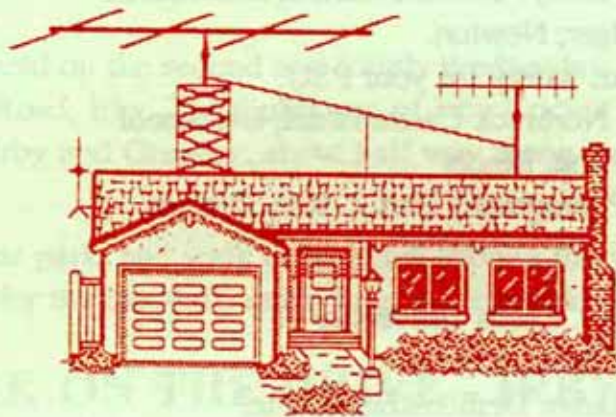


AIRWAVE

SPRING 1990



THE ANOMALOUS MAGAZINE OF THE

WIRRAL & DISTRICT

AMATEUR RADIO CLUB

G4MGR - G0MGR - G8WDC

Wirral & District ARC

PROGRAMME UPDATE

February 1990.

- 7th D&W. Hotel Victoria, Lower Heswall.
- 14th Discussion night. A discussion of forthcoming events and projects.
- 21st D&W. The Primrose, Wallasey.
- 28th Silent key sale. Details Alan G1XYP

March

- 4th Great Northern Rally. G-MEX Centre, Manchester
- 7th D&W. The Ridger, Newton.
- 14th Project Crowbar. Safety for your PSU.
- 18th NARSA Rally. Norbreck Castle Hotel, Blackpool
- 21st D&W. Railway Inn, Meols
- 28th Electronics in Photography Part 2. Ron Thomas.

April

- 1st White Rose Rally. Leeds University
- 4th D&W. Saughall Massie Hotel
- 11th Computers in Radio. Demonstrations etc.
- 18th D&W. The Anchor, Irby
- 25th Interference. Causes and Cures by Phil G0JSB.

May

- 2nd D&W. Bassett Hound, Thingwall.
- 9th A Talk on RAYNET. The Amateur Radio Emergency Service.
- 16th D&W. The Greave Dunning, Greasby.
- 23rd Club Project Night. G8MMM / G4OAR
- 30th Practice DF Hunt. 8:00pm in the Lay-by.

June

- 6th D&W. The Harp, Ness
- 10th Elvaston Castle Rally
- 13th Surface Mount Devices. Talk by Bill Mooney G3VZU
- 20th D&W. The Lighthouse, Wallasey.
- 27th The Eileen Medley DF Hunt. 8.00pm in the Lay-by

We will keep you posted via UPDATE with the rest of the programme.

Wirral & District Amateur Radio Club

The Committee 1990

Chairman	Paul Robinson	G0JZP	051-648 5892
Secretary	Vic Allen	G4UDR	051-648 3859
Treasurer	Gerry Scott	G8TRY	051-630 1393
N.A.R.S.A. Rep.	Peter Morton	G0LHT	051-677 7376
Publicity Manager	Peter Morton	G0LHT	051-677 7376
Contest Manager	Phil Langford	G0JSB	051-677 1947
Social Manager	Pauline Robinson		051-648 5892
Orinary Member	Peter Hilton	G8GYO	051-342 2879

Club Meetings

Meetings are normally held on the second and fourth Wednesday in each month, at Irby Cricket Club, Mill Hill Road, Irby. The clubhouse of Irby Cricket Club is located just off the main road between Irby and Greasby, about half way along on the easterly side of the road.

Please park on the top car park, and walk down, thus leaving the very limited space near to the clubhouse available for the bar staff, unloading, guest speakers, and for the disabled.

DO NOT PARK ON THE DRIVE - IRBY C.C. REQUEST

The club has two net frequencies :- 145.325 & 433.800 Mhz
Please use these as often as you can - Remember - USE or LOSE

AIRWAVE 325

AIRWAVE 325 is the periodic magazine for the club. We also produce a regular Newsletter, UPDATE 325 to keep members informed with the club programme. If you have a packet terminal available then this is the best way to access the very latest information, this can be done in the following manner :- Connect to WIRRAL then type C 3 GB7OAR-9

Articles for inclusion in any of our publications, Adverts etc are always most welcome.

This magazine has been produced on behalf of the club by :-

Phil Langford, Paul Robinson and Gerry Scott.

Printed by Frank Robinson.

Many thanks to all the contributors.

Editorial



Happy New Year and welcome to AIRWAVE

For a few of you, this will probably be the first ever issue of that you have ever seen, and I hope that you will enjoy it. This is the first edition of the mag for the 1990's. You may notice an improvement in quality over previous issues. This is mainly down to the use of a Desktop Publishing Programme. Yes folks AIRWAVE goes Hi-tec. This programme has opened up many new alleyways for us to explore, and it is hoped that you like the new format. The old typewriter has now taken a back seat in Gerry's shack, and you now have a new Editor, me. I must take this opportunity to thank Gerry for all of his hard work over the past years in producing this mag, and I now realise just how much hard work goes into getting an issue off the presses. Thanks Gerry and also a big thanks for your help and support in producing this edition. Thanks must also go to Paul (JZP) for printing the master copy, and also to Frank (REQ) for the copying.

If you are wondering why we haven't had an issue for ages, the main reason is down to the lack of material to go into it. It seemed that there was an ever decreasing supply of material for the issues, and so it was decided a few years back that we would produce the mag on a now and again basis, and back it up with the now familiar UPDATE's, in order to keep the membership informed of the latest activities.

Whats in it ?? Lots of new stories to read, a crossword to keep you puzzled, a quiz and many other articles to keep you awake at bedtime. If you would like to make a contribution to the next issue (PLEASE), then let me have it in one of the following formats :-

1. As ASCII file to my PMS G0JSB-2 on 144.650 preferably without CR/LF.
2. As ASCII file on either 5 1/4" or 3 1/2" inch disks. Disks will be returned.
3. As a Wordstar, Wordperfect, MS Word, 1st Word Plus, Wordwriter PC, Quintet or Beyond Words file on disk as above. Bet you've never heard of the last two formats!
4. Or written on sheets of paper.

I already have one or two articles for the next issue but a lot more would be appreciated. It is hoped that we will be able to produce another mag a bit later in the year. So come on, get typing.

Gerry has informed me that he is trying to compile a new Club Handbook containing all sorts of bits of useful information, and it it will also have a list of Members names, addresses, tel numbers etc... If you have an objection to any of your information being published then please contact Gerry A.S.A.P., otherwise it will be deemed that no objection will arise from its entry. Please bear in mind that this will only be issued to members of the club, it is not for circulation.

Thats about it from me. See you at the club soon. 73 Phil G0JSB

Chairmans Bit

Well here we are with the first Airwave in quite a while. What you hold in your hands represents several weeks of evening work work by Phil and I hope you all enjoy reading it. This column is actually the very last to be written and, as I am printing the whole shebang, means that Phil cannot editorialise anything I say! (This is real power). In fact as I had the final say on everything in the mag, if you have any complaints then I am the one responsible!

Its difficult to know what to say as, after perusing all the other items written, everything seems to have been said. However, I must also add my own thanks to Phil for putting the whole ~~mess~~ magazine together and writing several of the articles. If you think that the articles are a bit 'samey' then I can only respond that we have printed what we got!

Now to a general review of what has happened so far. As I am sure you will have heard me say many timed before last year was a quite an ulcer creating time for me, with all the cancellations and postponements by our visiting speakers. the end result of this was that we ended up with rather more non-radio nights than I originally intended. Rest assured that I do not intend this to happen again. Although I can't prevent people was ringing me up with bad news you will notice there are substantially more radio and technically orientated nights this year. If you have any ideas for other nights, or more importantly, contacts then please let me, or any other comittee member.

I think thats about enough from me now. Move on to the next article; read and enjoy!

73 Paul GOJZP

Now to a personal note. Many thanks to everyone who contacted or sent a card to Pauline and me on the birth of our baby daughter. We have decided to call her Victoria Jayne and she will no doubt make an appearance at the club some night.

Words From Your Treasurer

It actually makes quite a change to be writing a page for 'Airwave' again, since the last one came out in the Autumn of 1987. Having been the uncrowned editor on all the previous editions, then you will appreciate my relief at having the task performed by Phil, using his home personal computer and desk-top-publishing software, in conjunction with Paul and his high quality printer. All this makes quite a change from typing most of the pages on a

fifty-year old typewriter, although the last one that we did was greatly enhanced by the fact that Peter Morton had a little time between contracts, and could type-up quite a bit to be printed on a daisy-wheel printer.

I must confess that for this edition, I have been unable to supply any up-to-date photographs or newspaper cuttings, but then again, neither has anybody else (not quite true, see around this mag - Ed). They are the type of thing that you see and forget to cut out for future use, or else you save them and they become outdated before the issue is due to appear.

Another first for this issue is the fact that a number of pages have been compiled at home and then sent over packet, straight into the DTP software. But, don't feel too complacent that some content has been sent over the radio, because we first did that in 1983, as a data transmission using the cassette port tones from a computer.

So, now you all know how to make the editors job easier, how about making the treasurers job a little easier? As you probably know, I also look after the membership lists, which means that for each monthly committee meeting, I print out a list of paid and non-paid members, and prepare the list for payment for the Cricket Club. I can't remember how many times I revised the list last year, all because subs were coming in so late, that one would have thought that the person concerned was going to drop off that year. I, as much as anybody, want to see a large and strong membership, so don't let me put you off if you want to pay-up and think its too late, I'll still take it. All I ask is that everybody tries to abide by the rules and gets their subs in by the beginning of March, **please**.

