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Audio file

[20230813.newswest.mp3](https://www.vk6arn.com.au/20230813.newswest.mp3)

Transcript

00:00:06 Speaker 1

This is BK6 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 and welcome to another episode of News W for the 13th of August 2023, now to Ono VK 6 flab with another episode of Foundations of Amateur Radio.

_____00:00:38 Speaker 2

Foundations of amateur radio.

00:00:41 Speaker 2

Thanks to several high profile races, we already know that sending Morse is faster than SMS.

00:00:47 Speaker 2

Recently I started digging into the underpinnings of Morse code to answer the question, can you send Moores faster than binary encoded ASCII?

00:00:57 Speaker 2

Both ASCII, the American standard code for Information Interchange, and Morse are techniques to encode information for electronic transmission. One is built for humans.

00:01:07 Speaker 2

The other four computers.

00:01:10 Speaker 2

To answer the question which is faster, I set out to investigate. I'm using the 2009 ITU or International Telecommunications Union standard Morse for this, Morse is said to be optimised for sending messages in English in Morse, the letter E represented by DIT.

00:01:30 Speaker 2

Is the quickest to send the next is the letter TDA, followed by. I dit dit, a dit da N, da, dit and M da da.

00:01:43 Speaker 2

The underlying idea is that communication speed is increased by making the most common letter the fastest to send, and so on.

00:01:51 Speaker 2

Using a computer, this is simple to test. I counted the letters of almost 400,000 words of my podcast and discovered that E is indeed the most common letter.

00:02:03 Speaker 2

The letter T is next, then a O and I note that I said letter the most common character in my podcast is the space, which in Morse takes 7 dits to set.

00:02:18 Speaker 2

**Also note that the Morse top five is ETI,
AN the letter O is 14th on the list in terms
of speed.**

00:02:29 Speaker 2

**In my podcast, it's the fourth most
popular letter. Mind you, my name is
Ono, so you might think that that is
skewing the data.**

00:02:38 Speaker 2

**Not so much if I use the combined works
of Shakespeare, and given that it
represents an older and less technical
use of language.**

00:02:46 Speaker 2

**And doesn't feature my name. I figured it
might have a different result. The top five
in his words are ETOAI. The letter O is
the third most popular and space still
leads the charge by nearly three times.**

00:03:05 Speaker 2

I also had access to a listing of 850 job advertisements. Yes, still looking, and the character distribution top five is EOTIN. The letter O is the second most popular letter.

00:03:19 Speaker 2

Because I can. And I'm well me, I converted the ITU Morse code standard to text and counted the characters there too.

00:03:27 Speaker 2

The top five letters are ETION, but the full stop is a third more popular than the letter E.

00:03:35 Speaker 2

Mind you, that might be because the people at the ITU still need to learn how to use a computer.

00:03:41 Speaker 2

Seriously, storing documents inside the programme files directory under the ITU Admin user. What were you thinking?

00:03:49 Speaker 2

I digress. The space is still on top nearly six times as common as the letter E.

00:03:57 Speaker 2

As an aside, it's interesting to note that you cannot actually transmit the ITU more standard using standard Morse, since the document contains square brackets and multiplication symbol asterisks.

00:04:09 Speaker 2

A copyright symbol, percent signs, M dashes and both opening and closing quotation marks, none of which exist as valid symbols.

00:04:18 Speaker 2

Back to Morse, the definition has other peculiarities. For example, the open

parentheses takes less time to send than the closing one.

00:04:28 Speaker 2

But you would think that they are equally common, given that they come in pairs.

00:04:33 Speaker 2

If you look at numbers, 5 takes the least amount to send zero the longest in my podcast text 0 is a third more common than one, and nine is the least common.

00:04:46 Speaker 2

In Shakespeare, 9 is the most common 8 the least, and in job listings zero and 2GO head to head, and both are four times as common as the number.

00:04:56 Speaker 2

Seven, which is the least common. All this to say that character distribution is clearly not consistent across different texts and Morse is built around more

than the popularity of letters of the alphabet.

00:05:10 Speaker 2

For example, the difference between the left and right parentheses is ADA at the end. If you know one of the characters you know the other the numerical digits follow a logical progression from all dits to all dars between 0 and 9.

00:05:26 Speaker 2

In other words, their code appears to be designed with humans in mind.

