

**Newsletter of the Australian / New Zealand chapter of the International Morse Preservation Society
April 2018**

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NEW!!!!<<< **FISTS Down Under Sked Page** <http://n8fq.org/sked/index.php?board=fdu> >>>>>>

Facebook <https://www.facebook.com/groups/1765058520392148/>

Recommended FISTS calling frequencies (MHz):

1.808	3.528	7.028	10.118	14.058	18.085
21.058	24.908	28.058			

LETTER CHASE words for April are: **KOLLSMAN CHANGE REASON BACK** (Rules and Info on our webpage)

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From the Editor: Bill VK1FWBK #15215



"Why are people so tired on April 1st? Because they just finished a 31-day March?". (Unknown)

Time to QRS!!! -this year is slipping by way too fast! It has been a busy month and a big thankyou on behalf of every member of FDU goes to Garry VK2GAZ #14151 for his tireless efforts to keep us all keyed up!

Challenges such as the *Letter Chase* and the recent *St Patrick's Day Contest* to be sure (to be sure). The Sked page has been available for a month, so far only a few members have taken advantage. If you open and see no-one else signed in, don't walk away – log in! Others may be lurking on the sidelines. The only way to make it work – is to work it! So please, every time (note to self!!) just open it up and log in. If you are going to CQ, then in your Status area, post your frequency up - for example "7.025 CQ". Just don't forget to update your status if you QSY!!

Subscriptions: List of members whose subs become due in March and April 2018

April: ZL3GIL, ZL3PAH, ZL1CV, ZL2JU, VK3OZ, VK4XY, VK5RZ, VK7JB,

May: VK4ZW, VK2FNT, VK4010SWL, VK3OQ, VK2KJJ/OZ6YJ, VK3FPL

We ask that you keep an eye out for your callsign in the subs section and treat that as your reminder for you to pay your subs.

Our website http://www.fdu.org.au/join_renew.php has all the details for making payments. Don't forget that if you are paying your subs **to include your callsign**. Please do **not send cash in the post** as this causes problems for us in banking.

FISTS would like to thank the following member for his generous donation included with his subscription; **Bill VK6QW #14106**

Welcome to our new member Diarmuid (Dermie) Battisson VK1FDHA # 15224



Dermie is Retired, an ex-electrician, ex computer programmer, and, to his great credit, a volunteer with SES in Canberra. Isn't it the case Dermie that 'Once an electrician, always an electrician'? Dermie has completed three SOTA activations in the past month and I have had the pleasure of having 3 consecutive SOTA log entries with him! Great to have you on board Dermie! 😊

Congratulations to Tony VK3TP #15204 on taking out 1st place in the St Patrick's Day Contest! – Well done Tony!!



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April Contests

The Raven

Once upon a midnight dreary, while I pondered, weak and weary,
 Over many a quaint and curious volume of forgotten code—
 While I nodded, nearly napping, suddenly there came a tapping,
 As of some one gently rapping, tapping out that wondrous mode.
 'Tis some one calling, calling CQ
 Only this and nothing more.



The RAVEN Contest will be run on Saturday, 14th April, 2018.

Details can be viewed at:

http://fdi.org.au/contests_open.php

VK QRP Club CW Operators' QRP Club yearly contest:



QRP HOURS 80M CONTEST 2018- 7th April, 2018

This year's 80m QRP Hours contest is on 7th April. One hour on CW or digital modes, one hour for ssb.

Full rules are here:

http://www.vkqrpclub.org/qrp_new/qrp1_contest_page.php

Andrew VK1DA/VK2UH

VK QRP Club

(Many FDU members are connected with the VK QRP Club – so in the spirit of promoting CW we are more than happy to promote their contest here!)

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QRP By The Lake 14 April 2018 Lake Burley Griffin - Canberra



Following the popular QRP meetings in Melbourne (QRP By The Bay) and in Sydney (QRP By The Harbour), Canberra will be hosting it's own 'QRP By The Lake' on the shores of Lake Burley Griffin. It will take place on Saturday 14 April 2018 from 1 - 3pm.

Come along and meet fellow low power and portable operations enthusiasts. Bring your QRP radio, antenna and other portable gear. The location will be Black Mountain Peninsula, Lady Denman Drive, Acton. Plenty of parking, room for setting up antennas and BBQ facilities.

Please register your interest in attending by going to <https://www.eventbrite.com.au/e/qrp-by-the-lake-tickets-43626231232>

The event organisers are Wade VK1MIC (yet to discover our amazing world of CW) and Chris VK1CT #9057. We look forward to seeing you at QRP By the Lake.

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From Our Members

Skinning the cat:

by David VK3DBD #3756

As the saying goes, there are several ways of doing this:
Now having got your attention, this is nothing to do with cats at all. I'm sure you may already have guessed that!

Reading through the article in the March newsletter about traps and noting that Tony VK3CAB (now VK3TP) #15204 had a few problems with some aspects of construction, it struck me that perhaps there was another way to skin this cat and thank you Tony for inspiring me to put pen to paper. It is the fun of experimentation and invention that is all part of our multi-faceted hobby.

