

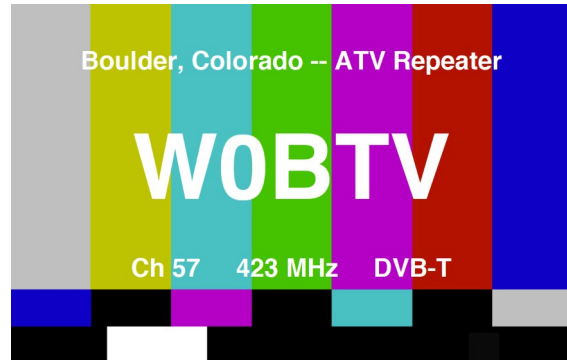
Boulder Amateur Television Club TV Repeater's REPEATER

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BATVC web site: www.kh6htv.com

ATN web site: www.atn-tv.com

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ATV RETURNS to DAYTON HAMVENTION

There was lots of interest in ATV. We were demonstrating a tabletop HV-310 transmitter operating on 1280 MHz that was transmitting a 2 MHz bandwidth QPSK DVB-T live video back to the W8BI repeater in Huber Heights, approximately 18 miles from Xenia. The ATV repeater was cross linking this signal back to Hamvention on DVB-T 70cm, also at 2 MHz. We received the repeater's signal at -45dBm with 17dB s/n. Here is a short (30 sec.) You-Tube video of the ATV booth at Dayton:
<https://www.youtube.com/watch?v=ANTgKaSmOP0>



AH2AR's truck supported two masts directly behind and outside of the ATV booth. Once set up, we determined that the 70cm yagi on the push-up pole only needed to be six feet up off the ground to work the repeater. There's nothing like having antenna height overkill! Pictured in the lower left of the above photo is the HV310 and amplifier used for the 23cm's transmitter crosslink. Looking closely on the amplifier are the words "HILLBILLY ATV GO KIT". The monitor/receiver to the right-front of the Hillbilly Go Kit is an HV122A test jig (for troubleshooting, if it was required). The center-background gear is an HV-110 receiver/monitor (not used for the demo).



Pictured above are a few recognizable faces within the ATV community at large. Left to Right Mike Collis WB6SVT, Dave Schwab KE8DOC, Dave Stepnowski KC3AM, Vince Vitullo N3BFZ, Charles Beener WB8LGA.



An ATV Dinner was held on Friday evening. One of the attendees won an HV-110, DVB-T receiver, donated by Mel, K0PFX. Unfortunately, the hard-copy Hamvention Program did not list any of dinners that were being hosted this year, so the attendance was small. I suspect next year will be far larger, once the dinner gets into the program and word gets out about next year's door prizes that will be offered!

Dave, AH2AR

There was also an ATV technical forum held. You can watch it on **You-Tube**. Search for "**ATV Forum Hamvention 2022**". The hour long ATV forum was moderated by Art, WA8RMC, Ohio & ATCO. There were two talks given. The first was by Mel Whitten, K0PFX, from St. Louis. The second was by Art and Mike Collis, WA6SVT, southern California on the Amateur Television Network (ATN).



Mel - KØPFX, gave a talk about DATV

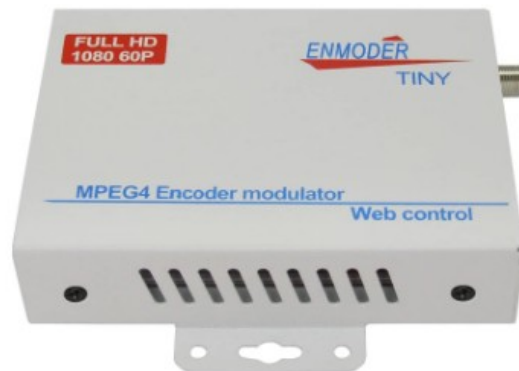


Mike, WA6SVT, & Art, WA8RMC, talked about ATN

FEEDBACK on SatLink DVB-T Modulator:

Greetings Jim -- Another DVB-T modulator we have had success with is this one from China.