00:05:31 Speaker 2

There are other idiosyncrasies. Most of the code builds in sequences, but there are gaps if you visualise Moors as a tree.

00:05:40 Speaker 2

The letter E has two children, both starting with a DIT 1 followed by another DIT or dit dit the letter I and the other followed by a da dit da.

00:05:51 Speaker 2

The letter A similarly the letter T Adar has two children Daddit N and da da M.

00:05:59 Speaker 2

This sequence can be built from many definitions, but not all the letter O da da, da has no direct children.

00:06:07 Speaker 2

There's no da da, da, dit or da da da da sequence in Morse. The letter U did it. Da has one child, F dit dit da dit. But the combination did it da da.

00:06:21 Speaker 2

Is not valid Morse.

00:06:23 Speaker 2

It's those missing combinations that led me to believe that Morse isn't as efficient as it could be, and what originally led me to investigate the underpinnings of this language.

00:06:34 Speaker 2

I think it's fair to conclude at this point that Morse isn't strictly optimised for English, or if it is a very small subset of the language, it has several eccentricities, not unlike the most popular computer keyboard layout, QWERTY, which wasn't laid out for humans or speed typing. Rather the opposite.

00:06:53 Speaker 2

It was to slow a typist down to prevent keys from getting in each other's way when there was still a mechanical arm punching a letter into a page.

00:07:03 Speaker 2

In other words, Morse code has a history.

00:07:06 Speaker 2

Now I'm off to start throwing some CPU cycles at. The real question is Morse code faster than binary encoded ASCII?

00:07:14 Speaker 2

I'm Ono Victor K6FLAB.

_____00:07:19 Speaker 3

The Northern Corridor Radio Group is holding its annual Ham Fest on Sunday the 20th of August 2023. This year you'll find us again at the Cyril Jackson Community Hall in Bassendean, which is conveniently located for easy access by car and public transport. A light at Ashfield if you're catching the.

00:07:36 Speaker 3

Rain. The Ham Fest starts at 9:00 AM and will finish around 12 noon when the raffle prize winners will be.

00:07:43 Speaker 3

Announced this year.

00:07:44 Speaker 3

The NCG have a fantastic array of raffle prizes including first prize AH FT 710, HF 50 megahertz radio valued at \$16195.

00:07:57 Speaker 3

Second prize is an ICOM ID 52A handheld with D Star 2 and 70 valued at 840.

00:08:05 Speaker 3

3rd prizes and MFJ enterprises MFJ 991 BHF antenna tuner valued at \$400.00 and finally 4th prizes a Raspberry Pi 4B DIY kit with case fan cables and a 60 gig SD card. It's valued around \$320.

00:08:24 Speaker 3

More details are available in the WI hams. The NCRB Facebook page and the club website.

00:08:31 Speaker 3

When you're at the event, please visit the NCGS club table to see the progress of the NRG Earth Moon Earth station.

00:08:37 Speaker 3

It's nearly complete and ready to roll John VK 6 and you will be promoting summits of the air.

00:08:44 Speaker 3

So if you're interested in this facet of amateur radio, be sure to drop by and have a chat with John. Many exhibitors are also lining up for this year's event.

00:08:53 Speaker 3

Future systems, QSL, Coms, chat, mtron and Bush com along with a range of local amateur radio clubs. And if you have one, make sure you bring your handheld.

00:09:04 Speaker 3

Don't miss out on your chance to snap up a deal and catch up with on their friends for a coffee and a chat.

00:09:09 Speaker 3

If you're interested in selling at their hamfests, please don't hesitate to contact the NCG Hempfest coordinator Brad Peters, VK 6 BAP.

_____00:09:20 Speaker 4

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

_____00:09:32 Speaker 5

Hi, I'm Steve Kennedy, VK 6 SJ with this week's episode of did you?

00:09:36 Speaker 5

Know did you know that about the most devastating thing that can happen in your shack is generally related to either a direct or near hit lightning strike?

00:09:47 Speaker 5

It actually happens more often than you might realise. In my day job I probably assist 1/2 a dozen hams a year, replacing almost every aspect of the shack from antennas, coax radios, amplifiers, SWR metres, tuners and power supplies.

00:10:02 Speaker 5

Most interesting thing though is that.

