

Amateur Television Journal

January, 2025
issue #180

BATVC web site: www.kh6htv.com

ATN web site: www.atn-tv.com



Jim Andrews, KH6HTV, editor - kh6htv@arri.net www.kh6htv.com

Another Low Cost DATV Receiver

I have found still another very low cost DVB-T receiver which will work on the amateur 70 & 33 cm bands. This one was recently found on E-Bay selling for only \$23, including shipping from China. As with most stuff these days from China, it comes with no brand name, nor model number, nor known distributor. Here is the ebay URL link <https://www.ebay.com/itm/156280235356?var=457299652129>



Even though the E-Bay ad allowed one to order it with either a US or European AC power plug. I ordered the US, but the one I got came with the European plug. Thus, I had to scrounge up an adapter to test it. It also came up in some foreign language and it took a bit of fiddling with the remote to get it to speak English to me. I was then able to manually program it for the various ham DATV channels on both 70 cm and 33 cm bands. Note: you must have a local DVB-T source (i.e. modulator) to be able to program these receivers. It programmed in the same fashion as the more expensive GT-Media boxes. A possible disadvantage of this box is it must be powered via the AC power cord. It makes no provision for a DC power source of either +12Vdc or +5Vdc. An advantage of this box is it does provide standard RCA jacks on the rear panel for composite video plus stereo audio outputs that do in fact work simultaneously with the HDMI output regardless of the resolution settings on the HDMI.

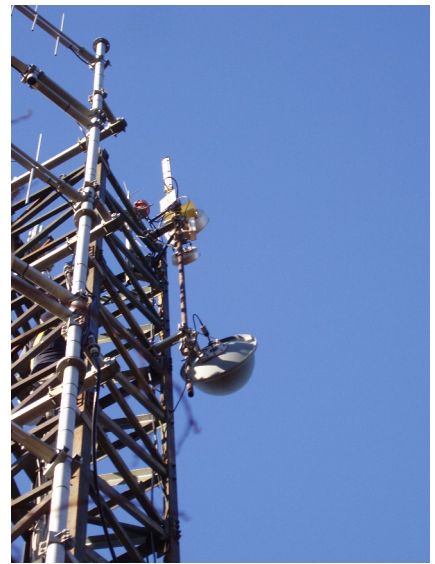
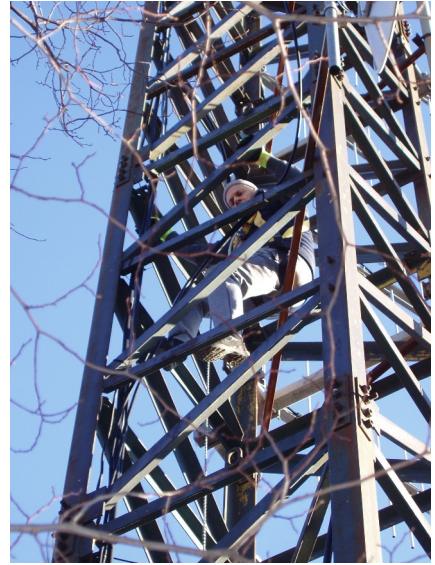
Otherwise, the BIG selling factor is the price - only **\$23 !**

73 de Jim, KH6HTV, Boulder, Colorado

SLOVENIA **ATV - REPEATER**

**Le ultime foto del nostro RPT
ATV S55TVJ.**

73 de S58RU, Rudi Pavlic



CHRISTMAS GREETINGS from DARA !

**Charles Beener, WB8LGA, ATVer
extraordinaire! Nobody knew that Santa
transmits live DVB-T video on his sleigh
while delivering presents. Here he is with
his daughter-in-law, Patty, this year,
providing Christmas cheers to a local
home in Delaware county, Ohio**



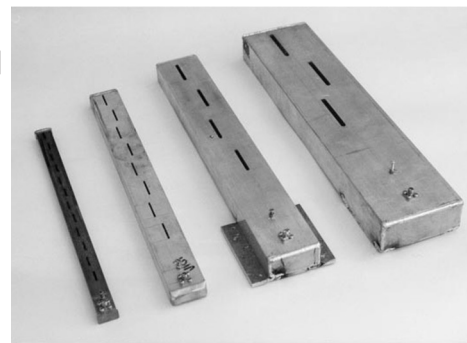
WAVEGUIDE SLOT ANTENNA FEED-BACK:

In previous issues of the magazine, I think I saw comments about experiments with various antennas for ATV repeaters. I would like to present to you an article about antennas for ATV, which was published in the book Beacon-99 (pages 13 – 17). This particular article on Waveguide Slot Antennas is also written in English. <https://s53m.com/download/phare/beacon.pdf>

73 de Rudi, S58RU

Double slot in a rectangular waveguide - an antenna with omnidirectional pattern in the azimuth plane and horizontal polarisation

Robert Vilhar - S53WW



(editor's note: This is a very comprehensive, 232 page book with lots of technical articles about all aspects of microwave ham radio. It is dated 1999 and is a publication of the RTV KLUB MURSAK SOBOTA.)

