



MEGAHERTZ TIMES

November 2024

W3AI

PO Box 336, Perkasio, PA 18944

R F Hill Amateur Radio Club 2024

President: Cary Binder, NI2Q
Vice President: Jim Soete, WA3YLQ
Secretary: Jim Reed, KC3LXV
Treasurer: Tom Dumire, K3KKI
News Editor: KS3Z, Charles Schmill
ks3z@comcast.net

CLUB INFORMATION

Mailing address:

PO Box 336, Perkasio, PA 18944

Club Repeaters: 145.31 MHz; input
144.71 MHz PL 131.8 (2 meters)
444.75 MHz, input 449.75 MHz PL 103.5
(70 cm)

Meetings: The club normally meets at
7:30 PM on the last Thursday of the
Month

Web page: <http://www.rfhillarc.club>

Email: rfhillarc@yahoo.com

The MHz Times is the official publication
of the R F Hill Amateur Radio Club, Inc.
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DEADLINE for article submission is 6
days before the meeting! Please submit
in Open Office (.odt) or MS Word (.docx)
format. No PDFs please!

Send to ks3z@comcast.net



Club Auction

Member Auction in November

Our November Club Meeting will be on Thursday, November 21st, one week early due to the Thanksgiving Holiday.

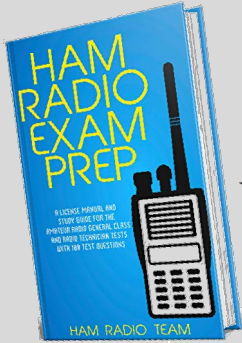
We will hold an Auction for the membership. Bring your no longer needed items, nice junk box "stuff" and other treasures that you wish to part with. Our Auctioneer will be Cary, NI2Q, who with his golden throated tone and sense of humor, I am sure will be most entertaining!

Fill out a listing sheet (in this issue) for each item you wish to sell. We are meeting in the first-floor small dining room at the far end of the main hall. For this reason, PLEASE, no tower sections, beam antennas or other large pieces of gear that cannot be easily displayed on a tabletop.

All transactions are between the buyer and seller. The Club earns a commission from seller donations. My Rubbermaid box is filling up! Get started on yours!

73 Jim, WA3YLQ

VE TESTING



VE testing for Technician, General and Extra Class licenses is held at 6:00 PM at the Indian Valley Public Library in Telford:

100 E Church Ave.
Telford, PA 18969



Scheduled VE Exam Sessions

2024 Dates: November 18

2025 Dates:

January 20

March 17

May 19

July 21

September 15

November 17

Direct questions to Kevin KW3P at kw3p@arrl.net or by cell phone at 215-378-6978.



Club Nets

SEPPTN traffic nets are on Sundays & Wednesdays at 8:00 PM local time at 145.310

MHz (-600). These nets are for anyone who would like to learn how to handle traffic as well as an on the air meeting place for members and future members.

RF Hill A-R-C Ten Meter AM Net: 29.005MHz on Sunday evening immediately following the SEPPTN

RF Hill CW Squad Operates on 28.370.600 CW at approx. 7pm Tuesday stopping before the NPARC net at 8pm. This is a non formal CW - slow speed - net for beginners and ranges in speed from 5-15 wpm.

SEPPATN Net Control Stations

09/22, 09/25 KB3DEN	11/17 WA3YLQ
09/29 WA3YLQ	11/20 KW3P
10/02 KW3P	11/24, 11/27 KB3DEN
10/06 WA3YLQ	12/01 WA3YLQ
10/09 KW3P	12/04 KW3P
10/13 WA3YLQ	12/08 WA3YLQ
10/16, 10/20 KB3DEN	12/11 KW3P
10/23 KW3P	12/15 KB3DEN
10/27 WA3YLQ	12/18 KB3DEN
10/30 KW3P	12/22 KB3DEN
11/03, 11/06 KB3DEN	12/29 WA3YLQ
11/10 WA3YLQ	
11/13 KW3P	

Contact Jim KB3DEN with any questions or conflicts. If at the last minute, the assigned net control station doesn't show-up, any net control station on frequency should run the net.

Thanks to everyone for your continued support.