00:10:05 Speaker 5

In 40 years of being in the radio industry, I think I could count on one hand the amount of lightning damaged sites I've worked on in the commercial radio sector, even though I have way more commercial customers than amateurs.

00:10:17 Speaker 5

Commercial installations are far, often far in excess of 30 metres off the ground compared to the average amateur installation at around 10 or 15 metres.

You would expect that with a higher mast, a commercial installation will be hit more, but it doesn't seem to be the case. Why is this so?

00:10:35 Speaker 5

There are a number of views on lightning damage and how lightning strikes on radio installations occur.

00:10:41 Speaker 5

Most of them actually sound plausible, but since I'm the one with your ear and it's my microphone, I'm going to give you my thoughts.

00:10:49 Speaker 5

Firstly, let's talk about why our Lightning strike occurs. We all know that lightning is caused by a buildup of electricity in the clouds, and once the potential

exceeds an amount that's required to ionise the air, hence creating a path from Earth to the clouds which is in effect the lightning strike.

00:11:05 Speaker 5

So lightning often occurs at a point that is above the ground because positive charge is build up in objects on the ground until a potential between the negative charge clouds and the positively charged objects on the ground exceed the amount of potential required to ionise the air and allows an electrical path between the two.

00:11:24 Speaker 5

The trick to reducing the likelihood of a strike is to bring the potential of any objects above the ground back to the same potential as Earth, which is said to be at 0 potential.

00:11:34 Speaker 5

How do we do that with the mast? Even if we ground the mast, there's still a potential for a build up of charge on the structure, particularly if the masts are old one with a build up of rust between sections, et cetera.

00:11:46 Speaker 5

What is it that's done on a commercial installation that maybe isn't done so well on a typical hand mast?

00:11:52 Speaker 5

Let's talk about what's normal and a part of Australian standards.

00:11:56 Speaker 5

Eating the mast.

00:11:58 Speaker 5

This isn't just a sorry. Made a copper rod hammered into the ground, but could be, depending on the quality of the ground.

00:12:04 Speaker 5

Once an earth system is established, it is tested for Earth resistance. Typically we would be looking for around 5 ohms between a peg coming into the ground 10 metres or so away and the Earth's system.

00:12:16 Speaker 5

How much rod do we need to achieve that? As much as it takes, is the answer on that one.

00:12:21 Speaker 5

Typically this could be 3 by 6 metre stakes housed in A50 millimetre diameter hole with an easing compound used to bond the rod to the earth.

00:12:32 Speaker 5

If it's a guide structure, you would also place a single six metre rod at each guide.

00:12:35 Speaker 5

Point and bond it back to the mast base.

00:12:39 Speaker 5

Using a 40 millimetre copper strap, also buried and bonded to the ground using the same earthing compound used for the copper rods.

00:12:46 Speaker 5

To top this off, check the entire structure for rust, particularly at junctions between the sections of the mast. If these aren't clean, you will have high resistance points that can isolate the mast from this great earthing system you've created. This takes the the thickest Earth cable.

00:13:03 Speaker 5

You can afford 72 millimetres is a good choice, and attaching it to the earthing system on the ground take it to the top of the mast and place it on a lightning funnel that is above any other antenna on the structure.

00:13:15 Speaker 5

This bonds the top of the mast to something as close to humanly possible to ground potential, hence significantly reducing the likelihood of a strike.

00:13:25 Speaker 5

You can rent the Earth resistance testers from any test equipment rental business.

00:13:30 Speaker 5

Next step is to bond your coax cable to ground. Also, if your feeder is like most and connected to a balloon and then to a balanced antenna.

00:13:38 Speaker 5

Then you have actually created a competing path for a lightning strike and all your work on earthing the structure is protected that that has protected your structure but not the radio equipment in the shack that's connected to your coat.

00:13:51 Speaker 5

How do you do that? Easiest way is to bond your cable.

00:13:54 Speaker 5

To using nursing kits, this is typically used for heliax coax runs and used to connect the braid shield of the coaxial cable to the mast, which is then earth to your mast Earth.

00:14:06 Speaker 5

Typically you would bond the cable to the mast at the top of the mast where.

00:14:09 Speaker 5

Your antenna is and where the cable leaves.

00:14:11 Speaker 5

The mast.