Setup is via Ethernet and a web page which can be accessed remotely at a repeater site. It's cheaper than the one described in your latest newsletter but does not have an on board display.



We use them here in Bendigo, Victoria, Australia. One is the exciter for our TV repeater on 445.5 MHz and several of us use the same modulator mixed up to 1284 MHz which is the input to our repeater.

They are sold under several brand names and prices vary but they are essentially the same unit internally. Here are a couple of URL links to them.

73 de Ross, VK3CE

https://www.aliexpress.com/item/32985153403.html?spm=a2g0o.order_list.0.0.21ef1802B4fp73

<https://www.kristalelectronics.com/featured-products/clearview-tinymod-multi-system-mpeg4-hd-digital-modulator.html>

Editor's Note: The Aliexpress link shows the modulator selling for \$136 (USA\$) + \$9 shipping from China. The link shows lots of specs. They include: RF range 100-950 MHz (1kHz steps), Bandwidth 6, 7 or 8 MHz, RF output 70 to 100dB μ V, resolution up to 1080P-60, video encoding H.264 up to 20Mbps, audio encoding MPEG-1, layer 2, 48kHz, +12Vdc 1 Amp. Management via Ethernet.

More Feedback on SatLink:

Hi Jim --- Hope things are going well setting up your new house and shop. I was interested in your new newsletter with the testing info about the Sat-Link modulator. One of my Chinese modulators is very similar to that one (if not identical) but I got it to work fine with the HV110 receiver once I got all the settings set correctly. I was able to set the PIDs up correctly with the menus. I haven't used it however since we ended up setting the repeater up for 2MHz bandwidth.

As you discovered, some equipment doesn't care if the PIDs match or not. I seem to recall a menu setting on one of the HiDes receivers that would ignore the settings but don't recall if the HV110 had that or not.

I have a general question about the PID numbers to be used. I have seen a number of setup documents mentioning to use specific numbers, but documents have been differing on what actual numbers to use. Even Hides equipment has different default settings shipped in their different models.

So my main question is does it matter exactly what numbers to use? Do the different numbers actually have a meaning performance wise? Somewhere in my travels, I saw a chart describing different PID numbers relating to their usage in commercial applications, but don't recall where. Obviously everyone should use the same settings on a particular repeater if the receiver requires it, but does it matter what that particular number is?

Also, I have been testing low power signal settings into our repeater set to 2MHz bandwidth lately. The interesting thing I've found is that even though people suggest QPSK, & 2K carriers for weak signal

conditions, I have discovered that I get a more solid lockup & motion using 16QAM, and 8K at threshold power settings. I have to raise my power a bit when I switch to QPSK & 2K in order to get good motion. This is using a UT100 modulator into a HV110 receiver at the repeater and using NTSC resolution inputs to the UT100 so I can't blame it on being too high a resolution video being transmitted. There is no point in using higher resolution at this point since our repeater only has an analog transmitter at this time.

Seeya, John Kozak; K0ZAK/3

8 km on 24 GHz DVB-T

Hello lads,

Today 16-05-2022, at 15:00 in the afternoon, after three hours of tests for the pointing of the dishes, problems with the decoder settings and poor visibility of the TV screen due to the sun, Rudi S58RU and I IV3WSJ were able to connect in ATV on 24.1Ghz in DVB-T.

The distance of the connection made is 8Km
... some data:

DVB-T power of the two TX 15mW

Rudi S58RU in JN65WM - ASL 275,
Mauro S5 / IV3WSJ in JN65VL - ASL 362
I am attaching some photos.
73 ... Mauro ... IV3WSJ, Trieste, Italia





ANALOG vs. DIGITAL ATV Contest Controversy

Hi Michel --- The DATV is not a step forward after analog. We cannot imitate RAI, RTVSLO, SRF... we don't have this vocation. The DATV is fine, if you work from home, maybe over the repeater but nothing more. If you make good QSOs in a contest you have to work in FM.

I, from home (275m ASL), not participating in the contest, giving only points to the participants, on 12.09.2021 I made 16 connections. In DATV, maybe I would do them 3 - 4.

