

CARRIER WAVE

February
2006

Aberdeen
Amateur
Radio
Society

The Society wishes its members a very happy and healthy 2006 and of course lots of DX. Thank you for your support throughout 2005 and it is hoped that you will continue to enjoy the programme of events being planned for 2006 and beyond.

Junk Sales have continued to be popular events and whether you are a buyer or a seller you are supporting the club.

2005 saw the Club participating in a number of events and visits. The outdoor activities were well attended and enjoyed by all. Should anyone have any ideas on how to improve these in the coming year, please feel free to pass on suggestions to the committee.

Computer logging is likely to feature more and more in our special events whether for contest or non-contest operation. Like anything new it does take a little getting used to but with some practice and experimentation it will lead to a faster and smoother operation.

The extra construction nights at the end of 2005 and the start of 2006 have paid off as half the transmitters are electrically complete and working

Some restoration of the CW practice evenings is envisaged so as to allow members to air their good work.

As 3.560 MHz is the calling frequency for QRP CW, should we make our local net frequency 3.5795 MHz where things are a little quieter? What about a time and day of the week? A sheet will be circulated so that we can arrange the most popular day and time.

It is not envisaged that construction evenings will cease when the last TX is completed. There are several small adjuncts to the TX that could be constructed, each taking about one evening's time to complete. Do you have a metered QRP dummy load? Do you have an SWR bridge that will register 5 W at 3.5 MHz? Do you have a small QRP ATU that will match the 3.5 MHz TX into a piece of wire?

VHF field day will be here soon enough. We would like you to give some thought to whether we should have a dry run, test site(s), start gathering gear, try a reduced number of bands. It is quite a major operation to do the 4 band entry as we need 4 members each to run a station. The stations have to be separated to a certain extent to reduce mutual interference. This item in itself could easily occupy the body of a talk some evening soon.

Anyone who is willing to give a talk to the club members is very welcome to do so and he or she should let a committee member know so that a time and subject can be written into the programme for 2006.

Norman has an interesting article later in the newsletter about /P operation. As it deals with HF operating exclusively I don't feel too bad putting in a plug for VHF /P operation.

If we are to be considering VHF Field Day, one of the main considerations is a site. This needs to be accessible to members, not too far from Aberdeen and high but not necessarily on the summit of a hill as most of the stations being worked will be located south of us so a good take-off to the South and East is in fact more important.

Please give some thought to a possible site. If you have any ideas at all then please pass on your suggestion(s) to someone on the committee: the sooner the better as a small party could try out the location well in advance as soon as the weather is suitable.

A beacon search would probably be sufficient on one of the VHF bands to establish the quality of the site.

Depending on the exact location we may have to seek permission to set up our station(s) there.

VHF allows us to use beams which we would need to rotate to the appropriate direction quickly. This is best done by hand directly rather than with electrical rotators. The last time I was involved with GM3BSQ/P on VHF we had a 7 over 7 skeleton slot beam for 4 metres and ran 25 W CW and 25 W SSB from a microwave modules transverter preceded by a TS130V HF transceiver on 28 MHz and followed by a converted PYE QQVO3-20A PA. This worked well in both halves of the contest.

You can imagine what a full four band entry involves!!

Snippets

Remember that members can borrow CDs by contacting a Committee Member and signing the Library Book. The borrowing period will be 1 week, subject to negotiation.

Titles are :-

- (a) ARRL Periodicals 1997 to 2004 including :-
 - (i) QST, the ARRL monthly magazine
 - (ii) QEX, the bi-monthly Experimenters, magazine
 - (iii) NCJ National Contest Journal
- (b) QEX from 1981 to 1998 on two discs
- (c) Sprat issues 1-100, the QRP quarterly magazine
- (d) QRP Radio Club International 1979-2004 in 4 CDs

A floppy disc with a contest logging program and accompanying manual can be obtained from Graham, GM4OBD. You should take one of these if you are going to participate in any of the club station activities to practise the use of a logging program even if you have no intention of operating the transceiver as loggers are a very important part of the stations when we are out and about. If you want to use a computer log at home the better option might be that demonstrated by Malcolm, GM0DB

PORTABLE or /P is FUN.

