



Annual General Meeting

Friday 7th March,

Doors Open 7.30pm

Ern Rose Memorial Pavilion, Seaver Grove, Reservoir



Actual morning view of Mount Cooper Tower at Bundoora Park, seen from the new work roof, just 1.4 km away, of Mick, VK3CH. Mick has been busy commissioning a new Amateur Radio Station, complete with all mode coverage of MF, HF and VHF & UHF. Hidden within the mist is a clear view of Mount Dandenong and VK3RTV as well... Read more on page 7

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SECRETARY'S NOTICE OF



ANNUAL GENERAL MEETING

The Annual General Meeting of WANSARC will be held on
Friday March 7, 2014
At the club meeting place,
Seaver Grove, Reservoir, commencing at 1930 hours.

All Executive and Committee positions will be vacated
and nominations sought for the following:

PRESIDENT
VICE-PRESIDENT
SECRETARY
TREASURER
&
COMMITTEE MEMBERS (5 positions)

In addition nominations will be sought for

MAGAZINE EDITOR
&
QSL MANAGER

Under the new MODEL RULES for INCORPORATED bodies,
a formal nomination for a position prior to the night of the meeting is not required.
Nominees may nominate on the night.

If you are considering nominating for a position feel free to drop me a line via email,
otherwise attend on the night and put your best foot forward to steer the club in 2014-2015.

Best wishes

Mark VK3PI
Secretary WANSARC

Payment of Membership Fees

Members have the option to pay their membership fees via internet banking and direct deposit, details:

Bank Name: Bendigo Bank
BSB Number: 633-000
Account Number: 139996052
Account Name: Western and Northern Suburbs Amateur Radio Club

Please quote your callsign and "renewal" as the reference.

When paying by internet banking or direct deposit, please email our Treasurer, Rod, and he will confirm receipt of your payment. Alternatively, you can send us a money order or cheque made out to "Western and Northern Suburbs Amateur Radio Club" to WANSARC, PO Box 336, Reservoir VIC 3073. Membership fees can be paid in cash, cheque or money order at our monthly meetings. Please note, we do not have EFTPOS facilities. Rod can be contacted at treasurer@wansarc.org.au

News

LAST MONTHS MEETING

The first meeting at the club rooms for the new year saw a quick meeting, followed by an impromptu action.

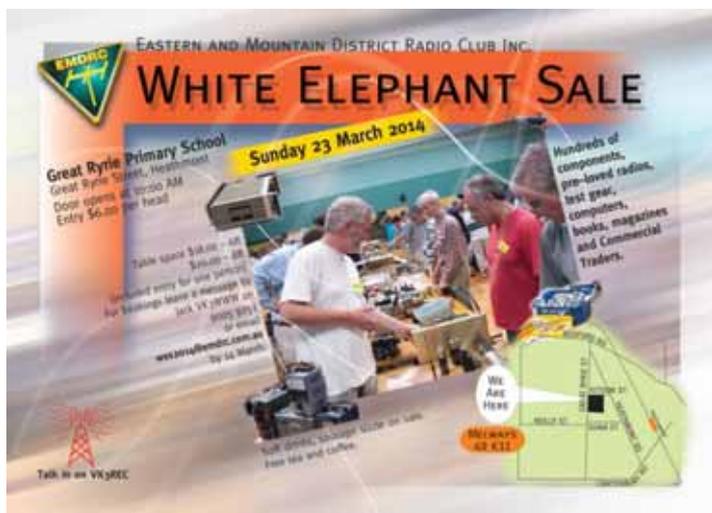
During the breaks the balcony with its cool breeze, was occupied by nearly everyone, enjoying the waterside views.

Cheryl, VK3FCAF, donated various items, which were actioned off under the hammer, the hammer being held by John VK3FEZZ.

A couple of items not sold were carried forward to the March meeting.



John VK3FEZZ showcasing the goods, a mixed bag of computer parts, radio items and coffee machine, which raised the most funds. Well done Cheryl, your surplus items raised \$200.50 for the club, not bad for an unannounced action, bargains had by all attending.



LISTEN BEFORE TRANSMIT SOFTWARE

It can be annoying when someone transmits over the top of an existing contact, now Steve N2CKH has developed this nifty software that may make this a thing of the past.