Jim – KB3DEN KB3DEN@aol.com

AREA NET LISTINGS

SEPPTN Southeastern PA Practice & Traffic Net	Su/W	8 PM	145.31-
EPAEPTN - EPA Emergency Phone/Traffic Net	Daily	5 PM	3.918 +/-
Pennsylvania Traffic Net (CW)	Daily	7,10 PM	3.585
Third Region Net	Daily	4 PM	7.243 (3.917 -alt)
Eastern Area Net (EAN)	Daily	2:30 PM	7.243
Bucks County ARES	W	9 PM	147.090+
Montgomery County ARES	Th	7 PM	146.835- (pl 88.5)



Find us on Facebook and Twitter

Join the conversation.

Follow us today!

<http://facebook.com/rfhillarc>

<http://twitter.com/W3AI>



RF Hill SEPPATN October Report

QNI = 80
QTC = 2
In 9 Sessions
That's a little over 8 Check-in's per session.

Thanks! and 73's

Jim – KB3DEN

2025 Dues Are Now Due

Your dues payment is expected no later than the January meeting. Please fill out this form and return it with your payment at a Club meeting or by mail: RF Hill ARC PO Box 336 Perkasio, PA 18944. The 2025 dues rates are **\$25.00** per year for regular membership, and **\$12.50** for Retired members and students. No dues required for Life Members.

Name _____ Call Sign _____

CIRCLE DUES PAID: \$25.00 \$12.50 Life Member

CHECK ONE: _____ No Changes to my info. (**do not go further**)

***** ONLY COMPLETE THIS FORM BELOW IF YOU WISH TO INDICATE CHANGES TO YOUR PERSONAL INFO. *****

E-Mail _____ Phone # _____

License Class _____ ARRL Member YES No

ARES/RACES Member ? YES NO

My Contact info may be shared with MEMBERS YES NO

Note: Your Call Book/ULS address will be considered your address of record.

OPTIONAL DONATION to support the W3AI Repeater and Club operations. Amount enclosed _____ .

RF Hill ARC October Meeting Minutes

Meeting Date- October 31st, 2024

Welcome/Call to Order- President Cary, NI2Q called the meeting to order at 7:34pm.

Twelve members were present along with two guest- Jack Unger N3ANZ, and Joe Johnson KC3ZPY.

Pledge to the Flag-

President- Cary NI2Q thanked all who participated in the Hamfest.

Vice President- Jim WA3YLQ discussed the Hamfest and entertainment for the November and December meetings. The November meeting will be in the downstairs room at Peter Becker. We will have pie night and a auction/flea market. No commissions but donations to the club are welcome. The December meeting will be on the 26th. We will have cookie night and a model railroad DCC presentation. Bring or send pictures of your train layout from the past or present to Jim. Elections are approaching. We will need officers for 2025. Jim can use suggestions for entertainment for the January and February meetings. Ned WQ3Z will contact Lou Ruh WX3I for a Skywarn presentation.

Secretary- The September minutes were approved as submitted to the MHz Times. Motions were made by Len N3EOE and John WB3ABH.

Jim KC3LXV read the first reading for 4 new applicants. Jack Unger N3ANZ, Joe Johnson KC3ZPY Bob Harcarik WA2POW and Tyler Smith KD3AAC.

Treasurer- Tom K3KKI reported on income from the Hamfest and reported that our books are in order.

Committee Reports- VE session co-ordinator Kevin KW3P noted 4 people took their test at the Hamfest. One passed the technical exam.

Hamfest- Jim WA3YLQ suggested we consider a later start time of 8am. Griff NE3I suggested that we increase next years admission fee to \$10.00.

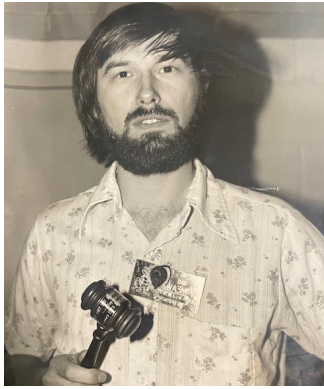
Old Business- None

New Business- It was noted that we will need several new officers for 2025.

50/50- Won by Kevin KW3P. Kevin donated his winnings back to the club.

Adjournment- 8:23pm.

Respectfully submitted,
Jim Reed, Secretary
KC3LXV



Q: Who is this guy?