Yes /P is fun, getting out of the shack and in to the countryside or seaside.

I discovered /P fun many years ago with AARS at HF CW NFD at the old WW2 radar site at Portlethen. These were the days of 10 watts max at NFD. Straight keys, paper logging and drafty scout ridge tents, operating GM3UU's home brew TX with many unmarked switches and knobs!!!

With modern equipment and power sources /P on HF has never been easier.....I have two basic systems which I use....

1. A QRP set up based on FT817 and a couple of gell cells, one of 7.2 ah capacity and the other slightly larger 18 ah. Capacity. Either of these batteries will run the FT817 at 5w, giving you many hours of fun. I mostly use CW which gives great results at QRP levels, but can be used on SSB.
2. A QRO set up based on the TS50 with a large 110 ah battery. The TS50 is an excellent HF only mobile rig which is switchable 10/50/100 watts. It is extremely simple to use. i.e. It's menus are easy and simple to cope with. GM3VLB, Andre, uses a TS50 for all his island hopping DXpeditions, and it has survived all the hard use it gets. I use this for both SSB and CW running mostly at 50 watts. This power level seems optimum for a long day on the 110 ah capacity battery.

How about antennas? Well for /P I always take a mix of antennas. For hanging from trees a 66ft Long Wire will give reasonable results 40m to 10m and a longer 132 ft for 80m to 10m. Naturally lots of cord and a sling shot or catapult will aid getting the antenna up. A small manual MFJ 902 tuner which will operate 5 – 50 watts or a LDG Z100 (125 watts) auto tuner will fit the bill.

What if a barren and treeless location is selected? Next in the antenna armoury is the fishing pole vertical. I use two - The largest is the DK9SQ 10 metre fibre glass f/pole. It is very well constructed, and my technique is to helically wind from the base of the mast approx 33ft 9 inches of lightweight loudspeaker wire on the mast. This technique will take some minutes but with practice is gets easier and along with 4 counterpoises of 33ft 6/9 inches you will find that a very low SWR can be achieved. It is of course designed for 40m only but will load up very readily on 15m via the tuner. I use a small plastic box at the base of the mast to house a SO239 socket and it also serves as the hub to connect the vertical element and the 4 counterpoises The mast itself could be guyed. I use a 4ft angle iron tapped into soft ground as a base support. The f/pole held in position against the angle iron by two bungees. However if a nice fence post is available that can be pressed into service equally as well to act as a support. The box is fed by a short length of RG58CU 50 ohm coax. If the weather is windy I attach a guy into the wind to maintain vertical stability.

Another great f/pole is sold by SOTA (Scotland on the Air) (See Web Site). About £18.00 will buy you a 6.7M long mast. Perhaps not quite the same quality as DK9SQ's pole but still an excellent device for supporting a wire vertical. Indeed it is also sold with a lightweight 2m VHF beam for the VHF fraternity.

However I use it for the basis of a 20M vertical. This time winding helically a quarter wave of L/S wire from the top of the mast. The feed point ends up around 1.7m from the ground. Fed again via a plastic box with 4 counterpoises of approx quarter wave, it becomes an elevated fed ground plane. This antenna was used at the vintage car rally at Crathie Castle to great effect, the SWR 1:1 with no tuner in circuit.

Both of these f/pole masts are easily erected by one person.

But where to go for /P, well I have found coastal locations excellent for take off, a car park near Walker Park close to Torry Point Battery. A site near Montrose. At Inverbervie. Near Lossiemouth etc. etc.

For a good HF and an excellent VHF location Cairn o'Mount is par excellence.

Pitfichie Forest is the site for a really quiet HF electrical back ground location, loads of trees. And a site 4/5 miles West of Stonehaven with an excellent Continental take off.

Best dx so far was N6NO/C6A/MM. An American amateur (Merv) on board M/S Endeavour in the Antarctic (62S 75W) on 21.029 on CW.

