

SPRING 1984

AIRWAVE

» 325 «



WIRRAL AND DISTRICT
AMATEUR RADIO CLUB

G4MGR --- G8WDC

WIRRAL AND DISTRICT AMATEUR RADIO CLUB

CLUB EVENTS

WINTER AND SPRING 1984

(All dates are WEDNESDAY's unless otherwise noted)

FEBRUARY

- 1st. D&W at the Basset Hound, Thingwall.
5th. SUNDAY-144Mhz. CW Contest. 6 Hrs. CLUB ENTRY
Also- Bury Hamfeast.
8th. Film Night.
15th. D&W at The Wheatsheaf, Ness.
22nd. Talk and discussion on this years contest entries,
as explained by Phil, G6SNO.
29th. D&W at The Green Lodge, Hoylake.

MARCH

- 3/4th. WEEKEND. 144/432Mhz. Contest. CLUB ENTRY.
7th. D&W at The Albion Hotel, Albion St. New Brighton.
14th. 'Power Supplies' by Andy, G6ALH.
21st. D&W at The Hotel Victoria, Heswall.
25th. SUNDAY, 0100 Hrs. British Summer Time begins.
28th. 'Cars on 325' Mobile Treasure Hunt. Irby start & finish.
Organised by John, G8UZZ.

APRIL

- 4th. D&W at Irby CC, with NARSA finalisation meeting.
7/8th. WEEKEND. NARSA Rally, Pontins camp, Southport.
Support your Club stand.
11th. Visit & talk by the County Emergency Planning Officer,
Mr. E. Hampson, on his duties and office.
18th. D&W at The Seven Stars, Thornton Hough.
25th. 'Japanese Morse', by Norman Kendrick, G3CSG.

MAY

- 2nd. D&W at The Eastham Ferry Hotel.
8th. TUESDAY Inter-club Quiz Night, 1st. round, at Chester
Amateur Radio Society, 7.45 pm.
9th. 'Lets build a repeater' by John, G8UZZ &co.
13th. SUNDAY. First of the Sunday D.F. Contests.
16th. D&W at The Saughall Massie Hotel.
23rd. Equipment Demonstration by Gordon Adams, G3LEQ.
30th. D.F. Practice. From Heswall lay-by, arrive by 7.30 pse.

CONTINUED ON BACK PAGE.

WIRRAL AND DISTRICT AMATEUR RADIO CLUB

THE COMMITTEE

FOR 1984

CHAIRMAN	GORDON NICHOLAS	G8MMM	051-336 7143
TREASURER	SUSAN NICHOLAS	G6ADO	051-336 7143
SECRETARY	GERRY SCOTT	G8TRY	051-630 1393 227 1018
PUBLICITY MANAGER	NEIL McLAREN	G4OAR	051-608 1377
SOCIAL MANAGER	FRANK KNEALE	G4DBG	051-339 9623
ACTIVITIES MANAGER	PHIL LANGFORD	G6SNO	051-677 1947
NARSA REP.	PETER DENTON	G6CGF	051-630 5790

This is the line-up following the Sixth Annual General Meeting, on 11th Jan.

AIRWAVE 325

Airwave 325 is the periodic newsletter of this Club, and is published three or four times each year as events and articles dictate. Articles for inclusion are always welcome.

Produced on behalf of the Club by

The Secretary,
Gerry Scott, G8TRY,
19, Penkett Road,
Wallasey,
Merseyside.
L45 7QF

(New address as from 23/9/83)

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 is just off the main road between Irby and Greasby, about half-way along on the Easterly side. PLEASE park on the top car-park, and walk down, thus leaving the very limited space by the Clubhouse available for bar staff, guest speakers to unload etc. and the disabled.

DO NOT PARK ON THE DRIVE - IRBY C.C. REQUEST. They know from experience that it is not possible for an ambulance to pass.

CLUB 'NET' FREQUENCY IS 145.325Mhz.

The net frequency of 313 was decided upon in 1980, as being otherwise completely 'dead' in this area. The Club assisted the purchase of xtals for rock-bound users (as most were). Please maintain activity on 325. Remember, use it or lose it. It is in grave danger of being 'pinched' unless we continue to keep it going, thus making others QSY.

Here at last is the long awaited 'didn't quite make it in time for Xmas' edition Sorry about that, but since moving house, the dust has hardly settled - literally! Everything has been one work buldge after another, so I must say thanks to all those who contributed to this mag. in plenty of time, only to find more delays in publication due to me waiting for promised articles, and then not having the time to carry-on.

So, as this is a very full edition, I'll press on with a number of items in brief. First, start writing those articles now, ready for the next edition.

1983 saw a very busy year for the Club, and involved more members giving talks. From motorcycle radio to cellular radio, and crystals to causes and cures of TVI. It also saw inter-club quizzes with Chester & DARC and well attended social events. We also exceeded 100 members, and we would like to see you all every meeting with no drop out's when the subs are due, ie. now. The year ended with the much publicised Radio Amateur in Space. Even if it did leave us all with a lot to learn, the publicity for us has been good, even if not directly connected with the Shuttle. For example, Raynet gained good air-time on Radio Merseyside, looking at amateur radio in the community, and they also recorded an interview with John G8UZZ, as Area rep., about the Shuttle, which went out in prime time. I gave an hours interview with the Wirral Globe, plus pictures (but it didnt reach print) as well as assisting the reporter who wrote the article in the Echo and Post.

1984 has started quite well, and the existing committee remains unchanged after the AGM, which produced the highest turn-out of members that we have ever had at an AGM. We also saw some competition for some of members. Without doubt, all of us on the committee would have liked to have seen Alan, G4EFP, join us on the committee, but there are only seven places. Alan has always been one of the mainstays in our contest efforts, and it is very encouraging to see that we now have enough support to maintain a contest station for the whole of a weekend again, with no small thanks to Phil, G6SNO, and his leadership in that direction. All we need now is an even greater support. The same applies to this years club stand at Pontins, at least it's getting better. What we could use, though, is members who would be willing to give assistance to the organisers. In that way, the club can take a larger share of the dividends of the show.

Now- as a service to members - two things. First, T-shirts. We are having T-shirts and sweat-shirts made to order, and printed with the club logo, ready for you to wear at Pontins, contests, BBQ's etc. Order from Phil, G6SNO.

Secondly, we have purchased a set of TVI filters for insertion in down-leads, and they are available on free loan to members only. The specification of them is very good, and they cover most applications in the HF to UHF bands. Also, we can supply these items for sale against orders, at a special price. Apply to the Secretary for loan of these.

The dates are now set for another round of inter-club quizzes with Chester, so we look to your support to help us win again. Staying with Chester, we have been invited, along with others, to attend a sale of surplus commercial radio-telephone equipment, by auction, at their premises, 7.30 prompt, on March 13th.

Please have a good look at the events diary. Included in it are about twelve contests that we want to enter, plus the Sunday DF series, and all the usual items, some of which we award prizes for. There is also talk of having a competition for home construction, just to keep you going. If you have any ideas for meetings that you would like to see, then let us know, and we'll see what can be done.

This year looks like being busy down by the river, with the Royal opening of the Garden Festival, on May 2nd, and the finish of the Tall Ships Race on August 1st to 4th. To leave you something to think about, how about a Special Event Station? Let's know.

73's. Gerry Scott, G8TRY. Secretary.

This newsletter is being sent to all members current up to the AGM, and those who have joined since. In the majority of cases, YOUR MEMBERSHIP WILL HAVE LAPSED immediately after the AGM. Please renew it promptly, to save us sending out a reminder. If your circumstances have changed, the please let us know, as you may be eligible for a different class of membership, and thus enable us to ensure that we collect and pay out the right amounts.

From the Chairman:-

Welcome to another edition of 'AIRWAVE 325', our Club magazine. I hope you are all enjoying the Club activities that we scheduled for you through the year and find the 'mix' of technical and social to be acceptable. With over 100 members to consider it is difficult to please all of the people all of the time.

This year has seen a 'beefing up' of the outside activities. Most listeners of .325 will have heard the new series of Sunday D.F. hunts but not everyone is aware of the greatly increased contest activity promoted by club members. Latest word is that our club considering lower than 2m and plans to work more C.W. contests.

Around the middle of the year we decided to implement a news-sheet to supplement the club magazine. Called 'UPDATE 325' it is distributed to all members and is designed to be more immediate than our traditional magazine. We use 'Update 325' to inform members of last minute programme changes as well as carrying reports and pictures of our recent events. For real up-to-the-minute news of course it is best to listen 'on the frequency!'.

Our in-house activities this year featured a newcomer to our traditional programme. Invited to Chester Radio Club for an excellent quiz night we returned the invitation and staged quiz at the club H.Q. A good night was had by all and it was great to see the interest and concentration on the faces of the audience.

Just a final word on activity on 145.325 Mhz. All club members should be proud of their operating procedure. Listening from a distance our protocols are 'fine buisness'. The only problem is that there is not enough activity. I think the problem is that most members have other interests as well as ham radio and don't spend all night in the shack in the 'traditional' manner. Hence you find most '325' activity is mobile. A happy side effect of a dynamic young club.

Hope you enjoy the rest of the mag. ...

Gordon. G8MM

Mary, Mary, quite contrary,
How does your Morse class go?
With dits and dars,
For hours and hours
Why is your progress slow?

Little Jack Horner
Sat in a corner
Tweaking his little black box.
He used fourteen puff
When two was enough,
Now his P double L never locks.

