



# Wirral & District Amateur Radio Club



Airwave 70.450 MHz

Volume 3, Issue 1

[www.wadarc.com](http://www.wadarc.com)

January 24th 2003

## 2003 Committee

**Neil G4OAR**

Chairman

**Bob G4NCI**

Treasurer

**Tom G4BKF**

Secretary & Publicity

**Gerry G8TRY**

Club Library

**Phil G6IIM**

NARSA

**Gordon G8MMM**

**Steve G7BBF**

Broadband

**Colin G3RLA**

Photographer

Meetings are  
held at Irby  
Cricket Club  
2nd & 4th  
Wednesdays  
8pm Start  
Visitors are  
always most  
welcome

Suggestions for  
Club talks or your  
comments on  
any topic .. to:-  
**Neil**  
[g4oar@wadarc.com](mailto:g4oar@wadarc.com)  
☎ 0151 608 1377  
or any committee  
member

## Club Roundup



### 2003 !

and to anyone I have not yet spoken I wish you a "Happy New Year". For the Wirral & District Amateur Radio Club we finished off 2002 in style, with some excellent Club Nights and celebrated our 25th Anniversary with what can only be described as a "Fabulous Night Out". Your AGM took place on the 8th January 2003 and in the panel alongside you will see your new committee. My thanks to Phil G0JSB and Chris G0PKE for their contribution who stepped down this year. We welcome Colin G3RLA, who takes many of the fine photographs which appear in our Newsletter and on the Club website, Gordon G8MMM and Steve G7BBF all of whom I know will bring some fresh ideas to the table.

I can't let 2002 close without mention of a few of the meetings which stood out in the last quarter. In September **Dave G3UFO** brought along a selection of Eddystone receivers and related the history of the "Hat Pin Company". With nearly 30 people it was one of the larger audiences of the year .. pipped to the post by **Paul Gaskell G4MWO** who gave us an excellent talk and demonstration of NVIS, ably assisted by Alan G8OJQ and Greg G0DUB. It was a good job the 1st XI didn't see the cricket pitch as it was a patchwork quilt of wires ! At the end of November another top evening was a talk with anecdotes by Captain Woodhall on his time in charge of one of the worlds most prestigious ocean liner .. the QE2. For those who missed the Chairmans Night it was a selection of video clips from almost a decade of travelling to the Friedrichshafen Ham

Radio Rally. There is a contingent of 6 from the Club already booked for 2003 with more interested.

Without doubt the highlight was the Clubs combined Christmas and 25th Anniversary Night out. A record number of 49 people supported the event which was held at the Hotel Victoria in New Brighton to celebrate 25 years of nostalgia in a hobby which has given us all so much enjoyment and some lifetime friendships. It was really good to see some of the callsigns from the past and we were delighted so many were able to join us. An excellent Carvery Dinner was enjoyed by everyone and the evening ended with a raffle of some 26 prizes. A selection of photographs adorn the right hand column of both this and the next page.

You will see this is a Bumper edition of the Newsletter with 4 pages. This is thanks to Denis G3UVR who is encouraging us all to "get constructing". To this end he has written an excellent step by step article on building a simple high quality attenuator for use on a 2m DF Hunt. The photographs were taken by Colin G3RLA and we will be making room on the Club website for what is hoped will be a range of construction articles. If you would like to contribute with an article, please contact me.

73 d Neil G4OAR

### Membership Fees DUE NOW

(Same as Last Year !)

Full membership £17  
Retired members £12  
if paid before March 31st  
or + £2 afterwards.

Treasurer - **Bob G4NCI**

## 25th Anniversary Photo Album



Eric G6HWD, Frank G4DBG, Pat (HWD), Pauline (JZP), Heather G7EZG and Bob G4NCI



Elaine with husband Gerry G8TRY



Julie M3JLI and Dad Gordon G8MMM



Frank G8REQ, wife Joan and Vera with husband Kenny G8GTI



Bob G4NCI with Jackie (BBF) and Janet (NCI) with Steve G7BBF

## The ANT Quiz by Eric G6HWD

The answers to the following clues have 9 letters and all end in ANT, hence the name of the quiz. Some are cryptic, some are anagrams and some are totally my own imagination.

