FISTS DOWN UNDER

Newsletter of the Australian / New Zealand chapter of the International Morse Preservation Society

November 2014 **Email:** fists-down-under@ihug.co.nz | **Website:** www.fistsdownunder.org

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Recommended FISTS calling frequencies (MHz): 1.808 3.528 7.028 10.118 14.058 18.085 21.058 24.908 28.058

This month:

Quiz

Can you unscramble the following radio related words?

1. EYK _____
2. BIMCAI _____
3. RMEOS _____
4. ENNNAAT _____
5. LENFEIDE _____
6. ILEWSESR _____
7. RFNEQEYUC _____
8. EOHIEPNRSO _____
9. EVITNRCRAES _____

See back page for answers.

New member

We extend a warm welcome to **Bruce Officer ZL2BCO #14181** from Tawa, in northern Wellington.

Bruce writes: Licensed since 1979. Active on HF digital modes and SSB. Learning CW is on my bucket list and most of my discretionary time goes into trying to learn CW. I have tried since I was 13. I am now past 55. Really looking forward to the time when my ear allows me to 'hear' CW.

If you have heard me on the air, I was probably using 100W from a Kenwood TS-570D using a G5RV which is at an elevation of 10m. I also have an FL-2100B that I fire up occasionally. I can transmit up to 800 watts.

I have a YouKits HB-1B 5W QRP rig. If you hear from me, please be patient. 5 watts CW seems to be a challenge.

10m permanent mast with G5RV behind the house and 10m temporary mast at the letterbox using 'full legal' QRP power.

QRP station based on a YouKits HB-1B.

FISTS Down Under SSB net

George VK2DLF #9052 has kindly volunteered to trial a FISTS Down Under net using SSB. This net will be in addition to the club's recently established weekly CW net.

George VK2DLF in his shack with his own handmade keys.

Some of the benefits of a voice net include:

- another forum for getting to know other members and to discuss all things CW
- spreading the word about the club to operators who are unfamiliar with CW
- encouraging and educating less experienced CW operators who may initially feel more confident with a microphone rather than a Morse key
- the opportunity to arrange skeds with other members

The first SSB net will take place on Thursday 6 November 2014, from 0900 to 1000 UTC (8 - 9pm AEDT) on 7.038MHz.

Antenna snippets

- by Doc VK5BUG #14136

Lowering dipole ends to form an Inverted-V configuration not only brings a small saving of occupied real estate, but also raises the resonant frequency.

It may therefore be prudent to use 475 as the division factor for calculating radiator length, rather than the usual 468 for dipoles. This is working on having a lowering angle of 45 degrees for each wire leg in the Inverted-V radiator.

Rule of thumb: a folded (2-wire) dipole presents an impedance of four times that of a single wire dipole at the same height, and a folded tripole will have nine times the impedance of that same single wire dipole at the same height.

Hints for open wire feedlines: use large conductors, constant spacing, minimum spreaders, no sharp bends and keep balanced to ground. The higher the frequency being used, the more important these all collectively become. E.g. for 2m operation as a benchmark, use No. 14 or larger conductors spaced about 2.5cm apart, with Teflon or nylon spreaders every metre and with only obtuse angle bends in the paired line.

MF and HF QRP stations will have already factored these considerations into their aerial systems, since they too are trying to get 'as much bang for each watt produced' as they can!

QRO stations at MF and most HF frequencies have more room to move on those feedline suggestions, since the impact is less critical as the frequency is lowered.

Members' news

Joe VK2KJJ

Congratulations to **Joe VK2KJJ #9689** for winning the 'CW Oceania Single Operator' category of the Scandinavian Activity Contest 2013. He recently received the award plaque in the mail.

Joe writes: The Scandinavia Activity Contest is run every year, for both CW and SSB. It is a traditional contest with RST + serial number and multiplier for each of the prefixes in Scandinavia.

I am from Denmark where I am OZ6YJ. In Australia I am VK2KJJ, but to give some of the Scandinavian ops a flashback to the good old days, I have taken VK2OXZ to use in some contests. OXZ is the callsign of a Danish coast radio station that was operating worldwide on CW.

Scandinavian Activity Contest award plaque.

A close-up of the inscription.