00:14:13 Speaker 5

If the mast is over 50 metres in height, you might also consider one halfway down the mast.

00:14:18 Speaker 5

That's great, but what if you can't afford Helias? That stuff's expensive.

00:14:22 Speaker 5

You can get earthing kits for L400, which is a popular choice of cable for hams. Check out your local ham shop.

00:14:28 Speaker 5

I haven't seen them for RG213, but given the physical specs for RG213 and L400 are very similar, you could probably use the same LL 400 earthing kits on 213.

00:14:39 Speaker 5

If you're using RG58, well, you're on your own and I.

00:14:42 Speaker 5

Can't help you.

00:14:45 Speaker 5

The next level of protection is to consider is actually quite common in many handshakes and that is the Lightning protection device.

00:14:52 Speaker 5

This is best placed as the coax enters your shack. It must be bonded to the shack Earth, which should also be bonded to the mast earth where practical.

00:15:00 Speaker 5

If you don't bond, the lightning protector to your RFS. You may as well not use one in the first place.

00:15:07 Speaker 5

As a byproduct of using the device, it's also a handy way to terminate your cable on the outside of.

00:15:11 Speaker 5

The shack with something more flexible on the other side, inside the shack to your equipment.

00:15:16 Speaker 5

These lightning protection devices are available from Ted Entron and their resellers, and they're very reasonably priced. We can buy a gas capsule equipped arrestor that you can that can be reused after a strike by just replacing the capsule.

00:15:31 Speaker 5

The gas capsule arresters are probably best for installations where you might be designing for that time when the acmas.

00:15:37 Speaker 5

Finally, allows us to use 2 kilowatts.

00:15:40 Speaker 5

Last step is to bond your equipment to the same RF ground used for the mast and feeder cable. If you can get away

with the feeder glam plate coming into the shack, then this is generally a good point to collect all.

00:15:50 Speaker 5

Those cables in the shack.

00:15:53 Speaker 5

So we do all this, we can reduce the likelihood of a strike to as low as practically possible.

00:15:58 Speaker 5

It also has another benefit. Differences in potential between your radio and the antenna noise is created. Removing all these potential differences should also result in the lower noise floor on your receiver.

00:16:10 Speaker 5

For more handy advice, talk to your local home shop, who should be able to supply most of what you need.

00:16:14 Speaker 5

Plus good advice.

00:16:16 Speaker 5

I'll thanks for listening. This has been Steve Kennedy, VK success Joe with another episode of did you know?

00:16:22 Speaker 5

If you'd like a text copy of this or other articles, they'll be posted on my blog.page@dxradiosystems.com dot AU about two weeks after it's gone to air.

_____ 00:16:31 Speaker 3

Do you want a cheap Chinese handheld?

00:16:34 Speaker 3

For new and returning hams, these radios are often shunned following criticism of their poor build and potential for interference.

00:16:41 Speaker 3

In fact, do you own a handheld at all, including the top brands? If you do, please bring it to the NCG ham fest on the 20th of August following discussion of F Troop, we've decided to put these radios.

00:16:53 Speaker 3

The test, but we need your help. The original data set of two is not statistically significant, so we're looking to get as many as we can on the day.

00:17:03 Speaker 3

Head to the WA VHF group tables and find Ono VK 6 flab who will run your radio into a spectrum analyzer for measurement.

00:17:11 Speaker 3

What's in it for you? We plan to openly publish the results of the test devoid of names and call signs to provide more

insight on how different makes and models perform on the day.

00:17:22 Speaker 3

By bringing your radio and participating in the test, we'll make sure you get a copy of the anonymised results along with the results specifically for your handheld radios tested on the day.

00:17:33 Speaker 3

If you don't want your personal details to be recorded on the day, that's fine. We'll just record the test results.

00:17:39 Speaker 3

No sweat. In the spirit of amateur radio, this is a bit of an experiment and would love to see you and your radio on the day.

00:17:47 Speaker 3

The bigger the diversity of low and high priced handhelds, old and new, the better the data we can gather.

00:17:53 Speaker 3

On behalf of Randall VK 6W Rd.

00:17:57 Speaker 3

The WAVY FF group, Onno VK 6 flab the participants of F Troop the net for new returning hams and finally the NRG. It's great to see this collaboration taking place.

