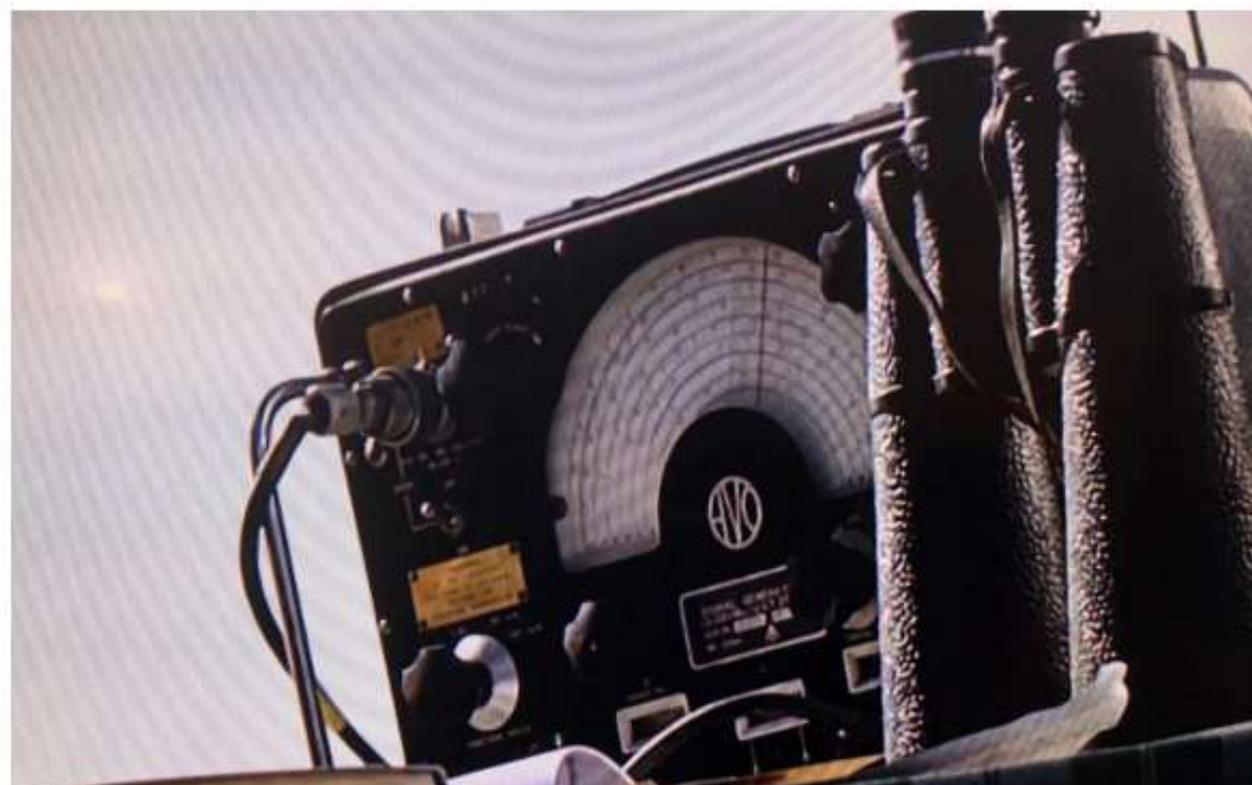
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By the way, Amateur Radio Newline reported a week or so ago that Special Event station K2M will be operating beginning July 16<sup>th</sup>, the anniversary of the launch of Apollo 11 thru the 24<sup>th</sup>. The special event will celebrate the flight and lunar landing. A special certificate will be available. And they are looking for any hams who had anything to do with the building of the Grumman company Lunar Module and any information on what and how they may have participated in the building of the LM. IF you know of anyone or could help in any way you can contact [NO2C@arrl.net](mailto:NO2C@arrl.net). Look for more information on the ARRL website. I am sure going to try to work these guys for sure.



Apollo 11 "The Eagle" Wish I could have "worked" these guys! ☺

So in the February 2019 edition of the Hamshack article (<http://www.ke0vh.com/hamshack/archives/TheKE0VHHamshack201902Feb.pdf>) I wrote about the rig shown in the movie about the Italians who in 1954 were the first to climb K2, second highest mountain on Earth and more dangerous than Everest. back in 1954. It was shown at K2 base camp being used to communicate with the team on the mountain. I asked if anyone recognized it in anyway.