The special thing with OXZ was the callsign they used when they where listening for traffic, for example: cq cq cq de oxz81 oxz81 oxz81 qsx 16 mhz ii ii - those two ii ii were very easy to identify if there was QRM on the frequency, or if the signal was weak. Remember it was only in the last few years that we've had receivers with digital displays!

David VK3DBD / G3SCD #3756 - I recently collected a small old linear amp. It uses six 6KD6 valves and will put out 300w, needs only 1w of drive too. 40, 20, 15, 10m bands, it is quite neat and I do not know yet what new valves will cost, if available. There are two missing and I suspect one of the others needs replacing. As if I need something to do? Also got a working device: a Morse practice machine with adjustments for speed, spacing, weighting etc. and will store up to 500 characters in a memory. Apparently full working order. All free, but a 200 mile drive to pick them up.

Bought a new laptop the other day, it has Windows 8 installed. It is driving me crackers! XP worked OK all these years. 'If it ain't broke don't mend it'. Arrgh. It does not have a touch screen (thankfully) but the touch pad can do some functions of a touch screen, a problem I could not understand until the penny dropped. You can open / close fingers on the touch pad to make the display bigger / smaller! Got to keep fingers off...

You can be assured that you're not the only one struggling with the Windows 8 operating system! Ed.

Chris VK3QB #9085 - Now also holds the callsign VK9NT (Norfolk Island).

Stephen VK2PS #9022 - I have just passed 92 years of age and fortunately my brain is 100%. I hope it will be that way for the next 10 years or so! I am of the old school, SSB does not excite me, but CW, yes. Due to all sorts of circumstances, I became totally computer illiterate. These days it is hard to live a normal life without the help of modern technology. I hope to be active on the bands again in a few months time, provided somebody can repair my antennas.

Stephen lives in Kenthurst, Sydney. If anyone can assist him with antenna repairs, please contact us at fists-down-under@ihug.co.nz

NZART Straight key night

It's time to polish and lubricate that old Morse key and enjoy an evening of old time radio fun. An activity night in which everyone can be a winner with a certificate to prove it.

When: **Sunday 2 November** 2000 - 2200 NZDT (0700 - 0900 UTC) in two one-hour periods.

Band: 80m (3.5 MHz) only.

Mode: CW sent with STRAIGHT KEY i.e. characters formed manually, no system of automatic dots, dashes or spacing permitted.

Divisions:

1. Vintage QRP
2. Vintage QRO
3. Open QRP
4. Open QRO

Vintage receivers and transmitters or transceivers using valves, no solid-state devices in the signal line permitted. QRP: 5 watts or less RF output.

Exchange:

RST, QTH, operator's name (one word), key used (e.g. ZC1, P&T), TX type (e.g. ZC1, FT1000, homebrew), and TX power (watts).

Non-ZL mainland stations only need to exchange RST, operator's name, and QTH.

Scoring: ONE Point per QSO.

Stations may be worked once in each one-hour period, CW to CW only. All stations submitting logs MUST use a straight key throughout, but straight key stations may QSO stations using bugs, electronic keyers or keyboards.

Multipliers:

1. Vintage QRP multiply total points by 2
2. Open QRP multiply total points by 1.5
3. Vintage QRO multiply total points by 1.2
4. Open QRO multiply total points by 1

Logs

Suggest using standard NZART log pages (not contest log sheets).

Logs are to show information exchanged, as above.

Calculate total score then multiply by the appropriate multiplier to give total score claimed.

Logs are to have associated data sheet giving entrant's: name, callsign, QTH, age (optional), full description of equipment used including: key, TX / RX, TX power, and antenna.

Send logs by mail by 30 November to:
Ken McCormack ZL1AIH, 181 Ararimu Valley Road, Waimauku, Auckland, or via email: zl1aih@xtra.co.nz

All stations (including DX) who send a log will receive a certificate. Special certificates for top three in each division.

Annotated certificates e.g. best ZC1, youngest / oldest operator at manager's discretion.

Any photos of operators and/ or equipment gratefully received.

http://www.nzart.org.nz/activities/contest-rules/rules-straight-key

This is should be a fun event and you're very likely to meet some other FISTS Down Under members, Ed.