On the subject of subs., I hope that you all appreciate the fact that we have not raised the rates this year, in spite of a £1.00 rise per person in the ICC rates. So, just watch out for some of the ways that we will be culling in the extra cash to make up the difference.

One thing that I want to produce is a members address list and hopefully a members handbook. This is something that I have wanted to do for a while, and some of the things for it are starting to come together now. Any suggestions or help with contents would be most welcome. As always, distribution to members only, with any specific requests not to print part of address of phone No., to me.

Somewhere in this edition should be a list of pubs that are or have been used for D&W's, together with a list giving the distribution of members. As some of you will know, I go to most of the D&W's, and sometimes travel quite far. Sometimes I wonder if we should close all the pubs around the Upton, Greasby, Irby areas and try and get some more of the membership to move about a bit, or just move out some of the big block of members living in these areas! But seriously, why don't you try to come along? The conversation gets more varied as the numbers grow, so don't be put off by thinking that a there is a closed group of 'packetees' or whatever - everybody who goes I am sure Knows the score, which is all about having a natter in general, but more specifically about radio topics. Just think, you may learn something, and I am sure everybody has something to contribute.

73's for now, see you soon. Gerry Scott G8TRY.

ABOUT THE WIRRAL & DISTRICT AMATEUR RADIO CLUB

The Club was formed over twelve years ago with certain aspirations and standards on which it was to be based, to ensure that the maximum amount of variety and enjoyment was available to its members. We are pleased to say that those ideals are still maintained today.

Initially, club meetings were held in West Kirby Concourse on regular 2nd. & 4th. Wednesday basis to avoid any conflict of dates with other clubs in the area. Subsequently, informal meetings were held at local 'hosteleries' on 1st. & 3rd. Wednesdays, and these became known as 'Drinking and Waffling' evenings, or 'D&Ws' for short.

Now, while the Concourse provided a adequate place for regular meetings, it could not, however, provide Club-house atmosphere that was really wanted. In 1982 the Club moved its headquarters to Irby Cricket Club, where we still meet today. The move provided us with a clubhouse, larger easier and safer car parking, a more central location, open space to erect antennas when needed etc., etc.. In all, a far better location that we could call home. This also allowed us to expand our range of activities and add extra facilities on other nights.

In addition to the regular meetings and D&Ws, we provide external activities. These can have a serious side, but are often usually for fun. These activities include Radio Contests, Direction Finding, Visits, Treasure Hunts and a host of others as well.

Our comprehensive range of activities have the following pattern :- In each month, 1st. & 3rd. Wednesday - informal (D&W) at a pub. (app 9 pm. on); 2nd. & 4th. Wednesday, 8 for 8.10 pm. - regular meeting at the club. On any 5th. Wednesday, it could be a D&W or a special meeting or visit.

Each Thursday, from about 8.45 pm., Morse Classes are held at the club.

For further information, please contact one of the following :-

Paul 051-648 5892, Gerry 051-630 1393 Phil 051-677 1947

Peter 051-677 7376, or call in at a Club meeting.

TOWNS AND CITIES QUIZ

CRYPTIC CLUES TO TOWNS AND CITIES IN THE UK.

EG. A Ships company

..CREWE.....

1. POUNDS AND PENCE
2. SALTS ON A RACE COURSE
3. OFFAL IN THE SWIM
4. JACK HAS A COIN WORTH 4d
5. CENTRE OF A RABBIT HOLE
6. INSECT
7. HAVE EATEN ENOUGH BACON
8. COD WARDEN
9. DRAGON BUT NOT SNOOKER
10. PART OF A SHIP
12. SISTER AT A PUBLIC SCHOOL
13. TOIL THEN DIP YOUR BREAD
14. OPEN SPACE TO RETAIL DRIED FRUIT.....
15. BLEAK FISHING RESORT
16. DISCOVER A TRUMPET
17. HURRY FOR YOUR CEREAL
18. A SAINTLY BURL
19. THE CHIME IS STRUCK
20. TALK TO A HOG'S THIGH

Answers to Eric [G6HWD] with your name and callsign

FIRST PRIZE 1 Bottle of 'Chateau HWD'.

THE JUDGES DECISION IS FINAL (its his quiz - so there! - Ed).

(If you wish, entries can be given to the committee on any club night to be passed on to Eric. No closing date has been specified but I think March 28th is a reasonable date - Ed)

A WEEK-END WITH GB2NIS

To see the dawn twice in one week-end is not so dramatic in Winter but in July it can lose its appeal. Still, if the urge to operate GB2NIS (Northern Ireland Scouts) special event station arises it must be satisfied. For economic reasons the route to Gosford Forest Park, a few miles south of Armagh, was via Cairnrain in Scotland to Larne in Northern Ireland. I saw the first dawn at 4am as I drove onto the ferry, so I was in nice time for a pleasant drive to the camp-site. That is, after I had crossed the first Northern Irish Bobby with a rifle held across him!!

The event itself, called DISCOVERY 89, was a camp linked to five other Scout Camps across the British Isles. The idea of the occasion was to run several camps at the same time which could also in some way be linked, and to introduce a 'high tech' aspect to these camps. To this end each camp had some telephone lines, a fax machine, a prestel terminal, and an Amateur Radio Station. I think there was some special arrangement with BT over the 'phone bills.

The station I visited was equipped with two HF stations, one with a two element beam for 20-15-10 Metres and the other with a trap dipole for 40 and 80 Metres. A 2 Metre FM station for local chatter and a 2 Metre packet station with full blown Mailbox. In addition we shared the two Portacabins with a three station workbench for technical projects, a Prestel Terminal, and a FAX machine.

The workbench was there to let three Scouts at a time get hold of a soldering iron and assemble six Led's onto a PCB and wear the latest thing in flashing personal decor at night. The demand for this was astronomical, there was even a lottery to see who were going to be the lucky ones.

Moving onto the radio side of things, most of the operation was on HF. The 40/80 Metre setup was tuned either to 7.090 or 3.740 and a large number of greetings messages were passed between Scouts all over the country. I also heard Japanese, Dutch and Flemish used on these frequencies. Also some Scouts spoke to their parents, one to Accension Island and one to the Lizard Lighthouse. The other HF station although having a more exotic potential was not as popular, mainly because the Scouts could not really yak to anybody. The packet side of things was run mainly in the mailbox mode, so did not have quite the instant appeal of phone contacts. Certificates were also awarded to those who passed greetings messages or followed the "DISCOVERY TRAIL" on Prestel and these seemed highly prized.

After a 3 day weekend (I was only on a 60 hour excursion) it was time for home, so having arrived on the campsite on Friday morning I left on Sunday afternoon for the 8pm ferry from Larne to arrive home on Monday at about 4am . Just in time for the second dawn.

Peter GOLHT.

BUILDING THE BSX2 - THE EXPERIENCE

Having had my first introduction to packet radio using the original "DIY" packet product-the BSX1, I decided that my venture into the world of TNC2 compatibles should also be with the help of G0BSX in the form of his BSX2 offering. It had been a difficult decision to abandon the trusty BSX1 but any form of "screen watching" was impossible with the V3.7 software and as I hadn't managed to sort the MASK command in the updated issue I decided to move on. I considered the alternatives which, to be practical, were the BSX2 and the German TNC board. The decision process was interesting in that it actually was summarised in a local radio club evening at which time all the pros and cons were identified and discussed. One of the key factors in my eventual decision was the knowledge of Peter's (G0BSX) phone number which could be invoked if there was any major problems!

Building up the board was pretty straightforward as the silk screening is easy to read and a layout is given in the instructions. I personally found the track "glue" to be a trifle fragile although to be fair I was using a rather large bit on the iron when I started to mount the components. One point I would recommend is the use of the "skeleton" sockets for the ICs because if you do have to fault-find, some of the plated-through holes are positioned under the sockets.

Once I had mounted all the components (and it must be said the BSX2 has a lot of discretes) then start up should be trouble free. If all is well then when you power up the 'CONNECT' and 'STATUS' LEDs light up for a brief period and then go out. The processor should now be running.

The only remaining problem was mounting the board in a box. The instructions recommend an expensive unit and apparently tolerance variation may give you a problem so I opted for a "rally standard" oversize box and fitted an extra pair of D25 and Rx/Tx sockets on the back of the case. It still looks ok and cost £3.50. I angled the leds to poke through the front panel. I mounted the PCB on pillars but found that the spare "land" around the pillars was in short supply so watch out for shorts! The only real problem I had was a dodgy 5V regulator which seemed ok but ran very hot. This gave very erratic start ups but in the end a replacement sorted the problem. I left my 5V unit on a separate heatsink mounted off-board but this is not essential. Eventually however all was well and the BSX1 was retired to "standby" duty.

Now that my BSX2 is in service I think it will be useful if the experiences of our constructors is made available to benefit those who follow so, as part of the NWPUG

“service”, I am listing a compendium of the comments that have been made on the board just in case you are in difficulties.