UPDATE 325

The concept of the club newsletter 'Update 325' was born at a Committee meeting acting on the realisation that Club Members were not as aware as we would like them to be about Club activities.

We are able to accept articles sent via your home computer, over the air, using 600 Baud ASCII. Gordon, G8MMM, and others can also receive 300 Baud and relay-on to Neil, G4OAR, for reception on his computer and printer. This is then photo-copied right into the Newsletter.

Introduction of this new facility is because time is at a premium and we do not have enough of it to sit down and write or type articles. Also, more and more of our members are buying home computers and it makes sense to use the technology and 'air' facilities that we have as radio amateurs. If sufficient members would do just one item each and dump the data via 325, we would be able to produce the Newsletter in just one evening.

We do, of course, want articles from everyone. It is not a computer club, and therefore we are quite prepared to make available typing facilities, but the more we can take 'off-air' the easier it will be to provide a regular Newsletter with a varied, topical content. If you would like to contribute a page, either text or mixed with a photo, then we are, for your information, using A4 size (approx 8"x11")

It therefore prompts me to appeal to you all to spare a few minutes to jot down items which would be of interest to us all, including photographs or diagrams, which as you can see, can be used either in the Magazine or Newsletter. So, in future, carry your camera!!!

"Update 325" will only be as good as the content, so we look forward to some regular contributors, and a successful "Update".

However, there is one problem - cost. The actual cost of making the Newsletter is quite small, but in order for it to be as immediate as possible, it needs to get to the membership as quickly as possible. About 50% of the members can be given a copy by hand at either a club meeting or a D&W, within the space of less than ten days. This unfortunately leaves a fair number to be posted, to those who have not been to the Club in recent weeks and may require a reminder of what's on, or has been changed. So, to help us keep our costs down, and to keep you up-to-date with all the latest news from the Club, keep a regular schedule to come down to the meetings.

Heard on 325

G8... to G6... - 'Why are you whispering?'
G6 to G8 'Well, we are not too far apart and I thought if I spoke quietly then I wouldn't cause as much interference to others on the channel.!!!'

Also on 325

"I couldn't hear anything of that over but a big powerful signal."!!!

BASIC PROGRAM TO USE A COMPUTER AS A TERMINAL
FOR SENDING TEXT TO UPDATE 325
BY GORDON G8MMM

```
10 REM UPDATE 325 TX PROGRAM
100 PRINT "TO?"
110 INPUT A$
120 PRINT "FROM?"
130 INPUT B$
140 PRINT "DATE?"
150 INPUT C$
151 PRINT "SUBJECT?"
152 INPUT D$
160 PRINT "INPUT TEXT"
170 FOR M=0 TO 9 STEP 1
180 INPUT T$(M)
190 IF T$(M)="-EXT" THEN 210
191 INPUT U$(M)
192 IF U$(M)="-EXT" THEN 210
193 INPUT V$(M)
194 IF V$(M)="-EXT" THEN 210
200 NEXT
210 PRINT "INPUT SEQUENCE TERMINATED"
500 REM "TX ROUTINE"
501 PRINT "READY TO SEND? SET TX SPEED"
502 INPUT R$
503 IF R$="YES" THEN GOTO 510
504 GOTO 501
510 SAVE
520 PRINT
530 PRINT
540 PRINT "TO ";A$
550 PRINT "FROM ";B$
559 PRINT "DATE ";C$
560 PRINT "SUBJECT ";D$
561 FOR C=0 TO 6 STEP 1
562 PRINT
563 NEXT
570 FOR M=0 TO 9 STEP 1
580 IF T$(M)="-EXT" THEN 650
590 PRINT T$(M)
591 IF U$(M)="-EXT" THEN 650
592 PRINT U$(M)
593 IF V$(M)="-EXT" THEN 650
594 PRINT V$(M)
600 NEXT
650 FOR C=0 TO 6 STEP 1
651 PRINT
652 NEXT
660 PRINT "END OF TEXT."
661 PRINT B$;" AWAITING CONFIRMATION."
662 PRINT " RETRANSMISSION REQUIRED ?"
663 INPUT E$
664 IF E$="YES" THEN GOTO 510
665 PRINT "ENTER NEXT MESSAGE "
666 PRINT      667 PRINT
668 GOTO 100
670 END
```

This program has been used successfully on a number of machines, including the UK 101 for which it was written. The cassette port tones are used both to and from the transceiver. The tones used are standard 1200 & 2400 Hz. Speed is usually 600 Baud. Slight modifications may be required to run on other machines. More versatile progs. have been written by some of the members, and this is meant to get you started.

Many different methods have been devised to connect the audio from the computer to the rig, and still manage to controll the PIT and use the mic. Most systems are based on an ally. box with various sockets on the back, all connected by rotary switches or minature toggle types and use a collection of suitable leads to plug it all together.

A diferent prog. is needed to use the comp in a data terminal mode, ie. like RTTY, but the connexions will be the same so why not do both?

It was suggested that this year we set together and give some effort to entering NFD as a Club entry. So, after numerous telephone calls and much jaw wagging, we managed to get nearly all of the equipment together.

It was originally intended to operate on 4M, 2M, 70cm, 23cms, but due to insufficient 23cms equipment, we had to be happy with three bands.

Friday arrived, so Duncan, G4PKO, and myself along with tents etc. headed for the hills, hotly persued by Alan, G4EFP, and John, G8UZZ.

After erecting the tents (we got better with practice) an adjournment to the nearest (3 miles) 'Watering Hole' was proposed and carried unanimously.

Saturday morning we leapt out of sleeping bags, bleary eyed, complete with headaches, to complete the tents and set up the equipment. 3pm., the start of the Contest, arrived quickly and 2m was all "go", (apart from our resident jammer), 4m was nearly ready and 70cm was in pieces. We eventually got various leads sorted out (blame Mr. X for faulty leads) and after some work on a faulty linear amplifier, we filled the air with R.F.

About 3am Sunday morning all stations had closed down due to either Operator Fatigue or beer. Mainly the latter.

Sunday, dawn arose but we didnt. 8am. and 2m was back on the air, shortly followed by the other stations. All was going well, when, in the early afternoon we heard a buzzing noise, was it our ears playing tricks or the masts coming down? No! it was "See you Jimmy" G4SYJ, better known as Bill (ex- CKO) in his micro lite. After landing in the field, consuming tea, and borrowing petrol, off he flew.

The last hour passed and a sigh of relief was heard.. All was packed-up for another venture and it was homeward bound.

Many thanks go to all who came and helped, members who loaned equipment, and all visitors who went 'GW' for a few hours.

Great fun was had by all, so come and join us next time and make it even better.

73, Phil G6SNO

This article, plus photographs, was first published in the first edition of 'Update 325'

THE EILEEN MEDLEY DF HUNT - 29th JUNE 1983.

This year 10 teams lined-up at the lay-by outside Heswall, all sporting an amazing array of metalware. The "Fox" for this event was Steve, G8TCC, supported by a record back-up team. At 8 o'clock the teams were off, and as usual cars shot away from the lay-by in all directions.

The 'Fox' was infact located at the Seacombe Ferry Bus Terminus, and the signals emanated from the top-deck of a topless, ex-GD land, double-deck bus. This was the reason behind that record-breaking back-up team. As soon as Steve asked the imortal question 'Have a guess, where do you think I'm going to be the Fox?', to the bus-minded fraternity, the reply came back "Don't tell me, not in a bus down by the docks?". And so, two potential teams immediately had an unfair advantage, and were asked to assist the Fox on the night. On top of that, the bus needed a driver who was insured for it, and before he knew it, Steve had a back-up of six people.

The first team to arrive was G6IIM/G4OAR, making it two wins in a row, after sucess in the practice DF hunt, in just 34 minutes after the start. The second team in was some 39 minutes later, at 20.13, and was G6SNO. The third was the G8UZZ team at 20.27, who nearly got disqualified because of the one-way system at Seacombe. Forth was the G6IFX team, at 20.43, with only one call-in to the fox. Fifth, right on the closing time for the event, was the G4NOY team; at 20.45.

Also taking part were G5MYX, G4TZW, G6ADO, G6LKI and G6JZP.

An enjoyable D&W took place at the near-by Seacombe Ferry Hotel.



THE WINNERS



THE LAIR



THE FOX





WIRRAL RAYNET

EXERCISE - AUNTY BEE

CHRIS ELDON-LEE OF RADIO MERSEYSIDE
INTERVIEWS MIKE HAMPSON G8RXB (LEFT)
GROUP CONTROLLER, WHILE HIS DEPUTY JOHN GBUZZ (RIGHT)
ENJOYS A JOKE, AT THE Y.M.C.A.

THIS WAS A SPIN-OFF FROM THE SPACE SHUTTLE PUBLICITY.

RAYNET NEWS

Wirral Raynet Group has now obtained its own call-sign, G6WRG, for use in Raynet operations. Group meetings are held on the first Thursday in the month at the Y.M.C.A. 56, Wheatstone Lane, Birkenhead, @ 7.30 pm. local time. Everyone is welcome at these meetings, members do not have to be licenced Radio Amateurs; new licencees and the old members (ex-Cheshire) are especially welcome.

The Group were requested to support the St. John Ambulance Brigade at the Vauxhall Motoring Groups "Astra Stages" Rally at Ellesmere Port on August Bank Holiday Monday. Although only a few messages were handled for the SJAB, everyone was kept busy in providing information to support the organisation and the running of the event - the Group were operational for nearly 12 hours - and most people seemed to enjoy the day. As a result of our work, a very worthwhile donation was received from the organisers, which will go towards setting-up a permanent station at our YMCA Headquarters.