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LARCAN HEAT SPREADERS:

On Sat, Jan 4, 2025 at 4:49 PM Fred Stefanik <n1dpmfred@gmail.com> wrote:
To: NEWSVHF Mailing List

I have been asked if I could machine some heat spreaders for the Larcan UHF (432) pallets that are available surplus. The answer is yes. I will be making them from aluminum (no need for copper at this power level). They will be the proper thickness to make for mounting the pallet on a flat surface. They will have the proper depth slot machined in them for the LDMOS FETs and 4 clearance holes for mounting the FETs and and 6 x 2-56 tapped holes for mounting to the PC board. I will also include (6) 2-56 x 1/8" screws for mounting.

The price will be \$25 each plus shipping (likely a small USPS flat rate package).

Please let me know if you want some and how many. I'm going to leave this open for 2 weeks. So right after the January VHF contest I will order the material. Let me by no later than end of the day January 19th. I will be ordering the material on January 20th. I'm making ONE "batch" ONLY!!! will contact you when they are done and you can settle up then.

Thanks and 73, Fred, K1FMS

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A Microwave ATV Windy Horror Story

(reprinted with permission from the author & NEVARC News, vol. 12, issue7,Dec. 2024, pp. 19-21)
(a publication of the North East Victoria Amateur Radio Club, <http://nevarc.org.au/>)

M.A.D. DISASTER: Microwave Activity Days, known as MAD, are held throughout the year. On Saturday 2nd November 2024 I ventured out to my usual spot at Kinglake as others were setting up quite a distance east of Melbourne so it was an opportunity to work some new locations. The wind upon arrival at my location was very strong, but I decided to set everything up anyway after making not

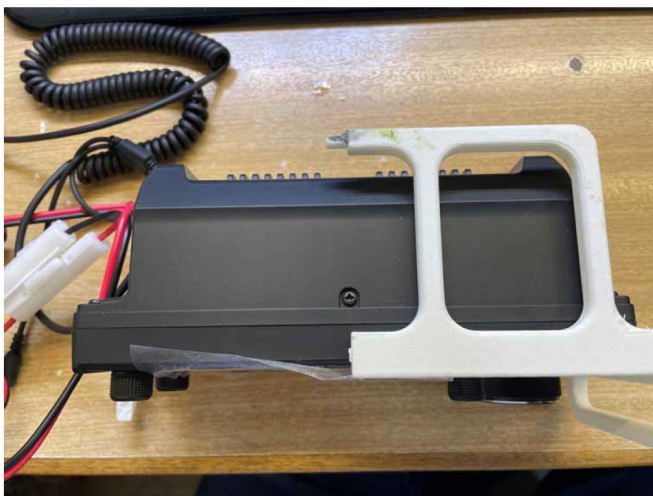
only the one hour journey, but about the same time packing everything into the car the day prior. I always prepare the day before with packing the car as I need a nights rest to recover, as all the electronics is kept in the house, so that involves up and down stairs with the walk to the carport.

As I was setting up the wind was getting more intense. When the tripod with the main microwave gear was setup I shook it to make sure it would stay upright. The wind is obviously stronger than me, as when I turned my back to get the battery a huge gust of wind blew most of the gear over, a huge crash sound. As I turned around I saw the damage, but only when I returned home did I see how bad it was.

The microwave dish is distorted on one side, the majority is still OK but until I go out again the RF pattern gain will be down from having a perfect dish surface. I am really pissed off about that. When I tried to pick up everything to place it all back to vertical the wind knocked me over to the ground. I have discovered, the hard way, that if I fall over, without having something to grab to lift myself up, on the ground I will stay. Getting old sucks ! So I crawled to the car and after finally opening the door, with the wind slamming the door into the side of my head, I finally was able to lift myself to stand up. I was so annoyed I gave the idea away and just packed everything up and went home. What a waste of a day!



Photo with the mobile phone before I started to pack up



The IC-905 with part smashed white protective frame



↑ Side damage to the microwave dish

Back at home QTH, the damage assessment began. The camera was free from damage, despite hitting the ground hard. The camera quick connect base had one side broken. The force of hitting the ground

was enough to break the plastic camera connecting base. This has since been replaced and a new 3D protective frame has been made and installed to the IC-905.

