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Audio file

[20231001.newswest.mp3](#)

Transcript

00:00:06 Speaker 1

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

00:00:23 Speaker 1

Hi there. I'm Clinton, VK6FCRC and welcome to News West for the 1st of October 2023. Now with the show.

00:00:29 Speaker 2

4 weeks, 4 weeks until Perth tick. Who would have thought it'd come round so quickly and I'm not panicking. Not yet. The programmes in the bag and we have some excellent presentations. A full day of them. You really wouldn't want to miss out so.

00:00:45 Speaker 2

Perth Tech 2023 is at the Giganet Recreation club 2 J Rd. In Giganta, up just under 20 kilometres up two J Rd. From Roe highway. It's closer to the CBD than many of Perth's so called suburbs. I own ashamedly promote Perth Tech as the premier event of its kind in Australia.

00:01:04 Speaker 2

I know there are others, but we've been able to offer one thing that the others haven't. It's free.

00:01:09 Speaker 2

Yep, entry to Perth Tech is free. However we do charge you \$25 which is a full pass on cost to the caterers who'll supply morning tea, lunch, afternoon tea and all day coffee.

00:01:22 Speaker 2

The lunch fee is not optional and on the subject of coffee, the Coaters last year couldn't believe how much coffee one group of people could consume all day. The Perth Tech weekend is 27th, 28th, 29th of October. The main events on Saturday and we have on site spaces for caravans.

00:01:41 Speaker 2

And campers on Friday and Saturday nights and these are charged at \$15 per night, per van camper or tent. And this is the pass on fee to the venue, the toilets and showers are in the Sports Club change rooms, the singing of rousing songs in the change rooms is optional.

00:01:58 Speaker 2

On Saturday evening there's a sundowner. The bar will be open for you to purchase drinks and you'll enjoy a BBQ dinner and the sundowner is an extra \$15 and you can book all of these options online at our tribe booking site. The link is on our website at the k6.net. It's absolutely essential to reserve your spot.

00:02:19 Speaker 2

At the Perth Tech main event on Saturday, we will not accept walk-ins, so book early to avoid disappointment,

the website isvk6.net. There are links to the bookings and updated Perth Tech information.

00:02:34 Speaker 3

Hi, I'm Steve. OK. Success. Jay, with this week's episode of did you know?

00:02:38 Speaker 3

As mentioned the week before last week this week I'll be doing a review of the 403, a flex radio PG XL amplifier.

00:02:47 Speaker 3

This Apple fire was designed jointly by Flex Radio and 403 A, although well built with the Flex 6000 series radios in mind is equally good with any other conventional.

00:02:57 Speaker 3

Receiver I've had. I've owned one of these amps for around 18 months now and it's the last of a string of previous amps of other brands starting with and are in Italy 600 Watt amp that lasted less than an hour to an hour. Andrews Comms 400 Watt solid state amplifier, then an old FL 2100 yacc ramp and then.

00:03:17 Speaker 3

And SPE 1K FA amplifier.

00:03:21 Speaker 3

Each amp had its good points. SP amp was good value for money and convenient and it has an internal antenna tuner and a four antenna switched output, meaning I could get away with less than an optimal antenna and I didn't need to worry about adding a remotely switchable coaxial relay.

00:03:38 Speaker 3

This amp is externally controllable via proprietary application and can also follow the radio when connected via a serial port. So there's a reasonable choice for a remote station as well. Well, how about the PXL? It's a nominally 1.5 kilowatt.

00:03:53 Speaker 3

Fire. However, in SSB we'll do up to two kilowatts PEP, depending on the band used.

00:04:00 Speaker 3

With a pair of 1.5 kilowatt transistors and some very robust design, the AMP can work comfortably at 1.5 kilowatts all day on any mode, subject, of course, to local laws limiting power output even on modes running at 100% duty cycle like FT-8 app is a few unique features from a performance perspective that are worth mentioning.

00:04:21 Speaker 3

Most amplifiers these days have high VSWR protection. The PGR Excel is no different and will continue to operate up to VSWR of three to one.

00:04:31 Speaker 3

When at that point it alarms out prior to that point, it works just fine.

00:04:36 Speaker 3

Most of my antennas seem to run between 1.1 and two to one across most bands except 20 metres, where seem to only have about 200 kHz bandwidth.

00:04:46 Speaker 3

On our tests, bring out some interesting features. There's an app used to allow monitoring of the important parts of the amplifier on your PC.