My thanks go to those who took part in the exercise-- five stations were operational, each manned by two people as well as well as the Controll station in the form of Alan, G4EFP, plus helpers, and his caravan. Both 2m and 70cm were used, and a land-line link was installed to the organisers controll area. John, G8UZZ, took controll since I was already committed to organise the start/finish of the days event. The Group have already been requested to perform similar duties at next/this years event.

To enable a radio 'map' of the Wirral area to be made, a mapping exercise took place, based on the YMCA. From the information gained radio coverage from this location has been established and both 2m and 70cm antennas erected. Suitable equipment should be installed in the near future to enable the controll to be fully operational, this will hopefully also include a teleprinter.

The Group funds are somewhat limited and with the kind of expenditure involved in the above operation there is little left for any other activities. I would therefore request any of the earlier members of the group who have not renewed their membership to do so, as soon as possible. In the absence of Noel, G8XEG, payment should be made to the assistant Treasurer- Mike, G6HMD, QTHR.

Radio Merseyside broadcast a 10 minute recording on 1 st. December, at 1.30 pm., that they made of Wirral Raynet Group in action on a specially prepared exercise, "Aunty Bee". The exercise and an interview were recorded on the previous Sunday at Birkenhead YMCA, with a representative of the St. John Ambulance Brigade in attendance. Originally only five minutes air-time was to be allowed but this was extended, thus allowing a better representation of the exercise to be broadcast.

Credit must go to Chris Eldon-Lee and and his staff at Radio Merseyside, for an excellent job they did in editing down from a total time of about one hours recording to just ten minutes. Although only few Raynet members were heard in the final broadcast, my thanks go to all the others who took part and to those who helped in the organisation of the exercise.

Other exercises covering message handling and map reading have taken place, and the regular net night on 38 (145. 200 Mhz.) at 20.00 hrs. on the 10th., 20th., and 30th. of the month, have all been well supported.

Further information on Raynet and the Wirral Group, can be obtained from myself or my Deputy, John, G8UZZ.

73's

Mike, G8RXB,
Group Controller.

FROM YOUR RSGB AREA REP.

Dear Friends,

Here we are at the beginning of a New Year, so first of all I must wish you all the very best for 1984.

When I came into amateur radio, not all that long ago, I was told about the "Spirit of Amateur Radio", that indefinable Code of behaviour and practice that sets our hobby apart from almost every other. Unfortunately my dreams were soon shattered by a few hours listening to the rubbish on GB3MP, or the complete lack of callsigns or operating procedures on GB3CR, but the worst is yet to come.

The behaviour shown by most of the stations on the air during the recent Space Shuttle mission made me ashamed to be a Radio Amateur. The abuse, foul language, misoperation and downright selfishness which exhibited itself during those few days did Amateur Radio than all the pirates or jammers put together. I am even sorer to have to write that I heard the voices of several of our own Club members joining-in.

So, let us make a New Years' Resolution to bring back that lost spirit to the hobby, to find out the correct procedure before we go on the air, and finally, to think of others before ourselves, for it is only by practicing the latter that we can personally all make our hobby so worth while.

Thank you for your support in 1983, and I look forward to 1984 with hope and anticipation.

73 & 88

JOHN FOGG

G8UZZ

Area Rep. (Wirral Area) R.S.G.B. Region 1.

LICENCES

- . New applicants and annual renewals for Amateur Radio Licences are now dealt with by the Post Office, by post only, at the following address:-

RADIO AMATEUR LICENCING UNIT

CHETWYND HOUSE,

CHESTERFIELD,

DERBYSHIRE

S49 1PF

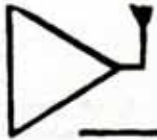
Tel. 0246 207555

Golden voice is silent.

Broadcaster Stuart Hibberd, who prepared Britain for VD-Day and the death of King George V, died on the 2nd. November in a Devon nursing home, at the age of 90.

He was the "golden voice" of radio in the 1920s, 30s and during World War Two. After Churchill, he had the best-known voice in wartime Britain.

He introduced his news bulletins with the famous words "This is London".



Northern Amateur Radio Societies Association

Ref:

Please Reply To:

Date 10 January 1984

NARSA REP'S REPORT

This year 1984 is again a 2 day event at Pontins, Southport.

There are to be no "upstairs" or "far away" rooms, so we can all look forward to a good stand position, as you all know I am the NARSA'S Club stand manager, as well as the Trade Stand Manager, so I hope to help out as well as possible.

The stand is up to the club committee and I don't think there will be much trouble, a several suggestion have already been made, so lets' see as fine as possible stand, with as good a turn out as last year.

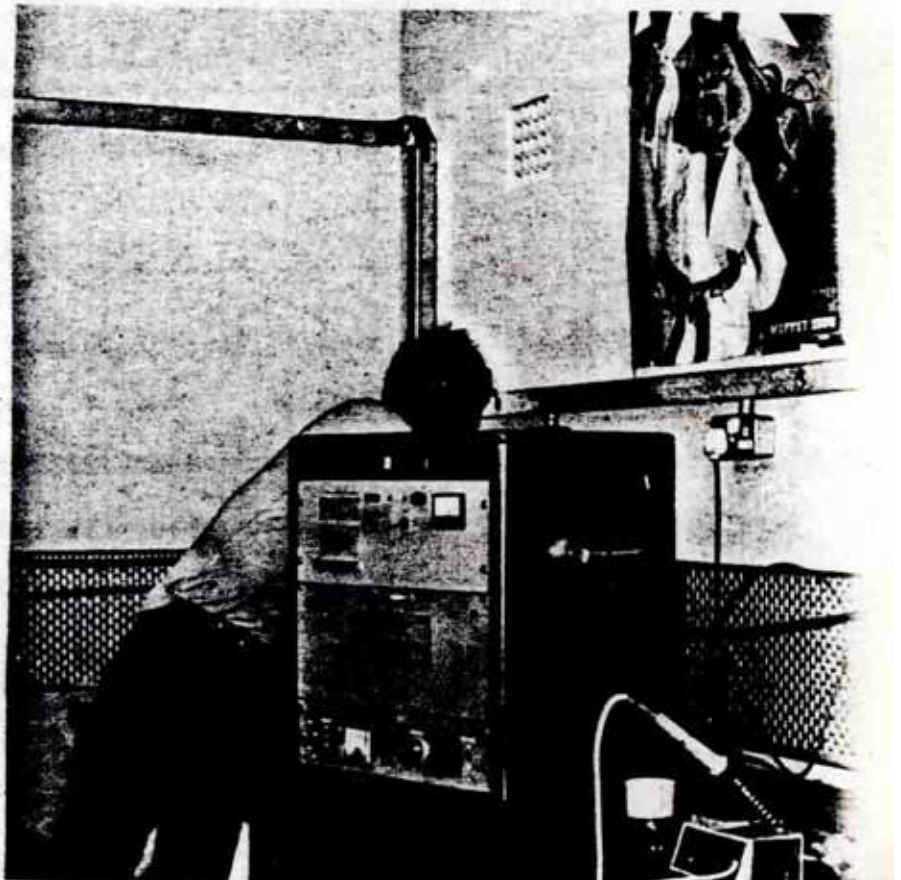
Good Luck

Peter Denton G 6 C G F 1983/84 REP

F.S. Remember Clubs are judged by amateurs on how their stand looks!

LAST SUMMER, GB3MP
MISS PIGGY, HAD A
MINOR SITE CHANGE,
AND MOVED INTO A
DEDICATED HUT ALONG
WITH SOME P.M.R.
BASE STATIONS
THE OPPORTUNITY WAS
TAKEN TO FIT A NEW
TRANSMITTER UNIT
TO THE REPEATER
JOHN FOGG, G8UZZ, IS
SEEN MAKING A FINAL
ADJUSTMENT.

PHOTO G8TRY.



NOTICE BOARD

MEMBERS ADVERTISEMENTS

FOR SALE

PYE 'LYNX' TV CAMERA
32mm. F1.9 lense. Full auto iris. Complete with swivel mount.
1 volt p--p composite output. **** £ 30.00 ****
Contact John, G8UZZ. QTHR. 632 3131

FOR SALE

REALISTIC 'DX 200' HF Receiver.
Brand new condition, complete with original manual, box etc.
Contact Peter, G6CGJ QTHR. **** £ 60.00 ****

FOR SALE

PYE 'WES
Fitted w
Receiver
service
Contact
(Note-

SORRY

SOLD

MOBILE

Included is
XO ****

from Sec. G8TRY

FOR SALE

Petrol driven GENERATOR. Villiers engine. 800 VA, 110 Volts
with add-on 110/240 volt transformer good for a few hundred
of the Watts.... with engine manual. ***** £70.00 **** ono.
Contact Gordon, G8MMM QTHR 336 7143

WANTED

HF or low band AM VHF transmitters, receivers, txcvrs, crystals
for use with etc. This type of equipment, in any condition, is
always needed for training Air Cadets, many of whom become amateurs.
Offers of equipment or assistance to -
Bob, G4OXN QTHR 342 6955

ALL CHANGE

SOME CHANGES OF ADDRESS

G8TRY Gerry Scott, Club Secretary, New address from 23/9/83 is
19, Penkett Road, Wallasey, Merseyside. L45 7QF 630 1393 (unchanged)

G4DLY Paul Collister moved within the Birkenhead boundaries on 12/2/84.