1. There was one case of a poor plated through hole....use skeleton sockets just in case.
2. The output pot can be a difficult unit to source and in operation it delivers lots of output!! Mine is run barely off the end stop so some extra attenuation may be needed. Some TNCs at the “other end” can be a bit particular on tones level so, even if it sounds ok, you will need to experiment to get reliable connections.
3. If you “abuse” the unit and lock it up then it may be difficult to restart. I managed to achieve this with the BBC/Comstar terminal emulation. I found that by resetting the micro at the lower speed setting (change the jumper link) then all was well and I could power off on the “cmd” status and reset the speed to 4MHz again. Still investigating this one but the problem may be the Z80A micro which is a bit stretched at 4MHz. Use of a Z80B may sort it out. Not a full explanation but at least it is a “fix”
4. More of a nuisance than a problem is that, unlike the BSX1, you can't run with the rig squelch open. This inhibits my DX efforts and forces me to use the network. ...Probably a good thing after all!

Can't think of any more at the moment but I am very pleased with the unit. For an all up cost of some £60-£70 I have saved a bit of QRK and learnt a lot about logic. My BSX2 now runs the PMS software and can auto rx and auto forward from my local BBS.

73, Gordon G8MMM

The ‘Other’ Phonetic Alphabet

A f' Horses as in Hay For Horses.

B f' Mutton

C f' Miles

D f' Mation

E f' Brick

F f' Pheasant

G Whizz

H This was missing on my list.

I f' El Tower

J f' Oranges

K Sera sera

L f' Leather

M f' Size

N f' Cement

O f' The Wings

P f' Rations

Q f' Ages

R f' Daly

S f' Rantzen

T f' Two

U f' Joyce

V f' La France

W See Fields

X f' Breakfast

Y f' Biscuits

Z Cars

Library of club books.

RSGB Callbook, winter 87/88.

RSGB VHF/UHF Manual, 3rd. Edition.

RSGB Radio Data Reference Book, 5th. Edition.

RSGB Amateur Radio Techniques, 7th. edition.

RSGB Amateur Radio Awards, 2nd. Edition.

RSGB Radio Communication Handbook, 5th ed, Parts 1&2, softbound.

RSGB HF Antennas for all Locations. Moxon.

ARRL Handbook 1988.

ARRL Solid state design for the radio amateur.

Practical Wireless Encyclopaedia, F J Camm, 13th.ed. 1954.

Electrical applications of Smiths Charts. McGraw-Hill.

One pad of Smiths Charts.

One pad of graph paper, A4.

Siemens databook 'IC's for entertainment' 1884/85.

Home Office 'Guide to better TV & Radio reception.

Pye PF1 pocketphone tune-up manual & diagrams.

A4 folder of general info on broadcasting stations.

A4 folder of info on TV servicing.

A4 folder on using an oscilloscope.

Folder of sample RAE questions.

If you want to borrow any of these books, then please contact - Gerry Scott, G8TRY.

In order to maximise their availability and life, it is felt necessary to restrict borrowing to a maximum of two books at any one time, with a maximum loan period of one month, per person. The borrower is solely responsible for the safe return of the books to the keeper, and a 'fine' of 100p per book, per week, or part of, has been suggested for overdue items. In this way, we may be able to be self funding for new purchases.

Suggestions for new titles would be most welcome, and any new purchase considered on its merits. Likewise, donations of books and material suitable to our needs would be warmly welcomed, but please, this is not intended as a dumping ground for boxes of old magazines!

PC OR NOT PC THAT IS THE QUESTION.

I am sure that on many occasions, some of you have listened in on a conversation between computer buffs and wondered just what they are on about. Well hopefully this article will help to explain things just a little.

A Personal Computer (or PC) is the subject. "Well I've got a computer, and it belongs to me, so why can't I say that its a PC „after all that's what a personal computer is, isn't it??"

The answer to the above question can quite often be NO unless it meets some of the criteria below.

The term PC has now been used for some time to relate to a desktop or laptop type machine running **MSDOS** or similar, (hang on I will explain in a mo) as opposed to the larger type **MINI** or **MAINFRAME** computers found in offices. **IBM** were one of the world leaders in producing the PC for use as a **STAND ALONE** machine, for use as a computer for just one operator. Whereas the **MINI/MAINFRAME** machines were used by a number of people; who could all be connected to it at once, via their own **TERMINALS**. Now that the trend is for a lot of people to have their own PC, you can see why many of the old **TERMINALS** are becoming available as junk items at the rallies.

PC's and small home computers, such as the Spectrum and BBC, are known collectively as **MICROS**. This also includes other computers such as the various Apples, Commodore Amiga, Atari ST etc.

So what does a PC consist of then ?

Normally it has a screen or monitor, a keyboard, memory, and at least one disk drive. "OK my Sinclair Spectrum computer has all of those, so what else is different ?" As I said before most PC's run **MSDOS**. This is a number of programmes which collectively provide a Disk Operating System, hence the term DOS. The MS part of it is a version of these programmes written by a company called MicroSoft. There is a variation of this known as **PC-DOS**, this is only ever issued by **IBM** for their own machines. There are differences, but they are usually of no consequence and you would be hard pressed to find a PC that would not run on **PC-DOS** as well as **MSDOS**. This operating system is loaded into the machine when you switch it on or **BOOT** it. You can then run one of the many thousands of programs available, or you could choose to load another **LANGUAGE** such as **BASIC** or **FORTRAN**. But with a machine such as a Spectrum, it loads **BASIC** from Read Only Memory (**ROM**) when you switch it on, and that's the only **LANGUAGE** it will run, although there is then a lot of **SOFTWARE** (programs) that run under **BASIC**.

Another difference that a PC has over the home type machine is that it has a lot more Random Access Memory (**RAM**) in-built. Most home machines have about 64,000 bytes or

64K, some have 128K but most PC's have at least 512K of **RAM**. On the newer type of PC some have several millions of bytes (or Megabytes). Most PC's also have the capability of running a **HARD DISK** (although this is not a prerequisite). This is a disk drive which has a number of metal plates inside which can store programmes and **DATA**. These hard disks can store a lot more information on them than a floppy type of disk. A **FLOPPY DISK** can store either 360K,720K,1200K, or 1440K depending on its type, but a hard disk can store over 100,000K depending on its size. Another advantage of a hard disk is that on most machines it spins permanently while the machine is switched on, so there is no delay in retrieving data, whilst on a floppy disk, it has to get up to speed before data can be read off it, thus slowing things down a little. It also spins ten times as fast as a floppy disk.

PC's are generally becoming more powerful and faster day by day. The top end of the **MICRO** market is encroaching on the **MINI**'s and their manufacturers are becoming quite worried.

The governing factors for speed on a machine are :- Disk speed of access, access times of memory, and most important the speed and type of **PROCESSOR**. This is the brain of the machine, it performs all the tasks and instructs other parts to do their bit. The old IBM XT PC, one of the early models had a **CLOCK** (pulses to operate the processor) running at 4.77 Mhz. This in its day was quite fast, but compared with the 20Mhz plus clocks that are available today, it was very slow, and this made some programmes seem very slow in their operation. But even the 4.77Mhz clock machines were far faster than some of the home computers. To give you an example of this, I wrote a programme on a Commodore 64 in **BASIC** and it worked great. It took 40 seconds to calculate a contest entry. The same programme converted for a PC only running at 8Mhz takes 1/4 second per entry. So you can see the difference.

Most PC's are fitted with a **PARALLEL** port to plug in a printer, and a **SERIAL** port to plug in a **MODEM** or your **TNC**. Inside the computer are spaces , or slots, to site further accessory cards. You can buy such things as **MOUSE DRIVER** cards or **JOYSTICK** cards, and just slot them into place. Another use for one of these slots is, if you only have floppy disk drives and want a hard disk, you can now buy a **HARD CARD**. This is a hard disk mounted on a card that just slots into place and contains all the control chips etc... needed to run it.

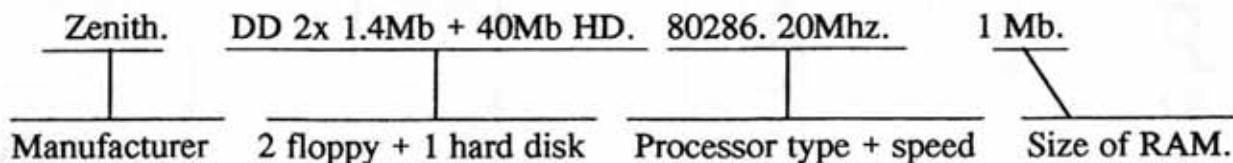
OK that's enough waffle from me !! I hope that it has at least given you an insight into what a PC is and does. I must add that if you are quite happy with what you have got and speed is of no great importance, then you can save yourself a lot of money sticking with you machine. The home machines are very good value for money and are great fun. This article was not written to knock these computers, but to help you join in the conversations, now that you know what the buffs are on about..

Listed below is an explanation of some of the terms used above :-

BASIC A programming language. Used by beginners but capable of
..... complex instructions

BOOT	To start up (the computer).
CLOCK	Provides pulses for the processor and other peripherals.
DATA	Information.
FLOPPY DISK	A bendable disk for storage. Either 5 1/4" or 3 1/2" inches in size.
FORTRAN	A language often used in industry.
HARD DISK	See text.
IBM	International Business Machines. Computer Company.
LANGUAGE	A programme allowing you to enter instructions in a form that the machine understands.
MAINFRAME	A large office type installation with many users, sometimes across country linked by special lines.
MINI	Office installation with many users, usually in same building.
MODEM	Commonly used for inter-connection using a telephone line.
MOUSE	A movable device to control cursor movement.
MSDOS	Microsoft's Disk Operating System.
PARALLEL	Information pulsed along a number of different wires at the same time.
PC	A Personal Computer running MSDOS or similar
PC-DOS	DOS as issued by the IBM company only.
PROCESSOR	The brain of the computer
SERIAL	Information sent one ulse after another along one pair of wires
STAND ALONE	A systm which requires no connection to other systems in order to operate.
RAM	Random Access Memory. Both read and write.
ROM	Read Only Memory.
TERMINAL	A machine requiring external support.