Eg. Eglantine altering Gracelessly = INELEGANT

- |    |                            |          |
|----|----------------------------|----------|
| 1  | Agent Orange               | .....ANT |
| 2  | Not Benign                 | .....ANT |
| 3  | Adding two vectors         | .....ANT |
| 4  | Grass                      | .....ANT |
| 5  | Oil Maybe ?                | .....ANT |
| 6  | Yesterday's worker         | .....ANT |
| 7  | Alsations about to help on | .....ANT |
| 8  | Flirting in gall + VAT     | .....ANT |
| 9  | I/Q 150 + 500 Lumens       | .....ANT |
| 10 | Grant Meat for a virago    | .....ANT |
| 11 | A Spot of the Spot         | .....ANT |
| 12 | A crawling toady           | .....ANT |
| 13 | From abroad and Here !     | .....ANT |
| 14 | Helper at the Baths        | .....ANT |
| 15 | Accidents around a drier   | .....ANT |
| 16 | 'E Burnt Axe in Excitement | .....ANT |
| 17 | unwilling hero             | .....ANT |
| 18 | Rent a tin to find a nomad | .....ANT |
| 19 | Note or add a better smell | .....ANT |
| 20 | To look and look again     | .....ANT |

Eric is offering a bottle of wine to the first club member to send him 20 correct answers.

✉ g6hwd@wadarc.com



## Welcome

The Wirral & District ARC extends a warm welcome to New Members:-  
**Dave G3UFO, John G3PXX, Danny M3PGB, Alan 2E1SOX, Brian G6HAL, Gary G7TOK, Chris M1EEV and Darren M3DKM**

## The AGM Challenge



No one member qualified for the quality bottle of Malt for introducing 5 or more new Members. Bill M1ARH introduced more NEW members than anyone else, and in recognition of this is seen receiving a bottle of Malt from our Chairman. Well done Bill. For 2003 ? Who will win .. YOU DECIDE.

## 25th Anniversary Photo-Album



Peter G3PYU chatting with Richard G8NDD



Maggie G6KBR Jan G6SNO with Prize



Paul G8NOM, Ann, Julie M3JLI & Steve G8TCC



Phil G0JSB, Jan G6SNO & Eileen G3WIO



Pattie (G3RLA) with Yvonne (G4BKF)



Gordon G8MMM with Jem G4NOY



Have you items you would like to advertise (To Sell or Wanted) ? Talk to Neil G4OAR

Amateur Radio Communications Ltd

38 Bridge Street, Earlestown  
Tel. 09252 29881

Support your local store

## The WADARC Teaser

What do bullet-proof vests, fire escapes, windscreen wipers & laser printers all have in common ?

**Answer :** They were all invented by women !

## Wirral & District ARC - Calendar 2003

### January 2003

- 08 AGM**  
 15 D&W - The Railway, Meols  
**22 Pre-owned Bargain Items Evening**  
 29 D&W - The Anchor, Irby

### February

- 05 D&W - The Harp, Lower Neston  
**12 "Choppers Aweigh" by Tom G4BKF**  
 19 D&W - The Black Horse, Lower Heswall  
**26 Talk on Emergency Services by Mike G8RXB**

### March

- 05 D&W - The Hoylake Lights, Hoylake  
**12 "From Cables to Wireless" by Steve G7BBF**  
**16 NARSA Rally, Norbreck Castle, Blackpool**  
 19 D&W - The Bridge Inn, Port Sunlight  
**26 Web Page Design—Part 2 by Phil, G0JSB**

### April

- 02 D&W -The Fox & Hounds, Barnston  
**09 Hilbre's New Radar by Dr. Paul Bell**  
 16 D&W - The Hotel Victoria, Lower Heswall  
**23 "Wirral - Before it's too late" by Glyn Parry**  
 30 D&W -The Earemont Ferrv

**Got a WAP Phone ?** Want to know what's on next Wednesday ?

Go to <http://wadarc.mywap.genie.co.uk/> To receive the bookmark by SMS send a text message with the words WADARC to 07740 148156



Steve, G8WOF



Laura M3AAA & Chris G8PKE



Hand-picked by the Chairman !