Listen Before Transmit (LBT) involves software automatically checking the entire passband before transmitting to ensure the channel is clear of any

SSB, CW or Digital signals. If any signals are present the transmission can be inhibited and the operator informed. The software Steve N2CKH has developed appears to be very effective, in his testing, it has so far successfully detected all human generated signals in the passband that can be heard by ear or seen in a waterfall display.

~WIA News

VK3RTV UPDATE

The antenna work done recently on VK3RTV has been mostly successful. The transmit array has a very good return loss and the coverage in the Metropolitan area is excellent. It is expected that there will be many years of service from these as they are significantly more substantial than the previous model.

The new PA has bedded down very well. It is running at about half capacity at the moment just on test. There has been a significant increase in received signal strength in all areas except the east. There have been a number of reports of reception through the domestic antenna system.

I intend to increase the power level to the maximum possible when I get a chance to get up to the site.

The PA is well cooled by three large fans and sits on a large heat sink. The fans run for about 10 minutes after a shut down occurs. It has VSWR, thermal and over voltage protection.

The site is air conditioned so no thermal problems are envisaged.

The new DVB-S receive array system is work in progress.

It has a wider capture area than the old (temporary) single quad and as such may not result in better signal strengths into the repeater. The noise level for this west situated array is extremely high and I am in the process of building a 5 pole inter digital filter that should result in an overall superior S/N input for all .

As a temporary measure, the analogue antenna (which has a filter) is being used for DVB-S as most of the users in Melbourne are digital. The east and south east receive antennas are still work in progress and are not yet fully functional.

When these antennas are sorted out and the interdigital filter completed, this will be the end of a development and work that has spanned most of last year.

~Peter VK3BFG

Beware...

If you know anything about antennas,
be prepared to cringe at my ignorance!

~Anon

JAYCAR LAYS DOWN THE LAW...



HF BROADCASTS RETURN TO VK3BWI NETWORK

Broadcast of news and information from VK1WIA at 10.30am and 8pm each Sunday by Amateur Radio Victoria has now restored its HF outlets on 80 metres, 40 metres and 30 metres. Land to the northwest of Melbourne, previously used for the HF transmissions was lost, while at about the same time the former VK3BWI hut in Waverley became a new educational facility. While reliable VHF and UHF repeaters were quickly re-located to Victory Boulevard, Ashburton, the Waverley site owner was very keen on keeping the good long-standing relationship. A new area was found and with government funding of around \$100,000 it was able to be re-established. The work was done with the help of St John Ambulance and WICEN (Victoria). VK1WIA can also be heard on 3.615, 7.158 and 10.130 MHz.

WANSARC NET Tuesday Night 8pm Check In



VK3AWS

146.450 MHz

FM Simplex

YES, BIG BROTHER IS WATCHING

Any fears you might have that Big Brother is watching you can now be officially confirmed. Come March, he will be. The advertising industry will be employing new technology known as Anonymous Biometric and Objects Data Sensors (ABODS). Put simply, sensor cameras are placed behind or close to the screen frame of a digital billboard, biometrically sizing you up as you walk past.

ABODS can tell age, gender and colour and also the number of people in front of a digital screen. This is advertising gold. It will be able to tell your age range, sex and the colour of your clothes. Armed with this information, it will throw the ads at you that best fit your demographic.

If an advertiser wants to target a 20-something female, the first suitable passer-by will be served up an appropriately aligned ad. ABODS has already been trialled in a Melbourne shopping centre and deemed a success.

ABODS is the brainwave of Chris Muir, 42, an expert in experiential advertising - a modern form of marketing that encourages consumers to experience a product or service before buying it, rather than just delivering a sales message - who dreamed up the idea 18 months ago. He went on to form AdBidx with his chief technology officer, Dapeng Ni. The past year has all been about "getting the algorithm right", says Muir. This means they have spent the time working on the technology behind ABODS. Most of that came down to Ni's talent as a software engineer, but they also had to employ computer vision experts. They now have university researchers working on a next-generation version of ABODS.

Muir says he has never heard of "real-time demographically targeted advertising" being used on digital billboards anywhere in the world. ABODS can tell age, gender and colour and also the number of people in front of a digital screen. It can pinpoint the range of ages present at a certain time of day, where those ages tend to congregate, which shops they favour and whether most of the people in that age group prefer a particular colour. This is advertising gold.

Muir hastens to add: "What we do is totally anonymous - we take no record of any personal info - the sensors are very broad and can only capture age range and gender, but no personal information.

"There's no way we can recall the data of any personal connection to anyone and a person's image is never recorded."

