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WEEKLY NEWS Update



3RD SEPTEMB

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Transcript

00:00:06 Speaker 1

This is VK6 ARN, news West. We are a community organisation and we've been serving up the best amateur radio news in Australia since 1931.

00:00:24 Speaker 1

Hi there and welcome to the 3rd of September edition	<u>on</u>
2023 of News WEST Now on with the show.	
00.00.21 Craalian 2	

00:00:31 Speaker 2

It's a big week for WI Amateur Radio news. We've launched the Perth Tech raffle, commenced taking registrations for Perth Tech and are running our annual general meeting in two weeks time.

00:00:43 Speaker 2

We've advised those on our Member list of our AGM.

However, we're not limiting attendance to known
members. We're inviting anyone interested in
supporting WIMA to radio news or if you're just
curious, by turning up and listening to our ATM. I'm the
President and I promise to keep my president's report
to less than 45 minutes.

00:01:03 Speaker 2

In fact, a lot less one minute more like it. We've chosen the Dome restaurant in Maylands for the meeting.

There will be light refreshments available, and after it, you're welcome to stay and chat for as long as it takes.

00:01:16 Speaker 2

The Dome in Maylands is in the Old Peninsula Hotel, directly opposite the Mainlands train station. You can't miss it. It's a beautiful heritage listed Federation style pub. And because it's right on top of the train station, why not take a train there? You can ride the Midland or airport trains to Mainlands. There's an obligatory, however, to this deal.

00:01:37 Speaker 2

And now, however, is that you need to tell me that you're coming so that catering can be organised. We need to count all the chips into.

00:01:44 Speaker 2

The bowl? Here's the gritty detail the WI Amateur
Radio News AGM is on Sunday the 17th of September
at 1:00 PM.

00:01:52 Speaker 2

Please go to vk6.net that's our website and follow the link which is right on the front page to register your name and email and your planned attendance in person on zoom or an apology.

00:02:05 Speaker 2

Did you remember the website itsvk6.net? And while
you're there, look around. There's lots of good
information there for you.

	00:02:14 Speaker 3	

Hello everyone, this is Clive VK six at CSW, reminding you that the radio amateurs, Old Timers Club of Australia's September Bulletin goes to air to Morrow.

00:02:27 Speaker 3

Experimental 10 metre transmission.

00:02:30 Speaker 3

The recent frequency change to 28.450 megahertz for the 00 hours UTC broadcast to the Eastern states has proved successful. Mike VK 8 Ma, who beams this transmission from Catherine in the northern.

00:02:49 Speaker 3

Is considering beaming A10 metre transmission to WA, while conditions on this band remain good. To assist this possibility Michael Transmit 2 WA tomorrow afternoon at 2:00 PM WA local time on 28.450 megahertz.

00:03:09 Speaker 3

And asks all who can to please listen to this transmission and report his signals to him once again.

That's to Morrow. Afternoon, 2:00 PM, local.

00:03:20 Speaker 3

On 28.450 megahertz, if you can listen, but can't transmit on 10 metres, you can email Mike at mikealsop@tbpl.com dot AU.

00:03:36 Speaker 3

I'll just spell that again. That's Mike Dot ALSOPM Alsop at TBPL TBP lima.com dot AU.

00:03:56 Speaker 3

Details of all other broadcast times can be found on the club website at www.raotc.org.au or by Googling Re
OTC broadcasts. Don't forget too, that even if none of the transmission time suits you, you can download the audio file at any time from today from the club website.

00:04:20 Speaker 3

If you do download the file, a brief feedback comment would be appreciated.

00:04:26 Speaker 3

This month, instead of the usual broadcast, we offer an interesting historical broadcast from 2001 by Alan Doble, VK 3, amp D Now silent key, the usual news and information will be broadcast next month. Every 1ROTC members of non members.

00:04:47 Speaker 3

Like is most welcome to listen to the programme and to join in the callbacks afterwards.

00:04:53 Speaker 3

At 8:00 AM local time to Morrow, as well as the experimental transmission on 28.450 megs, there's a transmission via digital mobile radio on the VK DMR Network Talk Group 5 at 9:00 AM, Chris VK 6 Ji will transmit The Bulletin on 80 metres.