A: Our own Dan Mitten, WA3NFV, when he was President of the Mt. Airy VHF Radio Club (Packrats)

In July 1976, RF Hill ARC member Dan WA3NFV and 5 other members of the Mt. Airy VHF Radio Club traveled to Columbia to become the first station to work all continents using Earth-Moon-Earth (EME) or Moonbounce technology. The following article was published in a recent weekly ARRL Letter. This is a well written piece detailing their experience. Congratulations Dan and the others on a job well done!

Enjoy! 73 Len N3EOE

Forty-eight years ago, the Pennsylvania-based Mt. Airy VHF Radio Club “Pack Rats” were experimenting with the latest amateur radio technology, Earth – Moon – Earth (EME), which became known simply as *moonbounce*.

While the radio equipment was pretty standard for the day, EME was not an easy technology. Moonbounce contacts required big antennas and kilowatt transmitters.

“There were a number of dedicated amateur operators in a dozen or so countries that had assembled stations capable of making the ultimate long-distance QSO with one goal in mind – to be the first to work all six populated continents on the globe, the Worked All Continents (WAC) award,” said club president Phil Miguelez, WA3NUF.

The Pack Rats were early experimenters of EME communications. Thanks to a donation of a 20-foot stressed dish antenna by Al Katz, K2UYH (SK), an EME station was assembled at a rural sheep barn in Revere, Pennsylvania. The station, W3CCX/3, began making EME contacts but the major obstacle to obtaining the WAC award was the lack of an EME station on 432 MHz on the South American continent.

Through a long series of coincidences, hard work by the Pack Rats to help assemble and transport to South America 20 boxes/crates, with the longest box being 6 feet or less, and a seaside cottage in Barranquilla, Colombia, six months of very intense effort ultimately paid off.

In early July 1976, six Pack Rats, Elliott Weisman, W3JJZ; Walt Bohlman, K3BPP; Tony Souza, W3HMU; Bill Olson, W3HQT (now K1DY); Dan Mitten, WA3NFV, and Bolmar Aguilar, WB3AOP / HK1AMW, headed to Barranquilla with the callsign HK1TL. In one week of operating, the HK1TL expedition made 16 contacts, but since they were the only station in South America, it was one short of the six continents needed for the WAC award in Colombia.

Meanwhile, in Revere, Pennsylvania, the W3CCX/3 station manned by Dave Mascaro, WA3JUF, completed a contact with HK1TL on July 29, 1976, achieving the goal of contacting the final continent needed to give the Mt. Airy VHF Radio Club WAC on the 70-centimeter band.

But the story doesn’t end there. The application for the WAC award was mailed and received. There was an issue with application, but no one remembered the details or recalled what actions were taken at that time. But the club never received a certificate.

With the help of retired ARRL Chief Executive Officer Dave Sumner, K1ZZ; ARRL Radiosport and Field Services Manager Bart Janke, W9JJ, and current Chief Executive Officer David Minster, NA2AA, “the ARRL went above and beyond to rectify the Mt. Airy VHF Radio Club lost EME WAC award application,” said Miguelez. The award was dated June 6, 1977.

Thanks to Phil Miguelez, WA3NUF, and Walt Bohlman, K3BPP, for their contributions to this story. More information can be found at the Pack Rats website <https://packratvhf.com>. The HK1TL story is located on the History TAB or directly at: <https://packratvhf.com/index.php/history/30-pack-rat-1976-eme-expedition-hk1tl>



Cary,

As president of RF Hill I wanted to bring you up to date on what is happening at Peter Becker Community (PBC) regarding an amateur radio club station.

PBC has agreed to accept my station as a donation. This will establish an up-to-date club station at the facility. The station is to be located at 483 Schoolhouse Rd. This property is owned by PBC and is being renovated to accommodate the station included the 55' tower.

Several years ago a club call sign was applied for and is K3PBC. I am the trustee of that call.

One of the reasons for giving you this information is to solicit some of the RF Hill club members to help with the assembly of the tower, antennas and the station. At this point I don't know the time line for the shack to be ready for occupancy or for the installation of the tower.

Let me know if you have questions, suggestions, etc.

My wife and I are moving into a cottage at PBC on January 3, 2025.

Tom Nolan, W3EX

Have you got four square feet ?



