

## Disclaimer

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**WEEKLY NEWS**

**UPDATE**

**NEWSWEST**  
**ON AIR**  
SINCE 1931  
WA AMATEUR RADIO NEWS

**10TH SEPTEMBER 2023**

Audio file  
20230910.newswest 2.mp3

Transcript

00:00:06 Speaker 1

This is VK 6A RN News West. We are a community organisation and we've been serving up the best amateur radio news in Australia since 1931.

00:00:23 Speaker 1

Hi there. Thanks for tuning to News W for the 10th of September 2023. Now on with the show.

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00:00:29 Speaker 2

Saturday 7th of October.

00:00:32 Speaker 2

Is the annual waruna agricultural show as people experience entertainment for young and old animals. Log chopping Sideshow alley, farm machinery, wine tasting food and trade stalls.

00:00:47 Speaker 2

And a stunning fireworks for Dali Peel Amateur Radio Group will be there again this year to demonstrate our

hobby to the public from the PAG Mobile  
Communications unit.

00:01:00 Speaker 2

Learn about winlink radio, fox hunting and see the  
capabilities of the parked mobile communications trailer  
in action.

00:01:10 Speaker 2

We hope you can join us at the WARUNA show Saturday  
7th of October, where you can experience a fun day out  
in the beautiful SW of WA.

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00:01:21 Speaker 3

The WI Amateur Radio News Perth Tech raffle has just  
ended its first week of sales and we're off to a good start.

00:01:28 Speaker 3

I'd like to tell you, and probably again, so bear with me.  
I'd like to tell you why this raffle is different to the usual  
amateur radio club fundraiser.

00:01:36 Speaker 3

Because you see the proceeds, not one cent of it, do not  
go towards buying another big new and.

00:01:44 Speaker 3

You see the proceeds? Not one cent of it.

00:01:48 Speaker 3

Do not go towards buying anything big, new and shiny for our club. It all gets spent on you, the amateur radio community in WA.

00:01:57 Speaker 3

It's spent on you because it's the fundraiser that enables us to stage Perth Tech as a freebie for you. Yes, we do charge \$25 to attend, and that's a total pass on cost to the caterers. The rest, the presentations, the amazing venue, the whole set up is free for you to attend.

However, you must register and the.

00:02:17 Speaker 3

Catering fee is not negotiable.

00:02:20 Speaker 3

The raffle has some great prizes and after last week stumble on pronunciation by me, it will do to say that there are three fantastic transceivers up for the prizes and the tickets are \$5 each and the full details and make your own pronunciation of the name on the vk6.net website. Remember that website.

00:02:41 Speaker 3

Name vk6.net couldn't be easier, could it? This is the raffle that will give back to you. Please support it both by purchasing tickets and registering to attend Perth Tech. You won't regret either the website againisvk6.net and I'm Bob VK6POP.

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00:02:58 Speaker 4

Clear prop.

00:03:07 Speaker 5

This is Martin VK6MJ in Mandurah.

00:03:11 Speaker 5

Parag is taking to the air in more ways than one.

00:03:15 Speaker 5

The sport Aircraft Builders Club of WA is hosting its 50th anniversary celebration and fly in on the 29th of October at Serpentine Airfield.

00:03:25 Speaker 5

Park will be providing public reception of the ctaf frequency of 119.1 megahertz AM.

00:03:33 Speaker 5

From our mobile communications trailer at the airfield and we will be looking for inbound pilots possessing amateur radio licenses who would like to have aeronautical contacts on 146.5 megahertz FM.

00:03:51 Speaker 5

If you are planning to fly into Serpentine for the event, how about connecting your airplanes headset into your VHF FM amateur radio rig?

00:04:01 Speaker 5

We will also be listening on 441.0 megahertz FM in the UHF band for amateur automotive mobile check-ins.

00:04:14 Speaker 5

All communications will be broadcast over our public address system from members of the public to hear incoming aviation and amateur radio transmissions.