Muir is offering just what advertisers are looking for. They want to understand more about how they reach customers, and how to use information to create better results for the money they spend. Until now advertising on digital screens has worked on a rotational policy. Advertisers book the screen for a month and hope for the best. ABODS offers the kind of targeting accuracy advertisers normally associate with marketing via the internet, he says.

Despite the high-brow technology it is not hard to see some weaknesses in the methodology. If, say, a 70-year-old woman approaches the screen at the same time as a 15-year-old male - what ad is thrown up? Muir admits this was one of the most important difficulties the AdBidx team encountered.

"We worked out that this would be done on a system of priority," he says. "It might not target the elderly lady because it is looking for the right person for which to showcase a particular ad."

The technology will be used in shopping centres, cafes and airports at first - the technology isn't yet effective in larger spaces such as train stations, where too many people pass by too quickly. "It's not for a train station where thousands of commuters pass by in rush hour. We couldn't deploy the computers or the software," Muir says.

Already Muir says the Melbourne shopping centre, "beta-trialled" in January, has served ads to 1.6 million people. On average, four people passed the screen every eight seconds.

“One advertiser, a mobile phone app, said it had a 100 per cent increase in downloads after using this form of targeted advertising,” Muir says. And it's not the preserve of the big brands; small, local businesses can have their ads uploaded to a screen too. But he won't say how much it costs.

“We charge per hit. We're still working out the revenue model with advertisers – so we don't yet have a rate card open to the public.”

But he claims the ads will be six times more cost-effective than traditional advertising, although that can't yet be substantiated. So will consumers finally get what they want to see? Or will they feel constantly bombarded with the same advertising wherever they go? Will this be adapted to larger venues, such as rock concerts and football stadiums?

Theoretically yes, but Muir cannot say where it will all lead. What he does know is that it will go live on 800 screens in Sydney, Melbourne and Brisbane next month.

You have been warned.

~Internet

2300 – 2302 MHz BAND UNDER THREAT

The ACMA has informed the WIA of proposed changes to spectrum usage in the 2300 – 2302 MHz band, which will result in Advanced Licensees losing access to that spectrum.

The ACMA proposes to reallocate this band to LTE (long-term evolution) 4G radio for high-speed data over mobile phones and data terminals.

Whilst the 2400-2450 amateur bands is unaffected, the nearby 2300-2302 band is the only viable option for Earth-Moon- Earth (EME) contacts to Region II (where the EME activity is on 2304 MHz) or Region I (which uses 2320 MHz). If the band is lost the Australian radio amateur EME activity would then be confined to 2400 MHz and above, where ISM and Wi-Fi equipment is likely to cause interference to local EME stations.

ACMA has prepared a consultation paper on the proposed plan and will be writing to all Advanced Amateur Radio Operators to provide them with a copy of the notice and inviting their comments.

Radio amateurs are encouraged to forward their comments to the ACMA by Wednesday 27th March 2013, to the address in the paper.

~adapted from WIA NEWS

MORE VK3RTV NEWS

The South East spot beam is now working so we will see a new DVB-S station (Clint, VK3CSJ) on VK3RTV2. This may bring interest from the Gippsland gate area now.

I have finished the inter digital filter for VK3RTV1 after a fair bit of machine shop and drilling and tapping brass. Looks good and works quite well.

I will install this early next week. Hopefully this will knock the noise down and help weaker stations.

I will re-instate the analogue input with its filter which obviously is essential for any sensible operation.

The Yarra Valley spot beam has been disconnected temporarily, but should be back in operation soon with a new quad antenna.

The arrays for both analogue and digital for VK3RTV1 are not as good as a single quad, but they have a much better beamwidth to allow access for most of Melbourne and Geelong. We have sacrificed a bit of gain for better coverage.

When the Yarra Valley antenna is installed this will complete the current upgrade program. We have the transmitter running as much power as possible, 300 watts input.

~Peter VK3BFG

JOHN MOYLE FIELD DAY 2014 CONTEST



The Field Day will be held over the weekend of the 15 - 16 March, 2014 and will run from 0100 UTC on the Saturday till 0059 on the Sunday.

<http://www.wia.org.au/members/contests/johnmoyle/>

TEN SIGNS YOU ARE MIDDLE-AGED

1. You book a cruise

While you once enjoyed Contiki trips and hiring a moped in the Greek Isles, now you're walking past travel agents and getting excited about going on a cruise.