00:05:14 Speaker 3

On 3620 kHz, with a repeat at 10 AM on 40 metres on 7088 kHz, also at 10:00 AM, there is a transmission via the news W linked repeater system.

00:05:31 Speaker 3

On Wednesday, September the 6th, we have a D star broadcast at 5:30 PM WA local time. This will be transmitted via D star reflector 91 C and will follow the D Star news line on Sunday, September the 10th repeats of the re OTC Bulletin. Follow the 160 metre.

00:05:52 Speaker 3

And a 40 metre broadcast of the WIA news.

00:05:57 Speaker 3

The next lunchtime meeting for members and friends of the ROTC is on Tuesday the 12th of December at the Woodbridge Hotel, 50 E St, Guildford we meet at 11:30 for mid day lunch. An attractive, well priced seniors menus available which can be viewed on line.

00:06:17 Speaker 3

Everyone's welcome to join in and have an eyeball cue, so there's adequate car parking, but if coming by train, be sure to alight at Guildford E repeat Guildford E State.

00:06:30 Speaker 3

Full details are on the club website under the heading luncheons, so once again TuneIn tomorrow for the September broadcast. If possible, listen to the 28.450 makes transmission at 2:00 PM tomorrow afternoon and we look forward to hearing your call sign and the call backs.

00:06:49 Speaker 3

Afterwards, 7/3	3 from	Clive,	<u>VK</u>	6 C	<u> </u>
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00:06:57 Speaker 2

Hi folks. It's raffle time again. This time it's Perth Tech raffle and the proceeds all go to making Perth Tech possible. We spend nothing of it on ourselves. The first prize is that Jaggu. I don't even know how to say that X i.e. Gu. Perhaps someone can tell me X 6100 portable.

00:07:17 Speaker 2

SDR transceiver the second prize is the icon IC2730-A dual band remote head transceiver. That's a riff of that one and the third prize is the Yaesu FTM 3100 R 2 metre mobile transceiver. I believe it's got 60 watts outputs.

00:07:34 Speaker 2

So its transceivers all away for this year's raffles. We're calling on all Western Australian amateurs to support this raffle, because it's all for you.

00:07:42 Speaker 2

The raffle is mentioned on the front page of the vk6.net website with a link to the purchase site. If you're not into buying online, I suggest you phone a friend. One thing's for sure, if you don't buy a ticket, you can't win.

If per chance for any reason you don't participate in ruffles. We'd be pleased to accept your donation towards Perth Tech.

00:08:02 Speaker 2

Thank you very much for supporting Perth Tech, the website againvk6.net.

00:08:08 Speaker 2

Perth Tech is on the weekend of the 27th, the 29th of October. The 27th is Friday.

00:08:14 Speaker 2

And the main event, the day full of presentations is on Saturday the 28th of October. We have a brilliant lineup of presenters for you again this year and we're very pleased to advise you that Phil Harmon, VK 6A pH has offered to make the opening presentation at Perth Tech.

00:08:31 Speaker 2

It feels been involved with the design and development of software defined radios almost ever since the beginning, so here we have Phil, a World authority on

software defined radios, and he's going to tell us about how software defined radios work and some of the things they can do that your ordinary super heterodyne receivers.

00:08:50 Speaker 2

Can't do so. He's gonna talk to us about where they are now and tell us about an alternative way to build an SDO that will probably perform better, cost less, blah blah, blah, all those things. It'll be fantastic.

00:09:02 Speaker 2

Nick. So don't miss out on what Phil's got to say. We'll talk to you about other presenters in coming weeks.

Now, what else about Perth Tech? Well, you can have your caravan there. Or your camp. You can stay over on Friday night and Saturday night. There's a cost for that, of course. But it's just a pass on cost. We give it to the people who run the site. And once again, you're going to have fantastic food on Saturday.

00:09:24 Speaker 2

You'll go home needing to go on a diet for a couple of weeks. It's got some good country hospitality cranked up for you.

00:09:31 Speaker 2

After the presentations are all over on Saturday, we've got the sundowner and that's an extra cost because we trot out more food and the bar will be open where you can buy your own.

00:09:40 Speaker 2

<u>Drinks. So that's fantastic. So all the more reason to bring your caravan.</u>

00:09:45 Speaker 2

So that you don't have to drive home the location is a get your grown up recreation Club. Some people think that's forever out in the country, but it's not far. In fact, it's closer to the CBD than some of those northern suburbs.