Here is a typical discription that you may see for a PC :-

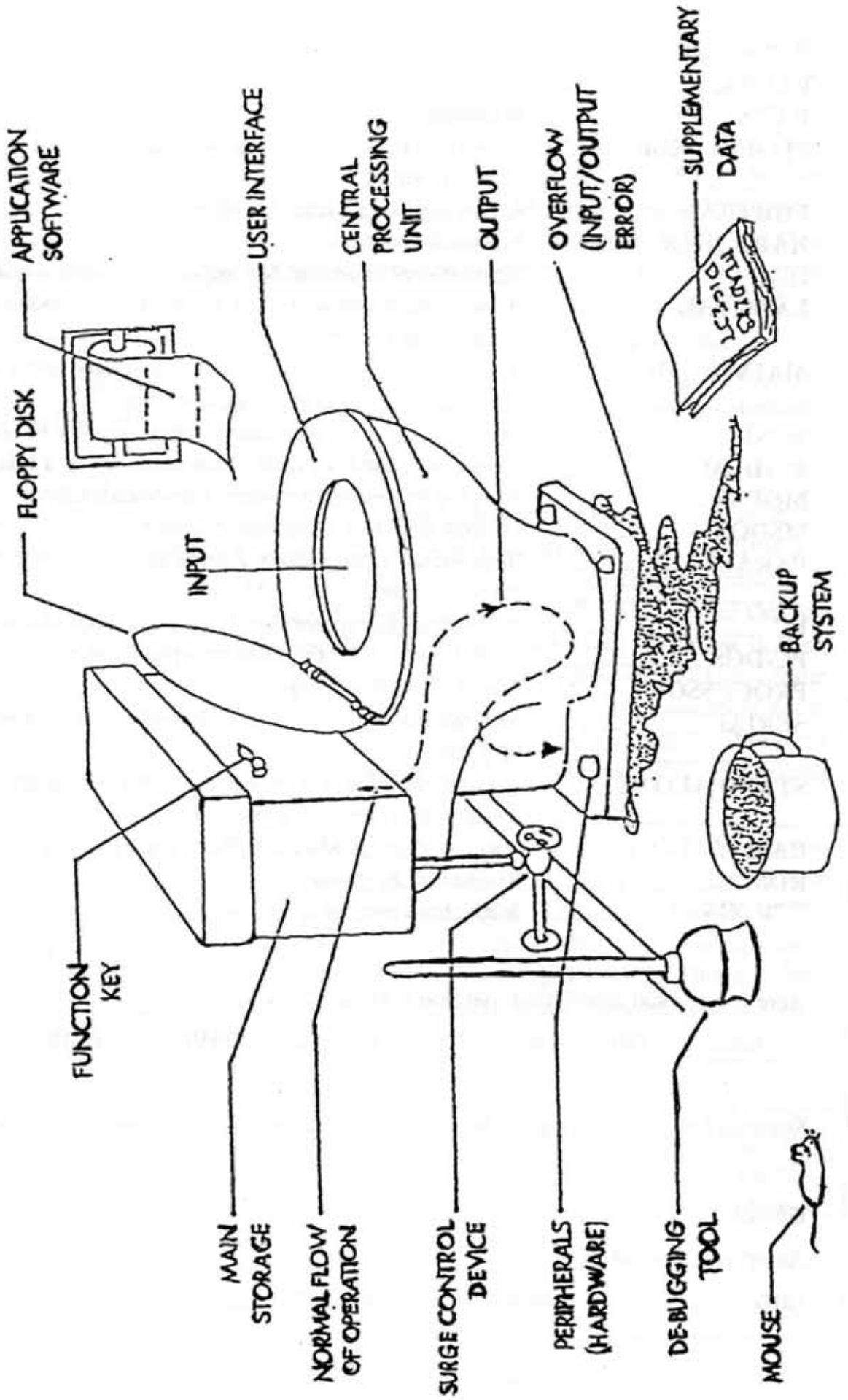


GOJSB.

Aided and abetted by

GOJZP

Understanding Computer Technology



Where's the D&W?

Below is a list of nearly every pub or hotel that has been used for a D&W. Most of them are still used quite often, but some may have only been used once or twice, or after a DF hunt. They cover nearly every part of Wirral, so there is a chance of one near you. Suggestions for new locations are, naturally, most welcome.

Acorn	Bebington	L63	Whit
Albion Hotel	New Brighton	L45	J.S.
Anchor	Irby	L61	Whit
Argyle	Birkenhead	L41	Hig
Arrowe Park Hotel	Arrowe Park	L49	Whit
Basset Hound	Thingwall	L61	Whit
Black Horse	West Kirby	L48	Whit
Black Horse	Heswall	L60	Bass
Blue Anchor	Hoylake	L47	Hig
Bromborough Hotel	Bromborough	L62	Whit
Bridge Inn	Port Sunlight	L62	Tet
Brown Cow	Bebington	L63	Whit
Caernarvon Castle	Oxton	L43	Whit
Eastham Ferry Hotel	Eastham	L62	Whit
Farmers Arms		L46	Whit
Fox and Hounds	Barnston	L61	Whit
Green Lodge	Hoylake	L47	
Greave Dunning	Greasby	L49	Bass
Greenland Fisheries	Neston	L64	
Harp	Ness	L64	Whit
Irby Mill	Irby	L61	Hig
Lighthouse Inn	Wallasey	L45	Whit
Pensby Hotel	Pensby	L61	Whit
Primrose	Liscard	L44	Hig
Railway Inn	Meols	L47	Whit
Red Cat	Greasby	L49	Whit
Ridger	Newton	L48	Green
Ring o' Bells	Caldy	L48	Whit
Saughall Massie Hotel	Saughall Massie	L46	Whit
Seacombe Ferry Hotel	Seacombe	L44	Whit
Seven Stars	Thornton Hough	L63	Whit
Shrewsbury Arms	Oxton	L43	Hig
Shrewsbury Arms	Neston	L64	
Stirrup	Arrowe Park	L49	Bass
Swan Hotel	Prenton	L43	Bass
Telegraph Hotel	New Brighton	L45	Whit

Twelfth Man	Upton	L49	Hig
Twenty Row	Wallasey	L45	Whit
Victoria Lodge	Tranmere	L42	Whit
Victoria Hotel	Heswall	L60	
Wheatsheaf	Ness	L64	Whit
Wheatsheaf Inn	Raby	L64	Hig
Wirral Hundred	Oxton	L43	Hig
And a few more			

DISTRIBUTION OF MEMBERS

In the Autumn 1984 edition of Airwave, I produced a table and map showing the distribution of the membership as of January that year. The total number of members figure used then, as now, is that of those on the books. This is to say, those who have just joined, renewed or were current members at the end of the previous year and have not renewed so far.

Produced below are the figures for then as well as now, using the same criteria, and once again based on postcodes. By the selection of certain codes, the Wirral can conveniently be divided into four areas, all roughly equal in size as follows:-

- North East = Birkenhead, Wallasey, Moreton.
L41, L42, L43, L44, L45, L46.
- North West = Hoylake, West Kirby, Upton, Irby.
L47, L48, L49, L61.
- South West = Heswall, Neston, Willaston.
L60, L64.
- South East = Bebington, Eastham, Ellesmere Port.
L62, L63, L65, L66.

Area	Code	Jan 84	Jan 90	Jan 84	Jan 90
		Numbers		Percent	
North East	L41	2	1	1.82	1.72
	L42	7	0	6.36	0
	L43	12	1	10.9	1.72
	L44	12	3	10.9	5.17
	L45	12	3	10.9	5.17
	L46	8	4	7.27	6.89
North West	L47	8	3	7.27	5.17
	L48	5	5	4.55	8.62
	L49	7	14	6.36	24.14
	L61	13	8	11.82	13.79

South West	L60	6	8	5.45	13.79
	L64	5	3	4.55	5.17
South East	L62	3	0	2.73	0.0
	L63	7	2	6.36	3.45
	L65	0	0	0.0	0.0
	L66	3	3	2.73	5.17
Other		4	1	3.63	1.69
A licences		29	25	26.36	42.37
B licences		60	32	54.54	54.23
Non-licenced		18	2	16.36	3.39

It should be remembered that these figures are only a 'snapshot' of the membership from the same place, six years apart. In its own right, 1983 saw an inflated membership following the CB boom, followed by a decline in 1984, i.e., just over twenty of those in the January 1984 figure did not subsequently renew that year, and in the time in between our Club, along with most others, has seen the results of a general decline in the hobby as a whole.

Gerry Scott, G8TRY.

ARTICLES FOR SALE

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In good clean condition.

Approx 60 c.p.s.

Parrallel Interface

£175:00 o.n.o.

Includes Manual.

Sheet Feeder For Above .

Requires Attn.

Also Available.

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BSX 1 BOARD

The Cheap and Easy way

onto Packet Radio.

Complete and Working.

But not boxed.

£20:00 o.n.o.