2. Your hairdresser doesn't cut your hair

When you go to the hairdresser (if you have one) they spend more time trimming your eyebrows and nose hairs than they do on the top of your head.

3. Police and school teachers look too young

You do a double take when police officers walk by and say things like, “they look like they have just come out of school”. You walk out of parent-teacher night at the school thinking, “lovely teacher, but I can't believe she is so young!”

4. The music is too loud

You ask a friend to meet you in a quaint little coffee shop up the road because the pub you met in last month was too loud to hear properly.

5. Your favourite TV shows are ...

You get excited about Antiques Road Show, you record SBS World News so you can watch it later, and CSI and Underbelly are just too fast-paced and noisy to bother with.

6. AM radio is king

You have no idea about the music your kids are listening to because you'd much prefer to listen to AM talkback on the way to work. It's much more educational and besides, you simply can't put up any more with hearing Justin Bieber and Miley Cyrus songs over and over again on FM.

7. You don't know who Justin Bieber or Miley Cyrus are

Actually, whether you are middle-aged or not, this is not a bad thing.

8. “I'm still alive” is your standard response

When people ask you how you are, you respond, “I'm still alive”, then use the words “in my day” at least once in the conversation that follows.

9. You still make phone calls

You remember the days before smart phones, so rather than messaging, Tweeting, emailing or texting, you still use your mobile to make actual phone calls.

10. Hangovers last for days

You used to stay out all night and bounce back the next day. Nowadays a couple of quiet ones after work flattens you for days. And don't you just love to let everyone know all about it?

630 METRE BAND CW BEACON

A new CW beacon 630 Metre band at 473 kHz has started and asks for reception reports with it already being heard in Melbourne and Eastern Victoria. During a show and tell event of the Sunraysia Radio Club held at Nichols Point, the beacon project of Noel Ferguson VK3FI was the subject of a small presentation. After initial reports were received, the beacon's presence on the band was announced by the VK1WIA broadcast, put on several websites, and the forum pages on the on-line VK Logger. The strategically located beacon is at Mildura on the cross-roads of Melbourne, Adelaide and Sydney.

The beacon is turned on by at least 1100 UTC, capturing the local night-time when VK3FI is present.

Reports to vk3fi@wia.org.au



From 1 July 2014, the WIA's journal will also be available in a digital edition for members to download from the WIA website. This will be produced in conjunction with the paper edition.

The print edition of AR magazine will still be delivered to your letterbox as it is now, through to at least 30 June 2016, and the digital edition will also be available for members' download.

By June 2016, it is expected that the WIA Board will make a decision about continuance of the print edition, the production and distribution costs for which are the Institute's biggest expense.

The WIA Board made this decision at its February teleconference after many months' research and lengthy, detailed discussions over the latter half of last year.

The Publications Committee and the Editor support the move.

The print edition of AR magazine will continue to be sold through newsagents until the WIA Board decides otherwise.

You may have noticed the cover price increased to \$9.70 from the January/February 2014 issue, which puts AR in the same price ballpark as other slim, hobby interest magazines on the newsagents' shelves.

One of the problems the Board faced when making the decision about AR is that we have really no idea about your ability to download and read large data files.

Many members, especially those of you living in remote areas, may not have the required internet speed; others may simply prefer to have a paper publication to read.

The March issue of Amateur Radio magazine features an article titled "The WIA, technology and the challenge of change", which details the story behind the Board's decisions.

You can download a copy of the article below. Or – you can download a sample digital issue of AR in PDF format – the March 2014 edition – via the following Link <http://www.wia.org.au/members/armag/pdf>

~WIA Website

WIA MEMBERSHIP FEES TO RISE FROM 1 JULY 2014



WIA Membership fees will rise as of 1 July 2014.

Full membership will rise to \$95 per year and Concessional membership will be \$80 per year.

All other membership categories will rise in the same proportion, except for student membership, which – at \$35 a year – will not change.

To ease the burden of paying your full membership fee up-front – for those of you who may wish to do so, the WIA is introducing the OPTION of quarterly membership payments by direct debit from your bank account.

The WIA Board made these decisions at its February teleconference after many months' research and lengthy, detailed discussions at previous monthly teleconferences.

President Phil Wait VK2ASD has highlighted the Institute's financial situation in his President's Comment column in AR magazine during the latter half of last year.

Trading losses have occurred over 2012 and 2013. Although the losses so far are not large (and the Institute has ample reserves to cover them), they are certainly tenacious.