00:04:55 Speaker 3

A lot of higher end amps have a similar feature, but for a 3A I've created a remote connectivity feature that providing you have a fixed IP address at the site, you can remotely monitor the amplifier. You do need to create a port forward on the DSL modem at the at the amplifier end to allow the comms through to the interwebs.

00:05:15 Speaker 3

Other features include two inputs outputs, so you can run 2 radios independently with two complete data inputs to control the amp and the, and two PTT and ALC inputs.

00:05:26 Speaker 3

Obviously you can't run 2 radios in transmit at the same time, but if you use 2 radios and want both to be able to access the amp, this is a neat feature.

00:05:36 Speaker 3

On SSB, the amplifier runs in what is called an AAB mode. This is similar to a class AB, but a little bit more linear and correspondingly a little less efficient.

00:05:47 Speaker 3

It also runs a mode known as MEF AA, which is used on non voice modes such as CW and digital modes.

00:05:56 Speaker 3

This is an algorithm that manages the DC bias and the drain of the PA final transistors, increasing the efficiency of the amplifier.

00:06:04 Speaker 3

Another neat feature is the harmonics filtering and dummy light. This is a common feature in broadcast

transmitter amplifiers and used for the first time on an amateur app that duplexes the harmonics and feeds the harmonics into a 400 Watt dummy load.

00:06:19 Speaker 3

Without this facility, the PA continues to amplify any harmonics, which are then dissipated by the final filtering or within the PA itself to cool the amplifier. There are three fans that operate at different speeds or modes depending on the temperature of the amplifier, and can also be manually adjusted.

00:06:37 Speaker 3

When doing the weekly broadcast in 80 metres, I tend to use the fans in broadcast mode, which keeps the out very cool even when transmitting constantly for an hour at 400 watts P.

00:06:49 Speaker 3

If you're using the amp in the shack where you operate from, the amplifier has a front panel that allows complete monitoring of the amplifier locally.

00:06:57 Speaker 3

Like most two kW amps, it's it's a big Beastie and heavy, but a lot lighter than, say, an acom 2000A valve amplifier.

00:07:06 Speaker 3

This amp is mains powered and operates comfortably with A2A10AMP GPO.

00:07:14 Speaker 3

Maintenance is often a hot topic with high power solid state amps.

00:07:18 Speaker 3

These have been sold in Australia for close to two years now and to my knowledge only one has bounced back on warranty.

00:07:25 Speaker 3

This fault required the replacement of the TPA transistors. The fix was identified quickly by 4 O 3A and two new pills were dispatched from Montenegro, where the factory is and received here in Perth within about 5 days and the amp was repaired quickly in Perth with a minimum of fuss. Amplifier was developed jointly by Flex Radio and 4/03 as so worked seamlessly with the Flex 6000 series of transistors.

00:07:48 Speaker 3

As long as the app is connected to the same LAN as the radio.

00:07:52 Speaker 3

Or main performance parameters are visible within smart SDR and the operator interface used by Flex and the only hardware connection between the radio and amp is the coax cable or control of the amplifier is via the LAN.

00:08:07 Speaker 3

If you're using a non flex transceiver, there's an RS232 serial port as well as an icon Civ port. The app will communicate with all mainstream radios including Flex, ICOM, Yaesu, Kenwood, et cetera.

00:08:20 Speaker 3

And in addition, there are separate PTT and RLC inputs for each input of the amplifier. Common comment I've heard on this app is that at a healthy price tag of an excess of 12,000, it really should have an antenna switching and an inbuilt ATU.

00:08:35 Speaker 3

My take on this is that with the ability to work within three to one and less VSWR, it really doesn't need an 80 if you're operating at 2 kilowatts zoom really from overseas where it might be allowed.

00:08:48 Speaker 3

You really wouldn't be wanting to be trying to feed 2 kilowatts into an antenna with an SWR of more than two to one, with or without an ate.

00:08:56 Speaker 3

If your ample arms out at 1.3 to one, then an external or internal ATU would be a complete necessity.

00:09:03 Speaker 3

A perfectly tuned antenna can easily go up to 1.3 to one with the warmer Ballin.

00:09:10 Speaker 3

And having operated the amp on a few DX contests, I can tell you this is a robust and travel free amplifier that I'm very happy with, and I expect that unless ACMA surprise us with allowing more than two kilowatts.

00:09:22 Speaker 3

This will probably.

00:09:22 Speaker 3

Be be the last brand of vampire I have in my shack.