G6JZP Paul Robinson & Pauline have moved from Rock Ferry to Pensby 17/2/84

G8WOF Steve Harry, has moved from Meols to Oxton.

G6IFX Dave Hughes has moved within Birkenhead.

PLEASE NOTIFY THE SECRETARY, AS SOON AS POSSIBLE, OF ANY CHANGES OF ADDRESS
OR CALLSIGN. Also- if any of the information in the Members List is wrong.

FOR SALE

PYE CAMBRIDGE AM 10D Dash Mount 2M Mobile
Part modified to FM on TX and fitted with 'Garex' board on RX.
Offers are invited from

GRAHAM; G8NNS QTHR 679 7698

WANTED

CRYSTALS or other information on PYE EUROPA High Band FM.
Uses 9Mhz. on TX and 11Mhz. on RX HC25/u when on 2M band.
For GRAHAM G8NNS

CONGRATULATIONS TO -

MARGARET and GORDON ROUSE G4MUP, on the birth of their child, Nichole Sian,
on 29th. January. Nichole weighed 7lb. 10z. All are well.

SUSAN and GORDON NICHOLAS; G6ADO & G8MMM, who have announced that they are
expecting a new arrival at the end of August.

Gordon is also moving to a new position within the company in a
side-step move which will entail moving from the existing works
QTH in Edge Lane, to Huyton (over). This may mean some more
travelling for Gordon, but he intends to organise meetings so that
he can still make the Club meetings as often as possible.

ANNOUNCEMENT

It is our pleasure to record the engagement of Tom Howarth, G4EKF, to Yvonne.
We take this opportunity to wish them both Success, Good Health and Happiness for
the future. While it is sad to see another fine bachelor bite the dust, we hope we
may well be gaining a new 'YL' Cambridge Operator in the near future, or the kitchen!!
Is that a 'Roger' Tom ??

SILENT KEY

We regret to announce the death of JOHN BARRETT, G6IBJ, during the early part
of September, due to a heart attack. John will be missed at the Club, where he had
many friends, and many stories to recall of his military service. He will be remembered
as a real gentleman and a great personality. Our sympathy has been sent to his family

SUNDAY AFTERNOON D.F. HUNTS

As most of you know, this year we held a series of Sunday afternoon D.F. Hunts. These proved to be a great success. Overall, the weather was kind and everybody seemed to enjoy themselves.

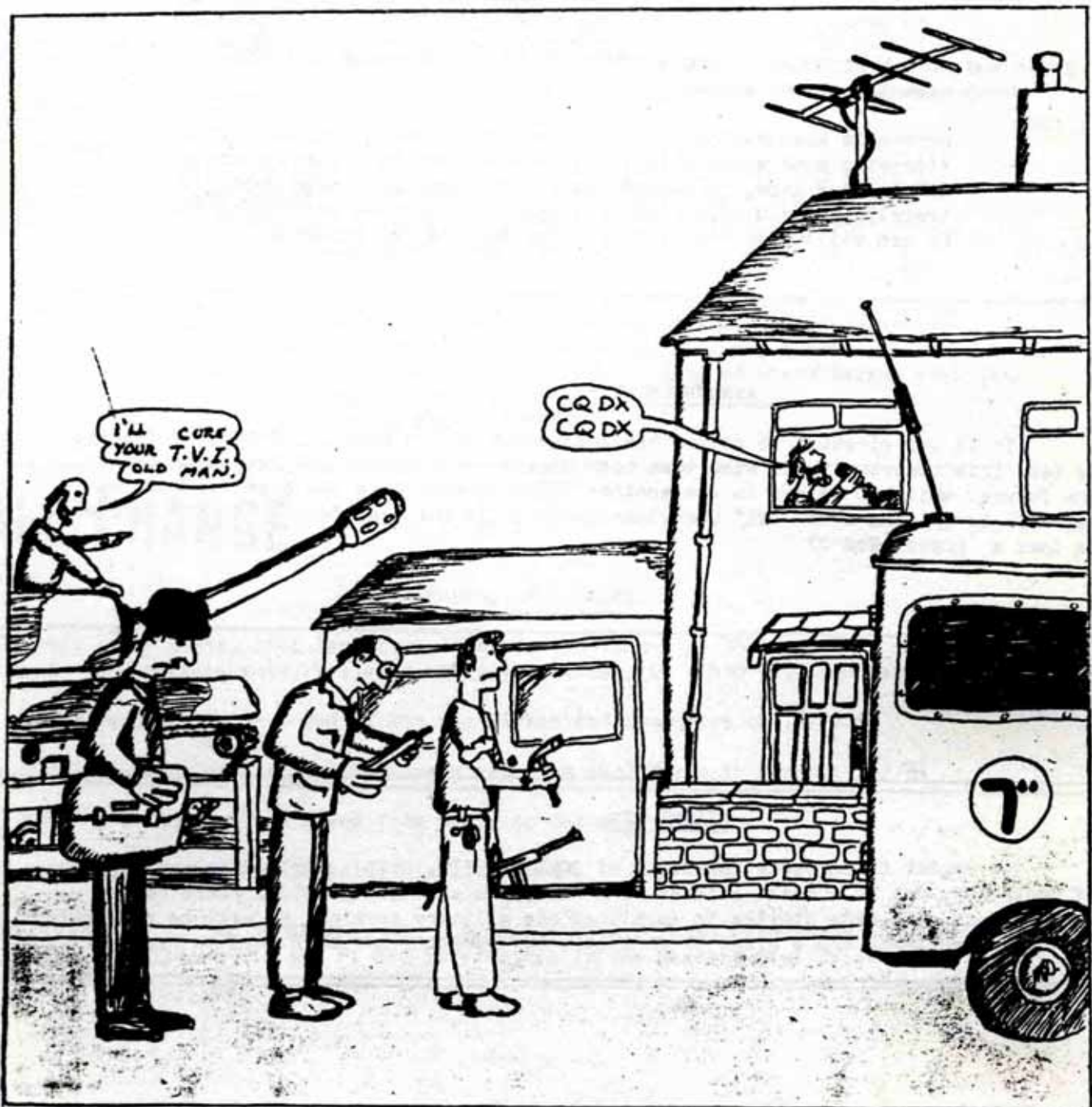
Eleven teams took part this year and as you can see from the table of results most teams improved on previous performances.

Many congratulations to John, G8UZZ, and Steve, G8WOF, on winning. Also a big thanks to all who took part and made it all worthwhile.

Looking forward to next year.

73's PHIL G6SNO

RESULTS TABLE →



<u>Team Callsign</u>	<u>Week 1</u>	<u>Week 2</u>	<u>Week 3</u>	<u>Week 4</u>	<u>Week 5</u>	<u>Best of 3</u>	<u>Posn.</u>
	<u>Time in Mins.</u>					<u>Total</u>	
		<u>Days points.</u>					
G8UZZ	15 6	*	29 6	23 5	80 1	17	1 st.
G5MYX	35 5	52 5	FOX	35 3	40 4	14	3rd.
G6SNO	40 4	FOX	48 3	18 6	14 6	16	2nd.
G6IIM	FOX	105 2	60 2	50 1	46 3	7	6th.
G6CGJ	105+ 1	*	46 4	58 1	FOX	6	7th.
G4GAR	*	48 6	43 5	40 2	48 2	13	4th.
G6LXI	*	*	*	*	Talk in 1	1	10th.
G8MMM	*	99 3	87 1	*	*	4	9th.
G6IAD	*	84 4	*	81++ 1	35 5	10	5th.
G6HWD	*	Res. 1	*	*	*	1	10th.
G6JZP	*	*	Res. 1	31 4	73 1	6	7th.

The Fox G6IIM G6SNO G5MYX G8TCC G6CGJ

The Teams Members

G8UZZ plus	G8WOF		G8WOF G4MSA	G8WOF	G8WOF
G5MYX Plus	--	--	--	--	G6XFF
G6SNO Plus	G4PKO	--	G4PKO	G4PKO	G4PKO
G6IIM					
G6CGJ Plus	G6PLY	--	G6PLY G4TZW G6XHG	G6PLY	--
G6LXI	By Himself _____				
G8MMM Plus	--	G6ADO	G6ADO	--	--
G6IAD Plus	--	G4TZW	--	G4TZW	G4TZW
G6HWD	By Himself _____				
G6JZP	By Himself _____				

NEWSGUIDE - ON SALE DATES FOR SOME POPULAR MONTHLIES

Ever wondered when one of your favorite mags is due out? Is it too soon, or have you missed it this month? Then wonder no more with our newsguide, where we have picked some of the more popular mags from the many available. Compiled from data available in November, and subject to change.