00:09:59 Speaker 2

That just sit on the train for 4550 minutes to get to.

Unfortunately, there's no public transport to gijang up, so you'll have to thumb a lift with a friend. Perhaps you could organise.

00:10:09 Speaker 2

Some right share or car share or something like that.

Get you down up is about 20 kilometres up to Jay Rd

from where it meets row highway.

00:10:19 Speaker 2

So it's pretty easy to get to from the South and from the north and not too hard to get to from the rest of Perth either. So all the details are on the VK 6 dot.

00:10:29 Speaker 2

Website There is a Perth Tech page in there that contains most of the things you need to know and most of the new information that we put there, so check it regularly. Vk6.net easy to remember and let's see what pertec we had a good number last year. We've got room for a lot more than we had last year. We had a very good number. We were very happy last year, but we can.

00:10:51 Speaker 2

Cater for more. So don't think that you're gonna be crowded out. We can cater for a lot more. We just need to know you're coming so we can feed you and put the chairs out and all those sorts of things.

00:11:01 Speaker 2

But Pertec is a fantastic day and it's going to cost you
25 bucks for the day. And as I said, the sundowner is
extra, you have to pay if you're camping overnight and
the camping fees are pass on costs. We're forking out a
considerable sum of money to keep the bar open for

you after Perth. It closes. And while the sundowner is on.

00:11:21 Speaker 2

So make sure you avail yourself of the bar. You can buy anything from a soft drink to something stiffer, and it's great company at Perth Tech. You have a fantastic time, so put it aside now. Saturday the 28th is the main deal, the whole weekend if you're camp.

00:11:37 Speaker 2

Perth Tech and again the website vkk6.net, don't forget
<u>it.</u>
<u>00:11:42 Speaker 5</u>
This is newest from VK 6 ARN produced by amateurs
for amateurs purely about the hobby of amateur
communication and experimentation.

00:11:53 Speaker 4

Hi, I'm Steve BK6J and this is another episode of did you know?

00:11:59 Speaker 4

A large portion of us are involved in at least one amateur radio organisation, even if that organisation is only a net.

00:12:06 Speaker 4

I think it'd be really interesting to look at the average age of a member of each organisation and compare notes.

00:12:12 Speaker 4

My gut feeling is that you'd see that the average age of being up in the 60s in many cases, if not more.

00:12:19 Speaker 4

And look at how many school age members each organisation has. That's a very low figure in all clubs I know of, with some clubs potentially having no school age members.

00:12:29 Speaker 4

If this were a squash club, we'd be in big trouble.

00:12:32 Speaker 4

Taking a sporting club as an example, though, they typically have a kids programme and often we'll have a programme of gradually integrating those kids into their adult competitions as they grow.

00:12:43 Speaker 4

Had a quick look at a squash club I was involved in about 20 years ago, which doesn't appear to be there anymore, but the last group photo I found was in 2019, just before the premises shut down, and I was pleasantly surprised to see many of the people I had known then still there, but more importantly, a big mixture of ages.

00:13:02 Speaker 4

So what you might say, we like the clubs.

00:13:04 Speaker 4

It is if I if I guess if your organisation is ROTC then I think you could be by definition forgiven for not having a kids programme. But for the rest of us, what would having a focus on bringing school age members into your club do for the club?

00:13:21 Speaker 4

Are you doing things in the club that make it not a place you want your kids around or that your kids don't want to be involved in?

00:13:27 Speaker 4

It could just be a matter of studying a conversation about how you might make the club a place your kids or grandkids would like to spend time at.

00:13:35 Speaker 4

From my part I started my ham journey while I was in high school up in Port Hedland.

00:13:40 Speaker 4

There are a handful of kids involved in CB radio at the time who enjoyed chasing DX, et cetera, but I was the only ham in my high school.

00:13:48 Speaker 4

I was encouraged a lot by other members of the club we started and I still still see some of them around the traps in Perth, 40 plus years later. A couple of those people had a very big impact on mighty youth years and in one and one in particular had enough impact too, I suspect make the difference between.

00:14:06 Speaker 4

My getting grades good enough to embark on a career in radio electronics.

00:14:11 Speaker 4

40 years ago, though the world was a different place.