00:09:26 Speaker 3

The other comment is on the antenna switching capability.

00:09:30 Speaker 3

Of my site that I share with three friends, we currently have 7 antennas and will likely have three or four added in the next 12 months. So the four antenna ports on my trusty old SPE 1K FA would still fall short, so I opted for a pair of four O 3A antenna geniuses.

00:09:46 Speaker 3

Which allow two radios to access up to 16 antennas.

00:09:50 Speaker 3

If I brought an amp with four antenna ports, I'd still only be using one antenna port in addition to the antenna geniuses. Ah, next week I might have a look at the antenna Genius suite.

00:10:00 Speaker 3

Of switches.

00:10:01 Speaker 3

Thanks for listening again, this is Steve. OK, success, Jay. ~~And you've been listening to, did you know on the news W broadcast?~~

00:10:09 Speaker 4

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

00:10:19 Speaker 5

Hello, this is Dennis VK 6 AKR for the WA VHF group.

00:10:25 Speaker 5

September has been a busy month for us, culminating in our annual general meeting last Monday. The club has re elected its executive members and we welcome Alistair VK680X to committee.

00:10:37 Speaker 5

Alistair is a skilled and experienced amateur operator and we look forward to his contributions to club activities in a committee role.

00:10:45 Speaker 5

The Perth Rtty sessions continue with only one hiccup due to weather. We used the VK 6 RFM repeater as a coordination channel on Wednesday evening and it proved useful to pass on hints, especially for those cases where poor RTT Y signal to noise ratio created problems for some participants.

00:11:05 Speaker 5

The normal Wednesday night scared may prevent others from getting on air, so we could offer an alternative or additional night as an experiment.

Suggestions are welcome either on WA Hermes or to the WA VHF group.

00:11:19 Speaker 5

Activity is increasing in the lead up to Jota in just under 3 weeks time.

00:11:24 Speaker 5

Clubs and individuals please make contact with your local Scout group and offer your services to make this a really successful experience for scouts of all ages.

00:11:33 Speaker 5

The WA VHF group will support a couple of sites and hopefully even more next year.

00:11:39 Speaker 5

Perth Tech is on at the end of this month. The new VHF grip. We'll have a table there so come and say hello to Robert VK 6 WHO Dave VK 6 KV me VK 6 AKR and others who may be there. We will have a few of our projects on display so that you can get an idea of what we do to share and enhance amateur radio in VK 6.

00:12:03 Speaker 5

If you are near Wireless Hill in Applecross next Saturday the 7th, please consider dropping in.

00:12:09 Speaker 5

That is our first activity day for October, so call in for a cuppa and a chat. You will find us a pretty friendly bunch.

00:12:16 Speaker 5

73 from Dennis VK 6 AKR for the WA VHF Group incorporated.

00:12:23 Speaker 2

Yes, it's me again. I'm Bob VK 6 POP, reminding you of the fantastic Perth Tech raffle. We have three fantastic transceivers, as prizes and any of which would be a useful addition to your radio arsenal. Leading the prize list is a JAGOSE X 6100 portable SDR transceiver, which is a well featured radio.

00:12:44 Speaker 2

And it's got a built in battery and antenna tuner with many other features. The Jaggu is valued at a dollar under 1000 bucks.

00:12:53 Speaker 2

The second prize is the icon IC2730A dual band VHF UHF transceiver with remote head. This rig has dual band simultaneous received capability with easy to see large white backlit LCD display screen. 50 watts of output power on both VHF and UHF. So that's a handy.

00:13:14 Speaker 2

It'll rig and it can be used with an optional Bluetooth headset. Be great for driving would.

00:13:20 Speaker 2

And third prize as the Yasu FTM 3100 R It's an analogue FM 2 metre transceiver and it's a tough little unit and it provides an output power of up to 65 watts.

00:13:34 Speaker 2

There you go and the tickets are on sale now and the raffle will be drawn at Perth Tech on Saturday the 28th of October.

00:13:42 Speaker 2

Prizes will be posted or delivered to winners who are not present at Perth Tech, so you don't have to be there, although you should be at Perth Tech, but you don't have to be there to win a.

00:13:51 Speaker 2

Raffle prize tickets are only \$5 each, and the link to online ticket sales is on our vk6.net website. Did you get that vk6.net? The Perth Tech raffle is conducted by.

00:14:03 Speaker 2

WI Amateur Radio news incorporated and the proceeds of this raffle enable us to stage Perth Tech for the

benefit of amateur radio in WA. Go to vk6.net to purchase tickets.