The Board has instituted as many savings as were possible without cutting member services, or cutting international representation at the ITU and the IARU. Both are critical to the future of amateur radio in Australia.

Fees for licence exam assessments and callsign recommendations will not change. These services are provided strictly on a cost-recovery basis under a Deed with the Commonwealth Government and are not linked financially to other WIA operations.

~WIA Website

WARNING THAT SPECTRUM TO BE VERY SCARCE

In Europe by 2020 there will be more than 30 times more mobile internet traffic than in 2010, according to the European Commission's own forecasts, prompting alarmist calls by industry.

The telecoms industry claims a ten-fold global increase of mobile data traffic between 2013 and 2019.

All mobile subscriptions globally are forecast to reach 9.3 billion by 2019, up from 6.6 billion in 2013.

The EU wants a specific part of the spectrum set aside for Internet mobile operators, so companies to have a clearer legal framework all across Europe.

While no mandated spectrum has been named, Europe is currently faced with many differing approaches to spectrum allocation.

~ARV

FOUNDATION LICENCE WEEKEND COURSES

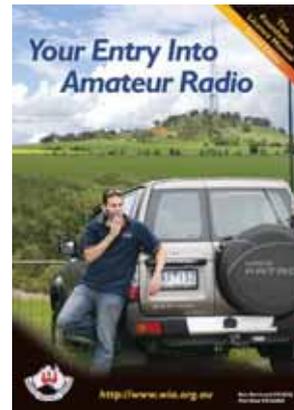
Next course held 26 and 27 April.

Courses are held at the Amateur Radio Victoria Office 40G Victory Blvd, Ashburton.

The study and operational practice guide book for the Foundation Licence is available as a mail order for \$26 from Amateur Radio Victoria on-line shop.

To enrol contact Barry Robinson VK3PV

foundation@amateurradio.com.au or 0428 516 001



WANSARC NEWS

Your local club Newsletter

Use it for,

- Selling
- Buying
- Post an Opinion
- Rig Reviews

Articles and news always welcome, send to the Editor

vk3ch@wia.org.au

Mick's New Work Shack

The new "radio room" storage,
'Tables' bolted to end of racking ↓

Most would know Mick, VK3CH, relocated work a few months ago, over the January holiday period. The old radio setup was taken down at work, that covered 2/70/23 bands, located right next to the Keon Park EHT Substation switchyard, amazing that we got out as well as we did. After getting work all established with the office fit out, shelving and racking, moving stock and lots of other things, in the summer heat, it was finally time to get around to thinking about putting another work station on air.

The new place is only about 3 km from the old, it is part of a business park that has sixteen units, eight along each side, complete with underground power and a car park in between the units. With the XYL boss on a trip overseas, it was decided to act quickly in her absence to erect a new antenna farm and some discrete gear. The new place is really a good site, well away from hard industrial use, no big industrial machinery nearby. Ground level is 110 meters above sea level, with the rooftop 8 meters above the ground, with clear views to Mount Dandenong and the Melbourne CBD.

Work is only and exactly, 2 km away as the RF travels, to Rotunda 6 at Bundoora Park as well. ↓



The only downside was the loss of the radio room and its tables to build gear upon, but you cant have everything as they say... To make up for the loss of a radio room, tables were made up of wood and attached to the end of one of the racking masts to store stuff, the more frequently used items near to ground level. Its only when you move you realise how much junk you still own!



Being a warehouse the roof area is 12 meters by 20 meters, so lots of ground plane, or a hiding place for masts, or VHF-UHF verticals. First was to work out antennas, then to run cables and coax to the office and where exactly would the radio be installed. To save running coax it was decided to go with an IC-7100, this gives all MF-HF and VHF-UHF in the one box. This way the radio would be remotely mounted near the roof and Ethernet cable run back to the office to the radio control head, saving coax losses or runs of coax through walls and tight bends.

Getting a serious signal on HF was either going to be running a wire around the perimeter of our warehouse roof edges, or the preferred option of running a long wire to somewhere further out. After using a 2 mm thin wire for an off centre fed dipole at home with much success, I decided to try and duplicate this setup at work. It was then decided to have the radio transceiver body just under the roof edge inside the building, with some coax feed to an AH-4 ATU. The ATU would then feed via 450 Ω ladder line to a "ladder lock" with the dipole wires going away from there. Mounted within our roof bounds would give a dipole of 20 meters.