The 3.4 GHz Grid Pack was OK as I have designed it to not get hurt if it falls after the last mishap with that.



Photo of Mick's microwave antennas and gear taken on a calm day. Photo from his www.qrz.com web site.

The NEW, expensive !!, Icom IC-905 was saved by the protective 3D printed frame that did its job and it broke instead of the radio case suffering injury. Still the thought of such sensitive and expensive electronics copping a fall to a hard rocky surface does not thrill me at all. There was however damage to the Ethernet socket on the IC-905. When the microwave tripod with the dish fell it pulled the Ethernet cable along with it that was attached to the IC-905 which ripped itself free by breaking the Ethernet socket on the side of the radio. Now Ethernet cable plugs will not stay inside the IC-905 socket I knew this was a bad idea when I bought the radio, but Ethernet sockets seem to be the preference. They might be OK for inside in an office where they are attached and left for a long time, but out in the field portable is another thing.

I suppose the microwave dish antenna seems to have fallen on the side, not the front. Had the front gone into the ground the feeds would have been damaged and the connectors would also break. These are the most sensitive part of the dish and even a slight disfiguration would have meant a huge change to both frequency resonance and VSWR, which I cannot measure at these frequencies.

Of course the best places for microwave activity is always a high clear open spot. So if the weather is windy then you are going to be out in the open. The bases can be held down with tent pegs or a weight of some kind but that is just more stuff to prepare and carry to both setup and pack up.

In future it looks like the XYL will be coming out on future MAD events to help setup and pack up. Also only in calm weather, so I may not get out on every planned Microwave Activity Day. Or maybe my health is so stuffed that maybe my portable outing days are drawing to a close. As the house is not in a high clear location, operating on the microwave bands is not practical and I have tried some tests to prove that. Only 23cm is viable, not any higher frequencies.

~Mick Ampt, VK3CH, Doncaster, Australia

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Linear Translator -- Feedback:

Jim -- This issue was great! I've never seen a write up for a terrestrial linear translator. Will have to study this in depth! Thanks for a great newsletter.

73 de Steve Stroh, N8GNJ
Editor, **Zero Retries** Newsletter - <https://www.zeroretries.org>
"Radios are Computers - With Antennas!"

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Another Solar Peak ?

Jim: Thanks for the newsletter.

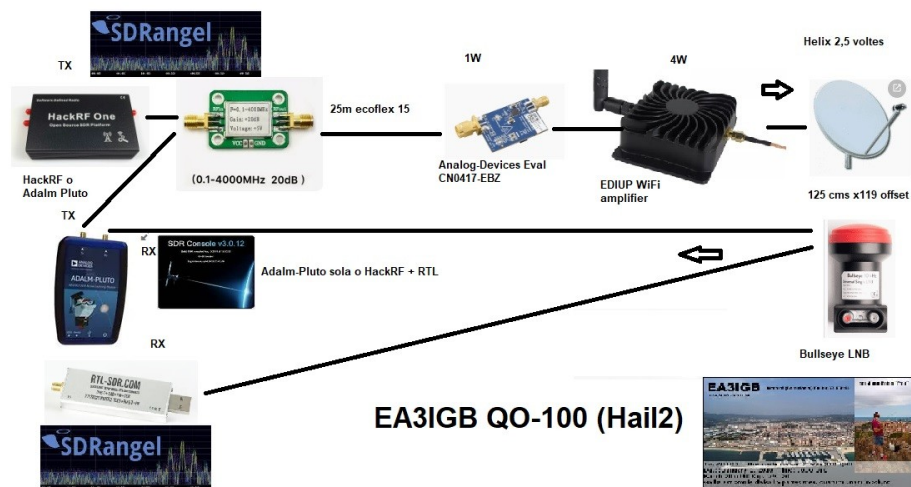
On another note, NA2AA had a great editorial re. Solar Cycle 25 in the January, 2025 issue of QST. --- A comment — this actually may NOT be the peak of Solar Cycle 25. There is a good possibility that Solar Cycle 25 will have two peaks. The current peak we are experiencing, and a second in a year or so. This is due to the current peak is only northern hemisphere sunspots.

Best Wishes for 2025. -- Jon, N0JK, QST WA50 column

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You Tube - ATV Video: Pau, EA3IGB, Mataro, Spain has sent us a link to a recent ATV You Tube video. <https://www.youtube.com/watch?v=RP9DUCVsqvc>

Plus here are some photos of his ATV activities, including his station layout for working the QO-100 ham TV satellite.





WOBTB Details: Inputs: 23 cm Primary (CCARC co-ordinated) + 70 cm & 3 cm secondary all digital using European Broadcast TV standard, DVB-T with standard 6 MHz wide TV channels. Frequencies listed are the center frequency of the TV channel.

