

<i>CARRIER</i> <i>WAVE</i>	August 2005
	Aberdeen Amateur Radio Society

There have been a few positive comments about the last newsletter and so the format and type of content for the moment will remain the same.

Two outside events have occurred since the June issue.

CW NFD took place at Countesswells on June 4th and 5th. The WX was favourable and 460 stations were worked. Thanks to Colin, Norman and Stan for most of the operating. A 264 feet end fed was used on 160 and 80 m while a 40 m full wave loop worked fine for 40 through 10 m. A 40 m quarter wave vertical served as a stand-by antenna and could be compared with the end fed and the loop. Over 40 countries were worked including VE and W. The 24 hours of operation at 100 W level was adequately maintained by two 110 Ah lead acid batteries. Apologies to anyone who was listening on 2m at the start as none of the people on site had working 2 m gear to allow S21 to be used for local information. It would be a good idea to appoint someone on these events to be responsible for manning a VHF rig in future. SSB FD would be an opportunity to start this habit.

Thank you to everyone who came to help with the setting up and taking down of the gear. This is an important part of the event and it ensures the smooth running of the rest of the day.

On the 17th July we participated in QRP Field Day at the Walker Park. This was a chance to try some big antennas on a good interference free site. The 80 m loop performed in a similar manner to the 40 m loop but it included operation on the lowest band for the contest. It is a big antenna and took some time to erect but lessons were learnt. On a site with some trees down one side it would be possible to erect the 80 m loop in less than half the time. The 3 element vertical for 40 m on the kite was successful electrically with no static interference build up over time. The only difference from last time was the use of bare copper wire throughout. The antenna is earthed for d.c. via an RF choke in the ATU. This makes it safe to touch and connect to a solid state rig. The disappointment was that the wind did not stay constant or strong enough all the time to keep the kite 200 feet up in the air.

60 stations or so were worked in the 6 hours which is not bad considering that some of this was done with 3 W only.

An attempt was made to keep up with the logging in the BSQ log book and QSL cards were written at the time to avoid too much post event writing.

Once again a big thank you to the many helpers who made it all possible.

At the Club itself we have had an antenna and patch lead night at which Stan was able to test a 3 band fan dipole. Morse for "beginners" and those more competent in two separate groups was tried for the first time. Construction of a 3.5 MHz TX has passed the planning stage and prototype and mark 1 versions have been successfully tested. Thanks to Tony, GM4HTU for his failsafe circuit design. The membership were fortunate to hear two very interesting talks from Stan, GM4BKV and Ian, GM8MHU on WWII magnetism techniques and J.L. Baird respectively. John Logie Baird had certainly a very varied life with all its ups and downs.

Snippets

1. Members can borrow the following CDs by contacting a Committee Member and signing the Library Book. The borrowing period will be 1 week, subject to negotiation.
 - (a) ARRL Periodicals 1997 to 2004 including:
 - 0) 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
2. If you want to build a simple but effective VHF or UHF antenna for very little cost, copper plated welding rods make very fine elements. 30 half-wave elements for 2m come in a packet for £3.70. One of these packets would allow you to make a high gain yagi for both VHF and UHF, quads for both bands suitable for lofts etc and Slim Jims for both bands and still have enough left over to weld the bad joints of the Forth Railway Bridge! (see Technical Comer for making a start.)
3. Would you like to have a 6.7m telescopic antenna mast or SOTA pole, as used by GM3WIJ. They are offered at reasonable cost if bought in number. If interested please let Graham, GM4OBD know. Demonstration available on request.