00:14:16 Speaker 6

Hello everyone, this is Clive VK 6CSW reminding you that the radio amateurs old Timers Club of Australia's October Bulletin goes to air to Morrow.

00:14:28 Speaker 6

The experimental 10 metre transmission, last month's experimental 28.450 megahertz transmission by Mike VK, 8 Ma from Catherine in the NT, came to naughty propagation, became weak about an hour before the scheduled time of 2:00 PM WA time.

00:14:48 Speaker 6

And then shortly before 2:00 PM, Mikes QTH suffered A lengthy power failure.

00:14:55 Speaker 6

Nevertheless, Mike thanks everyone who listened out on 10 metres and hopes for better luck. If this propagation experiment is repeated in the future. Now this month Andrew VK 3C AH brings us the latest club news, after which I'll be talking about the Earth in Doctor Compass.

00:15:14 Speaker 6

Followed by Bill VK 3B are telling us about the AA3
Mark 7 gun Fire control system.

00:15:24 Speaker 6

Everyone, ROTC members and non members alike is
most welcome to listen to the programme and to join
in the callbacks afterward.

00:15:33 Speaker 6

At 8:00 AM local time tomorrow, there's a transmission
via digital mobile radio on the VK DMR Network Talk
Group 5.

00:15:44 Speaker 6

At 9:00 AM, Chris VK 6 Ji will transmit the bulletin on
80 metres on 3/6/20 kHz.

00:15:54 Speaker 6

And at 10:00 AM, there's a transmission via the newest
linked repeated system together with the transmission
on 40 metres on 7088 kHz by crisp K6J I.

00:16:08 Speaker 6

On Wednesday, October the 4th, we have AD star
broadcast at 4:30 PM MW, a local time.

00:16:16 Speaker 6

This will be transmitted via D star reflector 91 C and will follow the D Star news line.

00:16:23 Speaker 6

On Sunday, October the 8th repeats of the ROTC Bulletin follow the 160 metre and 40 metre broadcasts of the WIA News.

00:16:34 Speaker 6

Full details of all transmissions times and frequencies are published on the REOC website at Ryota.c.org dot, AU or just Google ROTC broadcasts. If none of these times suit you, you can download the audio file at any time.

00:16:55 Speaker 6

From today, but if you do download the file, some brief feedback comments would be appreciated.

00:17:03 Speaker 6

The next lunchtime meeting for members and friends of the ROTC is on Tuesday the 10th of October at the Woodbridge Hotel, 50 E St, Guildford we meet at 11:30 AM for midday lunch and attractive, well priced seniors menus available, which can be viewed.

00:17:23 Speaker 6

Online, everyone's welcome to join in and have an eyeball QSO. There's adequate car parking, but if coming by train, be sure to alight at Guildford E repeat Guildford East station.

00:17:38 Speaker 6

Full details are on the club website under the heading luncheons.

00:17:42 Speaker 6

Once again, TuneIn tomorrow for the October broadcast and we look forward to hearing that your call sign in the Callbacks 7 three from Clive, VK 6 CSW.

00:17:57 Speaker 6

VK 6 CSW.

00:18:03 Speaker 6

VK 6 CSW.

00:18:08 Speaker 2

I'd noticed that Dennis VK 6 AKR was organising A ritty night on 2 metres on Wednesday evenings. As usual, I thought ho hum, I've got other stuff to do and never gave it a second thought.

00:18:20 Speaker 2

Well, last Wednesday I did give it a second thought. My first thought was that I need to do the washing up and second thoughts one the day or rather the night. I left the kitchen and wandered into the shack and switched on. The radios started up a rooty app on the computer, set the radio to the agreed frequency and crickets.

00:18:38 Speaker 2

This can't be right, so I turned up the volume and I could hear some clowns woofing away on the wrong frequency. Silly them. I put out a call on the agreed frequency. Nothing. So I went chasing the fools on the wrong frequency. And there they all were. Someone had a GPS locked thingy on their radio and everyone had tweaked up to match. Makes a lot of sense.

00:18:59 Speaker 2

Doesn't it?

00:19:00 Speaker 2

Once the little twiddly thing on the screen took its shape and the green thing went to its maximum, the ritty was decoding and I do apologise for the overly technical language there, something I'd forgotten because it had been so long since I'd used ritty was that the software was happily decoding signals that I couldn't.