All Items from :-

PETER G8GYO

342-2879

Morse Nights

As you may know, we hold Morse classes at the club every Thursday evening from about 8:45pm. We are always looking for more people to come along and try their hand at the dots and dashes.

So far we have managed to get six people through the test without any major problems :-

Bill Hough	is now G0IHF
Rick Hartley	is now G0IVL
Phil Langford	is now G0JSB
Paul Robinson	is now G0JZP
Peter Morton	is now G0LHT
and Ian Tuson	is now G0MQR

We are currently teaching 2 or 3 people approaching test dates, and we would love to have a few new starters along to have a go. Please remember that the Tutors give up their time to teach people, and the more that are there, then it makes it much more worth while. It is not all hard slog, as many think, we have a natter and a pint as well. After all its only a few hours a week, and you could soon be on the HF bands joining Neil and the group on their weekly skeds with Keith in Australia.

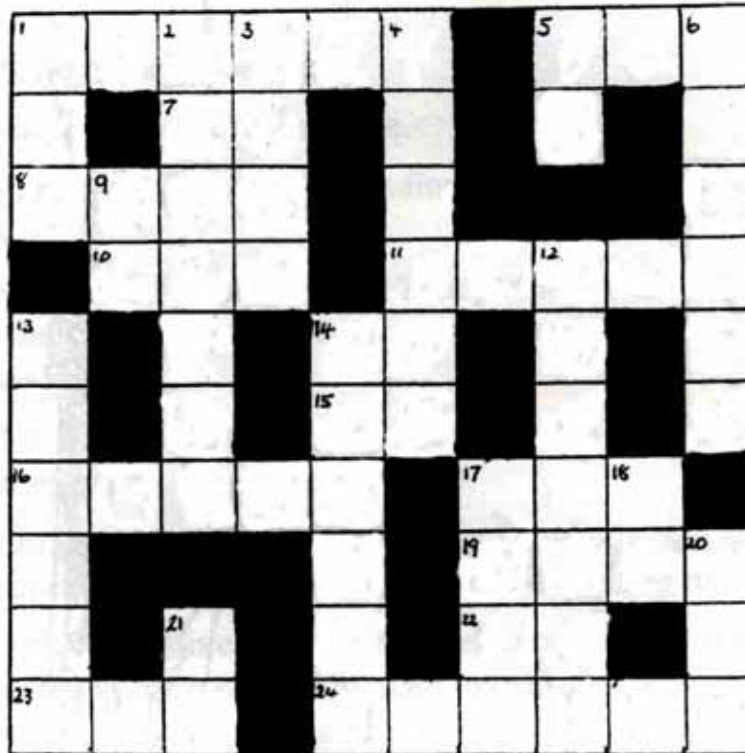
New Members.

In less than twelve months, we have gained no less than nine new members. We hope that you will be familiar with some if not all of them.

Please welcome :-

G1UJU	Bryan Williams, from Irby.
G7FVR	Cliff Heywood, from Parkgate.
G1XAH	Stan Cross, from Upton.
G1WOY	Paul Firmstone, ex- Neston, now -GW0MDQ, N. Wales.
G8UIY	Gerry Platt, from Moreton.
G6XTV	Derek Hough, from Greasby.
G1NXB	Roy Fardoe, from Wallasey.
G4YJV	Charlie Abbott, from Irby.
G4UPB	Grahame Read, from Little Sutton.

Spring Crossword



This Crossword has been devised for your entertainment. Some clues are easy, some are a little harder. Have fun, and the first totally correct solution wins a prize. Answers to Phil GOJSB.

Across.

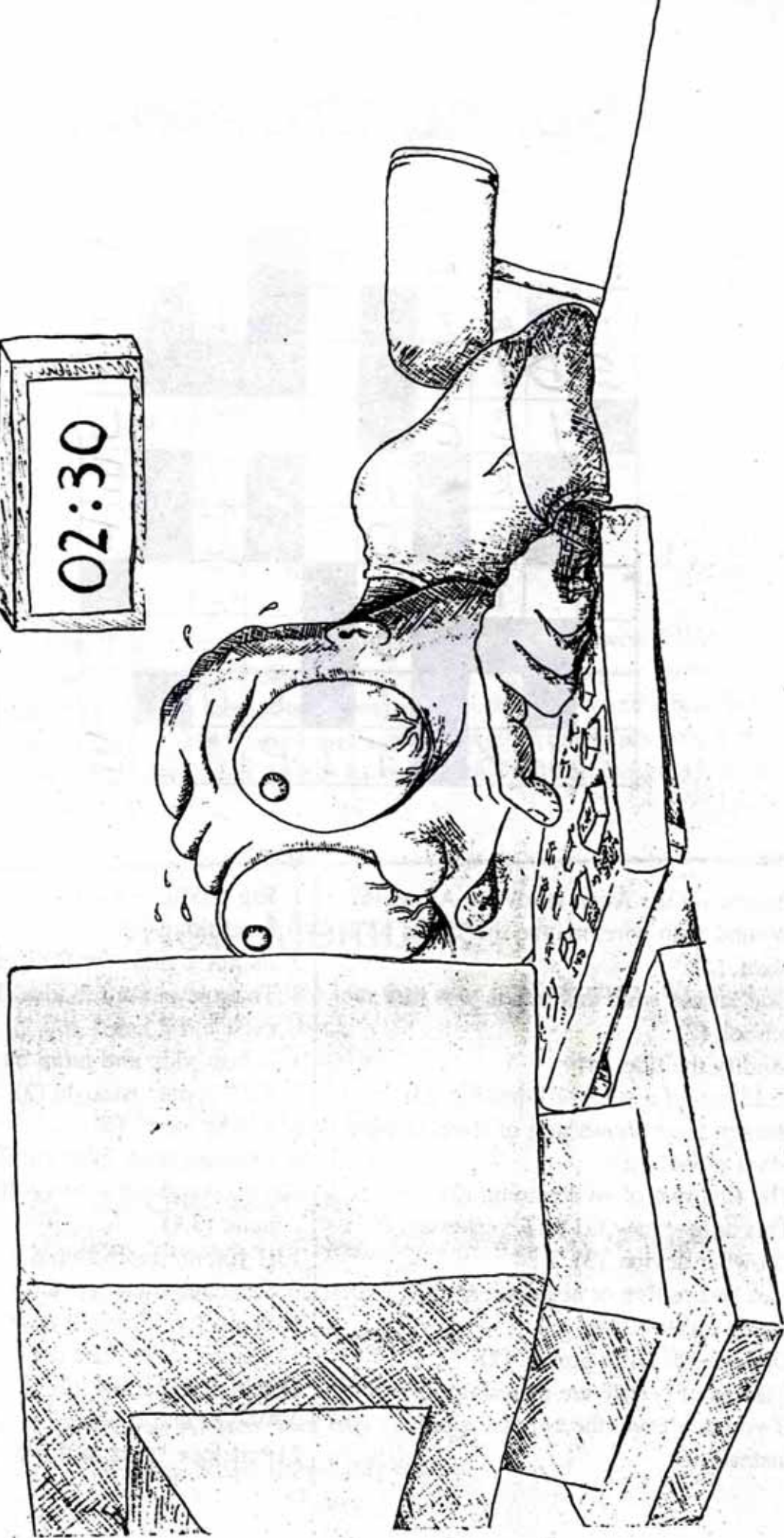
- 1 Bundle up the Alien ready for Axing.(6)
- 5 Wound with wire, maybe this could be a plant. (3)
- 7 God knows what this lesson was like at school. (2)
- 8 Modify the tide. (4)
- 10 Cold end of a stick of liquorice. (3)
- 11 Broken plate shows part of floral design(5)
- 14 Maxi model. (2)
- 15 The first two of an Austrian. (2)
- 16 This copper saw G1XYP yesterday. (6)
- 17 Crowbar device. (3)
- 19 Can be positive or negative, sounds like eating utensils. (4)
- 22 Opposite of Hi in power. (2)
- 23 Classes of people are mixed up. (3)
- 24 If you don't win the cup, try a pint instead. (6)

Down.

- 1 Rig producer found in Happy Eater at lunchtime. (3)
- 2 Its not a game for Rick etc. (7)
- 3 This old aircraft is ideal for hf support. (4)
- 4 A hop, skip and jump from 2 to 70. (6)
- 5 22/7 is near enough. (2)
- 6 A wee room. (6)
- 9 Charlies mate from the CID. (2)
- 12 You could get a divvy here or some help. (3,4)
- 13 If you are more stupid than the rest, then this could help subdue your illumination (6)
- 14 Wait !! A vice will do this. (4,2)
- 17 Second in and last out of the grain store (4)
- 18 Initially Seamen. (2)
- 20 Waves and channel on your dish. (3)
- 21 Penelope starts in the Gymnasium. (2)

Airwave Editors Office

02:30



The following is reproduced from a trade union magazine, in which a member took the opportunity to take a humorous look at support for the union at ground level. If the idea of a branch meeting were substituted for club meeting, I wonder if we would see much difference ?