No disrespect. Not referring physical appearance. Meaning space-wise in corner of room. Tape measure says, "Yes?" Fine! Means you have room for VITAVOX Klipschorn. Wish we had even that small amount of room here. Could then tell why VITAVOX Klipschorn gives nearly perfect sound. Not to worry. February "Hi-Fi News" had lots and lots of "why". We will send more "why" by mail if you ask us. Ah! You prefer deeds not words. Good. Deeds, words and music at Audio Festival. Come and hear VITAVOX Klipschorn first if last thing you do.

THE VITAVOX Klipschorn

VITAVOX LIMITED WESTMORELAND ROAD LONDON N.W.9
Telephone: C02144 8071. Telegrams: Vitavox Myle London
Close to Queensbury Stn., L.T., Bakerloo Line, Stamure Branch

Here are just five other examples from the wide range of VITAVOX sound reproducers and loud-speaker systems that you can see and hear at the Audio Festival.

If you've got the four square feet, and good sound equipment and £165 for the VITAVOX Klipschorn, you've got real high fidelity. We can't do much about the first two but we can arrange convenient H.P. terms on the £165.

RADIO SHACK LOWER-COST Klipsch licensed FOLDED CORNER HORN ENCLOSURE \$132.50*



*Add \$20 for top enclosure shown on photo (optional), also add \$15 for crating if we are to ship. Radio Shack is the only distributor personally licensed by Paul A. Klipsch to build this horn for 15" woofers. Finished in brown mahogany lacquer, hand-rubbed, 5-ply select gum-wood. 39x32x27" deep. Weight 150 lbs. Components and crossovers available from us!

6-STEP PLAYBACK EQUALIZER FOR G-E CARTRIDGE

Radio Shack's exclusive compensator specifically with G-E variable reluctance audio experts. ONLY such unit available leading audio experts. **SPECIAL COMBINATIONS** Above equalizer with fridge specially purchased Cartr. only, \$5.70.

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I Do Not Have A SCREW LOOSE
It Fell Out.



THE "GEORGIAN"

By HOWARD SOUTHER Electro-Voice, Inc.

Complete details on the theory and construction of the Electro-Voice loudspeaker system which utilizes the Klipsch "K" type of indirect radiator for the extreme bass range.

THE complete illusion of reality in music reproduction demands that full consideration be given to the generation of the widest frequency response range possible in the speaker system. This must be accomplished uniformly and with reasonable efficiency for reasons of practical economy; the distortion which accompanies this wide response range must be retained below the threshold of the individual's perception. The intermodulation distortion threshold is on the order of 3%.

The "Georgian" utilizes the famous Klipsch "K" horn with the special E-V Model 15WK driver in the bass section. An electrical network makes the first crossover at 300 cps to a compression type, horn-loaded, mid-low frequency driver with 68" path length. From 1000 to 2500 cps, a special E-V diffraction horn, through an acoustical crossover, gives smooth, augmented treble tones. These last two assemblies are essentially combined in the Model 848HF

that heard in prior systems, due principally to the fact that all driving components are compression operated. This feature provides hitherto unobtainable efficiency. Efficiency, in a way, is a criterion of speaker excellence, for a system which is 100% efficient possesses little distortion and approaches perfection itself.

Interior Assembly or "K" Horn

For the novice at woodworking it will be better, perhaps, to consider using hardwood plywood for the construction of the rather complicated bass horn. Sanding the cut edges smooth will be facilitated and a misdirected nail will have less tendency to split the 1/2" sections. To insure a complete understanding of the construction and also to acquire approximate templates, it is recommended that the pieces be laid out (Fig. 2) to scale on large sheets of corrugated cardboard. Allowing for a difference in thickness of 1/4", these sections may then be put together with gummed tape, insuring a saving by minimizing miscuts of the expensive lumber.

After this has been accomplished, use the templates as a guide and lay them on top of the 4' x 8' plywood sheets so that the least waste is effected. After checking measurements carefully, draw in the outline of the various piece parts and saw them out completely before attempting any assembly whatsoever.