Historic ex-marine equipment on 630m

Doc VK5BUG #14136

You may be aware that the draft Band Plan for 630m contains no identified consideration for operating historic ex-marine radio equipment formerly active on the MF marine band.

Some of us have been busy for several years developing operational 630m hand sent CW stations pursuing that theme, with available crystal frequencies (FT241, FT243 and D Type) being the core dependency element. In addition, some of us have spent in excess of 50 years solely operating with hand sent Morse code in preservation of its historical significance and operational efficiency in very diverse conditions.

It would appear that decisions are made for embracing only 'technology of today', without due consideration for those of us who spent many years at sea and in coast stations extensively using the MF band, and who intend maintaining our skills and historical interest in this spectrum area through the establishment and operation of amateur radio stations containing relevant equipment.

Having solely operated the VK5MGY RMS Titanic centenary special event station between May 2011 and April 2012, and as a survivor of a collision at sea, I have a strong connection to the use of this allocation and its historical significance.

I would be very interested to know what your interest is on this topic and whether there is support for my request to have the WIA formally recognise and make overt allowance for the establishment and multi-frequency operation of crystal controlled ex-marine MF wireless equipment.

Does not the allowance for AM operation still exist on both 6m and 2m? As with most historical groups of which I am familiar, the membership and activity simply fades away. Would you support a special interest group (pre-GMDSS era marine/ coast station CW equipment) that allowed for 'technological parameters of the day', similar in principle to the registration and road use of historic motor vehicles in Australia, which is my aim?

More details are on the WIA website:
http://www.wia.org.au/members/bandplans/data/

I'd be pleased to hear from you.

73, Doc VK5BUG email: d.wd@bigpond.com

A paddle plug for the Elecraft KX3

David VK3DBD #3756

QRP enthusiasts do seem to be multiplying and with the miniaturisation of components over the years there is without a doubt good reason for this. There is something fascinating about operating a radio from wild places, away from QRM and working with the power from a pocket sized or even an internal battery.

The ubiquitous KX3 from Elecraft is one of several radios that have excelled in this field and although traditionally the best fun in amateur radio was building and using home brew equipment, a black box such as this still leaves plenty of scope for home brewing of antenna systems to suit the portability required. Long may the interest continue!

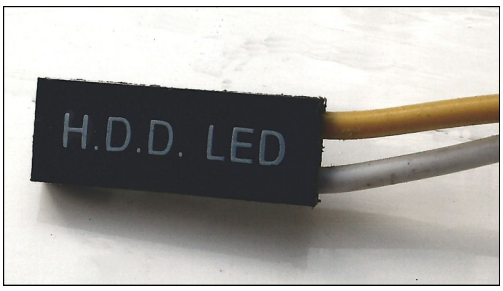
I built a KX3 from a kit earlier this year, having seen one for the first time about a year before at the National Rally in England. Only brief hands-on experience, but I felt the optional paddle key which fastens to and plugs directly into the special socket was not really to my liking. It is of course quite easy to use any type of key in the normal 3.5mm jack socket provided on the radio, but switching between a paddle and straight key that way requires a change within the menu setting. Not something one would normally do in the middle of a QSO.

No big deal you might say, but I often like to have two keys plugged into a radio at the same time, so I can simply use the paddle or pump key at will. I have found many times over the years that when conditions are really difficult, a distinctive slow and perhaps slightly exaggerated dot / dash character sending will get through when all else fails; short dots get lost in the noise.

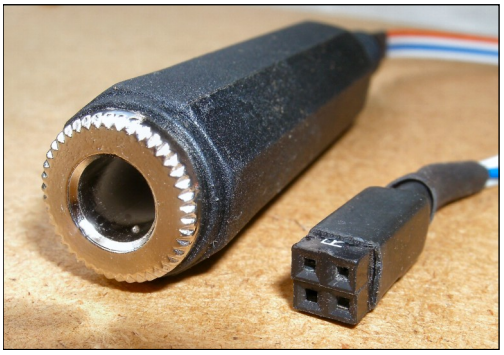
So the idea of getting a suitable plug to fit the four pin paddle-only socket in the K3 base seemed a good one. This did not seem to be something one could normally buy and after a few attempts to modify tiny ex-equipment plugs failed, I found that the two pin plugs (female ends) used in computers to connect the various panel LEDs and switches to the motherboard were exactly the correct spacing to fit the pin ends in the radio.