I look at the Qatar Oskar 100 -333KS a deadly bore. I don't know the languages, I don't want to transmit....

Try fixing your record list, to be fair - FM, DVB-S, DVB-S2, DVB-T, DVB-T2. Try making a list of RAs that work in ATVs at higher frequencies.

73, S58RU

No. Analog is "ATV" and Digital is "DATV". Today nobody makes more than the analog ATV. We did ATV twenty years ago and there were 140 in the SWISS- ATV club. We are currently more than 5 active.

We are very little doing 24 GHz, DATV. It's all hard time finding correspondents. Personally I built a separate TX and RX to be able to do tests without correspondents.

Today, I only have one correspondent -- ONE ! And this is in his shack and send through his window Life is not easy..... hi

73 de Michel, HB9AFO, Bussigny, Switzerland

Editor's Note: This is directly from HB9AFO's qrz.com web page ----

Actually and since more than 20 years, I am mainly interested by ATV (now DATV) and microwaves. During years, I was co-holder of the ATV 10GHz distance world record. I have a very active web site devoted to ATV and named: ATV french connection (www.hb9afo.ch). I was the first and former president of the SWISS ATV association until 1999. I am also doing reflexion QSO to the Mont Blanc in 10GHz DATV. For the moment the best distance is 322 km (with F9ZG/P). I am also QRV on oscar-100 in DATV and SSB with an home-made PA of 150 W. Historically I was knew as 4W1M and 4W1Z in Yemen in 1968.

KH6HTV Mobile ATV Again

Jim is slowly getting his ATV act back together again after the Dec. 30th fire. On May 23ed, he was finally able to assemble enough gear to head out and try his hand again at mobile ATV. The photo shows him successfully putting a 23cm DVB-T signal into the Boulder, W0BTV repeater and simultaneously receiving it back on the repeater's 70cm DVB-T output.

Jim was parked at a high spot out on the eastern Colorado prairie at Lowell & 152 Ave. The distance to the repeater was 12.7 miles.

Jim was using a Diamond NR2000NA, 2m/70cm/23cm mobile antenna with a Diamond DPK-4NM-N mag. mount on his Saab convertible. A Diamond MX-3000N triplexer was used to split and isolate the 70cm receiver from the 23cm transmitter. The transmitter was a Hi-Des HV-320E driving a KH6HTV Video 23-11A amplifier putting out 3.7 Watts. The repeater reported receiving the 1243 MHz signal at (-92dBm) and 12dB s/n. The receiver was a KH6HTV Video 70-LNA preamp to a Hi-Des HV-110 receiver. It received the repeater's 423 MHz signal at (-69dBm) and 17dB s/n.



SALVAGED ANTENNA from FIRE Finds a NEW HOME

In the April issue of this newsletter we told about giving away Free a 50ft Rohn tower, DX Engineering HF Hex Beam antenna and Yaesu Rotator. They were salvaged from the qth of KH6HTV which was destroyed in the 30 Dec. fire storm which also wiped out 1000+ other homes. Well here is where it found a new home.

Jim -- Wanted to let you know I got the tower and antenna setup today and on the air again! I modified the base and made it a tilt over tower with an old winch I had mounted in the out building attic. I was able to re-use 3 tower sections (plus the half section I buried and modified for the base) to get it 30 feet off the ground.



Thanks once again, I hope you are doing well!
73 de Derek Brady, KE0RVP

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.



ATV Repeater -- For Sale

Jim --- Just getting around to get some pictures of the ATV equipment I have. This was on the air not long ago working fine. My friend Jim, WD4ATV (now SK) gave all of it to me. Now the Forest Service has made it difficult to maintain my mountain site. So, I would like to sell or trade it. Please be advise I am familiar with ATV as I operated it after lots equipment from P.C. Electronics But my friend Jim and one other (sk) really poured the money in this setup. He allowed it was as good as money could buy. Input = 434 MHz & Output = 421.25 MHz. What all is here, I hope someone can identify etc.. There are more parts, etc. contact --- Sam, WM4T, wd4sbx@gmail.com , Gray, TN