Sand all edges. All mating edges should be sanded as straight as possible and then sanded smooth. This will guarantee a tight fit and prevent air leaks in the final horn. A tight fit is especially necessary in the case of the

NAQCC CHALLENGE

BY GARY K1YAN #2365

THIS MONTH'S LETTER CHALLENGE: THE QUIET ZONE

Phone booths, no cell service or WIFI, only a few weak-signal AM and FM broadcast stations, and using a microwave to cook dinner can bring a knock on the door have I entered the twilight zone?

No, you have entered the Quiet Zone. Encompassing about 13,000 square miles, it was established in 1958 and is located along the borders of Virginia and West Virginia and into a piece of Maryland. Its purpose is to provide as quiet an RF environment as possible. Inside this area you will find the Green Bank Observatory and the Sugar Grove Station site.

The Green Bank Observatory is the site of the world's largest steerable radio telescope. Its 300 foot radio telescope is operated by Associated Universities Inc. and operates 365 nights a year. The Sugar Grove Station was part of a military intelligence gathering network that included many sites around the world. The Sugar Grove site is no longer in operation and has been sold to a private group who plan to create a healthcare facility for the military and their families.

FIVE ZONES

The area is divided into five zones, centered around the Green Bank observatory, with zone 5 being the farthest from the facility and having the fewest restrictions.

Within zone 1, known as the radio astronomy instrument zone, you may not drive a gasoline powered vehicle because of ignition noise, only diesels allowed. Intentional radiators within zone 1 are limited to those deemed essential and must operate only under criteria that limit their interference potential.

In an area of 2 to 10 miles from the site the owner of an interfering device can expect a visit to request cooperation in eliminating the offending signal.

GIVE IT A LISTEN

So, if you are planning a trip to this area, it would probably be a good idea to keep the VHF/UHF FM rigs in the car off and not plan on any portable ham operations. It might be worth the trip just to hear what a noise level with no electronic interference sounds like, even if you can't operate.



About the Author

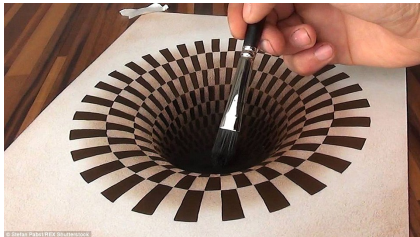
Gary, K1YAN, is a dedicated QRP CW operator living in Plymouth, MA. I have worked him three times, by chance, on 40 meters in the last twenty years. Since Thanksgiving is approaching, I suggest that you visit his QRZ page and check out his Mayflower pictures. Mayflower II is a nice restoration; however, the Mayflower 400 is most impressive. Happy Thanksgiving to all. 73 Jim, WA3YLQ

Hamfest Pictures



EZ Pix

Some pictures copied from EZ Pix by Lamar, K3UCI

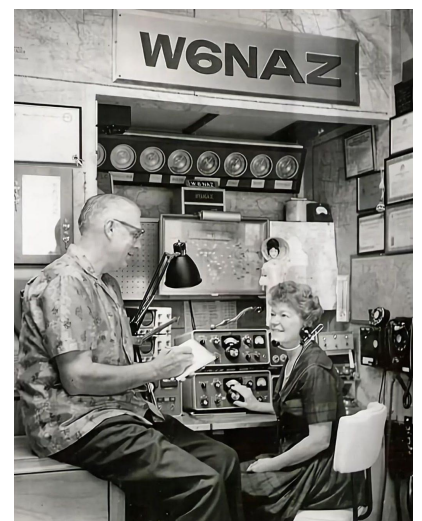


MY PLAN FOR TODAY?
SAME AS ALWAYS.
DRINK COFFEE AND BE SEXY!



Bob and Lenore at their home station during the late-1960s; their Vietnam Army MARS phone patch period.

Len N3EOE



US Amateur Radio Bands

Operator license classes: **E** = Amateur Extra **A** = Advanced **G** = General **T** = Technician **N** = Novice
 CW operation is permitted throughout all amateur bands. Except as noted, all frequencies are in megahertz (MHz).

■ = RTTY, data, phone, image
 ■ = USB phone, RTTY, data and CW
 ■ = RTTY and data
 ■ = phone and image
■ = SSB phone
 = CW only

LF – Low Frequency band

2200 Meters (135 kHz) E,A,G
 1 W EIRP maximum



Amateurs wishing to operate on 2200 or 630 meters must first register with the Utilities Technology Council online at <https://utc.org/plc-database-amateur-notification-process/>. You need only register once for each band.