1. Do not attend branch meetings.
2. If you choose to attend, turn up late.
3. When you attend a meeting always find fault with the officers and Committee.
4. Never accept an officership but get annoyed if you are not appointed to serve on the Committee. However, if you are elected do not attend any Committee meetings.
5. If invited to offer an opinion by the Chairman on a matter of importance, have nothing to say.
6. Tell the Officers, Committee members and anybody else who will listen how things should be done, but only after the meeting has closed.
7. Never do anything more than is absolutely necessary, but when you see the Committee setting about important issues, start howling that the branch is being run by a clique.
8. Always be on the look-out for something wrong and as soon as you find it, resign.
9. Resign at every opportunity, but do not leave it at that - try to persuade all of your mates to resign too.
10. During the meeting, agree with everything that is said and then disagree with everything outside.
11. Never disclose information that is in your possession - it might help the union.
12. Having taken no interest in Union affairs throughout the year and not attended a single meeting, attend the AGM and vote against all the Officers and Committee just for the fun of it.
13. Whilst attending a meeting, ensure you make as much noise as necessary during any debate which is not a burning issue affecting you yourself.
14. After the AGM, complain that the Branch is not being run democratically and accuse the Committee of being dictators.
15. When all else fails, curse the Secretary and/or the Chairman, preferably behind their backs.

GB7OAR BBS : FILES AREA

I thought I would document a couple of the facilities now available on the BBS which may help you get even more out of the system.

One of the features for listing mail from **KNOWN** callsigns or aliases is the use of the **L> G4OAR** or **L> AMSAT** to list all mail addressed to G4OAR or AMSAT and of course the opposite **L< G4OAR** to list all mail FROM G4OAR. Now you also have the ability to search for callsigns you only **HALF** know !! With the use of wild-characters you can use **L> G4O*** or **L< G4O*** to list messages to and from all callsigns beginning with G4O and hopefully among those will be the one you couldn't remember!

Another very under-used facility is the **REQFIL** and **REQDIR** command for requesting both directories and files from remote BBS's. This runs almost automatically at the BBS. I say almost, because the server programme which carries out the function takes up quite a bit of memory and to run it I have to take 2 user windows off air. Ok it only takes a few minutes but it is not feasible to leave it running all the time. However BBS's up and down the country have file sections and there are many interesting and useful files to be read. For all the instructions type **DA REQHELP**

Talking of the file section brings me to summarise a few of the files on GB7OAR, some of which are new and many of which are now right up to date.

WA directory now includes a file called **BEWARE** which names all the programmes known to be suspect virus versions... A **MUST** for the computer buff.

WB is for Bandplans, and perhaps over the next few months we can add a few more.. as a reference for where we can and can't go.

WC lists all the GB7 mailbox details for the UK complete with files about UK network.

WD gives the latest Amprnet details and **HOST** files and is an area I think will be expanding in the future as more stations start using **TCP/IP**.

WE directory now includes **ALL** the **MOBILE** files for installing amateur radio equipment into a range of popular makes of vehicles. Complete with tips on the easiest approach to the job, together with recommendations of where to site radio equipment in a car.

WF is a new one, which lists forthcoming Rally's from January to end of June with all the necessary contact details... by **G6CZV**

WG is building up to be a **R.S.G.B.** orientated directory, which includes 10 metre beacon list, and Zone Plans together with some interesting items on Company Law... as it applies to the **RSGB**.

WH is the Raynet directory with details of all the Group **NET** skeds... complete with frequencies and times.... a must for the keen Raynet member.

WI contains the minutes from the latest UK SYSOPS meeting... currently SYSOP 8.

WJ directory is another NEW one featuring SPACE NEWS. An up and coming news item and attracting new readers every day. It originates from KD2BD in Wall Township, and is distributed around the world.

WL lists all the KA nodes in the UK complete with callsigns, aliases, frequencies.. etc etc...

WM is the NWPUG directory which includes a copy of the latest committee meeting minutes, together with an application form you can print out.

WN is the TNC directory, with plenty of information on TNC's and packet including the latest G6LTR KAMKPC bulls for ALL KANTRONIC users, and the very latest word on eprom upgrades.

WP has some useful basic programmes for the constructional ham, including a very thorough and detailed file on components... colour coding/values etc.

WQ is the directory for finding out the latest mods available to YOUR rig... complete with the easy to follow instruction on bringing it up to the very latest spec.

WR and **WS** hold the latest RNARS and RSARS respectively, list of members and if your a member of either group.. its a must to have in the shack.

WT is a specialist satellite directory with some excellent files written by Andrew G8TJZ @ GB7BPL. He covers the range of amateur satellites which are currently operational, and tells you all you need to know to get involved.

WU is the Scout directory, and has the latest definitive list of Scout radio operators in the World. This is increasing every time a new one is produced and is invaluable to those involved with Jota and the many Scout special event stations.

WV is the last one... and is completely different ! It is a list of some very useful phone numbers which you may not be able to find easily.. ALL related to Radio and computers... and I welcome additions.

Well there you are... I guess you can't wait to connect and read the new ones, and check on the ones you did know about... If you have a file or some information which could be of help or interest to others in our common hobby, then please upload it to the most appropriate directory.

At the moment I have made ALL the directories accept uploaded files, but please drop me a line to let me know what you have done.

To those who are not yet operational on packet.. just think what you are missing ! Besides all the subjects mentioned here is the facility to ask anyone in the world for help on your problem and receive many answers in return to the TNC in your own shack... it really is the largest reference library ... just waiting to serve you.

73 and have fun

from Neil, G4OAR

Useful Phone Numbers taken from GB7OAR BBS

NAME	NUMBER
AMRAC	0736 518818 (BBS 300/300bd)
AMSAT UK	01 989 6741
ACORN COMPUTERS	0223 245200
ARRL USA	0101 212 925 7000
AMCOMM	01 992 5765
AMDAT	0272 699352
AMSTRAD	0277 228888
ANDREWS COMPUTER SERVICES	01 950 9381
APPLE COMPUTER (UK) LTD	0442 60244
ARE LONDON	01 997 4476
ARC EARLSTOWN	09252 29881
BORLAND INTERNATIONAL UK	0734 32002
BREDHURST ELECTRONICS	0444 400786
CAMBRIDGE COMPUTERS LTD	0223 312216
COMMODORE (UK) LTD	0623 770088
DEE COMM	0384 480565
D.M.R.ELECTRONICS	0274 817889
DRAE DAVTREND LTD	0705 372004
DRESSLER COMMUNICATIONS	01 558 0854
GAREX	0296 668684
HEATHERLITE	0964 550921
HRS ELECTRONICS	021 789 7171
HRS ELECTRONICS (COMMODORE IC's)	021 789 7575
ICOM UK LTD	0227 363859
	0800 521145 (HELP LINE)

ICS ELECTRONICS (ARUNDEL)	024 365 665
ICPUG (COMMODORE USERS)	01 579 1229
LOWE ELECTRONICS	0629 580800
MAPLIN ELECTRONICS B'HAM	021 384 8411
MICROWAVE MODULES	051 523 4011
McKNIGHT CRYSTALS	0703 848961
NORTHGATE ELECTRONICS	0244 313333
RANDAM ELECTRONICS (TONNA)	0235 23080
REVCO	0364 73394
RSGB	0707 59015
RSGB	0707 59260 (LATE NEWS)
SISKIN ELECTRONICS	0703 849962
SMC	0703 255111 (SOUTHAMPTON)
SMC	0532 350606 (LEEDS)
SPECTRUM COMMUNICATIONS	0305 62250
STEPHEN JAMES	0942 676790
WESTLAKE	0409 253758
ZORTECH LTD	01 854 1194

This is a list for REFERENCE ONLY, and no responsibility is accepted for any matter arising from any contact made.

If you have any useful numbers to add, please leave me a message and I will update the list at the earliest... I hope you find it handy.

73 de Neil, G4OAR

25th October 1989

CONTEST CALENDAR 1990

JANUARY

- 21st 144 CW
(Also Oldham Rally)
28th 70MHz Cumulative Session 1

FEBRUARY

- 4th 432MHz Fixed
11th 70MHz Cumulative Session 2
25th 70MHz Cumulative Session 3

MARCH

- 3/4th 144/432 - (Also G-MEX Rally)
11th 70MHz Cumulative Session 4
25th 70MHz Cumulative Session 5
Also 70MHz Fixed

APRIL

- 8th 50MHz Trophy & Fixed

MAY

- 5/6th 432 Trophy & 432-24GHz
19/20th 144MHz & SWL

JUNE

- 10th 432CW + 432FM
(Also Elvaston Castle Rally)

JULY

- 7/8th VHF NATIONAL FIELD DAY
28th 144MHz Low Power
29th 432MHz Low Power

AUGUST

- 12th 23cms / 13cms Trophies

SEPTEMBER

- 1/2nd 144 Trophy
16th 70MHz Trophy
30th 50MHz CW

OCTOBER

- 6/7th 432-24GHz
9th 23cms Cumulative Session 1
17th 70cms Cumulative Session 1
21st 70MHz CW
25th 23cms Cumulative Session 2

NOVEMBER

- 2nd 70cms Cumulative Session 2
3/4th 144 CW
10th 23cms Cumulative Session 3
18th 70cms Cumulative Session 3
26th 23cms Cumulative Session 4

DECEMBER

- 4th 70cms Cumulative Session 4

That's all of the dates for the the forthcoming year. Please note that there are changes compared to previous years.

As a group within the club, we currently hold some 50 certificates for our efforts in the past few years, and our aim is to make this a lot more in the near future.

Contests are good fun, and you can learn a lot about one of the many aspects of radio. If you would like to join us up in the Welsh Mountains, please contact me.

Best 73.

Phil G0JSB.

VHF National Field Day 1989.

We looked forward to this event with great anticipation. Following our placing the previous year, we hoped for a possible win in this event. During the preceding months, I wondered if we would ever get enough people together to put the show on the road. But, unlike last year, I was pleasantly surprised to receive numerous telephone calls from many amateurs pledging their help. Albeit not many from members of the club. Please try and help in this years event if you possibly can.