00:19:16 Speaker 2

Here inaudible signals I had decodes from 4 stations. The closest to my Gigi Ganap cutie hatch was 50 kilometres and it was all working a treat. So what about you having a go at Ratty? It is fun chatting via the keyboard was invented many decades ago, way before Bill Gates got his first Abacus for Christmas.

00:19:37 Speaker 2

You heard me mention Ritty. It's how we pronounce the abbreviation RTTY, which means radio teletype. So during the week, keep an eye out for an email from Dennis to the WA Hams email list, then tune up and TuneIn. It's on 2 metres. It's.

00:19:53 Speaker 2

One maybe someone could organise a short contest or an on air game, or a quiz or whatever over to you.

00:20:04 Speaker 7

WA and beyond News W is available on air online and on demand. Visit our website vk6.net to find out how this is VK 6 amateur radio news.

00:20:25 Speaker 8

Foundations of amateur radio.

00:20:28 Speaker 8

If you've been following my amateur radio journey, you'll have likely noticed that I've been straying from the fold.

00:20:34 Speaker 8

The words I use for power have been changing. I've reduced references to what and increased use of the term decibel.

00:20:42 Speaker 8

Initially this was incidental. Recently it's been more of a deliberate decision and I'd like to explain how this came to be. It starts with representing really big and really small numbers.

00:20:54 Speaker 8

Let's start, beak.

00:20:56 Speaker 8

On 14 September 2015, the first direct observation of gravitational waves was made when a pair of black holes with a combined estimated weight of 65 solar masses merged.

00:21:09 Speaker 8

The signal was named golf W150914, combining gravitational wave and the observation date to immortalise the event.

00:21:21 Speaker 8

Following the collision, it was estimated that the radiated energy from the resulting gravitational waves was 50 times the combined power output of all the light from all the stars in the observable universe. As a number in Watts, that's 36 followed by 48 zeros.

00:21:40 Speaker 8

If you're curious, there's even a word for that 36 quindecim Leon Watts.

00:21:47 Speaker 8

Now let's look at small. The typical signal strength received from a GPS satellite, like say, by your phone.

00:21:53 Speaker 8

Is about 178 Etowah TTS, or in Watts, 0.0000 and so on in all 13 zeros between the decimal point and then 178.

00:22:07 Speaker 8

What if I told you that the energy associated with the collision of those two black holes could be expressed in comparison with a milliwatt?

00:22:15 Speaker 8

Remember, this collision emitted more energy than all the output of light from all the stars in the observable universe.

00:22:22 Speaker 8

The expression for all that power is 526 DBM.

00:22:28 Speaker 8

Similarly, the tiny received GPS signal can be expressed as -127.5 DBM.

00:22:37 Speaker 8

Just let that sink in.

00:22:39 Speaker 8

All the power in the observable universe through to the minuscule power received by the GPS in your phone.

00:22:45 Speaker 8

All expressed between 526 DBM and -127.5 DBM and not a zero insight.

00:22:55 Speaker 8

As I mentioned, the unit DBM relates to a milliwatt.

00:23:00 Speaker 8

As a starting point, let me tell you that one Watt is 1000 milliwatts and is represented by 30 DBM.

00:23:08 Speaker 8

The decibel scale doesn't work quite the same as other number ranges you might be used to.

00:23:13 Speaker 8

Adding the value 3 doubles its size and adding the value 10 increases its size by a factor 10. For example, to double power from one Watt or 30 DBM, add 3 and get 33 DBM, which is the same as two.

00:23:31 Speaker 8

Watts, if you want to increase one Watt by a factor of 10, again starting with 30 DBM, add 10 and get 40 DBM which is 10 watts. Similarly, 50 DBM is 100 watts and 60 DBM is 1000 watts.

00:23:48 Speaker 8

Going the other way, having power remove three, so taking 3 from 60 DBM is 500 watts, or 57 DBM. Dividing power by a factor 10 works the same. Take 10. So 47 DBM is 50 watts and 37 DBM.

00:24:08 Speaker 8

Is 5 watts.

00:24:10 Speaker 8

If you get lost, remember DBM relates to a milliwatt. 1 Watt is 1000 milliwatts and is represented by 30 DBM. Divide by a factor 1000. Remove 30 and end up with 0 DBM which is the same as one milliwatt.

00:24:26 Speaker 8

I'll say that again, 0 DBM is the same as one milliwatt.

00:24:32 Speaker 8

It takes a little getting used to, but you can do some nifty things.

00:24:36 Speaker 8

For example, remove 10 to get a 10th of a milliwatt, or -10 DBM.