Selecting a site is all part of the fun. Each new site is a challenge.

A nice view helps. I also prefer a quiet location i.e. minimal public. I came to this conclusion after operating from a very large lay by and my long wire took off with a large collie dog attached and a worried dog owner appeared!! All in the middle of a CW QSO!!!!

Each time you go /P a different challenge arises. Being buzzed by an RAF Tornado which flew so low, the 10 metre mast wobbled around in its wake vortex!!!

I wonder if I had been flying Graham, GM4OBD's kite what the outcome may have been? I think the Jet would have won.

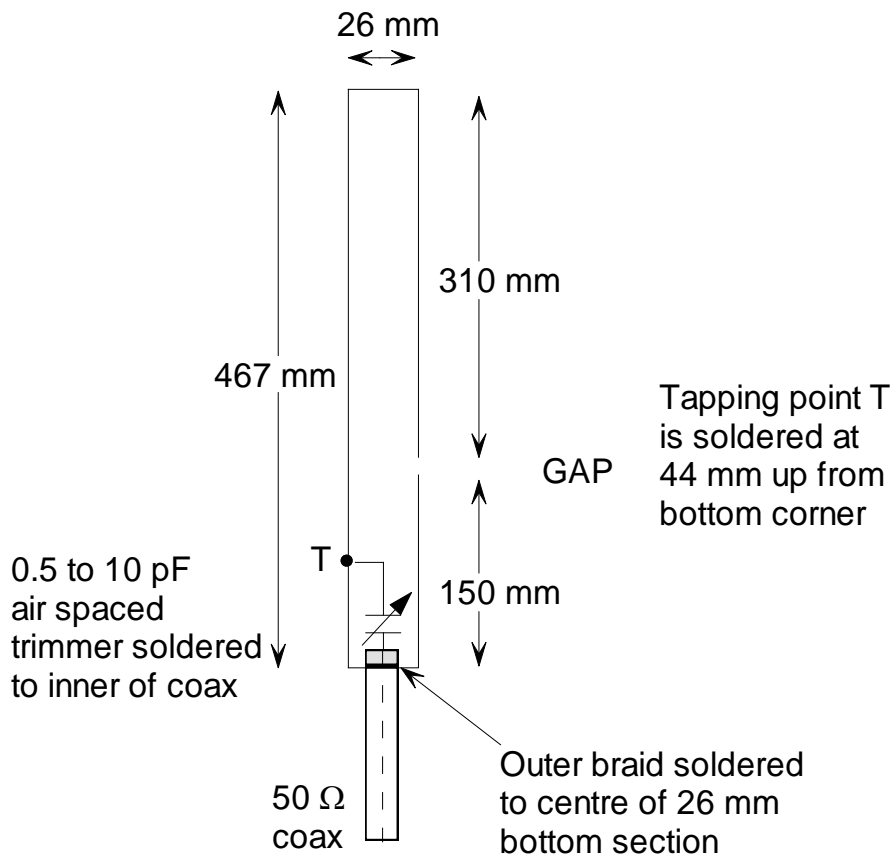
Talking about kites. I wonder if it might hold up a top band vertical!!!!!!?????