We didn't have the Internet. If you wanted to learn
about another part of the world, you went to the
library and read an encyclopaedia. Or if you were a
ham, you could just ask someone who lived there.

00:14:24 Speaker 4

Many countries use radio to broadcast their point of view across HF shortwave broadcast stations.

00:14:30 Speaker 4

Amateur radio and CB were were the medium for social media.

00:14:35 Speaker 4

CB in particular had a very similar feel to the Internet of today, good and bad, so it was easier to attract people into the social aspects of radio, be it amateur or otherwise.

00:14:46 Speaker 4

Anyway, back on topic.

00:14:48 Speaker 4

What benefit would a club get from actively focusing on bringing in school aged members into your club?

00:14:54 Speaker 4

From a selfish aspect, it would make it much easier to get permission to head down to the club if it were actually a family activity.

00:15:01 Speaker 4

Apart from that though, I can tell you from personal experience that there's a lot of joy in sharing a hobby with your kids and grandkids.

00:15:08 Speaker 4

I'm a four year old grandson who is always playing with an old portable radio in my shack and has an antenna and microphone on his little go Kart. I hope you get him involved in the hobby more in a few years time.

00:15:21 Speaker 4

His mum and the auntie he worships are both ham so shabia and manage.

00:15:26 Speaker 4

What are some other benefits if the average age of a club member continues to grow by around a year each year, the club will become less viable each year.

00:15:36 Speaker 4

Having young members around the club will bring different perspectives to the club, and then there's the other thing whereby the club is actually bigger and has more activities to choose from.

00:15:46 Speaker 4

And then I guess there's also something about having kids around that tend to make us all behave better, which is also very healthy.

00:15:51 Speaker 4

For a club.

00:15:53 Speaker 4

How do we attract younger people to this hobby and our respective clubs? How do we compete with the Internet? Is the most common complaint I hear, and not just from the amateur community, I might add.

00:16:05 Speaker 4

The fact is that 60 years ago the hobby was very technical. You had to build your own radio before you could use it.

00:16:11 Speaker 4

40 years ago it was easier to buy a radio than build it, so the hobby migrated more to a communications.

00:16:18 Speaker 4

Hobby. Now the communication is actually easier on the Internet than by radio, and information spreads between hams at the speed of light.

00:16:26 Speaker 4

So it's becoming much more technical than it was even in the 50s.

00:16:30 Speaker 4

In fact, there's more to do on a hobby today than there's ever been. It's just a lot of that activity is not necessarily involving chasing that last country to get on the DCC honour roll.

00:16:42 Speaker 4

So how do we start this? It's pretty simple. Bring your kids and grandkids into the shack. Talk about some of the things that they might find interesting.

00:16:51 Speaker 4

I know with one of my kids who's in her 30s, so probably not a kid anymore. Has zero interest in talking to someone on the other side of the world, but actually enjoys being on FTA.

00:17:01 Speaker 4

I suspect a lot of the popularity of FT-8 is because it's more like the Internet.

00:17:05 Speaker 4

While as older members of our community get more joy out of a Rachel with someone in the USA, kids will get more joy out of building a fox hunting set up than using it will get more into the technical aspects of the hobby.

00:17:18 Speaker 4

Keep an open mind and look for things that might interest them, even if it isn't your bag, bring your kids and grandkids along to the club meetings. That'll throw a cat amongst the pigeons. Find a couple of like minded members and start a little sub group of youngsters. It's not that hard.

00:17:34 Speaker 4

Well, thanks for listening. This is Steve. VK6SJ And you've been listening to, did you know on the news west broadcast?

00:17:41 Speaker 2

Next week, the Radio Amateur Society of Australia's

QTC magazine will be published. QTC is an online
magazine. It's available in a truly online format where
you can flip the pages on the screen, and it's also
available as a PDF download, if that's the way you want
to.

00:18:00 Speaker 2

There are some excellent items in there this month, and of course the recent ACA announcements about amateur radio licencing has provided fighter for a couple of items and some comments in there about the way things are going. So it's all good stuff, it's current stuff and it's all free provided to you.

00:18:19 Speaker 2

By the Radio Amateur Society of Australia, you can go
to their website vkradioamateurs.org if you want to go
straight to the magazine. It's QTC mag. That's QTC
mag.com. It's pretty easy.

