Boulder Amateur Television Club
TV Repeater's REPEATER

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BATVC web site: www.kh6htv.com

ATN web site: www.atn-tv.com

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Tell Your ATV Story Here

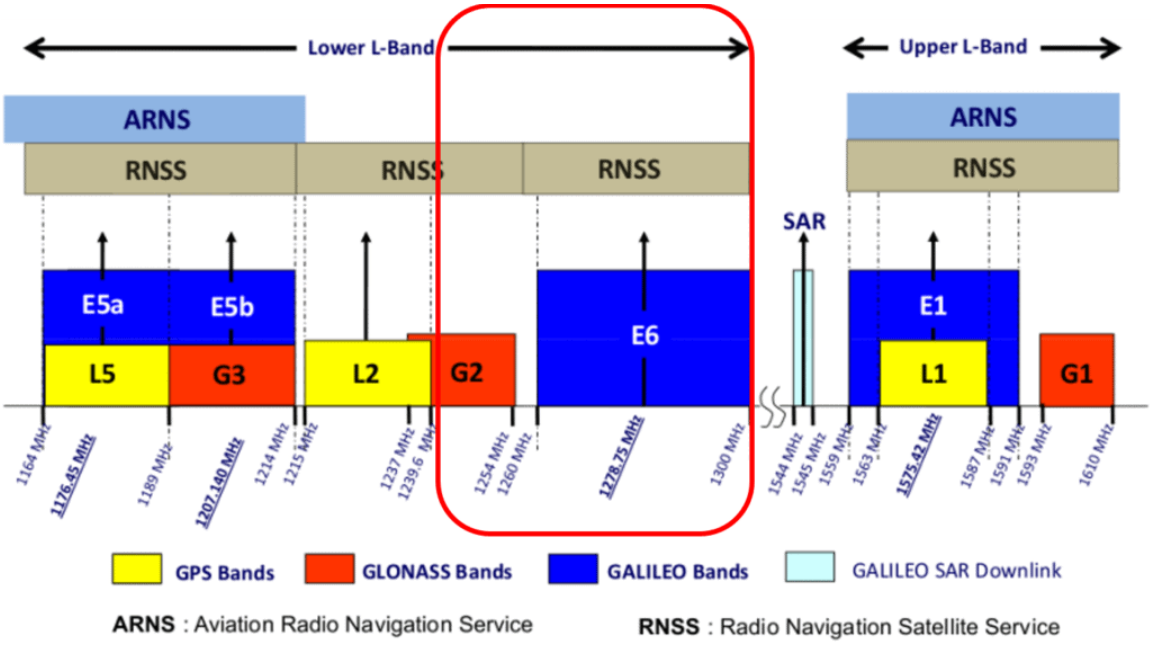
While this newsletter is billed as the "*Boulder Amateur Television Club -- TV Repeater's REPEATER*", it has become much more than the news rag for the Boulder, Colorado ATV hams. It has grown to become the 'de-facto' USA ATV newsletter with a distribution now going out to over 500 ATV hams, both nation wide and international. With the recent demise at issue #100 of *CQ-DATV*, we may be the only free, on-line, ATV magazine left standing. We started in the summer of 2018, and are now also rapidly approaching our issue #100. All previous issues are archived on our web site: https://kh6htv.com/newsletter/

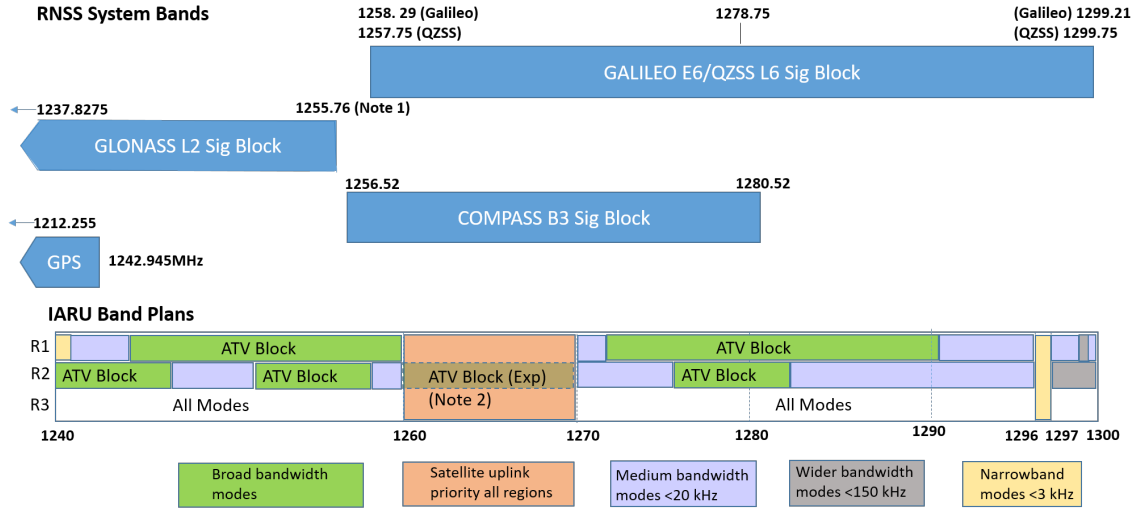
We do not want to just be publishing news of the ATV happenings here in Boulder, Colorado. We want to hear your stories about your own ATV equipment, ham shacks, repeaters. Also how you use ATV, for example for microwave experiments, ARES operations, or other public events. Please send your news, etc. via e-mail to us at the above e-mail address. Photos with your news are always appreciated by our readers.

