

Chelmsford Amateur Radio Society.

NEWSLETTER No. 279

April 1989

NEXT MEETING - Computers, Some Amateur Radio Uses.

As we can tell from the callsign, Harry, G2HPF has been associated with amateur radio for a good number of years; now that he is retired from the every day hustle of professional communications, Harry has more time to study the applications of computing to our hobby of Amateur Radio.

We look forward to hearing how his station has benefitted from a 'box of chips' together with the problems and successes of mixing digital electronics with R.F. signals.

The illustrated talk will begin at 7.30pm and we look forward to meeting you all on Tuesday 4th April at The Marconi College, Arbour Lane, Chelmsford.

The Jackpot Raffle will drawn and the winner will receive a bottle of Asti Spumante.

DATES FOR YOUR DIARY

- 4 April CLUB MEETING - Computers, Some Amateur Radio Uses - Harry G2HPF.
- 16 April RSGB VHF CONVENTION - Sandown Park.
- 2 May CLUB MEETING - KW Communications for Ten-Tec.
- 7 May SOUTHEND & DISTRICT MOBILE RALLY - Roachway Youth Centre, Rochford.
- 28 May EAST SUFFOLK WIRELESS REVIVAL - Bucklesham, Nr. Ipswich.
- 3/4 June NATIONAL FIELD DAY.
- 6 June CLUB MEETING - Constructors' Competition.

NFD 1989 - Dick, G3WHR.

There will be a meeting at 12 Blacksmiths Lane, Wickham Bishops at 8 pm on Tuesday 11th April, for all those interested in participating in National Field Day - 3/4 June 1989.

You don't need to be a confirmed CW operator to take part in NFD, in fact you don't need to know morse at all, if you are interested then COME to the meeting.

LAST MONTHS MEETING - Amateur and PMR Repeaters - Richard G4ICP.

In many instances radio services have a direct bearing on UK manufacturing performance. Business radio is all about improving business efficiency and is still a growth industry.

Malcolm, G3XVV is professionally involved in Private Mobile Radio and his company operates PMR repeaters in the A-Band range of VHF (148-174MHz). He has also been involved in technical work with repeaters GB3DA and GB3ER. Although similar in principle, the PMR repeater differs from its Amateur relative in many ways.

As expected, PMR has a much higher DTI specification, part of which relates to harmonic and unwanted emissions. On 'DA or ER' any suitably equipped amateur station can have its transmitted audio to the repeater input re-transmitted by the repeater output, upon receipt of a short tone-burst of 1750Hz. Any station listening on the repeater output can hear everything that is relayed.

This is not so on the PMR repeater. The mobiles and base station user groups paying a rental to use the PMR repeater have their equipment designed so that only the designated user base station can talk to his own set of mobiles, and thus they can only talk back to him. All other users, which could be rival companies, cannot receive any other user groups messages.

This is achieved by each user group equipment being controlled by a continuous tone controlled signalling system, (CTCSS), where the TX is modulated with a sub-audible tone between 71.9 and 250Hz. Each user group is allocated a different tone, upon receiving a signal, the repeater regenerates the tone received and encodes it on transmitter. All users from other groups on the channel cannot hear what is going on because their RX squelch has not been opened by the their tone - also their PTT is locked out.

However, what other user groups do know is that their rig is showing a "busy" light, meaning that the repeater is in use and they must wait until the light is off before being able to make a call.

A typical A-Band PMR repeater service area is about 30 miles and is similar to its amateur counterpart. It would appear that the problem of heavily loaded channels is a result of poor radio technique. Like amateur repeaters, a PMR repeater has a time out, a typical over lasting up to 40 seconds.

A recent opportunity for the expansion of mobile radio was presented by the release of spectrum originally used by 405 line Band III television.

Band III mobile radio is proposed to be an improvement over A-Band, but so far has been slow to take off, probably due to competition from the Cellular Radio network, however, the growth of users of Cellular Radio telephones does not appear to have reduced the demand for conventional PMR, it has probably had the effect of increasing awareness of mobile radio generally.