00:04:24 Speaker 5

This is a great opportunity for amateur radio to assist in a Community event to demonstrate our hobby.

00:04:31 Speaker 5

For further details, please see current activities and events on the park's website.

00:04:38 Speaker 5

Which can be found at triple WPR g.org dot AU.

00:04:46 Speaker 5

This is VK 6 Arg on final approach for full stop at  
Serpentine.

00:04:53 Speaker 5

7/3.

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00:04:57 Speaker 6

Hello everyone, this is Clive VK 6 CSW with a brief report  
on last Monday's 10 metre propagation trial with Mike  
PK8, MA. Unfortunately sod who really was alive and  
kicking.

00:05:14 Speaker 6

30 minutes before the 28.45 megahertz transmission,  
mikes QTH thing. Catherine suffered A lengthy total  
power failure. To add insult to injury, signals from the  
Perth 10 metre beacon had been good all the morning  
but faded right out a short while before mikes power.

00:05:35 Speaker 6

Such is life sometimes, however, Mike thanks everyone  
who listened out for him and hoped that if we can have

another try in the not too distant future, both the Catherine Power Company and the propagation Gods will be more cooperative once again. Thanks to everyone who did participate.

00:05:54 Speaker 6

Three from Clive, VK 6 CSW.

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00:06:00 Speaker 3

Perth Tech runs over the weekend of the 27th to the 29th of October and the central event is the day of technical presentations on the Saturday the 28th of October. The venue is the Giganta Recreation Club, which is a modern sporting and recreation facility in the Perth Hills right in the Giganet village.

00:06:22 Speaker 3

Pertec is a full day of very interesting presentations and of course social interaction with other amateurs. At the end of the day there'll be a sundowner with the simple but delicious BBQ meal accompanied by your beverage of choice, purchased from the clubs bar.

00:06:39 Speaker 3

There's a charge of \$15 for the sundowner. Now, if that's not enough, we've also arranged for you to bring your



caravan camper or tent to camp over on Friday and Saturday nights.

00:06:49 Speaker 3

The gates will open at noon Friday and were expected to vacate by noon Sunday. There's a \$15.00 fee per site per day. This is a pass on cost to the recreation club.

00:07:01 Speaker 3

Per tech as a premier amateur radio symposium which you shouldn't miss, registrations are now open. The link is on the vk6.net website, vk6.net bookmarket.

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00:07:15 Speaker 4

Hi, I'm Steve Kennedy V K6J with this week's episode of did you know?

00:07:20 Speaker 4

This week I thought I might do a deeper dive into ham college.

00:07:24 Speaker 4

Home College was formed in 2007 by deal Husk, VK 6 BDO, now Silent Key. Neil was an ex Navy radio operator who had been a ham for a long time prior to then.

00:07:36 Speaker 4

Neil and a small team around him wrote the manual. We still used to this day prepared all the slides, et cetera. Mostly ran the core single handedly including foundation standard and advanced course.

00:07:48 Speaker 4

Not the stalwart of the early days was Cassie VK 6 KTS, who still stays involved with the college and we lead on her for professional teaching expertise. From time to time.

00:07:59 Speaker 4

Group uses the facilities of the Linwood Scout Hall at Whaleback Golf Course and also have a club station there assembled, which is used for practical testing as well as the odd contest.

00:08:11 Speaker 4

My involvement with the college started in 2017 when I turned up to see if I could assist in teaching the advanced and standard courses in some way.

00:08:19 Speaker 4

It happened to be an AGM and I forgot to stand back when everyone.

00:08:22 Speaker 4

Else did and ended up president on my first visit.

00:08:26 Speaker 4

Few months later, nearly embarked on a long term and much anticipated around Australia holiday and I took over as the main presenter for the Advanced and Standard Course.

00:08:36 Speaker 4

The first year was pretty good and quite easy, but all my students were engineers, so I think I ended up learning more than they did.

00:08:43 Speaker 4

One of them was Randall VK 6WR, who stayed on to assist in teaching and is now the main man for the advanced course.