ICOM moves to Microwaves: According to a public information release, Icom has been conducting technical research on a new project to create a product from its wireless communication technology cultivated over more than half a century. Under the theme of "Icom SHF Project--Super High Frequency Band Challenge --", the company started to develop a new amateur radio product available for use in the 2.4 GHz and 5.6 GHz bands. They stated, "Icom engineers are working hard to research and develop a number of never-cleared challenges within the SHF band, such as large cable loss and higher frequency stability requirements. The ultimate goal is to bring it to the market as a new radio product."

from ARRL ARES newsletter, 15 Dec. 2021

23cm Amateur Activities vs. GALILEO & GLONASS





Rudi Pavlic, S58RU, has sent us the following URL link: https://www-iaru--r1-org.translate.goog/2022/23cm-band-and-rnss-compromises-need-to-be-found/?_x_tr_sl=en&_x_tr_tl=sl&_x_tr_hl=sl&_x_tr_pto=op,wapp
It is a situation report from the IARU on a study of the interference potential of amateur radio activities on the 23cm band with the Radio Navigation Satellite Service.

SDATV Society © 2022

23cm DVB-T2 Receive from Ramona

Mobile/Portable/Fixed base DATV |MESH
DVB-T2/S2/ATSC 3.0 Station

SDATV Society © 2022

One of our Ubiquiti 5 GHz MESH Network Bridges located at our Ramona site {Private Property} at an elevation of 1,640 feet which is also home of one of our all Digital Amateur Radio TV repeaters [DVB-T2/S2 and will be home to one of two(2) *new ATSC 3.0 UHF stations] Our MESH-L network is used to administer our DATV NSM - Network Systems Management for both MESH and DATV systems on site. Each has an on site IP phone and video monitoring PTZ. This site is linked to our downtown San Diego DATV and MESH-L network overlooking the San Diego Bay at 450 feet elevation. IPTV is on our MESH as an alternate feed to both repeater sites for multiple access by our members when away from their homes. System is also linked to our Oceanside Cable *Community* Coastal Access TV via Cox for those not having line-of-site to receive. Thanks to our very skilled amateur radio membership in Rf Network Engineering, Computer Science Data/Engineering and our private funding we are achieving our goal in achieving one of the most modern Amateur data networks and Ham Television systems in the U.S.

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Sat-Link DVB-T Modulator Feedback:

Mario, KD6ILO reports --- "I have an operational SatLink modulator and it is a very good starter, works well with your DVB-T power amplifiers. These photos were taken in May of 2018 using the Sat-Link modulator on my test bench. Also a test re-transmission of your ATV net on to our repeater here in Oceanside on 423 MHz / 6 MHz BW, using 10 watt PA. This was and still is a good easy starter unit for a new user to DATV. This one is still in service at one of our relay stations in Vista about 15 miles SE of my QTH. A very very easy unit to set up.

Mario has also said if any ATV hams have questions about the SatLink unit, you can contact him at: kd6ilo.ha@gmail.com

Aloha Jim!
Our team will be receiving a gift from Barcelona, Spain from Carlo's { that produced our new PA's} that will help us with our 2022 ATSC program that will benefit our tech team. It's a professional grade TV signal and spectrum analyzer; Ranger Nero 2 coming in via FedEx next week. We are looking forward to receiving this package.
73 de Mario, KD6ILO

FEEDBACK:

TinySA Feedback: Jim --- Once again, thanks for a really informative and useful newsletter! I plan on getting a TinySA , and putting the info you provided on it and the mixer to good use. 73, Chris, K0CJG, Boulder, CO

Hi Jim --- Good info in the latest newsletter on the TinySA. I have been using one on my DVB-T remote base to monitor the waveform remotely . I watch it remotely when changing the output power on the remote base to make sure things don't go wonky. I had also noticed that the shoulders looked a whole lot worse on the TinySA than they were on a friends Rigol, so I have just been using it as a relative reference point, knowing the

signal was really better than indicated. Guess I'm going to have to hook up a LO & mixer like you suggested and use the low frequency port to get a more accurate reading.. I'm glad to know that works. I have another Chinese spectrum analyzer I use at home ranging from 35 MHz-4400 MHz, that does a much better job than the TinySA, I've used that with an external noise source generator for aligning filters, then checking them on my friends Rigol, and it gets them pretty darn close. It doesn't have a screen so requires a PC all the time to use so makes it more complicated to use portable. I was always using the tinySA around the house looking for stray RF signals before I installed it at the remote base.