23 cm = 1243 MHz (primary), 70 cm = 441 MHz & 3 cm = 10.380 GHz

Outputs: 70 cm Primary (CCARC co-ordinated), Channel 57 -- 423 MHz with 6 MHz BW, DVB-T Also, secondary analog, NTSC, FM-TV output on 5.905 GHz (24/7 microwave beacon).

Operational details in AN-51d Technical details in AN-53d. Available at: <https://kh6htv.com/application-notes/>

WOBTB 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. ATV nets are streamed live using the British Amateur TV Club's server, via: <https://batc.org.uk/live/> Select *ab0my 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 newsletter was started in 2018 and originally published under the title "*Boulder Amateur Television Club - TV Repeater's REPEATER*" Starting with issue #166, July, 2024, we have changed the title to "*Amateur Television Journal.*" This reflects the fact that it has grown from being simply a local club's newsletter to become the "de-facto" ATV newsletter for the USA and overseas hams. This is a free ATV newsletter distributed electronically via e-mail to ATV hams. The distribution list has now grown to over 800+, both in the USA and overseas. 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



SWAP-FEST -- save the date, Sunday, February 16th.

Rocky Mtn. Ham Radio's annual swap-fest will be held Sunday, Feb. 16th, at the Adams County Fairgrounds in Brighton from 9 am to 1 pm.

For more info, go to: <https://www.rmham.org/the-swapfest/>

FREE ANTENNA:

Free, 2.4 GHz, BBQ Grill Dish Antenna.

looks to be the same as the L-Com model HG2424EG-1NM. specs. are: 39" wide x 24" high. 24 dBi gain, 12-14 deg. beam-width, 31 dB F/B, pigtail coax cable with N connector. Will NOT ship. For local Boulder, Colorado area hams only. interested ? -- contact Jim, KH6HTV, 303-594-2547, email = kh6htv@arrl.net



KH6HTV Video - Year End Inventory Clearance Sale

This past summer, the Boulder, Colorado ARES group (BCARES) asked me to build a 70cm, DVB-T repeater. After I purchased over \$2,000 worth of specialized materials for the repeater, they canceled the order. I was left stuck with a lot of nice, new, but unusable gear. I need to recover some of my investment. So, I am offering some of the brand new items here for sale at a discount of **25%** off my cost. Shipping costs would be added to the total. No shipping in Boulder area. I will deliver. Interested ? -- you can contact me at: kh6htv@arrl.net or 303-594-2547. Jim, KH6HTV

FOR SALE: all prices discounted 25%+

**YAESU
model FTM-3100R
2 meter, 65 Watt,
FM Mobile Transceiver**



it cost me \$ 192
Your price is \$ 140

**POWER WERX
model SPS-30DM
25 Amp Power Supply**

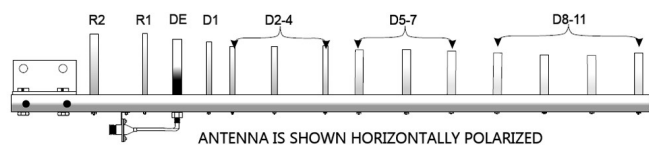


adjustable output 5-16Vdc, digital volt & amp meters.

it cost me \$ 197
Your price is \$ 140

**Directive Systems
model DSE2414LYRMK
23cm Loop Yagi Antenna**

DIMENSIONS OF 1240-1285 MHz LOOP YAGI, MODEL 2414LY(K) RM



15dBi gain, 3 ft. boom
it cost me \$ 146
Your price is \$ 100

**Diamond X50NA
2 meter / 70cm
Base Station Antenna**



4.5dBi (2m) & 7.2dBi (70cm), 5.6 ft.
it cost me \$ 124
Your price is \$ 90
note: will not ship. for sale only to local Boulder area hams

FUMEI
model SGQ-450A
70 cm Duplexer

I have (2) of these available. For details on how to use these as either an ATV channel filter or ATV duplexer, see ATV Journal issues # 160 & 16 from April-May, 2024.

it cost me \$ 125 ea.
Your price is \$ 75



Low Loss Coaxial Cable
KMR-400

50 ft. coil, N connectors
(3) coils available

it cost me \$70 ea.
Your price is \$ 50



AGPTEK model Mini 1080 HD Media Player

plays USB memory sticks continuously. HDMI 1080p, A/V output plus composite analog video output. includes remote control.

it cost me \$44
Your price is \$ 30



OREI model HD-104

HDMI 1 in / 4 out Splitter

it cost me \$24
Your price is \$ 18