00:18:35 Speaker 6

Since 1931, News West has provided amateur radio news for WA and Beyond. This is VK 6 ARN.

00:18:48 Speaker 7

Foundations of amateur radio. Recently, I had the opportunity to use a piece of professional equipment to measure the so-called unwanted or spurious emissions that a transceiver might produce.

00:19:01 Speaker 7

In describing this, I finished off with the idea that you could use a \$20 RTL SDR dongle to do these measurements in your own shack.

00:19:09 Speaker 7

I did point out that you should use enough attenuation to prevent the white smoke from escaping from your dongle, but it left a question how much attenuation is enough.

00:19:21 Speaker 7

An RTL SDR dongle is a USB powered device originally designed to act as a digital TV and FM radio receiver.

00:19:29 Speaker 7

It's normally fitted with an antenna plugged into a socket on the side.

00:19:33 Speaker 7

I'll refer to it more generically as a receiver because much of what we're about to explore is applicable for other devices too.

00:19:42 Speaker 7

Using your transceiver or transmitter as a signal source isn't the same as tuning to a broadcast station unless you move at some distance away, as in metres or even kilometres away, depending on how much power you're using at the time.

00:19:58 Speaker 7

Ideally we want to connect the transmitter output directly to the receiver input, so at least theoretically, the RF coming from the transmitter stays within the measuring setup between the two devices.

<u>00:20:11 Speaker 7</u>

Assuming you have a way to physically connect your transmitter to your receiver, we need to work out what power levels are supported by your receiver.

00:20:21 Speaker 7

For an arcl estr dongle, this is tricky to discover. I came across several documents that stated that the maximum power level was 10 DBM or 0.01 Watt, but that seemed a little high since an S9 signal is -73 DBM.

So I kept digging.

00:20:41 Speaker 7

And discovered a thoughtful report published in August 2013 by Walter Hotel B9AJ Gough.

00:20:48 Speaker 7

It's called some measurements on DVBT dongles with E4000 and R820T tuners. There's plenty to learn from that report, but for our purposes today we are interested in essentially 2 things, the weakest and the strongest signals that the receiver can accommodate.

We're obviously interested in the maximum signal because.

00:21:10 Speaker 7

Out of the box, our transmitter is likely to be much too strong for the receiver. We're going to need to reduce the power by a known amount using one or more connected RF attenuate.

00:21:22 Speaker 7

At the other end of the scale, the minimum signal is important because if we add too much attenuation, we

might end up below the minimum detectable signal level of the receiver.

00:21:32 Speaker 7

Over the entire frequency range of the receivers tested in the report, the minimum varies by about 14 DB. So let's pick the highest minimum from the report to get started. That's -127 DBM.

00:21:48 Speaker 7

What that means is that any signal that's stronger than
 -127 DBM is probably going to be detectable by the
 receiver, and for some receivers on some frequencies
 you might be able to go as low as -141 DBM.

00:22:05 Speaker 7

At the other end of the scale, the report shows that the receiver range is about 60 DB, which means that the stronger signal that we can use is -67 DBM before various types of distortions start occurring for comparison, that's four times the strength of an S9 signal.

00:22:24 Speaker 7

So if we have a 10 Watt transmitter or 40 DBM, we need to bring that signal down to a maximum of -67 DBM. In other words, we need at least 107 DB of

attenuation, and if we have a safety margin of two, we'll need 110 DB of attenuation.

00:22:45 Speaker 7

Remember, double power means adding three DB.

00:22:48 Speaker 7

Sorry, find 110 DB of attenuation.

00:22:52 Speaker 7

As it happens, if I connect most of my attenuators
together I could achieve that level of attenuation, but
there's one further issue that we'll need to handle and
that's.

00:23:03 Speaker 7

As you might recall, an attenuator has several attributes. The most obvious one is how much attenuation it brings to the party. It's specified in DB.

My collection of attenuators ranged from one DB to 30

DB.

00:23:17 Speaker 7

Another attribute is the connector it comes with. I have both N type and SMA connectors in my collection, so I'll need some adapters to connect them together.

00:23:27 Speaker 7

One less obvious and at the cheap end of the scale, often undocumented aspect of an attenuator is its ability to handle power. Essentially we are turning an RF signal into heat, so an attenuator needs to be able to dissipate that heat to handle what your transmitter is throwing at it.