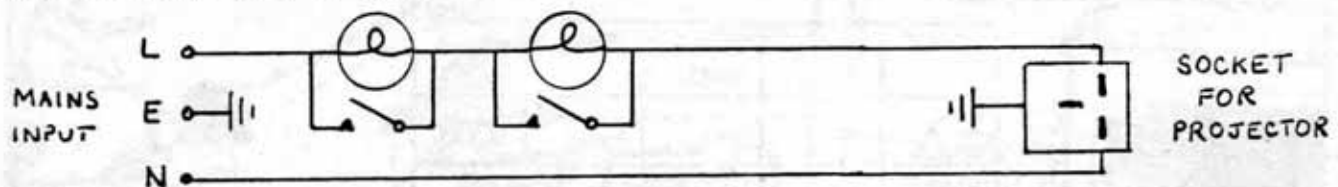
Amateur Radio, 4th. Thursday.	Electronics & Music Maker. 4th. Thursday
Electronics Today Int. 1st. Friday	Elektor. 3rd Friday.
Everyday Electronics & Computer Projects. 3rd. Friday.	
Ham Radio Today. 1st. Friday.	Hobby Electronics. 2nd Friday.
Practical Electronics. 1st. Friday	Practical Wireless. 1st Friday.
Short Wave Magazine. 4th Friday.	Television. 3rd. Wednesday.
Radio & Electronics World. 2nd. Friday.	Wireless World. 3rd. Friday.
Radio Communication, posted to RSGB Members only, 1st. Friday.	

Specific computer mags have been deliberately omitted due to sheer numbers (get it? computers and numbers- never mind.). But seriously, though, while computers and amateur radio do go together, very little can be found about amateur radio in computer magazines, and so we are always pleased to have any usefull programs and modifications passed on.

QUICK TIP FOR PROJECTOR USERS

Bulbs in still projectors are often blown by the initial surge of current through a cold filament. This can be reduced by a series resistor, thus extending the life of the projector bulb.

Ideally, a continously variable resistor of hundreds of Watts is needed! Not very practical you say, but two 100 Watt/240 Volt lamps, capable of being shorted-out, will serve just as well.



I would suggest that two mains bulb-holders are screwed to a piece of wood, together with a 13 Amp. socket and shorting switches, as shown above.

Try it and save money !!!

The same problem exists with Xmas lights - some people advocate an extra bulb, but I fit a 'Varistor'. This is a resistor which reduces in ohms as it warms-up. They used to be fitted in T.V.s when valved sets were in vogue. Fit the 'Varistor' in a small box and wire in series with the lights.

Bob Williams GA OXN

MAJOR SYSTEMS

Cellular radio — how it will work

TACS — total access communication system — is the cellular radiophone standard that will be adopted by the two radiophone network operators in the United Kingdom when their systems start service in 1985 (see *Management News*, January).

The system differs from Telecom's present radiophone services, known as System Three (manual) and System Four (automatic) in several important respects.

Firstly, TACS will operate on the 900 MHz band where up to 1000 channels will eventually become available as other users are moved from this part of the radio spectrum. This will be a significant advantage over the present narrow band of 110 channels near 160 MHz. Initially, however, the networks will each have about 200 channels available to them.

Channel re-use

Because the range of 900 MHz signals is usually less than that of 160 MHz signals, it is possible to re-use channels more often because base stations can be put closer to each other than on the present systems. This means that more users may be served for the same number of channels — each channel can be 're-used' more often because it has a shorter range. The price to be paid for this extra capacity is that a greater number of base station sites will be needed. Also, because the coverage area, or 'cell' served by each base station will be smaller, the chance that a mobile radiotelephone will move from one cell to another during a call is greatly increased. To allow calls to continue with almost imperceptible interruption, the system automatically measures the mobile's signal

strength at each of the surrounding base stations and chooses the best, switching the connection through to that one. Most users will be unaware of this call hand-off operation.

The cellular networks will provide access to a mobile, regardless of its location within the service area, just by dialling the mobile's full number. Unlike Systems Three and Four, where the caller needs to know the approximate location of the mobile, the new system will automatically keep track of the location of all mobiles that are switched on and are within the service area. This feature — known as automatic national roaming — will be carried out by computer-controlled switching equipment and is an advance on the similar cellular systems currently entering service in the USA.

The size of components for 900 MHz radios, very importantly, allows the manufacture of the hand-held portable, with two-way simultaneous operation just like that of a normal telephone. There will be some limitation on power, simply because of the size and weight of batteries that customers are willing to carry, but the systems will be engineered to provide service to hand-held portables in those areas that justify it.

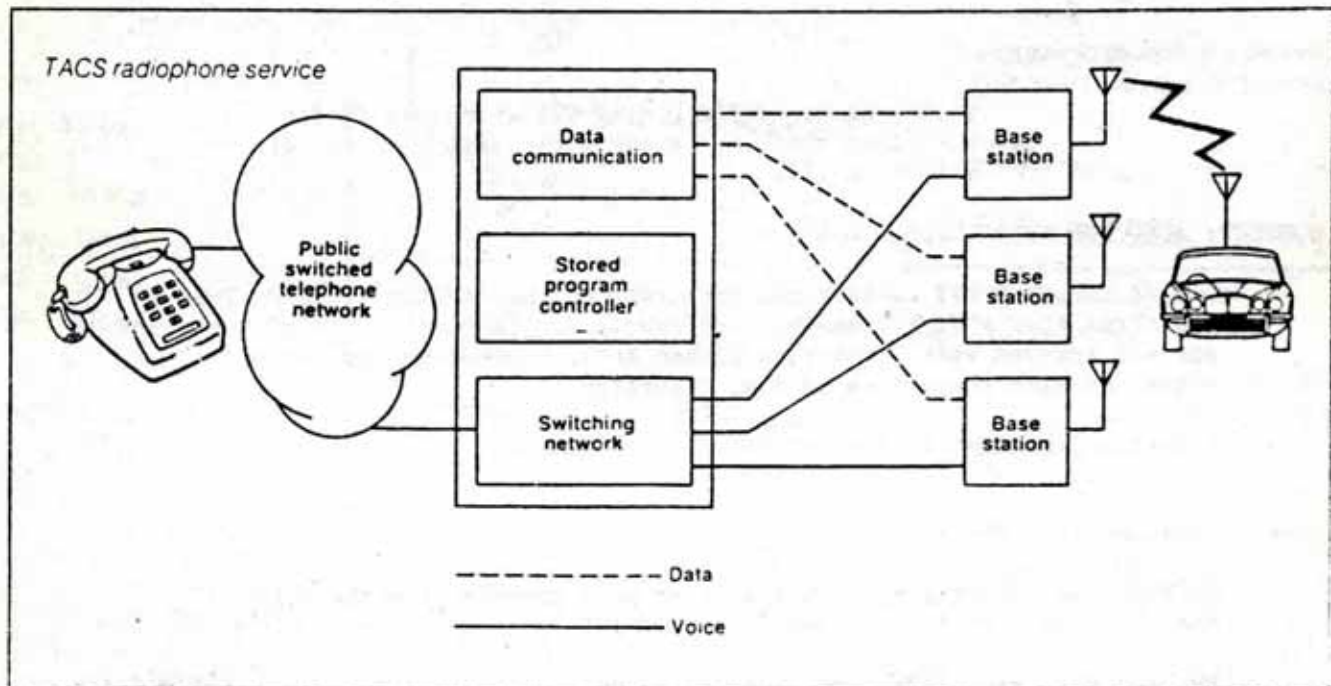
The commercial challenges brought about by cellular radio are every bit as exciting as the engineering aspects. Radiophone service will be provided by two operating companies, Racal-Millicom and the joint Telecom-Securicor venture (currently known as Secutel). The Department of Industry is issuing licences to the two organisations, which require mobiles belonging to one service to be able to make and receive calls on the other operator's system.

This factor calls for considerable co-operation and the adoption of common standards; standards that do not yet exist. Joint specification work has started with Mr C J Hughes, deputy director ASU/SESD Martlesham, being appointed chairman of a committee comprising representatives from Telecom, Racal and Securicor. The committee will help ensure that those technical areas that must be defined to allow inter-system compatibility are specified in sufficient detail so that the Department of Industry's requirements are met and so that operators' and manufacturers' commercial freedom is not unnecessarily restricted. A draft specification for the 'air interface' has already been published (see *Management News*, June).

The connection of the radiophone networks to Telecom's telephone network and the allocation of mobiles' telephone numbers is also an area of intense commercial activity. What happens for radiophone may set a precedent for other value added networks and it is, therefore, being treated with caution and an eye to the future.

True demand

It will be some years before the true market demand for cellular radio is realised and manufacturers of TACS equipment can start to provide the mobiles and portables at prices that will put radiophone into every car and briefcase. Large network investment will be needed to provide coverage over much of the country but rich pickings are promised from a fully used cellular system. Turning that potential into profit will require carefully thought-out engineering and marketing strategy.



CALLSIGN REGISTRATIONS FOR CARS IN THE U.K. ?

In the Summer Edition of Airwave 325, we reproduced an article entitled "California Motorcyclists may soon get Ham plates". As you probably know, the U.S.A. is far more liberal in permitting personalised vehicle registration marks than in the U.K., and the article went on to describe how the 'motorcycle-mobile' amateurs amongst them were going about removing a prohibition against amateur callsigns on motorcycle plates. Presumably they had been permitted on cars, and as far as we know, the Bill is proceeding through Assembly.

Earlier this year, '83, Rad Com carried an item of news to the effect that talks were to take place with the DoT, with a view to permitting amateur-callsigns for vehicle registrations. Now that the year letter suffix has become a prefix, then the equivalent of this years 'A' will be a "G" in seven years time. So far, no more has been heard on the matter from amateur sources.

However, 'Registration Notes' in October's "Buses" commented about the application of the new year-letter prefix series, and the following extracts may be of interest;

"Readers may have noticed that the range 1-20 has not been issued in A-prefix marks, all of which start at 21. The Government has decided, somewhat curiously, that 1-20 in all (registration) marks are specials and therefore intends to sell them to the highest bidder, although why anyone would be willing to pay for marks such as A 17 FOX or A 7 JBU mystifies me!"