I have been a user of traps for a very long time, I have never found a better way to fit aerials in spaces that are too small for them. We are into compromise of course, better a Sterba

curtain or a two element Cubicle Quad, a Rhombic or.... well we can dream. But down to earth again! (No pun intended). I have heard it said many times by folk (who think they know but have no evidence) that traps are lossy. That is not true. They do of course have a loss factor, everything does, but Baluns are mostly far worse and the average ATU / ACU can be surprisingly so, - it all depends on many factors. The trapped antenna offers the following advantages. It allows multiple antennas on one feeder, and it needs less space than most aerials for the lowest frequency you wish to use. If you used say, a dipole, or indeed a simple wire tuned against ground, then yes, you can fit traps in that too if you wish.

A full conventional 80m half wave dipole is about 40m end to end, if you build in traps to cover 8 bands (i,e 10 to 80m) it is a shade under 33 Metres. You can always make up an 80 / 40 dipole which requires just one trap per side, and later add others as you need them - shortening the antenna a little each time you add one. Traps are high-Q resonant circuits which act as an insulator at the resonant frequency and as a loading coil at others.

The coax design is one way of doing it, and this is the most difficult to make. Neither will it guarantee to be better or even as good as the straightforward L + C trap. It can however shorten the whole antenna a little more but adjusting the measurements may drive you crazy. Coax can be heavy too.

My way, used for many years, is to use a short piece of plastic waste pipe, around 35mm or 40mm diameter, and about 6.5cm long. There are different wall thicknesses, choose the thin one to keep weight down. Grey or white is available, avoid black as I have been told it contains carbon which is a partial conductor. Whatever you use, put a short piece in your microwave oven along with a glass of water (for an RF load) and give it a 3 or 4-minute burst. If the plastic gets hot I would consider it unsuitable.



A 40m trap wound on 40mm diameter tube, using insulated wire. The number of turns has to be found by experiment. These photos give a guesstimate for a 7 MHz coil. On about 7.1 MHz a GDO lightly coupled, will bring you spot on in conjunction with listening to the station receiver while doing the tests.

Now if you have a source of high voltage capacitors there is nothing wrong in using them - but consider that the working voltage needs to be 4k or 5k volts. There is still no real guarantee they will not burn up. Instead find some offcuts of double sided copper fibreglass PCB about 6cm long and about 4 cm wide (or 34mm if you are using the 35mm pipe).

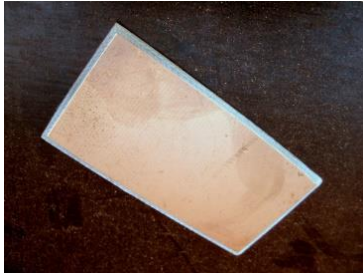


Photo 2 cut to size double sided PCB with chamfered edges to deter high voltage tracking over. Fibreglass board is a necessity

Cut carefully and file the width to be a light push fit inside the tube. The two sides of copper make your capacitor and it does have a very high breakdown voltage. Once the edges are tidied up then file or grind a bevel on each side so there is little chance of it arcing across the edge. It is officially suggested that the capacitor should have a value of about 1pF for a meter of wavelength. This is not critical at all, you will adjust the resonance by the coil around the tube. A 60mm x 40mm is near to 100 pF and that will work well for all the HF frequencies.

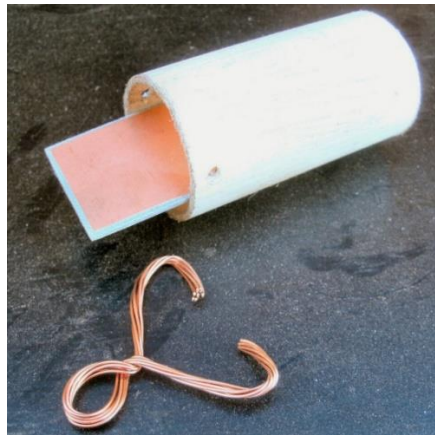


Photo 3 The parts for a trap ready to assemble this is a 35mm diameter tube



Photo 4 Ready to solder. Tinning the ends first and the PCB too is a big help. Plenty of heat and a speedy operation saves melting the tubing etc. But avoid dry joints. Leadfree solder is useless, it does not flow properly, and is likely to be a recipe for disaster. Stick to the lead-based solder. *(From the Editor – please take common sense safety precautions, PPE, ventilation etc!)*

The wire for the coil can be almost anything. Enamelled copper of about 1.2mm diameter or 16 gauge whichever you like to call it, or a length of similar gauge insulated wire will work

equally well. I have found no disadvantage with single strand insulated wire removed from mains wiring. There is plenty of the old red / black types which cannot be used legally for its original purpose. Multi or single strand wiring of suitable gauge also works well and the insulation indeed spaces the turns a little (more below on that).