But going over the car park to another unit would give nearly 80 meters distance. This was of course the desired option.

Work started two weeks prior. The time consuming boring bits were done first, being wiring. To keep the legal safe segregation from telecommunications and mains cables, the IC-7100 data Ethernet cable was run within its own protective conduit, from the new radio operating table in the office to where the radio was going to be mounted near the roof access. Mains power to feed the DC supply was also run to the same location with its own power point. DC leads to the radio are then kept short to stop current loss and stray RF getting in.

A full article on the IC-7100 is in the August 2013 edition of WANSARC News, page 7.

While running the cable for the IC-7100, it was decided that the spare ID-1, 23cm Dstar transceiver, from the old warehouse, may as well get put into service again also. The conduit would not allow the Ethernet plugs to fit through with one cable already inside, so another conduit was run, to accommodate the data cable for the Dstar remote operating head.

After running the Ethernet cable through the conduit and bolting it all to the wall, it was realized that a twin for the speaker output was needed, which was just able to be squeezed through along with the data cable.

This would then give coverage on 23cm both Dstar Voice (DV), Dstar Digital Data and FM.

The control head unit is not really supposed to have such a length of data cable between it and the radio, but it seems to tolerate it. Like a lot of things with amateur radio, its a case of experiment and see what happens, at least the risk of damage is quite low.

Setting up the new IC-7100 is so simple, just transfer all settings and memories from the IC-7100 in the car, via the micro SD Card. This must be the fastest setup from 'out of the box' to ready to transmit that I have ever done.

As all the memories are labelled the same, with the same numbers and channel banks, getting up to speed is a non issue, its like I have magically taken the rig out of the car and its at work, but when I go back to the car, the radio is still there!

While the new radio was on the bench, the latest firmware update was done as well.

Icom go to great warnings, saying back up all your data, as it will be wiped, but after doing the firmware update and reboot, it was still all intact. But I backed it up to two computers, plus its on the two SD cards within each radio and copy of the "icf" file on a CD. So I think the data is safe...



View of the Melbourne CBD from the roof, Melbourne GPO being exactly 15 km away ↑

Checking the heat shrink seals on the coax into the X7000 antenna ↓



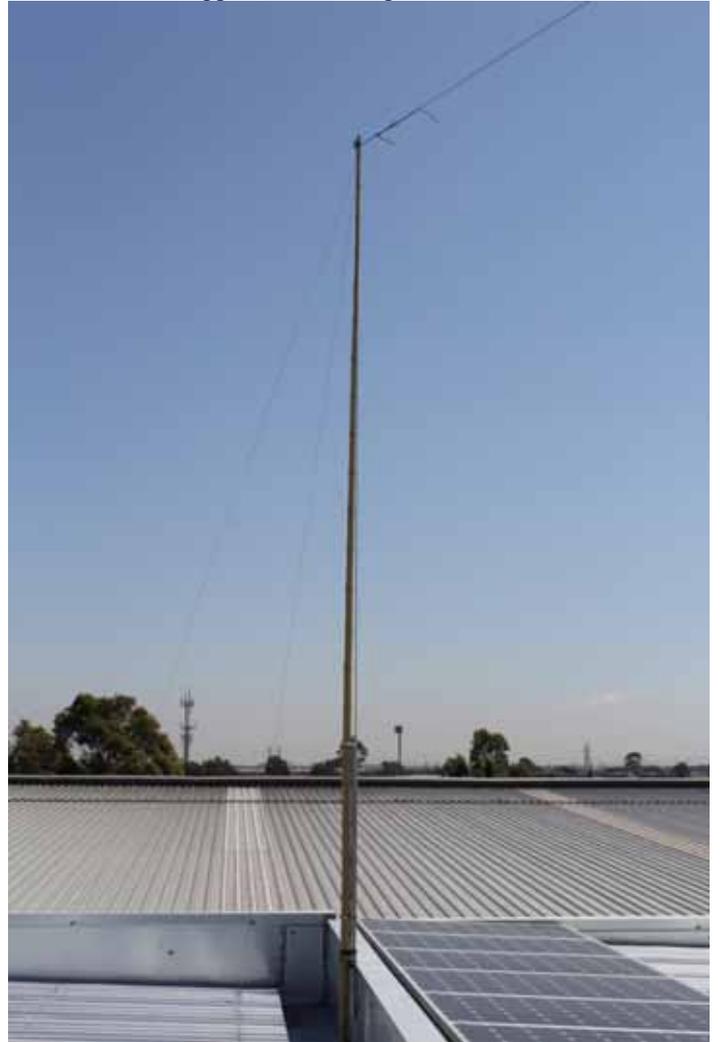
X7000 which covers 2 meters, 70 cm and 23 cm ↓