Obviously the author, Gordon Watts, is not an amateur as well as a bus enthusiast the likes of which can be found amongst the Clubs membership. So, presumably, the way is open to getting amateur callsigns for our vehicles, subject to negotiation and the depth of our pockets. The same article also carried information of particular note to those with old registrations, who could be in danger of having them sold by the DVLC if they remain un-recorded, and the adoption of 'Q' prefixes for vehicles newly licenced in this country, but of unknown date of manufacture. And finally, the numbers 5 and 55 or 555 will not be issued with the 'A' prefix, so as to prevent potentially embarrassing or abusive words, i.e. A 55 OLE is definitely out, but the new series does leave the way open for some interesting combinations.

Heard on the Repeater:-

I've just heard I'm giving TVI on my own TV for the first time....I guess there must be a bit of a lift on !!!!

SUBJECT; ALSO FOR THE LADIES...

One of our Club XYL members has been awarded the 'KACITK'* award. This is the first time a YL/XYL has won the award, and in recognition of the event she was awarded with light-blue fluted knob, mounted on its own base of a former squelch board from an A.M. Cambridge.

* Keep a Cambridge in the kitchen.

Live in harmony with the hobby...

Do you make the mistake of ostracising your partner from the hobby ?
Has it become the 'other woman' in your life ?

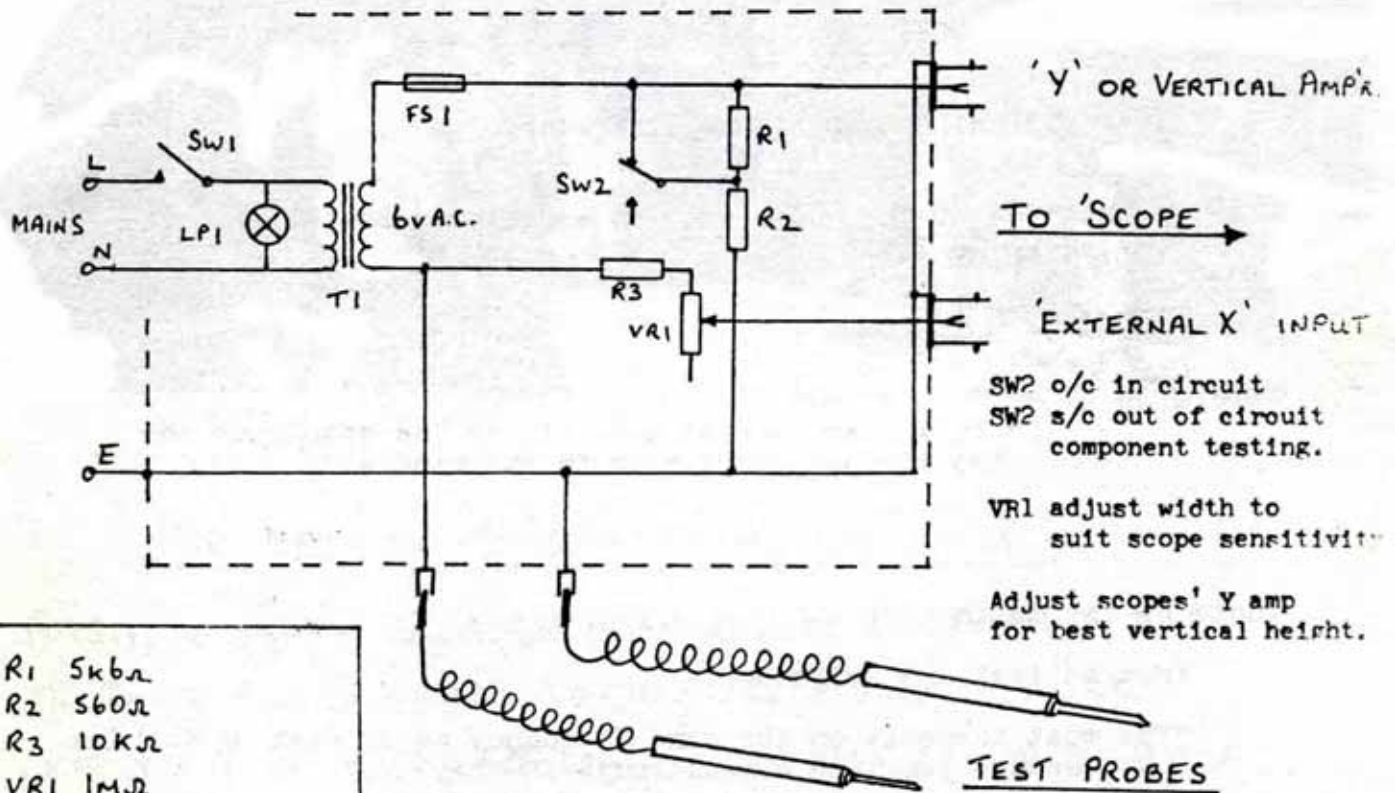
Why not make your life more peaceful by encouraging her to share your radio ?
Put a Cambridge in the kitchen and bring her to the Club socials.

You never know- one day you may be calling her on the airwaves....
No excuses for cold or burned dinners then!!!







A SEMI-CONDUCTOR JUNCTION TESTER
FOR IN-CIRCUIT FAULT TRACING, USING A SCOPE

Modern equipment and production techniques require a safe, simple and quick method of finding faulty components on PCB's without having to remove suspect components first for testing. A simple tester for doing this in conjunction with an oscilloscope was described in the TT pages of Rad Com a few years ago. I built one for use at work, and it works well. Shortly afterwards, I was passing on the idea to a friend to try, and he produced another circuit based on the same idea, and this is reproduced below. I built the second circuit, also, and of the two, this is the one that I prefer as it is more versatile.

The circuit under test must not be powered-up as one of the probes is earthed. All semiconductors should produce a definite "knee" on the scope, representing the junction. Some typical displays are given.



- R1 5k Ω
- R2 560 Ω
- R3 10k Ω
- VR1 1M Ω
- T1 6V A.C.
- LPI - NEON.
- FS1 - mA
- SOCKETS
- SWITCHES.
- BOX.

 OPEN CIRCUIT	 PURE RESISTANCE	 SEMI-CONDUCTOR JUNCTION
 SHORT CIRCUIT	 CAPACITOR	 ZENER DIODE

TYPICAL
DISPLAYS

GERRY, GSTRY

AMNESIA RULES - ER! ER!

I used to be indecisive, but now I don't think I am.

Be alert - the country needs lerts.

Old fishermen never die - they only smell that way.

Sado masacisim beats me !!

Absolute zero rules O°K

Dixlexia rules K.O.?

I'd give my right arm to be ambidextrous.

Did you hear about the judge who was a dixlexic amateur ?
He called QC QC QC !

Heard on MP -

" It's easy to find me - I'm in the shop with the
two windows and a door in the middle."

Quote of the month

From an amateurs neighbour:-

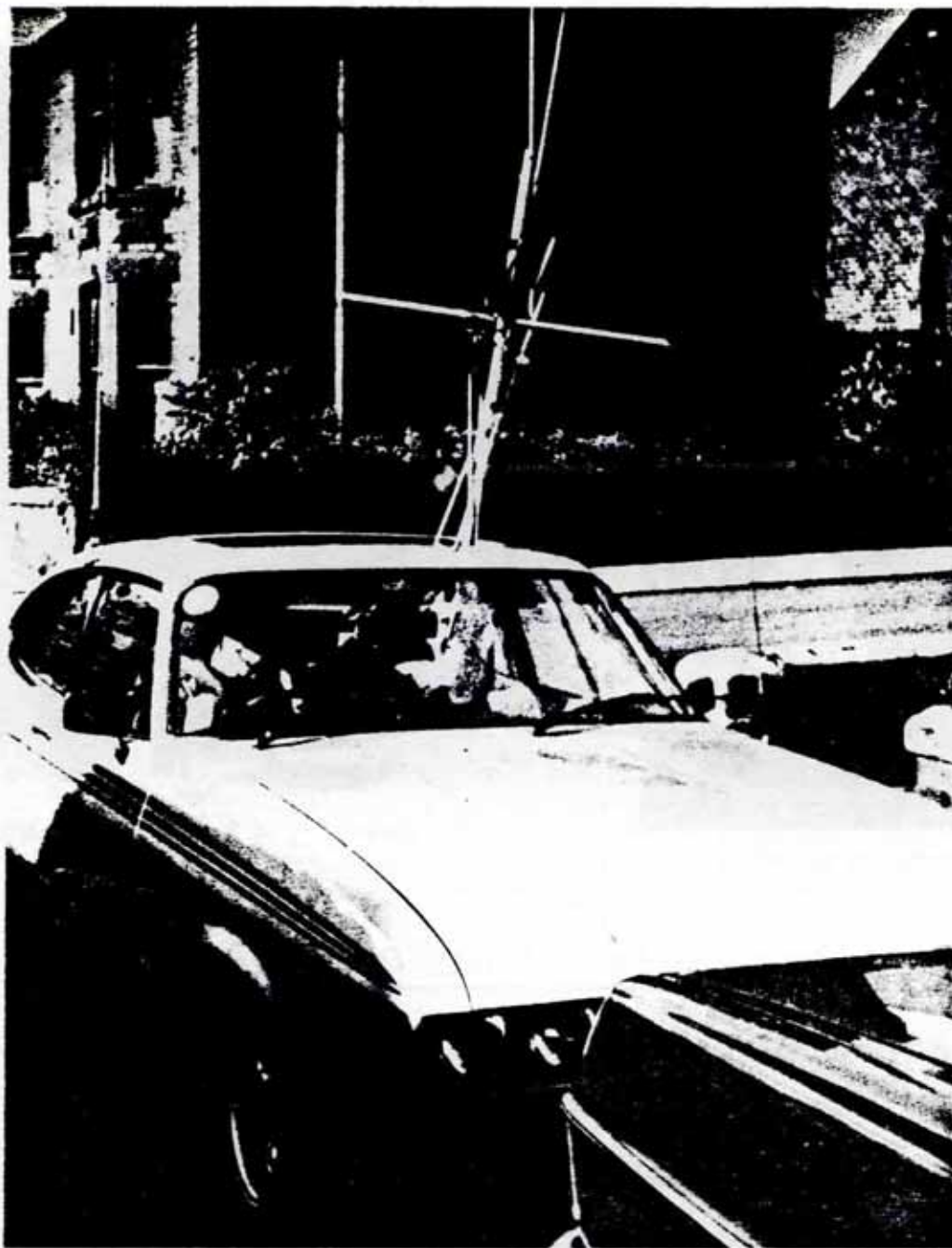
"You must transmit on the same frequency as my washing-machine
... because you both come through on the T.V."