The week previous was the usual bedlam, with masses of equipment to collect and check out. Then Friday morning dawned; collect the caravans, stock up the food, fill up water containers, etc.. etc... then, with a few milli-seconds to spare, lunch was devoured. A quick call on the radio rounded up those who were going up to help setup. All the gear was packed into 2 caravans, 2 cars, and a box trailer, kindly loaned, so then it was wagons roll and head for the hills. There was only one stop on the way, that was for Frank (G8REQ) & I to collect some of our mates for the weekend. If you haven't heard the story by now, where have you been?

We actually managed to get on site (CYRN-Y-BRAIN nr Llangollen) this year without too many problems, a quick brew was had and then it was all hands on deck. As we were operating in the restricted section, there were no big masts to erect as we were limited to a single antenna and a 32ft. mast for each of the bands. 4 mtrs went into my old caravan, 2 mtrs in the box trailer and the 70 cms & 23 cms stations were in the old faithful club tent. The only major problem that occurred in setting up was that the TS 430 on loan from Peter (G0LHT) was missing a vital switching box for the transverter. Chris (G0DVV) came to the rescue and sped off to Birkenhead on his motor bike, to collect the box from Denis (G3UVR) who had been detained at work.

There was no real DX to be worked this year on any of the bands, but we still had plenty of fun working the usuals. 4 mtrs closed down at 2300 hrs and the antenna for 6 mtrs was erected in its place for the start of that section at 0600 hrs the next day. With that Frank (REQ) and myself set off for a few hours kip, leaving those still standing to carry on into the wee small hours. These included Neil G4OAR, Jan G6SNO, Chris G0DVV, Eddie G6XHG and Paul G0JZP. At 0200 I managed to drag Frank out of bed and we then took over for the night shift.

With matchsticks keeping eyes open, the rest of the contest went off with only one problem, about $\frac{3}{4}$ hr. before the end, the 2m transverter decided that the antenna change over relay was going to lock up. This meant that the power to the transverter had to be switched off every time we reverted to receive.

All the gear was packed away into the vehicles, and we set off for home. Now this should really be the end of the story but as always we never get away without the odd problem on

Field day. After travelling about 2 miles we noticed some smoke coming from one of the wheels on the trailer. It subsequently transpired that this was due to one of the tyres rubbing on the bodywork of the trailer. After unpacking the few items that were stored in it and putting them into Steve (G7BBF's) van we set too repairing the trailer. This was eventually done by removing the wheel and putting some large washers on to act as wheel spacers. Thank heaven for Frank's tool kit and Paul (G0JZP's) idea. We then set off again and eventually arrived home at about 8:00 pm.

The next few weeks were spent returning the equipment to its owners and entering the contacts into the computer for scoring. The results are shown in the table below, and they reflect the superb efforts of all who took part, to make this an enjoyable and successful weekend. A very special thanks to Geoff G8AAP who travelled from Mansfield to help us out on 70 & 23 cms.

Contests are hard work, but the work is normally rewarded with a good placing for the club. Please come along, even if only for a few hours and see what it is all about. Even if you are anti-contest you will be surprised how much fun they can be, ask G4UDR our latest convert !!!

1990 its Wirral for the Cup..... We hope.....

Wirral & District ARC. OVERALL SECOND PLACE.



50MHZ 1ST PLACE. GW3UVR/P
70MHZ 3RD PLACE. GW3UVR/P
144MHZ 5TH PLACE. GW4MGR/P
432MHZ 3RD PLACE. GW0DVV/P
1296MHZ 2ND PLACE. GW0JSB/P



Many thanks to all who took part in this sterling effort.
PHIL...G0JSB... CONTEST MANAGER.



Those Darn Fox Hunts Again..

This short article is for the benefit of those who may not be too familiar with the fairly recent history of one part of the Wirral. In other words, it's dedicated to those who still don't have a clue as to where the fox was on the Eileen Medley DF Hunt, even after the clues were dropped. So, while you drive towards the toll booths of the Kingsway Tunnel, cast yourself back in time, even as little as thirty years, (I was only 5! Ed.) and you would have been travelling by train along that road....

As far back as 1863 Parliamentary permission had to be granted to connect Hoylake and Seacombe by rail. However, mainly due to the high cost of building cuttings and fourteen over-bridges, the line was not opened until June 1895. This was originally intended as a temporary station. It was planned to extend the line a further 140 yds where the railway and ferry terminals were to be built side-by-side. This proposal was never carried out. The station closed to passengers on January 3rd 1960 and to goods on July 17th 1963. Flats now occupy the station site. Virtually the whole of the track bed, from the end of Bidston Dock, to beyond Wheatland Lane near Seacombe, has become the Mersey Tunnel approach road. The offices and marshalling area were once the sidings and marshalling area for the branch line. Today, where the bottom of Mill Lane crosses the approach road, there once stood the Liscard and Poulton Station. In fact, right by the end of Station Road.

Gorsey Lane used to be straight, running over the railway line on its way from Dock Road to Poulton Road. Traffic from Duke St. bridge had to make an awkward left-right when entering Wallasey by this route. Construction of the tunnel approaches called for a new roundabout adjacent to the old railway bridge. Gorsey Lane became a dual-carriageway, aligned with the new roundabout and in a straight line with the end of Duke St. Upon opening, the new road took its predecessors name, the old road alongside the gasworks became "Old Gorsey Lane" as far as the old bridge (which was subsequently demolished), and the whole area was landscaped.

So, for the benefit of those who did not take part, or just could not find the fox, when I say "we were at the top of Old Gorsey Lane, adjoining the M53 approaches and roundabout," you should know exactly where we were..... Well, at least perhaps the clues mean something.

Thanks to all those who took part, and Congratulations to the winning team, with commiserations to the runners-up for what was a very close finish.

Gerry (G8TRY) assisted by Roy (G1NXB) the foxes....

The Other Side Of The Eileen Medley DF Hunt.

Following on from Gerry's explanation of the hunt, this is a short piece on the other side of the evening. After assembling at the start for 8:00pm. the initial bearing was taken and it pointed towards Birkenhead. So off we set, doing a steady 30 MPH (honest) towards Bidston Hill. Here we took a further reading and this pointed towards the Gorsey Lane area. After a short drive we arrived near the roundabout where Gerry was hidden. We then asked for a transmission, he was about 57 ish on the meter and pointed further up the road. After driving some 200 yds up the road he was 59+ back the way we had just come from. So back down the road again and dived into the bushes in the middle of the roundabout. You guessed it NO GERRY to be seen, his signal was now again down to 57. After repeating the trip up and down the road 3 times with the same results each time, we decided another on another plan of attack. We drove up Old Gorsey Lane to the top, ie about 15ft away from his lair. Another call was made and he was 59 but not as strong as when we were further away, so off we set again for another look around not realising just how close we had just been. After driving around the dock road and just about every other street in Wallasey we eventually found him nearly one hour later just in time to be next to last to finish.

The reason for our not finding him was down to the fact that Gerry kept transmitting into a dummy load every time I called him from close in. Then when I moved away he upped the power again. Nice one Gerry !!! Please bear in mind though, I WILL GET MY REVENGE.... and hopefully will not fall into the same trap again.

73 Phil

Sins of Praise Wreck Sunday

VIEWERS who tuned in to watch TV's Songs of Praise found themselves watching a porn video instead.

Fans of the religious programme expecting to see hymn-singing churchgoers were stunned to see naked men romping across their screens. The show lasted almost an hour on Sunday.

Last night the Depart-

ment of Trade Radio Investigations Service was trying to discover how the scenes appeared on TV sets in the Cardiff area. One theory is it was accidentally transmitted from a video signal in a nearby room.

Researcher Sophie Thomas, 23, who alerted police, said: "It was certainly not the sort of thing anyone wants to see on Sunday night."

AMATEUR TV EQUIPMENT

FOR SALE

ONLY USED ONCE

**A MUST FOR THE RADIO HAM WHO
WANTS TO TRY SOMETHING NEW.**

CONTACT :-

NORBERT @ GB7OAR

Stroke P or not Stroke P, that is the question.

The new licence is still causing some problems to people when it comes to identification away from the station address. How many times in 1989 did you hear someone signing with /P or /A at the wrong time? Perhaps you didn't notice, or worse still, did so yourself. A prime example of this was during one of our fox hunts, with stations calling in as /P, and then trying to tell the fox that he should be /P or asking if he was in a car.

So let's get the record straight. On 1st January 1989, the new licence conditions came into effect. These had been much publicised and generally praised, especially by RadCom and PW, who both gave the full details with their own 'plain mans guide' to them. The DTI had them published in a booklet (BR68) which was sent out with licence renewals, so nobody has any excuse for not having them available.

To clarify the point in hand, let us look at the relevent parts:-

Location (Sub-clause 1(9))

- (a) at the Main Station Address
- (b) at a Temporary Location ("Temporary Location" means a location, other than the Main Station Address, in the United Kingdom, and in a fixed position);
- (c) while Mobile ("Mobile" means located in the United Kingdom in any vehicle, as a pedestrian or on any Vessel in Inland Waters);
- (d) while Maritime Mobile ("Maritime Mobile" means located on any Vessel At Sea).