See ya, John, K0ZAK

70cm BAND-PASS FILTER from China

In the November issue of this newsletter, John, K0ZAK, mentioned he had found this BPF on the internet. He had not purchased one, but thought the specs. looked interesting. The Chinese claimed the following for their model LBQ-450: 400 - 520 MHz tuning range, 0.6 to 8 MHz pass band, < 1.5dB insertion loss, 50dB rejection (but over what range?), and 50 Watts max. RF power.

So, on Dec. 1st, I decided to order one for evaluation. Prices ranged all over the place. I found the best price of $89 at 409 Shop in Hong Kong (www.409shop.com). After placing the order, they contacted me and asked what frequency I wanted it tuned to, so I told them 441 MHz. The filter arrived on Dec. 28th.

So what did I discover? For one, the filter is a three pole, cavity resonator with three tuning screws. I promptly tested it and found that it was in fact tuned to 441 MHz. I tested it with my Rigol spectrum analyzer + tracking generator.

Sorry, but I don't have any photos of it's response. The data I took was stored on a USB memory stick plugged into the Rigol. The filter, the Rigol, the memory stick are all a

pile of ashes now as the Dec. 30th Fire Storm burned them up along with my home and all it's contents.

So, working from memory, as I recall as tuned by 409, the center frequency was 441 MHz, about -1.7dB insertion loss and the -3dB bandwidth was a bit more than 2.5 MHz. The pass-band was nice and flat over about 2 MHz. I then experimented with the tuning. I was unable to tune it to any wider band-width. Thus the claim of 8 MHz is totally bogus ! I was able to tune it to narrower band-widths, but with increased insertion loss and undesirable pass-band response. Conclusion: This BPF would be useful for folks wanting to work with 2 or 2.5 MHz BW, digital TV, but nothing wider, nor narrower.

Jim, KH6HTV, Boulder, CO

2023 ARRL HANDBOOK:

Look for new material on ATV in the ARRL Handbook. The editor, Ward Silver, N0AX, has asked us to rewrite the ATV section. Ward says "The next edition of the Handbook (2023) will be the 100th edition and we're making a big push to update a lot of the material."

Jim, KH6HTV, Boulder, CO

BOULDER HAM BREAKFAST:

--- A group of Boulder, Colorado hams, including several ATVers get together weekly for breakfast on Tuesday mornings. We are presently meeting at the Walnut Cafe - South Side, in the Table Mesa shopping center at 8am.

Jim, KH6HTV, Boulder, CO

W0BTV Details:

Inputs: 439.25 MHz, analog NTSC, VUSB-TV; 441MHz/6MHz BW, DVB-T & 1243 MHz/6MHz BW, DVB-T

Outputs: Channel 57 --- 423 MHz/6MHz BW, DVB-T, or optional 421.25 MHz, analog VUSB-TV. Also, secondary transmitter, FM-TV output on 5.905 GHz (24/7).

Operational details in AN-51a Technical details in AN-53a. Available at: *https://kh6htv.com/application-notes/*

W0BTV ATV Net:

We hold a social ATV net on Thursday afternoon at 3 pm local Mountain time (22:00 UTC). The net typically runs for 1 to 1 1/2 hours. A DVD ham travelogue is usually played for about one hour before and 1/2 hour after the formal net. ATV nets are streamed live using the British Amateur TV Club's server, via: *https://batc.org.uk/live/kh6htvtvr* or *n0ye*. We use the Boulder ARES (BCARES) 2 meter FM voice repeater for intercom. 146.760 MHz (-600 kHz, 100 Hz PL tone required to access).

Newsletter Details:

This is a free newsletter distributed electronically via e-mail to ATV hams. The distribution list has now grown to about 500. News and articles from other ATV groups are welcomed. Permission is granted to re-

distribute it and also to re-print articles, as long as you acknowledge the source. All past issues are archived at: *https://kh6htv.com/newsletter/*

ATV HAM ADS

Free advertising space is offered here to ATV hams, ham clubs or ARES groups. List here amateur radio & TV gear For Sale - or - Want to Buy.

KH6HTV Video is temporarily out of business due to the Dec. 30th Fire Storm which destroyed about 1000 homes in Boulder County, Colorado. However, I have located another house to buy. So the ham shack and electronics workshop will begin to be rebuilt this spring. I am hoping to be able to be back in business by late spring. I will make an announcement in this newsletter when that happens. Then I will again be able to supply fellow ATVers with my Linear RF Power Amplifiers and Low Noise Pre-Amps for the 70cm, 33cm and 23cm bands.

73 & Great ATV-DX de Jim, KH6HTV