GM3WIJ

Technical Corner

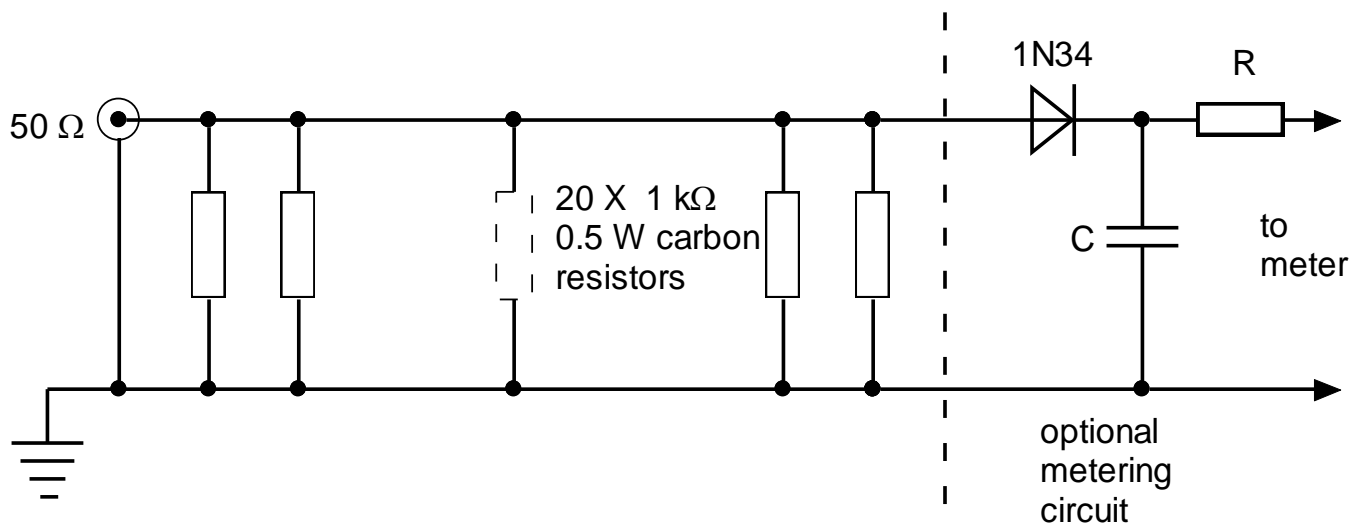
A number of members will have transceivers which cover all the HF bands and 6 m, 2 m and 70 cm. Possibly you have not used the transceiver on UHF as you did not want to put up yet another antenna. After some successful experiments with Slim Jims on 2 m using all sorts of antenna materials I decided to try a Slim Jim for 70 cm. This antenna is very compact and I have one in the shack suspended from the roof with a fine piece of cord and a drawing pin. The same technique could be used in a loft.

A single copper plated steel welding rod is just longer than the required total length of the antenna and it is constructed as follows. The antenna itself costs under £1.00, a bit more if you want to locate a coaxial socket at the foot of the antenna.



GM4OBD

Simple QRP “Dummy Load” for 3.5 MHz TX (GM4OBD)



Parts:- (dummy load)

1. 50 Ω socket to suit your shack
2. 20 X 1 kΩ half watt carbon resistors
3. 1 empty and cleaned beans tin
4. 2 pieces of plain blank PCB

(meter monitor)

5. 1 X 1N34 diode
6. 1 X RF capacitor
7. 1 X Resistor (value dependent on available meter)
8. 1 X output socket to suit shack e.g. 3.5 mm jack

This is essentially a one evening project if you are starting with all the bits to hand and have the PCB cut into shapes to suit the tin you have rescued from the kitchen!

For Sale Ian Munro GM4GVK (01224 316787)

- Pair of Magnum–K Speakers 25 Hz to 20 kHz, 3 speakers with 12" Bass unit gives excellent quality. Dimensions 15" x 24" x 11.5"
- Heathkit HW-8 QRP Rig. 80-10m approx 2W o/p. Includes mains PSU and Manual. **£100.00**
- Yaesu FRG7700 Gen. Cov. RX, 30 kHz to 30 MHz, SSB, FM & AM wide and narrow + 2 VHF converters 118 – 150 MHz and 140 – 170 MHz. Full manual and circuit diagrams included. **£85.00**
- Goldring variable speed turntable, shure 75 pick-up

Thank you to all those who took part, in either the CW, SSB or both AFS contests last month. At the time of writing the logs for the CW event had been sent to the RSGB and the logs for the SSB event were being compiled into sets of three.

Graham, GM4OBD

Thank you to **Norman, GM3WIJ** for helping to spread the load when it came to sorting out logs for AFS and for his article on /P operation in this issue of Carrier Wave.

Graham, GM4OBD

Items for the April Newsletter should be submitted by

Thursday 6th April, 2006