00:08:53 Speaker 4

Two years were a lot rougher with the third year I was involved in the course having a really poor, poor result.

At that point, a bunch of new blood came into the committee. We split the teaching up across about 8 instructors, all under the watchful eye of Randall.

00:09:07 Speaker 4

And we had an immediate improvement in attendance and exam passes.

00:09:12 Speaker 4

The same format is still in place today and our pass rate is generally around 100% or very close to that.

00:09:19 Speaker 4

Most years see at least one student stay on to either assisted instructing or just get more involved in the group, which is very satisfying.

00:09:27 Speaker 4

So what is ham college doing? We run a combined advanced Standard course once a year, generally starting in March and completing in October or November.

00:09:37 Speaker 4

In addition, we run a foundation course every two months, normally attracting between 6:00 and 10:00 students, and we've also run ad hoc foundation courses for community groups both face to face and across the.

00:09:49 Speaker 4

Between the two programs, we're responsible for bringing between 70 and 100 new hams into the hobby each year.

00:09:57 Speaker 4

With the advanced course, while there are a few different and very valid ways to study for and pass the exam.

00:10:03 Speaker 4

Some much quicker than our course. We found that the methods we're using provided good depth of knowledge. That's allowed. Many of our Members to become very competent hams.

00:10:13 Speaker 4

So at this point in time, Ham College has more than its fair share of doers.

00:10:17 Speaker 4

From running courses and exams, building a new two metre beacon, managing the IT system that's so important to the quality of our course and keeping the club station on air and operational, the culture of the club is very healthy. It's a single mindedly focused on its

core business of educating new and upgrading hands and with a great camaraderie amongst the members.

00:10:39 Speaker 4

So what next?

00:10:41 Speaker 4

We've often spoken about running more post Grad style courses like CW, digital modes, workshops, etc. But our issue is that if we take these kind of ventures on, we could run the risk of burning out our core group of instructors.

00:10:55 Speaker 4

We could do this if we had more volunteers to spread the load and we would love to hear from anyone interested in becoming more involved in the college to carry out additional courses.

00:11:04 Speaker 4

We'd also love to have more engagement with all the various clubs in the Perth Metro area, even if we are just assisting in clubs doing their own courses, using our intellectual property.

00:11:15 Speaker 4

Another area we would love to engage more with is the scouting and guide movement. We see these movements as being the future of the hobby without which we believe the hobby could be in trouble without.

00:11:26 Speaker 4

We do offer free foundation courses to scouts and guides, including their leaders, to aid in fostering this relationship, and would welcome any groups wishing to use our services to gain licences.

00:11:38 Speaker 4

If you're interested in learning more about home college, either as a student instructor or volunteering your services to assist the college, you can contact us via our website [hamcollege.org](http://hamcollege.org) dot AU. We'd love to hear from you.

00:11:53 Speaker 4

Oh, thanks for listening again. This has been Steve VK 6 J with another episode of did you know if you'd like a text copy of this or any other articles? They will be posted to [my.blog.page@dxradiosynthesis.com](mailto:my.blog.page@dxradiosynthesis.com) dot AU about two weeks after it's gone to air.

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00:12:09 Speaker 7

This is newest from VK 6 ARN produced by amateurs for amateurs purely about the hobby of amateur communication and experimentation.

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00:12:21 Speaker 8

Foundations of amateur radio.

00:12:24 Speaker 8

Before we start, I should give you fair warning. There are many moving parts in what I'm about to discuss, and there's lots of numbers, comma.

00:12:32 Speaker 8

Don't stress too much about the exact numbers. In essence, what I'm attempting is to explore how we can reduce the power output from a transmitter in such a way that it doesn't blow up a receiver whilst making sure that the signal is strong enough that we can actually measure it.

00:12:49 Speaker 8

With that in mind, recently I discussed the idea of adding a series of attenuators to a transmitter to reduce the power output by a known amount, so you could connect it to a receiver and use that to measure output power at various frequencies.