Drill two holes each side of each end of the tube these are for the connection loop to the antennas wire, see photos. Drill one small hole to take the coil wire at one end of the tube, preferably just above the centre line of the PCB and one hole the other end of the tube just below the PCB end. The connecting loops can be made of any handy strong wire like a oddment of 12 or 14 gauge tinned copper or a twisted double of 16 g. A loop formed in the centre is convenient to solder the antenna wire to, bearing in mind this takes the strain of the whole antenna, do not skimp it.! Solder the ends of these open loops to the PCB one end to one side in two places and the other end to the other side of the PCB at other end of the tube. Photos explain I hope. Use a large hot soldering iron, to make sure the solder melts and flows properly and quickly, the close proximity of the plastic pipe and the heat dissipating powers of copper can be deceptive. The turns need to be experimented with to get the sharp resonance you need. A GDO is an invaluable device to do this and is not difficult to make, either the true GDO Grid dip oscillator using a valve (and of course the mains supply for power.) Or a solid-state Dip Oscillator which conveniently runs off a 9v battery. - Or even a lash up using a few components on a bit of veroboard and your (non-digital) multimeter to provide the all-important meter.

There is another way which is a little more difficult and that is to check the resonant frequency of your coil with the station receiver. Simply connect one end of it to the antenna input and the other end to an aerial wire. But for that you really need to get fairly near the wanted frequency first. There will be noticeable dip in any (weak) signal (like a wideband background noise, as you tune across that point as the hi-q circuit rejects the incoming signal. A 7 MHz trap for CW use needs to be set at about 7.1 kHz That will work right across the band with a slight fall off towards the high frequency end. Few ops in VK seem to use the high end, even some SSB QSOs are on 7050....

If you are solely CW it is just as easy to get the trap frequency around 7050 kHz to maximise the lower end. The completed trap must be adjusted before connecting to any antenna wire and sometimes you need to drill a hole only half way around the former - when half a turn is needed. Spacing out the wires shifts the frequency higher and is a good way to make a minor adjustment. Once satisfied, use a hot melt glue gun to run three strips of glue across the winding. Finish with (preferably) a coat or two of yacht varnish, or an aerosol spray of clear lacquer if you feel impatient. Using insulated single strand hook up wire spaces turns slightly. This in theory lowers the Q and offers a slightly wider bandwidth. If you use both Phone and CW sections of the permitted bandwidth then it can be advantageous.

The measurements I provide are only a guide to the wire lengths. Again, a GDO or antenna analyser will quickly show you what resonant frequencies your antenna has, and then it is a steady task to change one section at a time to get all frequencies correct. Start by looking at the inner section of the dipole which must be got right first, meaning that if you were fitting two traps into each side of a (original 80m dipole) say 20m and 40m you would be able to use it on those three bands. But get the traps right first...

The length of any 1/4 wave is found by $234 / \text{frequency in MHz}$ for the length in feet. If you work in metres use $72 / \text{frequency in MHz}$. Always leave a short extra length for wrapping around the insulators. etc. It is easier to cut off than add on! One trap (for instance a 40m trap in an 80m dipole), will reduce the overall length of the whole, adding another (pair) of traps for say 20m, 30m and /or 17m will reduce the length even more. If space is a problem, you gain all the way. But do spend time to adjust the appropriate sections... It pays off!



Photo 5

The finished trap. Showing the tethering loop soldered to the PCB (each end on opposite sides) and the hot melt glue to secure windings. Yacht varnish will also act as a good holder for the turns, but the hot melt is quick and easy if you have one. Heat Shrink will work too but I feel it might act as a moisture retaining device!

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Key of The Month

Steve VK7CW#14164

USSR KDM-2 Sideswiper

I recently acquired this extremely rare USSR KDM-2 Sideswiper from Colin, G3VTT. It has a very heavy base and a very smooth action. It is great fun to send with and an absolute pleasure to use.



From what I know about the key it is a Maritime key dating from around 1967. It was used by the Soviet Navy (including submarines) and on Soviet Polar bases. It was also used by vessels in the Soviet fishing fleet. On top it has the markings KDM-2 and СССР and some other Russian wording. *(Soviet "fishing" vessels did not often smell of fish" but their presence was always a bit fishy.....They often would sit "fishing" not far from NATO and other Western exercises. They had more than the odd morse key on board!! ..ed)*



It has been difficult to find out any more information or history of the key as they are so rare. If any FDU member or collector can provide any further history or information on these wonderful keys I would be very grateful to hear from you. 73 de Steve VK7CW#14164

Many Thanks Steve – KDM Key-De-Month (ohhhh why did I say that!)

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OK, I am now on the hunt for more “Key of The Month” submissions! You all have AT LEAST one key– so I should be inundated with your keys!! It does not need to be an essay – just a few photos and any information, its history if known – and why YOU like it.

Have a safe Happy Easter everyone!

That’s all folks!

de Bill
VK1FWBK #15215