Ultimately, Band III will enable a national trunking scheme to operate along with proposed limited connection to the Public Switched Telephone Network. The main difference between A-Band and Band III is that user congestion is hopefully avoided because more than one channel will be available on the each Band III site.

The new system is run by a consortium known as Band III Radio Ltd., thus highlighting how mobile radio offers scope for UK manufacturers of radio equipment to expand into significant new markets with international potential.

Thank you Malcolm for a most interesting meeting, which was attended by 40 members.

DF NEWS - Dick, G3WHR.

The 1989 DF Season starts this month with 4 events taking place in April. The DF Calendar was published in February so I've some space to do a little advertising.

First let me dispel a few myths - you do not need to be Mastermind, He-Man or Rambo to take part, though you will give your brain and brawn a bit of exercise. - DF events are not survival tests, they are enjoyable and can be taken at any pace you like - you do not have to be male, there are mixed and ladies teams who are very successful.

Participating in a DF event includes getting to the start, listening to the hidden station on a Top Band (1.8/2.0MHz) receiver with a directional aerial, plotting bearings and using two or more bearings from different locations to pinpoint the transmitter location, then finding the operator.

As with ski-ing the apres-DF is a very important part of the DF experience. At the start of an event all competitors are given a sealed envelope with the location of the 'tea site' where everyone meets whether they have found the transmitter or not. These gatherings may be at a pub or someones house and are a sort of mini-social where the chit-chat can be amusing or technical, and are where the results are announced.

How do you get started with DF:-

1) Contact the organiser, thats me folks.

2) Turn up at the start of a local event - wearing old clothes and sturdy shoes (shorts or T-shirts are not recommended).

There are several teams who regularly take part and who would welcome an extra person to their team.

You might also like to assist the hidden station operator - though you may hear some colourful language from competitors.

This months events :-

2 April - RSGB G T Peck Memorial Trophy.

7 April - Colchester.

14 April - Chelmsford.

23 April - RSGB Oxford.

All local events use OS map 168 Colchester and the Blackwater. Chelmsford events start from Tiptree Heath NGR 884148, Colchester events start from Fordham Heath NGR 945264.

Starting time for local events is 7.30pm.

HOUSE EARTHING, YOUR RESPONSIBILITY! - Roy, G3PMX.

The BBC Radio Four programme "You and Yours" is a weekday public service feature dealing with a wide variety of information and listener problems.

Recently, some failings encountered with house electrical wiring were discussed and the laws regarding earthing are worth repeating in these columns.

Traditionally the method of securing electrical earth in a house is by making good contact to the incoming underground water-pipe, however, recent changes with the use of plastic piping to repair leaks in the incoming water supply have led to low efficiency earthing in a previously satisfactory system.

Legal test cases involving water companies in the west country have revealed that a water company can not be held responsible for any deterioration to earthing performance by changes made externally to the property and that it is the householders responsibility to ensure that the house earthing is effective.

In the programme no advice was given for checking the earth other than by engaging the services of a qualified electrician. I will not prolong this item by suggesting the test methods but if a member would like to write a short article for the Newsletter I will gladly include it in a future issue.

CLUB LIBRARY

We are pleased to announce that the library book "H.F. ANTENNAS FOR ALL LOCATIONS" by Moxon, has been returned and is again available for loan.

COMMITTEE MEETING

The April Committee Meeting will be held in the Telford Lodge (Marconi College Residence) at 7:45pm on Wednesday, 12th April. You are most welcome to join us.

Please note the new starting time.

73 from Roy & Ela Martyr, G3PMX & G6HKM

Telephone, Home (0245) 360545
or Office (0245) 353221 Ex.3815

1, High Houses,
Mashbury Road,
Great Waltham,
CM3 1EL.

MEMBERS ADVERTISEMENTS

WANTED

To borrow and return November and December 1985, Practical Wireless magazine.
Richard, G4ICP, Tel.0376-84478.

WANTED

Input for your Newsletter, dateline for the next edition is Friday 21st April.