00:13:05 Speaker 8

One hurdle to overcome is the need to handle enough power in order to stop magic smoke from escaping. None of my attenuators are capable of handling more than one or two watts of power, so I cannot use any of them as the first in line.

00:13:21 Speaker 8

As it happens, her good friend of mine, Glynn Victor K6 Popper, AW, dropped off a device that allows you to divert most of the power into a dummy load and a small amount into an external connector, in effect creating an inline attenuator capable of handling 50 watts.

00:13:39 Speaker 8

The label doesn't specify what the attenuation is, so I measured it using a nano VNA to make our job a little interesting. It isn't constant between 10 kHz and one gigahertz. The attenuation decreases from 70 DB to 10 DB.

00:13:57 Speaker 8

We want to measure at a base frequency on the 2 meter band and its second and third harmonic.

00:14:02 Speaker 8

The attenuation at those frequencies varies by 11 DB, which means we'll need to take that into account. So let's subject our currently imaginary test set up to some sanity checking.

00:14:15 Speaker 8

Our receiver is capable of reading sensible numbers between a signal strength of -127 DBM and -67 DBM, and we'll need to adjust accordingly.

00:14:27 Speaker 8

If we transmit an actual 20 Watt carrier, that's 43 DBM with 110 DB of attenuation, we end up at -67 DBM, which is right at the top end of what we think the receiver will.

00:14:41 Speaker 8

If we're using something like 5 watts or 37 DBM, we end up at -73 DBM, which is well above the minimum detectable signal.

00:14:50 Speaker 8

A best harmonic measurement was around -30 DBM, which means that with 110 DB of attenuation we end up at -140 DBM which is 13 DB below what we think we can

detect. So at this point you might wonder if this is still worth our while given that we are playing at the edges.

00:15:10 Speaker 8

And to that I say.

00:15:12 Speaker 8

Find me again while you're here.

00:15:15 Speaker 8

1st we need to attenuate our 20 watts down to something useful so we don't blow stuff up. Starting with 110DB attenuation, we can measure our base carrier frequency and its harmonics and learn just how much actual power is coming out of the transmitter. Once we know that, we can adjust our attenuation to ensure that we end up at the maximum level for the receiver.

00:15:37 Speaker 8

And see what we are left with.

00:15:39 Speaker 8

So let's look at some actual numbers, mind you, we are just looking at calculated numbers. These aren't coming from an actual dongle yet. Using Glenn's dummy load as the front end at 146.5 megahertz, the attenuation is

about 30 DB. If we look at a previously measured handheld and rounding the numbers, it produced 37 DB.

00:16:00 Speaker 8

That's the maximum power coming into our setup with 30 DB of attenuation from glyn's dummy load that comes down to seven DBM. We'll need an additional 74 DB of attenuation to bring that down to -67 DBM and all we'll need 104 DB of attenuation.

00:16:21 Speaker 8

The third harmonic for that radio was measured at -26 DBM, so with 104 DB of attenuation that comes out at -130 DBM, which is below the minimum detectable signal supported by our receive.

00:16:36 Speaker 8

However, remember that I told you that our dummy load has different attenuation for different frequencies.

00:16:42 Speaker 8

In our case, the attenuation at 439.5 megahertz is only 19 DB, not 30. So in actual fact, we'd expect to see a reading of -119 DBM, which is above the minimum detectable signal level.

00:16:59 Speaker 8

I realize that's a lot of numbers to digest, and they're specific to this particular radio and dummy load, but they tell us that this is possible and that we're potentially going to be able to measure something meaningful using our receiver. I'll also point out that if you are going to do this, it would be a good idea to take notes and prepare what numbers you might expect to see.

00:17:19 Speaker 8

Because letting the magic smoke escape might not be one of your desired outcomes.

00:17:24 Speaker 8

Speaking of smoke, what happens if you consider changing the attenuation when you're measuring at another frequency? Like say the second or third harmonic and you see a reading close to, or perhaps even below the detectable signal level? As we've just discussed?