00:23:45 Speaker 7

I said that from a safety perspective, I'd like to be able to handle 20 watts of power. Fortunately, we don't need all our attenuators to be able to handle 20 watts, just the first one directly connected to the trans.

00:23:58 Speaker 7

through the attenuator is reduced to 0.02 watts and the next attenuator in line only needs to be able to handle that power level, and so on.

00:24:13 Speaker 7

To get started, find about 110 DB of attenuation, make sure that it can handle 20 watts and you can start playing.

00:24:21 Speaker 7

Before you start keying up your transmitter, how might you handle a range of different transmitters and power

levels, and can you remove an attenuator when you test on a different free?

00:24:33 Speaker 7

On that last point, let me say no, you cannot remove the attenuator when you're measuring a different frequency.

00:24:41 Speaker 7

I'm Onno, Victor Kilo 6 Foxtrot Lima Alpha Bravo .
00·24·45 Speaker 8

Good morning, listeners and Happy Father's Day to all the dads. It's Roy, VK 6 XV. This week's helpline for the 3rd of September 2023 Father's Day. And today I have the following for sale. An NGT codan AR voice.

00:25:00 Speaker 8

With crab.

00:25:02 Speaker 8

It's a codan NGT, has speaker, mic, cradle, power cable and fuse cable and has been shortened. GPS has also included it's an AT International Multi Tech 9600 GPS unit with roof mount. And there is also an auto tune 9350.

00:25:21 Speaker 8

Auto tune antenna, coax and antenna control cable
with which has also been shortened. A tow bar
antenna Mount spring and stainless steel whip. The
radio and microphone are in very good condition apart
from some of the cables being shortened. If you get
them the radio is all set up for us.

00:25:40 Speaker 8

Travel and if need be, offer discount membership. Also if you have any anyone knows anyone chasing radio, this one's available. NGT and invoice and contact Colin with pick 6C India. His phone number is 04170970.

00:26:00 Speaker 8

4/3 his phone number is 0417097043.

00:26:08 Speaker 8

The next item comes from Wayne VK. 6NW has a
Kenwood TS 450S for sale. Excellent condition, asking
\$700.00 only and you can phone Wayne for that
Kenwood 450 S his phone number. That's three K 6NW.

00:26:28 Speaker 8

Phone number 0499450505 again 0499450505.

00:26:40 Speaker 8

Next item is from Gavin VK 6 Victor KS. He has a yagi.

He has a four element Yagi 10/15/20 metre dual driven

4 metre boom with a boom extension, an extra

element brand new from Tat Mtron asking \$250 a lot.

00:27:00 Speaker 8

A four element Yagi 10/15/20.

00:27:03 Speaker 8

Metres contact Gavin VK 6 Victor Kilo Sierra
04283885310428388531 next item is from Jessie VK
6JQ.

00:27:23 Speaker 8

He has a transceiver by Kenwood, a 480HX in a maximum condition, 200 watts PP out, original box.

Manual programming cable can be used with computer software and display radio, and we'll check in a uh.

00:27:42 Speaker 8

USB PAN adapter as well which I can a no elect nest. I don't know what that means anyway.

<u>00:27:51 Speaker 8</u>

It was it was throw that in and see PAN adapter and Ideal Base radio or can be used as a mobile rig as.

00:27:57 Speaker 8

Well, as a manual for all of it and cables and microphone on their reports welcome \$1100, including post anywhere in the VK land. That's \$1100 including post.

00:28:11 Speaker 8

Message. And she's from Jessie 0437789246. I'll say again, 0437789246, that's Jesse VK 6JQ. That's almost it for the day. But just to remind you.

00:28:32 Speaker 8

If you have any items for next week, please contact me Roy Dot Watkins at Big Pond.

00:28:36 Speaker 8

Com and we to let you know also this is the 38th birthday of Helpline Royce helpline 38 years ago. I started this and I'm still going I think I'm still going.

Yeah. Poke poke yeah I'm still alive and thanks for everyone happy Father's Day from VK 6X3 Victor cheers now.

00:28:53 Speaker 1

Hi there. I'm Clinton, VK6FCRC and I'd like to thank our news west 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.

00:29:11 Speaker 1

The form on the vk6.net website so we know how many people are listening or reading news west each week.