00:24:41 Speaker 8

The same process of adding and subtracting applies in other ways too. Attenuation or making a signal weaker, and amplification or making a signal stronger can use the same rules. For example, if you apply three DB of attenuation, you're making the signal 3DB weaker or halving it, so you subtract 3 DB.

00:25:02 Speaker 8

From your power output.

00:25:04 Speaker 8

If your amplifier is rated at six DB gain, you're quadrupling the output and you add 6 DB to your power output. Similarly, if you talk about the gain of an antenna, you add it. If the gain is 20 DBI, you add it to the power output. You can use this for coax loss calculations as well.

00:25:24 Speaker 8

100 metre length of RG58 at 28 megahertz has a loss of eight DB. You can directly subtract this from the power output of the transmitter and know precisely how much power is making it to the antenna.

00:25:37 Speaker 8

There's more. The radio amateur S 9 signal strength on HF, something which we consider to be a strong signal can be expressed as -73 DBM or a very small fraction of a milliwatt.

00:25:51 Speaker 8

An S8 signal is 6 DB weaker, or -79 DBM. A 20 / 9 report is -53 DBM.

00:26:01 Speaker 8

I will point out that this is at 50 ohm.

00:26:04 Speaker 8

As a result, we now have a continuous scale for all the elements in the transmission chain between the transmitter and the receiver.

00:26:13 Speaker 8

While I'm here, I've already mentioned that negative DBM readings relate to fractions of a milliwatt.

00:26:19 Speaker 8

So values between zero and one. This highlights 1 limitation of this scale. We cannot represent 0 watts.

00:26:28 Speaker 8

Mind you, that doesn't happen all that often. The thermal noise floor in space at one hurts bandwidths. That's at 4 kelvins is -192.5 D BM, which practically means the minimum level of power we need to express.

00:26:45 Speaker 8

It's also a good value to remember, because if you're doing funky calculations and you end up with a number less than -192.5 DBM, you can pretty much guarantee that you've.

00:26:56 Speaker 8

Probably made a Boo Boo.

00:26:58 Speaker 8

0 watts using the DBM scale is represented by negative Infinity or essentially a division by zero error. Really not defined, so there's that. I'm onno VK6FLAB.

00:27:14 Speaker 9

Hello and good morning. This is Roy VK6XV with this week's.

00:27:18 Speaker 9

Plan for the 1st of October, brand new month and I don't have any new items for you, but I still have 3 repeats from last week. We're looking for our Collins 51J. Four general coverage receiver prefer working condition. Of course, prepared to administer TLC if need be, says Steve VK 6 Victor.

00:27:39 Speaker 9

Lulu. They'll let him know what the details are and how much, et cetera. His email address is Sarah TE. Victor. Echo. Victor. K6. Victor.zulu@tpg.com. Dot. AU that is.

00:27:54 Speaker 9

Steve Victor K6 victor.zulu@tpg.com dot AU next one wanted is an antenna analyzer covering frequencies from 100 kHz to 600 megahertz, such as the rig expert or other brands similar that can sweep the spectrum, not a nano VNA, says Mark VK 6BS.

00:28:16 Speaker 9

If you have one of those and surplus your requirements, please contact Mark. His email address is Victor, K6B, sarah.alpha@gmail.com, Victor K6B, Sierra alpha@gmail.com, and Wayne K 6NW may still have a Kenwood.

00:28:36 Speaker 9

Is 450S for sale. Excellent.

00:28:39 Speaker 9

Condition asking \$700.00. Contact him on 0499450505 again. That's 0499450505 Wayne Rique 6NW. Also dial a controller is available for \$350.00 the vacuum tube.

00:29:01 Speaker 9

Order metre for \$50.00 from Barry we gave 60ADI.

00:29:06 Speaker 9

His email address is bravo.juliet.burns@pingpod.com.

00:29:11 Speaker 9

Bravo dot Juliet dot burns that's BURNS at bigpond.com or mobile 04289597710428959.

00:29:25 Speaker 9

771 and that's me for this week. Thank you for those who still tuned in and listening. My email address ready.correspondentnextweekisroy.watkins@bigpond.com or roy.watkins@bigpond.com.

00:29:39 Speaker 9

Cheers and seven threes from VK6XV.

00:29:43 Speaker 1

Hi there. I'm Clinton, VK6FCRC 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 call backs after the ident or if nobody is taking callbacks, please fill out the form on the vsix.net website.

00:30:03 Speaker 1

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