00:17:39 Speaker 8

You might be tempted to reduce the attenuation to increase the reading, but you need to remember that the

transmitter is still actually transmitting at full power into your setup, even if you're measuring elsewhere.

00:17:51 Speaker 8

This is why for some radios you'll see a measurement that states that the harmonics are below a certain value because the equipment used doesn't have enough range to provide an actual number.

00:18:03 Speaker 8

To simplify my life using a nano VNA, I created a spreadsheet with 101 data points from the attenuation levels of Glenn's dummy load between 10 kHz and one gigahertz. I charted it and with the help of the inbuilt trend line function, determined a formula that matched the data. I've also skipped over 1 aspect that needs mentioning.

00:18:23 Speaker 8

And that's determining if the receiver you're using to do this is actually responding in the same way for every frequency. One way you might determine if that's the case is to look at what happens to the signal strength across multiple frequencies using a dummy load as the antenna.

00:18:39 Speaker 8

One tool, RTL power, might help in that regard. This is going to give you the same quality readings as a professional piece of equipment.

00:18:48 Speaker 8

Well, do the test and tell me what you learn.

00:18:51 Speaker 8

I'm on Victor K6FLAB.

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00:18:59 Speaker 9

On HF, VHF and UHF via the VK 6 linked repeater network and online, this is News W from VK 6 ARN.

00:19:13 Speaker 10

Good morning. Good morning. It's helpline 2023 for the 10th of September as Roy VK 6X Victor with this week's hotline. What's the same as last week in fact and we have an NGT AR voice with cradle, speaker, microphone cable, power cable and fuse unit cable. As has been shortened.

00:19:33 Speaker 10

With GPS.

00:19:34 Speaker 10

And there's a 9350 auto tune. Antenna control cable has been shortened and tow bar 10 amount. Spring and stainless steel whip and all in good condition. Contact Colin Three K 6CI on 0417097043.

00:19:55 Speaker 10

0417097043 and it is equipped with austral frequencies. At the moment that sells travel safety net at Traveller's net. Next item we have Kenwood TS 450 S Sierra for sale. Excellent condition asking 700.

00:20:13 Speaker 10

Dollars by way, Enrique 6NW his phone number is 0499450505 0499450505. That's Wayne K 6NW.

00:20:29 Speaker 10

Next item, we have a hallicrafters HT33 linear amplifier \$350.00 a dial, a controller rotator, \$350.00, a vacuum tube, Volt meter, \$50 contact Barry VK 6ADI.

00:20:43 Speaker 10

On his e-mail, Bravo dot Juliet dot Burns that's BURNS at bigpond.com, his mobile phone number is



04289597710428959771 and the last item today I'll. Hey, sorry. Second.

00:21:04 Speaker 10

I have a forum at Yagi Antenna 1015 and 20 metres dual dual driven elements, 4 metre boom with boom extension \$250 a lot. It's by Ted Entron may contact Gavin for that on contact 042838853.

00:21:21 Speaker 10

310428388531 that's VK 6, Victor KS Gavin and how we have a Kenwood TS 480HX Max and condition turned. What's output? Original box? Manual programming cable can be used for computer software and they.

00:21:41 Speaker 10

USB it pan adapter as well. Ideal for radio or mobile. Have manual and all cables and microphone.

00:21:49 Speaker 10

On any reports welcome contact contact Jessie VK 6JQ on 04377892460437789246 for that Kenwood 480HX. That's me for this week. I'm going down to Narrogin for the.

00:22:09 Speaker 10

Plus, travel AGM today and you all have a good weekend and this is Roy VK 6 security Victor now concluding and saying 73 cheers.

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00:22:19 Speaker 1

Hi there. I'm Clinton, VK 6 FCRC and I'd like to thank our newest team of volunteers and broadcasters each week and those regularly submitting content each week. I'd also like to thank our readers and you for listening.

Please stand by now for callbacks after the ident or if nobody is taking callbacks, please fill out the form on the vk6.net website.

00:22:39 Speaker 1

So we know how many people are listening or reading news W each week.