Phil, G6SYO, has added a new dimension to giving home computers
a 'voice'. Just ask the man down the road when Phils on SSB!



SOCIAL AND PRESENTATIONS EVENING

BASIL O'BRIEN, G2AMV, (FAR RIGHT) PRESENTED THE TROPHIES AND AWARDS TO THE FOLLOWING MEMBERS LEFT TO RIGHT PHIL G6IIM, EILEEN MEDLEY CHALLENGE CUP PETER, G6PLY, 100th MEMBER-BOOK TAKEN PHIL, G6SND, PETER, G6L6J WITH THE G8PMF AWARD FOR THE 'REVENGE' D-F HUNT. STEVE G8WDF, AND JOHN, G8UZZ, WITH THE SUNDAY D-F SHIELD. JAN (G6IIM *YL) IS SEATED IN FRONT OF THE EILEEN MEDLEY CUP MAGGIE, G6KBR, HOLDS HER KACITK AWARD, A CAMBRIDGE BLUE FLUTED KNOB MOUNTED ON A SQUELCH BOARD



GEOFF, G6LLK, AND ALBERT G6NPU, GO LOOKING
FOR THE SUMMER RESIDENCE OF BILL, G6MFG,
WITH SUITABLE ANTENNA. OF COURSE.

HERD ON FREE TOO 5 etc.etc. etc. etc...

- 1 Rumor has it that G6SNO, having now recovered from the unplanned third-party greeting from his works Q.T.H., has now recieved messages of "Greeting" from his next-door neighbours.
- 2 Still with Phil G6SNO, we wish him all the best with his new venture - T.V. Broadcasting ! and also medium wave, long wave and V.H.F. simultaneously.
- 3 RADIO AMATEURS DO IT IN THE SHACK !
(Except Dave, G6LME, who does it in bed.)
- 4 At the 144 Mhz. C.W. Contest, the nice weather meant that we didn't have to worry about keeping things down, except for Colin, G6RUT, who tried hard to acheive the opposite.
- 5 Congratulations once again to Steve, G8TCC, who operated inverted sideband as his van travelled down Scotty Road on its roof.
- 6 Last December, G8MMM finally came out of his CFLL and gave us a talk. Offers are already being taken for the projector.
- 7 UZZ's trying out a new form of contraception---
by running 10 Ghz. in the bedroom.
- 8 WANTED.... Variable speed tape recorder for meteor scatter and trying to understand G6RUT at times.
- 9 Heard on G6JMP...
The damm thing dosn't give a "K", all I get is a load of Morse Code every time I drop carrier..
- 10 Rumor has it that Tim, G6HOX, has made a New Years Resolution to pass the C.W. test, so now he only plays with his Morse key in bed.

Supplied by G8UZZ.

1. Introduction

One of the most important requirements in VHF and UHF mobile radio transmitters and receivers is the need for adequate frequency stability.




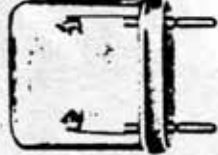

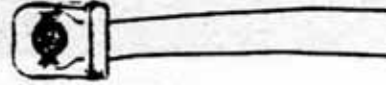


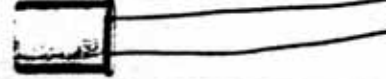
The order of stability needed varies inversely with the channel bandwidth required, and consequently over the years the change from 100 kHz to 12.5 kHz channel spacing has shown that a need for much tighter tolerances over wide temperature ranges is required to ensure reliable communication.

The correct choice of crystals plus maintenance of the correct frequency cannot be carried out without an understanding of the basic characteristics of quartz crystals and the associated oscillators.

The following notes are intended as a guide to the basic characteristics of frequency control, to assist the engineers responsible for the maintenance of narrow band radio systems.

2. Crystal Holder Styles

Crystal units are available in a number of shapes and sizes, most of which are internationally standardised. The following table shows the more popular styles used in mobile radio equipment.

	HOLDER STYLES	INTER-SERVICES	I.E.C.	U.S. MILITARY
SOLDER SEALED		D	AA	HC6/U
		K	CX	HC25/U
		J	BC	HC18/U
ALL GLASS		L	DA	HC27/U
		N	CZ	HC29/U
		M	CY	HC26/U
COLD WELD		—	DN	HC36/U
		—	DO	HC42/U
		—	DP	HC43/U

It will be seen that the holder styles fall into three main categories: solder sealed, all glass and cold weld. These variations will be discussed more fully later in the section on 'ageing' (Section 5).

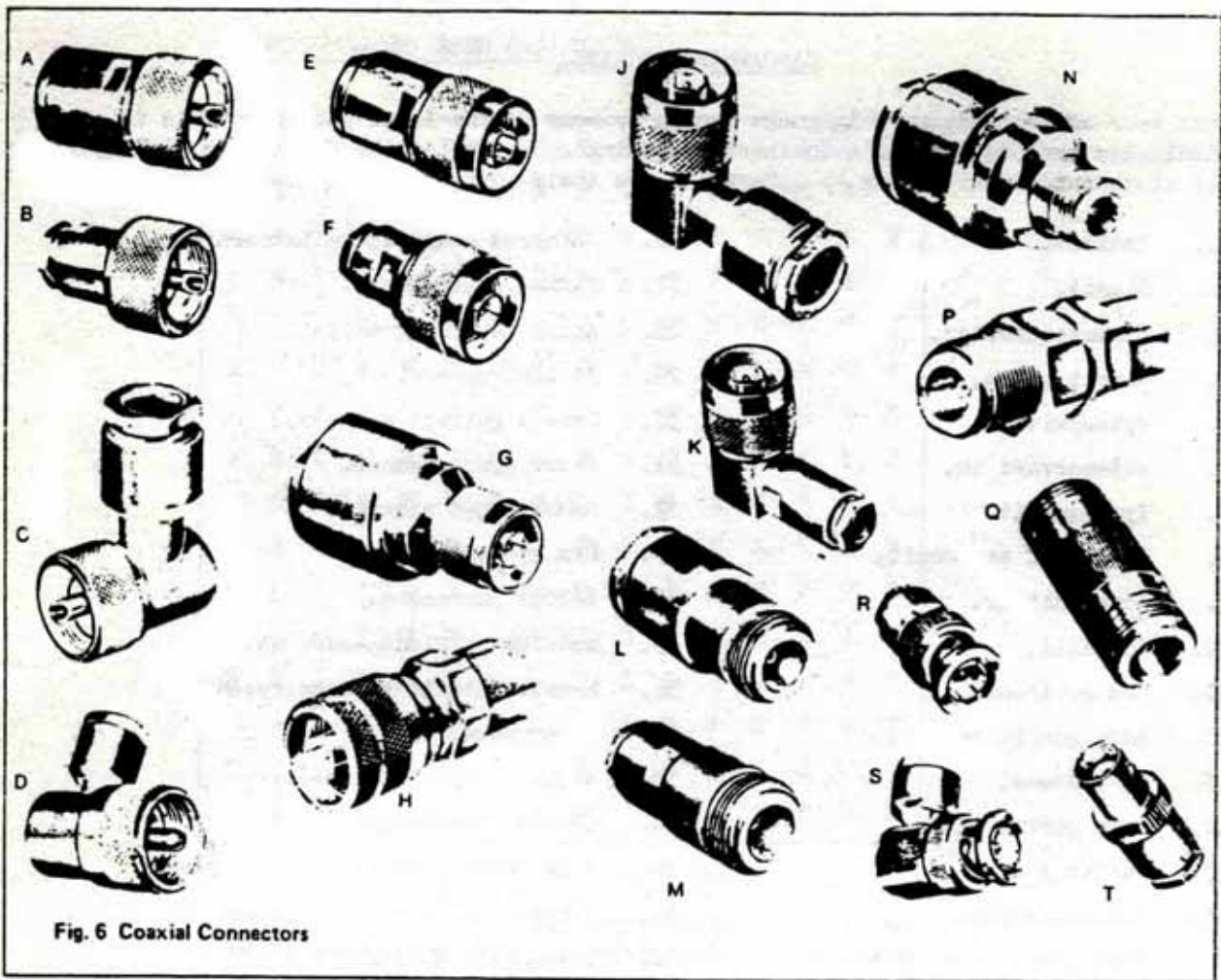


Fig. 6 Coaxial Connectors

Fig. 6 shows variations of the above connectors likely to be used with equipment.