Technical Corner

Cheap and Easy Antennas for VHF/UHF

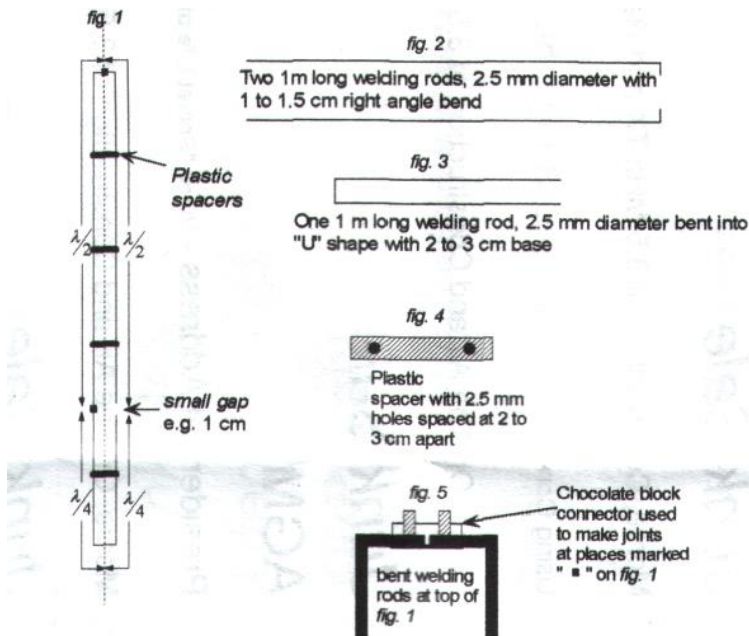
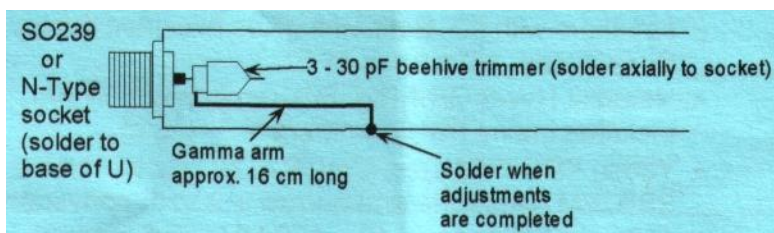


Fig. 1 shows the Slim Jim dimensions with electrical wavelengths.

Figs. 2 and 3 show how to bend the welding rods.

Fig. 4 shows the plastic spacers with the 2.5 mm diameter holes drilled at a spacing equal to that of the Slim Jim rods. The length of the plastic rods is only important if the antenna is to be placed in a protective plastic tube. (Waste pipe is ideal.) If this is so then the rods should be of a length that makes the antenna a snug fit in the tube. Spots of glue can anchor rods.



Make initial adjustments as follows.

- The gamma arm should be on the side without the gap.
- Suspend ant. vertically with a cord from roof or hold socket with plug attached from below. Keep away from metal objects.
- With SWR bridge in line, apply a few watts of RF on 145.400 MHz or 433.900 MHz.
- Rotate trimmer for minimum SWR.
- Remove RF
- Lengthen or shorten Gamma arm by about 1 cm and repeat RF test, adjusting trimmer as before.
- Repeat until SWR is very low. (1.0: 1 for inside use)
- Place Slim Jim in plastic pipe, at least 30 cm longer than antenna. Leave gamma section in the open.
- Make final adjustments to matching as before. Solder join of gamma arm and main antenna.
- Solder join of gamma arm and main antenna
- Attach final coax to be used and push antenna and feeder into plastic tube until top of antenna reaches top of tube.
- Secure a plastic cap at the top and bottom to keep out water
- Place antenna in final position for use.

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. 80-1 Om approx 2W o/p. Includes mains PSU and Manual.
- 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. **£150.00**
- Goldring variable speed turntable, shure 75 pick-up

For Sale Graham Sangster GM4OBD

- Kenwood TM-702E VHF/UHF mobile/base FM transceiver, 25 and 20 W @ 13.8 V d.c. Vgc with mic. and boxed with manual. **£150.00**

Wanted Items for inclusion in the October issue by 22/09/05

Suggestions, Comments and Feedback Corner

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