Finished X7000 antenna on the roof ↓



Ground side support, a bamboo pole, on the HF wire ↓



The HF wire, as seen from our upper level office window, with support mast to the right ↑

Nylon rope is over the far right roof, wire the antenna wire commencing near the centre of the photo

I am indeed in debt with gratitude to the neighbour who owns the unit over the car park, for allowing HF wire to go on his roof.

Well as the newsletter has to go out, more will be told next issue...

Jobs still to do are installing the radios and run coax from the HF ATU to the radio.

It's been a lot of work; I hope it performs well...

~Mick VK3CH



"Sorry about the noise, I tripped...anyway, the name here is Roy...I am located near downtown Chicago, and I've been a ham now for 20 years..."

WANSARC VK3AWS

PRESIDENT: Frank Petrowitz
SECRETARY: Mark Stephenson

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All correspondence to be addressed to the **SECRETARY: PO Box 336, RESERVOIR 3073**

WANSARC CLUB PROFILE

History

The Western and Northern Suburbs Amateur Radio Club (**WANSARC**) was first formed in 1969 and since then has served the needs and interests of amateur radio operators, short wave listeners and those interested in hobby radio and electronics. The club is not gender specific, having both female and male members. Members come from all walks of life with a mix of experience, young and mature, novice and technical. The most important aspect of the club is the willingness of all members to share their knowledge for the benefit of others. Members mainly reside in the west and north of Melbourne; however membership is encouraged from all interested. **WANSARC** is an affiliated club of **The Wireless Institute of Australia**.

Meetings

Meetings held at the **Ern Rose Memorial Pavilion, SEAVER GROVE, RESERVOIR** (Melway Map 18 D5) on the **1st Friday of each month** (excluding January) commencing at **7.30pm local time**. Talk in on **146.450MHz FM**—call club station **VK3AWS**.

Benefits

Free technology and related presentations, sponsored construction activities, discounted (and sometimes free) equipment, network of likeminded radio and electronics enthusiasts, excellent club facilities and environment plus an informative monthly newsletter for members to post articles, news, classifieds for all radio, test equipment, etc, featuring Amateur Radio news from WANSARC, ARV, WIA, ACMA, Melbourne Clubs, VK and Worldwide.

Club Nets

146.450MHz FM each Tuesday evening commencing 8.00pm local time. Net Control Station - **VK3AWS**

Website: www.wansarc.org.au

Postal: **WANSARC PO Box 336 RESERVOIR 3073**

A proud tradition of supporting hobby radio and electronics enthusiasts since 1969

All editors' comments and other opinions in submitted articles may not always represent the opinions of the committee or the members of **WANSARC**, but are published in the spirit in which they were submitted; in any case anything stated is to promote interest and active discussion on club activities and the promotion of Amateur Radio in general. Contributions to **WANSARC** are always welcome from any part of the world. Email attachments of Word™, Plain Text, Excel™, PDF™ and JPG are all acceptable. You can either post material to the Post Office Box address at the top of this page, or email your submission to the editor direct at vk3ch@wia.org.au Email attachments not to exceed 5 Mb in file size. Attachments of (or thought to be) executable code or virulently affected emails will not be opened.

Other persons or radio clubs may edit or copy out such as they like from the magazine but a reference to **WANSARC** is appreciated, except copyrighted (©) material or as otherwise indicated. Other articles that are credited to outside sources should be asked for their permission if they are used.

While we strive to be accurate, no responsibility taken for errors, omissions, or other perceived deficiencies, in respect of information contained in technical or other articles. Any dates, times and locations given for upcoming events should always be checked with a reliable source closer to the event – coming up on the **WANSARC Tuesday evening NET** on **146.450 MHz** starting at **8:00 pm Local** is recommended to discuss and confirm information and any dates.

The club website has current information on planned events and scheduled meeting dates. **WANSARC News** written with Word™ 2007, published with Adobe Acrobat™ 10. You can get the **WIA News** sent to your inbox each week by simply clicking a link and entering your email address found at www.wia.org.au The links for either text email or MP3 voice files are there as well as Podcasts and Twitter. This service is FREE.