## Tech.Tip How to build a good switched Attenuator by Denis G3UVR

Picture the scene ... your out on a 2 meter DF Hunt. You've taken some good beam headings and you have arrived quite close to the fox. He could be anywhere within a 1 mile radius. You feel you're a good 10 minutes ahead of your rivals but suddenly you realise the signal from the fox is producing a full scale deflection on your radio's S meter ... in all directions .. so which way is he ? You wave the antenna around and your meter is still showing full s cale ! Panic ?

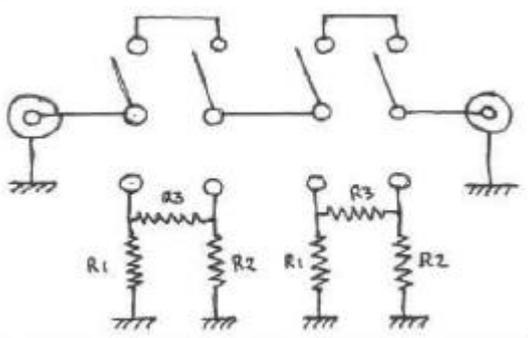
Well, one of the most essential tools required at this point on any 2 meter DF hunt is a good switched attenuator. Soundly constructed, this will reduce the RF level received within the range of your radio S meter by switching in your choice of attenuation. You can then peak your antenna again on the incoming signal from the fox and continue the hunt.

Benefits of this Unit are:-

- > Suitable for fox hunts at 144MHz
- > Good Screening
- > Attenuation selectable to suit S meter on radio
- > Easy to make with no special tools
- > Low cost .. Approx. £5.00 if parts have to be bought



I have now built three attenuators and have found a two way Pi-network unit to be the most practical with 10db and 20db switched attenuation. This gives three settings up to a maximum of 30db. Previous experiments suggest that any greater attenuation ahead of a handheld radio, typically used on DF hunts, would cause the incoming signal to bypass the attenuator anyway and be received straight into the radio through the plastic case. Pi-network configuration was chosen rather than T-network as Pi gives a smaller neater unit with less lead lengths. The chosen attenuation values were selected to give optimum performance with the dynamic range of the LCD S meter in my Standard C500 handheld. I tried various values by experimentation and found a value that when the S meter was just hitting maximum, switching in the lowest value reduced the S reading just above minimum, so further peaking of the incoming signal could be done. This is what I refer to as the dynamic range of the S meter. This arrangement gives four ranges of hitting full scale on the S meter with just two switches.



Circuit of the Attenuator

	R1	R2	R3
3db	292	292	18
6db	150	150	37
10db	96	96	71
12db	84	84	93
15db	72	72	136
18db	64	64	195
20db	61	61	248
24db	57	57	395

Table of resistor values for the Pi-network 50 ohm attenuator

### Parts Required:-

- 1 Chassis BNC plug
- 1 Chassis BNC socket
- 2 DPST toggle switches (Double Pole Single Throw)
- 6 Resistors, values selected to suit the dynamic range of the S meter on your radio.

Piece of double sided PCB

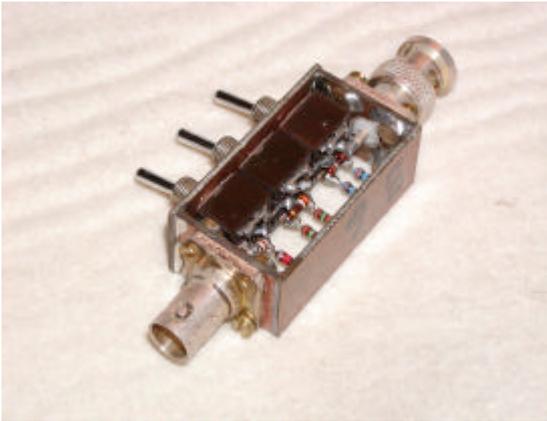
Old Oil Can or suitable tinplate for screening



The box is made as small as possible out of double sided PCB and an old Duckhams oil can cut up and soldered to the PCB to complete the screening. The overall size of the finished housing is a unit of 37mm x 27mm x 17mm excluding all sockets and switches. This enables the input and output connectors to be directly soldered to the switch poles and keeps all leads as short as possible. Remember ALL leads act as antennas so keep them as short as possible. If a chassis plug is used this means that you don't need a patch lead to connect the attenuator to the rig. Connectors should be chosen to match the rig in use.