MF – Medium Frequency bands

630 Meters (472 kHz) E,A,G

5 W EIRP max, except in Alaska within 496 miles of Russia where the limit is 1 W EIRP

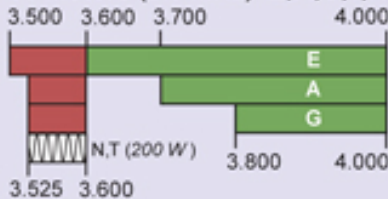


160 Meters (1.8 MHz) E,A,G

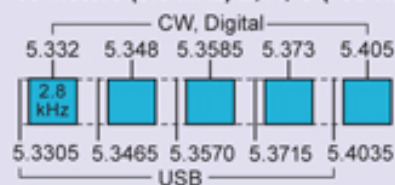


HF – High Frequency bands

80 Meters (3.5 MHz) E,A,G,T,N

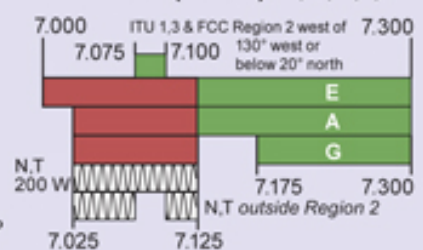


60 Meters (5.3 MHz) E, A, G (100 W)



General, Advanced, and Extra licensees may operate on a secondary basis with a maximum ERP of 100 W (relative to a half-wave dipole antenna).

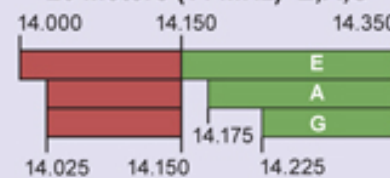
40 Meters (7 MHz) E,A,G,T,N



30 Meters (10.1 MHz) E,A,G



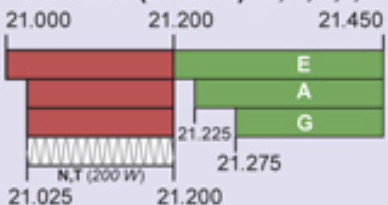
20 Meters (14 MHz) E,A,G



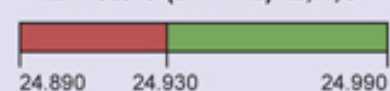
17 Meters (18 MHz) E,A,G



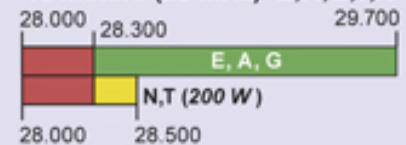
15 Meters (21 MHz) E,A,G,T,N



12 Meters (24 MHz) E,A,G



10 Meters (28 MHz) E,A,G,T,N



VHF – Very High Frequency bands

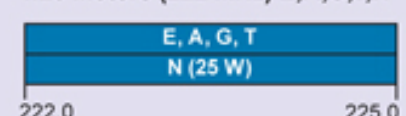
6 Meters (50 MHz) E,A,G,T



2 Meters (144 MHz) E,A,G,T



1.25 Meters (222 MHz) E,A,G,T,N

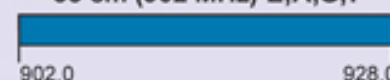


UHF – Ultra High Frequency bands

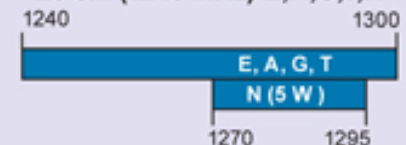
70 cm (420 MHz) E,A,G,T



33 cm (902 MHz) E,A,G,T



23 cm (1240 MHz) E,A,G,T,N



SHF&EHF – Super and Extremely High Frequency bands

All licensees except Novices are authorized all modes on the following frequencies:

2300-2310 MHz 3400-3450 MHz 10.0-10.5 GHz 47.0-47.2 GHz 122.25-123.0 GHz 241-250 GHz
 2390-2450 MHz 5650-5925 MHz 24.0-24.25 GHz 76.0-81.0 GHz 134-141 GHz All above 275 GHz

See www.arrl.org/band-plan for detailed band plans.

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