Two of these together allowed easy connection and a snug fit in the square hole through the case. Only three pins are used of course. I found one of these in my own junk store and scrounged another from a friend. I used the wires still attached of course, as fitting a new wire would have been a near impossible task due to the small size.

Once the correct pins for dot, dash and common had been identified - by simply shorting alternatives and listening - the two plugs were encased in a short piece of heatshrink tubing and shrunk on to keep them together. Leaving a slight surplus of the heatshrink, to trim off with sharp knife, just sufficient to allow insertion into the hole on the KX3. A further length of heatshrink slipped along the wire to encase the entry wires and the four ends teminated in a socket to suit the paddle key I intended to use. I fitted a 1/4 inch one as it is easier to adapt a 1/4 down to a 3.5mm than the other way around and they are more robust too.



One of the computer leads used to make the plug.



The assembled plug.

Plug and KX3 paddle socket .

The plug allows two keys to be used with the KX3.

Low power CW

Ian ZL2AIM #9683

As you might already know, I enjoy QRP and of course, CW. My QRP rigs are ICOM IC703, Yaesu FT817, OHR100A, TenTec 1340, Lake DTR7 and my QRPp rig the Pixie II. Whilst the 703 and 817 cover all the HF bands, the OHR and Pixie II are 80m only and the TenTec and Lake are 40m exclusively.

Whilst operating portable, I tend to use the 703 as it has its own built-in tuner. In the shack I prefer using the FT817 along with the LDG Z11 Pro II tuner. I realise that there are many of you that would prefer to have the antenna cut to the correct length to ensure the rig sees 50 Ohms, but I like to have a multiband antenna and let the matching unit sort out the 50 Ohms to my rig. I do it the lazy way and it works for me.

This year I entered the Sangster Shield contest for the first time. I worked 26 stations that had 5 watts output and one station that had 10 watts output. That was really great and on the two nights of the contest, 80m was clear of any QRN. But, where are those 27 stations at other times?

I tend to use my QRP rigs in the early evening on 40m and later on in the evening, move to 80m. Occasionally I get a ZL coming back to my call but most often it is the VK stations that return my call. Quite often the VK stations are also QRP. My guess is that those ZL stations might not have the passion for QRP that I have and would invest that time using their rigs at 100 watts looking for DX.

Both the 703 and 817 have got histories of blowing their finals. It has happened to me on both of those rigs. There is plenty of information as to why this might happen on the internet. (I have since stayed clear of having internal batteries in the FT817.) Icom in South Africa very kindly replaced my IC703 with the IC703+ and I have not had any problems since.

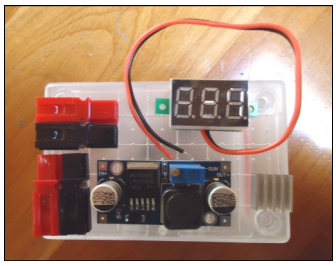
I decided to investigate what would be the 'ideal' voltage to use on my rigs that would give me the full 5 watts output, but might also help save my rig from excessive heat etc. At the same time, I was interested in what voltage the IC703 would need for its full output of 10 watts.

I used various dummy load / wattmeter combinations to keep an eye on the output. My IC703 certainly preferred the full 13.8 volts to keep its output at full wattage. However my FT817 showed a different face!

The table below shows the voltage into the rig and the wattage into the dummy load on the various bands. I have never used a QRP rig on 160m so disregarding that band, I could still get full power out (5 watts) even if my input voltage dropped to 9.5 volts. But I like to have a bit of safety, so I decided on anything around 9.7 volts would be fine.

I could of course alter the output voltage on my power supply, but as that feeds a fused distribution box where I need 13.8 volts for other devices, I decided to use a simple step down voltage set up for the FT817.

All the parts for the transformer are available on eBay and are very cheap. International postage is thrown in for free, but bear in mind it could take up to three weeks for a parcel to arrive. Total cost was under $10 (not including the Anderson Power Poles).



The step down transformer parts.

Whilst I can't prove that what I have done will make the rig last longer, what I can say is that the rig runs a lot cooler.