Cut the bottom and ends out of double sided PCB and drill the holes for the switches and sockets. Solder your chosen R3 resistors and the shorting links on the back of the two switches and fix to top PCB. (Take care not to overheat the switches when soldering as they are quite sensitive to excess heat). The ends can now be soldered in place and the input / output connectors fitted and soldered. The bottom piece of PCB can now be soldered into place and the R1 / R2 resistors fitted as shown in the picture. The open three-way attenuator shown in the photograph contains three, six and twelve db steps and was built for the purpose of varying the Tx / Rx drive to a transverter but otherwise is the



same construction as my two-way DF unit.

I used tin snips to cut up an old oil can to make the side screens. After degreasing and when you are happy with your chosen attenuation values solder the sides on to the PCB frame to complete the screening.

Use the nearest preferred values available e.g. In the case of 10db use 100 ohm instead of 96 ohm and 68 instead of 71. It does not matter that it ends up as 9.6db and 51.9 ohms impedance.

It is our intention to add a "Construction Page" to our Club Website [www.wadarc.com](http://www.wadarc.com) so that this and future articles can be viewed there with pictures in greater detail and capable of full screen sized magnification. This time the size of the Newsletter will be rather larger than it was originally intended to be.

It is hoped that other members may also want to upload articles about their home construction that may be of interest to others locally and further away.

In a future article, a "sniffer" will be described for use when within 100 metres of the fox and even the attenuator is swamped with RF.

My thanks to Colin G3RLA who kindly took the photos.

✉ [g3uvr@wadarc.com](mailto:g3uvr@wadarc.com)



## WADARC Silverware 2002

I thought it would be nice to list the winners of the Club's Silverware which were awarded at the Home Construction and Hot Pot Evening in November.

The **Eileen Medley Cup** is awarded for the Clubs main summer 2m DF Hunt competition which takes place on WIRRAL. This year it was won by Phil, G6IIM and Neil G4OAR closely followed by Phil with the G0JSB team. The fox was Denis G3UVR and family who were to be found in Brotherton Park in Bromborough.

The Revenge DF followed a few weeks later for which the **G8PMF Rose Bowl** is presented. In true revenge style this was won by Denis G3UVR and Frank G8REQ, followed some time later by the G0JSB team with suitable excuses ! Susan G6ADO, daughter Katie 2E1CES and Neil G4OAR were foxing in Lower Neston.

The **Glen Dobie Shield** was awarded for the Best Fox and this year it went to Tom, G4BKF, who located in an excellent site in Wallasey for the Practice DF Hunt. The Practice Hunt was won by Phil G0JSB, however, the location caused considerable problems for the G8MMM team !! Unfortunately construction is not a strength of current club members (although we hope this might change !) and so in 2002 there was no candidate for the **Rennie Par Cup** for the best newcomer to construction.

The **Alan Griffiths Home Construction Cup** was won yet again by Denis G3UVR. A prolific constructor of the highest standard, Denis has offered to contribute a couple of articles this year in the hope of persuading everyone that it really is not that difficult, and it is certainly highly rewarding. Finally the **10th Anniversary Cup** is awarded to a person not on the committee, but who in the view of the committee is judged to have contributed above the call of duty. This year the selection was unanimous and it was presented to Peter G3PYU. Peter is regularly one of the first at Club Meetings and first at the D&W's. His priority at the club is always to help move tables, chairs and sort whatever is needed and is without doubt a most worthy winner.



## Club Polo and Sweatshirt

Anyone looking to buy a Polo or Sweat Shirt with the Club motif ... as proudly worn by many members of the Club, can do so by visiting Wirral Textile Motifs (Mon-Fri). The Polo Shirt is Cat.No. 539 at £15.28 and the Sweatshirt is Cat.No. 762 at £17.04. When ordering, ask for the WADARC motif and give your callsign to add below the motif. They are both in a standard hard wearing Polyester/Cotton mix. Smart for any occasion !



## ...and finally,

Some pictures just in from Steve G7BBF which he took at the Pre-Owned and Cherished ?? Bargain Equipment Sale last night. At very short notice Gordon G8MMM kindly took over as auctioneer, however nothing quite prepared him for the sight of the fine Pye Cambridge which had been dug out, complete with the nest of a mouse !