00:18:10 Speaker 3

I'm Glenn VK 6PAW and I'll also be at the test bench on the day. See you at Ham fest.

_____00:18:18 Speaker 6

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

00:18:29 Speaker 7

Hello from the WA VHF group. This is Dennis VK 6 AKR. Today. I would like to offer a few thoughts and maybe start a few conversations around VHF and above.

00:18:40 Speaker 7

There are many amateur radio clubs throughout the world that have VHF in their name, and there are a few here in VK.

00:18:48 Speaker 7

A couple of nights ago, some of our members were having a discussion around the apparent level of activity on VHF. Here in VK 6, and we concluded that it was lower than might be expected.

00:19:00 Speaker 7

And perhaps the level of uptake of amateur radio generally by newly minted amateurs could be higher too.

00:19:07 Speaker 7

After all, they have spent a fair amount of money with training, taking exams, applying for their licences and so on.

00:19:15 Speaker 7

As listeners will know, the WA VHF group in common with others accesses and uses the lower bands too. Anyone who has visited our QTH at Wireless Hill in Applecross will have seen our HF log periodic as ample evidence of that.

00:19:32 Speaker 7

And several of our Members access the really low bands you've probably heard of the Preloved aeronautical non directional beacon at Manjimup, which Professor Peter Hall, Vico 6HP from Curtin University has repurposed into an

**experimental whisper site running in the
2190 and the 630 metre bands.**

00:19:52 Speaker 7

**Club member Dave VK, 6KV, has
contributed time and talent helping to
get that station on air, and he and I have
regularly received it and sent reports.**

00:20:04 Speaker 7

**Back to the higher bands for a moment,
though, as amateurs will know the
relationship between frequency and
wavelength, something that governs our
construction and use of antennas.**

00:20:15 Speaker 7

**My interest in VHF and above stems
largely from the suburban block
syndrome. As block sizes shrink, so too
does the scope for larger lower band
antennas.**

00:20:26 Speaker 7

Magnetic loops, loaded dipoles and so on mitigate some of this, but compromise antenna performance in one way or another.

00:20:34 Speaker 7

Can you imagine constructing far less installing an Alfred slot antenna for the 30 metre band?

00:20:41 Speaker 7

But with VHF and above, the construction of quarter half or even full wavelength antennas becomes achievable.

00:20:48 Speaker 7

And ready built rigs such as the handhels provide a relatively painless entry into the hobby. My walks and two metre 70 centimetre handheld is a case in point.

00:21:00 Speaker 7

Antenna construction for two metres and 70 centimetre bands is well covered in the literature, with the ready availability of reticulation, pipe and fittings to form the mechanical structure and coax for the element or elements. A dual band vertical antenna is on line in under an hour.

00:21:18 Speaker 7

Club members Dave Vico, 6 DM, and Dave VK, 6 KV, have hosted antenna bill days at the club for Pogo Stick and Bunnings Yagi tape measure antennas respectively.

00:21:29 Speaker 7

Peter VK 6 PBS from the Peel Amateur Radio Group has an identical tape measure Yagi, and they work well.

00:21:37 Speaker 7

A bit more expensive than the Pogo stick, but the extra time and effort to construct them makes them worthwhile.

00:21:44 Speaker 7

In summary then, there are quite a few resources out there for new operators or those returning to the hobby, perhaps from HF days keen to try their luck on VH, F uh F and above.

00:21:55 Speaker 7

And don't forget the friendly UHF VHF field days to hone your skills. Opportunities abound.

00:22:03 Speaker 7

If this has wet your appetite or curiosity, then please consider visiting the WA VHF group on a Saturday afternoon as per our website or Facebook page.

00:22:14 Speaker 7

Easy to find, easy parking, friendly people and a great place for families with young children to enjoy the grounds.

00:22:21 Speaker 7

There is a museum exhibition titled solid State that you can visit while you're there, too.

00:22:27 Speaker 7

73 from Dennis speak O 6 AKR for the WVH Jeff Group. Thanks for listening.

_____00:22:33 Speaker 8

Good morning. Yes, it's Roy SEK 6X, Victor with this week's camera radio helpline 30th of August.

00:22:40 Speaker 8

2023 today I have from the estate of VK 6G silent key have the following bundle have an EMAC, an iMac with you.