Anyway it was a fun project and only took about an hour to complete.

The completed kit with the FT817 and LDG tuner.

Output Power in Watts at various voltages using Yaesu YP-150Z wattmeter							
Band	13.8 V	13.0 V	12.5 V	12.0 V	11.5 V	11.0 V	9.5 V
160	5.5	5.5	5.4	5.2	5.0	4.9	4.6
80	5.6	5.6	5.6	5.6	5.5	5.5	5.4
40	5.5	5.5	5.5	5.4	5.4	5.4	5.4
30	5.5	5.5	5.4	5.4	5.4	5.3	5.0
20	5.2	5.2	5.1	5.1	5.1	5.1	5.0
17	5.1	5.1	5.0	5.0	5.0	5.0	5.0
15	5.1	5.1	5.0	5.0	5.0	5.0	4.9
12	5.1	5.1	5.0	5.0	5.0	5.0	5.0
10	5.1	5.1	5.1	5.0	5.0	5.0	4.4

Key dates

FISTS Down Under CW Net

Tuesdays on 7.028 MHz

0900 - 1000 UTC
(8 - 9pm AEDT)

Net controller: VK2FDU

NZART straight key night

Sunday 2 November

2000 - 2200 NZDT
(0700 - 0900 UTC)

More details: www.nzart.org.nz

FISTS Down Under SSB Net

Thursdays on 7.038 MHz

0900 - 1000 UTC
(8 - 9pm AEDT)

Quiz answers

1. KEY
2. IAMBIC
3. MORSE
4. ANTENNA
5. FEEDLINE
6. WIRELESS
7. FREQUENCY
8. IONOSPHERE
9. TRANSCEIVER

How many did you unscramble before checking the answers? HI

Donations

Thank you to the following members who included a donation when renewing their membership:

Ian ZL2BJC #12
John ZL4IM #9638
Mark VK4IL #14152
Chris VK3CGB #9087

Design competition: the RF trolley mark II

Pictured below is an electric powered golf bag caddy that Doc VK5BUG #14136 recently bought for $20 at a local suburban auction. He bought it because he saw immediate potential to make it into an electric powered pedestrian portable 'RF Trolley Mark II'. Doc said that although he could start working on it immediately, he thought it might make a suitable subject for a FISTS Down Under newsletter competition by asking readers for design input.

...electric powered

pedestrian portable...

The unit is purpose designed to travel over sloping, level and undulating land - remembering that few Australian outback golf courses are grassed, even if all the Kiwi ones are! The caddy is chrome-plated, well-balanced, handles very easily, has a 325CCA lead-acid battery to power its neat belt drive mechanism, offers a profile conducive to mounting a squid pole, alloy vertical aerial, PVC mast pipe etc.

It features a lift-top storage box padded seat, which is spring loaded so it is auto-retracting once the person stands up to move it along, and a shoe-cleaning brush pod that could be re-purposed to house coiled wire aerials as required.

It has a small notched rack for 8 golf tees, which could easily become home for some necessary connecting leads. The pair of large wheels are 250mm diameter and the single front wheel, 200mm. The unit has two large knurled plastic knobs that allow for the whole thing to be reduced to three pieces for car / caravan transportability.

The question is 'What radio equipment and features ought to be included on this trolley?'

This is a real-life project which is currently on the drawing board. You're invited to submit your idea(s) via the online form or via post to either Chris VK2CTN or Ralph ZL2AOH (addresses in masthead).

As an example of pedestrian portable operation, Doc's 'RF Trolley Mark I' is pictured on the right.

Entries close on 20 November 2014. Prizes will be available.

The golf caddy awaiting modifications.

RF Trolley Mark I.

Membership renewals

Ralph ZL2AOH #1073

The following memberships are due for renewal (up until 30 November 2014) - some are well overdue:

9022 - 9053 - 9061 - 9064 - 9613 - 9625 - 9674 - 9677 - 9681 - 14100 - 14102 - 14111 - 14113 - 14125 - 14126 - 14132 - 14133 - 14145 - 14150 - 14154 - 14169 - 14171

If you are listed in error, wish to receive a replacement reminder notice or would like to discuss your membership, please email us at: fists-down-under@ihug.co.nz

Until next month, ***73***