Identification (Sub-clause 7(3) and 7(4))

- (3) At a Temporary Location, the Licencee shall:
 - (a) use the suffix "/P" with his callsign and give the location of the Station to an accuracy of at least 5km. ...or
 - (b) give prior written notice of the location ... (to the RIS)
- (4) When Mobile, the Licencee shall use the suffix "/M" and when Maritime Mobile the suffix "/MM".

The main point of all this is that when you are not operating from home, and have not told the RIS, you are either /P, /M, or /MM. You **cannot** be /A anymore. The whole ambiguous wording about 'temporary' and 'alternative' premises and locations has gone, and so too have the hypothetical arguments about caravans and tents on Welsh hillsides. If you are in a fixed position then it is a temporary location, and you sign /P and give a fairly accurate location during overs. The CEPT interpretation for a portable station 'includes a station powered from the mains electricity at a temporary fixed location such as an hotel). No longer do you have to worry about being in a sea, river or estuary, or whether it's a public service vehicle you're on, because /M takes care of it if you are mobile, on foot or vehicle or vessel or anything that is not fixed on land or water (as long as the tide does not come

that far). But if it does, or else you are in territorial or international waters, then use /MM. 'Vessel' includes hovercraft, but use in a aircraft or any airborne vehicle is still prohibited.

Now, are there any doubts about all those (except the fox) in the fox hunt being /M? Should you need any convincing, remember that you only have to log the transmissions at the Main Station Address and all Temporary Locations, so gone is the Log for /M and all it now entails.

HONEST FRED'S GUIDE TO THE AD'S

A short, disbelieving guide to some of our favourite silly sayings !!

Buying a used car or bike is never easy. Leaving aside the pitfalls of visiting the dealers, then private sales market is a better bet, although still risky. Before venturing into the classifieds, any potential buyer should be able to translate the language used in the small ad's. We hope this item will be a guide on your interesting journey.

One Owner from new = AVIS Car Rental.

Never Crashed = But regularly scratched, dented, and set on fire.

One Lady Owner = Who revved it so hard, you'll need a new engine.

Low Mileage = Somebody has clocked it.

Many new parts = Many minor accidents.

Genuine reason for sale = Its a shed, and it should be scrapped.

Part-ex possible = I'm totally desperate to get rid of it.

Good runner = You'd better be, it spends 11 months a year getting fixed.

Mildly customised = Wife bent it round lamppost twice.

Needs slight attention = Also £3,000 and a fully tooled workshop.

Reconned engine = Scrapyard engine runs so ,selling while its going.

Recent Re-spray = It hides all the plastic padding.

Phone after six = I work nights and nobody will be in.

Must be seen = I will arrange to see you when its dark.

JSB...

Presentations Evening

During November we held the usual evening combining the presentation of the prizes and also, the judging of the Home Brew Competition. If you attended this evening then you may also have enjoyed some of the free food that was laid on.

The Home Brew was judged and there were two prizes issued. The first one was presented to the best entry in the Novice section, and the second one to the best entry in the more experienced constructor section. The results of this and of the awards for DF Hunts are shown below :-

Rennie Parr Trophy. (Novice) won by Peter Davidson Jnr. G6PLY

Dave Elliott Trophy. (Experienced) won by Chris Brown. G0DVV

Eileen Medley Cup for DF was won by John Fogg. G8UZZ

G8PMF Rose Bowl for the Revenge DF was won by Phil Langford. G0JSB

Sunday Shield for DF was won by Phil Langford. G0JSB

The 10th Anniversary Cup for Services rendered won by Eric Gethin G6HWD

It was an honour to have Audrey Parr, Rennie's widow, with us to make the first ever presentation of the Rennie Parr Trophy. She enjoyed the evening, and passes on her best wishes to all.

We hope that all of you will enter as many of the 1990 events as you possibly can, and may the best man or lady win.

M. J. Hilton

Personalised Clothing

Callsign T-Shirts & Sweatshirts

T-Shirt or Sweatshirt printed with your Name, Callsign and RSGB or RAYNET logo.



T-Shirt Colours:
White, Sky Blue,
Royal Blue &
Yellow.

Sweatshirt Colours:
Navy Blue, Red,
Yellow, Pink,
Turquoise & Royal
Blue. (XXL Red &
Navy only)

Sizes:
Small, Medium,
Large, Extra
Large & XX Large
(XXL Sweatshirts
only)

Printing Colour:
White or Black

T-Shirt with Name and Callsign	£4-50
Sweatshirt with Name and Callsign	£9-00
XXL Sweatshirt with Name and Callsign	£10-00
(Add £1-00 to above for RSGB or RAYNET logo)	

ADDITIONAL WORDS
Text can be added to the garments at a cost of 12p per letter. This can be used for club names etc.

DELIVERY Orders are normally dispatched within 7 days of receipt subject to stock availability.

ORDER DETAILS
Please ensure that you have included full details, allowed for price adjustments due to size and post and packing charge.

POSTAGE The charge for postage and packing is 75p per shirt to a maximum of £2-00. Baseball cap prices include post and packing.

Callsign Baseball Caps

American style Baseball cap printed with your callsign or RAYNET logo - £3-90



Baseball caps printed with your name or callsign. These caps have an adjustable back strap so one size fits all.

RAYNET Baseball Caps black or white logo printed on an American style baseball cap.

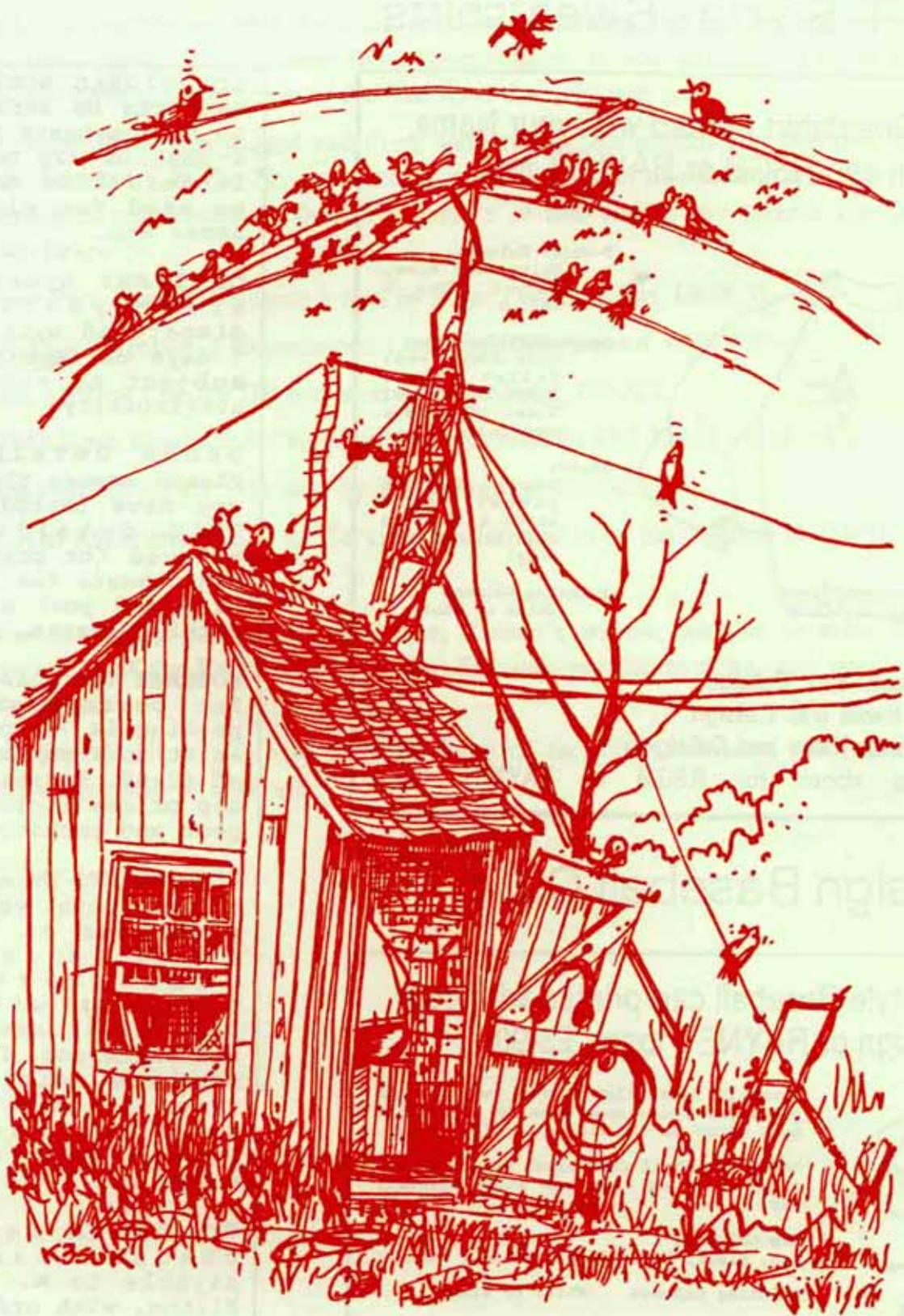
Cap Colours:
Red, Black, Royal Blue, Yellow & Pink

Printing Colour: White or Black

RAYNET Baseball cap with logo and Callsign £4-40 (black print only)

CLUB SHIRTS We are able to print your club logo on T-shirts or sweatshirts together with individual names and callsigns. The minimum initial order is only 10 sweatshirts. Please ask for details.

TO ORDER Send cheque, made payable to M. J. Hilton, with order to the address below.



K35UK