00:22:51 Speaker 8

Prefer Sierra K510 jumbo socket, an iMac SK 506 ceramic glass chimney and E Mac.

00:23:01 Speaker 8

IMac HR 8, NO cooler and a Mac 4000 tube 4-1000 tube that is all items Nos and.

00:23:11 Speaker 8

450 the lot contact Nora on phone number 636353.

00:23:18 Speaker 8

50 yes, I checked that number. It is correct. It looked a bit strange 63635350.

00:23:25 Speaker 8

And you'll talk to Nora, or you may phone 0438352661. I'll say again, 043835.

00:23:38 Speaker 8

2661 regards from Bob we K6 KRC looking after that one next item comes from Barry for the Jerry Wilde Shack, VK 6 GW now in a nursing home and his shack is being cleared and the House

**will be put on the market later on the
during the.**

00:23:56 Speaker 8

**Here and we have the following Daiwa
DC-7011 round controller with dial
antenna rotator. Dr 7600CX requires A6
foot core cable tested OK, however price
\$400.00 a lot and still has a high
frequency vacuum tube.**

00:24:17 Speaker 8

What metre model 1600B by Rd electric?

00:24:22 Speaker 8

**Chronics so I'll solve it. Still works with a
manual supplied at \$100. There was also
a hallicrafters 2 kilowatt linear amplifier
model HT3.**

00:24:33 Speaker 8

**3 requires A2 kilowatt power supply
covers HF frequencies 80 through to 10
metres. Uses 2 by 4 CX 250B tubes in the
final.**

00:24:43 Speaker 8

RF unit complete with filament and bias Transformers. Good project for an experimenter and a couple of used 4CX-250 tubes as well. Asking \$450. Contact Barry Burns, that's VK 6A.

00:24:56 Speaker 8

India his email address is bravo.juliet.burns@bigpond.com say again bravo dot Juliet dot BU.

00:25:07 Speaker 8

RNS at bigpond.com. Or you may ring mobile 042895977.

00:25:17 Speaker 8

10428.

00:25:19 Speaker 8

959771.

00:25:22 Speaker 8

The following items are repeats. Kai and Broom is looking for a ICOM 7100 transceiver antenna analyzer.

00:25:31 Speaker 8

Any Model 40 and 10 metre vertical antennas and the 5/8 wavelength for mono band 20 metres, 5/8 wavelength mono band for 40 metres plus a mic.

00:25:42 Speaker 8

AT125E tuna. He's in broom and would like anyone who can help him to contact him.

00:25:49 Speaker 8

His email address is Victor K6KSJ at westnet.com dot AU or say again, Victor K6KSJ at westnet.com dot AU, Greg VK 6K Delta did have or has a IC718HF transceiver 10 metres through 160 metres.

00:26:10 Speaker 8

100 watts out comes with a microphone power lead original handbook. Very good condition \$450. Contact Greg on phone 04179 hundred 874.

00:26:22 Speaker 8

Zero 417-900-8742, says Greg, Steve VK 6. Victor Zulu is still looking for a AM transmitter 50 Watt transmitter by Johnson Ranger Panda Club, kW Vanguard kW Valiant equivalent. Anyone with a 50 Watt.

00:26:42 Speaker 8

I am transmitter.

00:26:44 Speaker 8

Please if you can help, contact Steve. He's also looking for tubes type 6D66C66.

00:26:52 Speaker 8

B7 and a number 42 and I would like to hear from anyone who can help me with

**that as well. Steve's email address is Ste.
Victor Echo Victor, K6, Victor.**

00:27:05 Speaker 8

Zulu@tpg.com dot AU.

00:27:08 Speaker 8

**You I'll say that again. Yeah. Why not?
Sarah TE victor. Echo. Victor, K6, Victor
Zulu. Or one in one word at tpg.com dot
AU.**

00:27:21 Speaker 8

**And that'll do for me for this week. Thank
you once again for listening. And if you
are still listening and you would like to
contribute next week.**

00:27:28 Speaker 8

**Please send me an email
roy.watkins@bigpond.com will get me.**

00:27:33 Speaker 8

7/3 until next time. Cheers.

00:27:35 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.

00:27:44 Speaker 1

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.

00:27:53 Speaker 1

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