Style	Description	Key (see Fig. 6)	Cable	Pye reference	Near American equivalent
UHF Series	Straight plug	A	URM67	FP13774	
	Straight plug	B	URM76/43	FP13775	
	Elbow plug	C	URM67	FP13792	
	Elbow plug	D	URM76/43	FP00032	
N Series 50 ohms	Straight plug	E	URM67	FP13709	UG21D/U
	Straight plug	F	URM76/43	FP13715	
	Straight plug	F	BICC RPC4780	FP13807	UG536A/U
	Straight plug	G	T3319	FP13808	
	Straight plug	G	T3320	FP13799	
	Straight plug	H	Andrew FHJ4-50B	FP10842	
	Straight plug	H	Andrew FHJ2-50A	FP10841	
	Elbow plug	J	URM67	FP13716	UG594/U
	Elbow plug	K	URM76/43	FP13735	
	Straight socket	L	URM67	FS43732	UG23D/U
	Straight socket	M	URM76/43	FS43738	
	Straight socket	M	BICC RPC4780	FS43834	
	Straight socket	N	T3319	FS43831	
	Straight socket	N	T3320	FS43832	
	Straight socket	P	Andrew FHJ4 50B	FS40844	
	Straight socket	P	Andrew FHJ2 50A	FS40841	
Straight adaptor	Q		FA00051	UG29A/U	
BNC Series 50 ohms	Straight plug	R	URM76/43	FP13711	UG88C/U
	Straight plug	R	BICC RPC4780	FP13818	
	Elbow plug	S	URM76/43	FP13713	UG913/U
	Elbow plug	S	BICC RPC4780	FP13819	
	Straight socket	T	BICC RPC4780	FS43835	

LANCASHIRE ENGLISH.

Test your understanding of language spoken by some of the local people. This is an invaluable introduction to a Southerner coming up North for the first time. Also for student teachers trying to understand how their pupils communicate with each other.

- | | |
|---------------------------------|---|
| 1. Intitot. | 26. Goforrus atarpastate intmornin. |
| 2. Giusit. | 27. Nathen wataterdoin. |
| 3. Summataupoereor. | 28. Aster seenim ontelly. |
| 4. Gerrit ottem. | 29. It dunt marrer. |
| 5. Wotsupwithee. | 30. Lerrus guttert pichers. |
| 6. Wotsmarrawi im. | 31. Aster gorra tanner. |
| 7. Iyamtgorrit. | 32. Eenose nowt abertit. |
| 8. Im gerrin eartonnit. | 33. Eez gonta gerrit. |
| 9. Azeeginityer. | 34. Lerrer gerronbus. |
| 10. Tophill. | 35. Eedernt purrized under water. |
| 11. Eez goinoocam. | 36. Eesezeeantadit burraberreeas. |
| 12. Asta gorrit reight. | 37. Oowerreewe. |
| 13. Is themmum. | 38. Ateldim burriunt lissen. |
| 14. Asta gorrit withy. | 39. Lerrim purrisaton. |
| 15. Purrit ineer. | 40. Asle clowt thee if the duntgivover. |
| 16. Iyant eaerdnowt. | 41. Tintintin. |
| 17. Thal after gerra newun. | 42. Eez gorrit atooam. |
| 18. Hesesittint burra berritiz. | 43. Gerarry tergithi anandweeit. |
| 19. Lerrus gerrus anwesht. | 44. Thawantsta wesh thi eeroil ait. |
| 20. Wiv gorra gerrus imbux. | 45. Wiv gorrereer. |
| 21. Summonum alatergeroff. | 46. Thakan if tha asto. |
| 22. Thammun gerrit lernt. | 47. Eez nowt burrababbi. |
| 23. Shut thigob. | 48. Tantad nowt dunnatit as I noe on. |
| 24. Owzeeno. | 49. Cantha cumta owerowse terneet. |
| 25. Aberrittintere. | 50. Weez gaffer. |

Marking:

- 10 correct - You are obviously an immigrant from Sussex.
25 correct - you are on your way to becoming a settler.
40 correct - You have settled.
All correct - Thawantsta brush up on thi Queen's English.

AMATEUR RADIO WORD SEARCH



There are thirty "Radio Connected" words in the above grid, some are two words e.g. "morse code". The first all correct answer returned to the editor will receive the radio prize of your choice donated by the winner to the winner.

ERIC
G6HWD

IDEAL GIFT FOR THE KEEN COMPUTER OWNER

POLISHED WOOD FINISH

MADE ON THE WIRRAL

MOTHERS-WIVES-PARTS

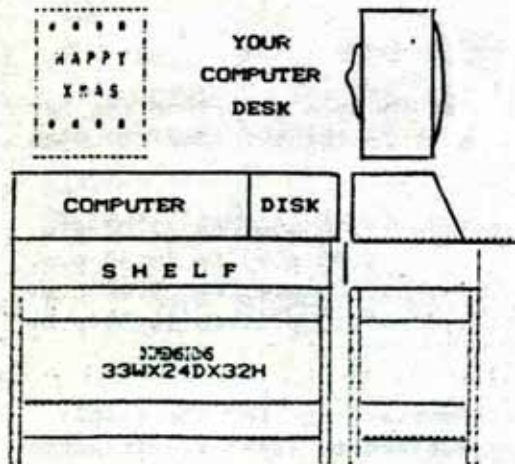
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G6AGP
ANDREW



EXTRACT FROM THE RULES OF IRBY CRICKET CLUB

5. CONDUCT

- (a) Any members who wilfully or by gross negligence damages any property of the Club or any property entrusted to the Club shall be liable to make good such damage at his/her own expense. The question of the damage being or not being accidental shall be decided by the Management Committee from such evidence as they may be able to obtain.
- (b) A member may be expelled by resolution of not less than two-thirds of members present at a Special General Meeting duly convened to consider the conduct of such members. No person whose membership has been so terminated shall be introduced by any other member as a visitor to any part of the Club premises.

6. CLUB PREMISES AND BAR

- (a) Any voting member, or lady member, may introduce a guest to the Club premises. Such guest must sign his/her name in a book kept for this purpose and no guest may be introduced to the premises more than six times in any one year.
- (b) Members or visiting teams and their guests and bona fide members of visiting Clubs may purchase intoxicating liquor for consumption on the Club premises on the day or days on which the visiting team plays on the ground.
- (c) No person under 18 years of age shall be permitted to purchase or consume intoxicating liquor on the Club premises.
- (d) Hours of Opening and Closing the Club Premises

Subject to the right of the Management Committee to open and close the Club premises at it's discretion the Club shall be open as follows:-

Weekdays.....	.....	.....	10.00 a.m. to 11.30 p.m.
Sundays)		
Christmas Day	)..	.....	10.00 a.m. to 11.00 p.m.
Good Friday)		

Notice of the hours during which the Club premises will be open will be posted in the Clubroom.

(e) Hours of Opening and Closing the Bar

Subject to the right of the Bar Committee to open and close the bar at it's discretion within the permitted hours the bar shall be open as follows:-

Weekdays.....	.....	.....	11.30 a.m. to 2.00 p.m.
			4.00 p.m. to 10.30 p.m.
Sundays	)..	.....	12.00 p.m. to 2.00 p.m.
Christmas Day	)..	.....	7.00 p.m. to 10.30 p.m.
Good Friday)		

The Bar Committee may on special occasions arrange for the supply of intoxicating liquor at other times subject to legal requirements

Notice of the hours during which the bar will be open will be posted in the Clubroom.

FURTHER EVENTS, SUBJECT TO CONFIRMATION

JUNE

- 3rd. SUNDAY. 70Mhz. CW Contest. 6 Hours section.
- 6th. D&W at The Basset Hound, Thingwall.
- 10th. SUNDAY. Contest - 432Mhz. Trophy.
- 13th.
- 17th. SUNDAY. 2nd. Sunday D.F. Hunt.
- 20th. D&W at The Lighthouse, Wallasey.
- 27th. The Eileen Medley Challenge Cup D.F. Hunt.

JULY

- 4th. BBQ at Heswall.
- 7/8th. Weekend. VHF NFD. 4 Band Club Entry.
- 11th.
- 15th. SUNDAY. 3rd. Sunday D.F. Hunt.
- 18th. D&W
- 25th. (Revenge) DF Hunt for the G8PMF Award.

AUGUST

- 1st. D&W
- 4th. Saturday. 432Mhz. QRP Contest.
- 5th. Sunday. 144Mhz. Low Power Contest.
- 8th.
- 12th. Sunday. 4th. Sunday DF Hunt.
- 15th. D&W
- 22nd. Junk Sale.
- 29th. D&W

SEPTEMBER

- 1/2nd. Weekend. 144Mhz. Trophy. Club Entry.
- 5th. D&W
- 9th. Sunday. 5th. and FINAL SUNDAY DF HUNT.
- 12th. Equipment demonstration by LOWE Electronics.
- 16th. Sunday. 70Mhz. Trophy, 6Hr. Contest.
- 19th. D&W
- 26th. Inter-Club Quiz Night, 2nd. round with Chester, at Irby.

TO FILL THE BLANKS, BE A REGULAR AT THE CLUB