Well Shane KØSDT found information on it and sent it to me. Great Job DUDE!

## Signal Generator Portable No 2, ZD 03813



Uploads & questions ▾

My model ▾

ID = 217862

Help



AVO Ltd.; London: Signal Generator Portable No 2, ZD

If you are interested in seeing and reading more check this out:

[https://www.google.com/search?q=Signal+Generator+ZD+03813&rlz=1C1GCEA\\_enUS833US833&tbm=isch&source=iu&ictx=1&fir=mLFeqYHSKJ1uVM%253A%252CjKelJgwm4onGLM%252C\\_&vet=1&usg=AI4\\_-kSfGtjnDIJWYG8x0uq\\_xc3oNOFR0w&sa=X&ved=2ahUKewjL\\_-apil\\_iAhXlsFQKHRRUBkoQ9QEwBHoECAkQBA#imgsrc=mLFeqYHSKJ1uVM:](https://www.google.com/search?q=Signal+Generator+ZD+03813&rlz=1C1GCEA_enUS833US833&tbm=isch&source=iu&ictx=1&fir=mLFeqYHSKJ1uVM%253A%252CjKelJgwm4onGLM%252C_&vet=1&usg=AI4_-kSfGtjnDIJWYG8x0uq_xc3oNOFR0w&sa=X&ved=2ahUKewjL_-apil_iAhXlsFQKHRRUBkoQ9QEwBHoECAkQBA#imgsrc=mLFeqYHSKJ1uVM:)

AND FINALLY, nothing to do with Fusion or Ham Radio in general, scroll down to the next page to see my favorite picture from this month with warm skies in Denver and my other favorite pastime!



**70+ degree day in Colorado, downtown Denver in the distance on Lookout Mountain above Golden  
CO!**

## **The Hamshack Archive Links**

<http://www.ke0vh.com/hamshack/archives/TheKE0VHHamshack201701Jan.pdf>  
<http://www.ke0vh.com/hamshack/archives/TheKE0VHHamshack201702Feb.pdf>  
<http://www.ke0vh.com/hamshack/archives/TheKE0VHHamshack201703Mar.pdf>  
<http://www.ke0vh.com/hamshack/archives/TheKE0VHHamshack201704April.pdf>  
<http://www.ke0vh.com/hamshack/archives/TheKE0VHHamshack201705May.pdf>  
<http://www.ke0vh.com/hamshack/archives/TheKE0VHHamshack201706June.pdf>  
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<http://www.ke0vh.com/hamshack/archives/TheKE0VHHamshack201811Nov.pdf>  
<http://www.ke0vh.com/hamshack/archives/TheKE0VHHamshack201812Dec.pdf>  
<http://www.ke0vh.com/hamshack/archives/TheKE0VHHamshack201901Jan.pdf>  
<http://www.ke0vh.com/hamshack/archives/TheKE0VHHamshack201902Feb.pdf>  
<http://www.ke0vh.com/hamshack/archives/TheKE0VHHamshack201903Mar.pdf>  
<http://www.ke0vh.com/hamshack/archives/TheKE0VHHamshack201904April.pdf>

**4 Years AGO:** <http://www.smpte-sbe48.org/wp/2015/05/>  
**5 Years AGO:** <http://www.smpte-sbe48.org/wp/2014/05/>  
**6 Years AGO:** <http://www.smpte-sbe48.org/wp/2013/05/>

Society of Broadcast Engineers



The Association for Broadcast and  
Multimedia Technology Professionals

## **SBE VHF/UHF Chapter 73' of the Air HAMnet**

**The SBE Chapter 73 of the air UHF/VHF Hamnet is today (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. The SBE UHF/VHF Hamnet is based in Denver on 449.450, pl 103.5, and the 448.350 Fusion repeater, linked to WiresX room "SBENETCOM" node 46361**

**And Soon BACK: WØKU 449.625, Fusion/Analog pl 141.3**

**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](http://www.ke0vh.com).**

The Society of Broadcast Engineers

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**73' from the "Shack"**