

# CHELMSFORD AMATEUR RADIO SOCIETY

NEWSLETTER No.218

April 1984

## NEXT MEETING

This month we have a guest speaker, Steve Oakman G8MRO who will give a talk on test equipment entitled "Then and Now". The talk will review how past measurements were made on communication systems compared with present day Micro-processor controlled instruments.

The talk will be illustrated with some items of test equipment and we look forward to an interesting evening on Tuesday 3rd April, at 7.30pm in the Marconi College, Arbour Lane, Chelmsford.

## LAST MONTHS MEETING

The talk by Arthur G3KPJ last month was of interest to both those with home computers of their own and those who didn't know a ROM from a RAM. Arthur started off by explaining all of the basic components of a computer with the aid of block diagrams. He then described the floppy disc and how information is stored on them. A demonstration of the difference in speed of computer language was given, by showing that machine code is far quicker than BASIC. Arthur then moved on to describe and run some programmes that he had. Some simple programmes were used for ohms law calculations and one of the more advanced ones calculated aerial parameters. A lot of work must have gone into the preparation of the talk, so our thanks to Arthur for agreeing to give his talk in March instead of April.

## MEETINGS TO COME

**May-** "RF Power Transistors" by Dick Brocks G3WHR.

**June-** Constructors Competition. Is that project nearly finished now? If not there are only a few weeks left before the constructors competition to put the finishing touches to your masterpiece. This year the competition will be judged by guests, members of the Colchester Club. In addition to the main prizes of £7, £5 and £3, there will be a novice prize of £3 awarded to the best entrant who has not previously won in the annual competition.

## COMMITTEE MEETING

Wednesday April 11th Marconi Residence, Arbour Lane, Springfield 7.30pm.

## NFD - DICK G3WHR

There will be a meeting at 30, Rowan Drive, Heybridge, Nr. Maldon on Tuesday 10th April at 7.30pm. for all those interested in participating in NFD. Talk-in available on 2m if you need it, otherwise, entering Heybridge from Chelmsford direction - follow signs to Tolleshunt Major and turn right just before the speed de-restriction signs. Don't think that because you can't read morse, you can't participate in NFD - COME to the meeting. For those unable to make the above date, there will be a second meeting after the club committee meeting at Marconi College at Wednesday 11th April at 9.00pm.

## VHF NFD

The club has decided to enter VHF NFD this year on July 7th-8th on all bands. John Donnithorne G8MKX is the organiser and would like to hear from those interested as soon as possible. John comes to most meetings and can be contacted on Chelmsford 267111 Ext.2901 or Witham 515271.

## DF - DICK G3WHR

Its BST again! that means the start of the Top Band DF season. A number of local events have been arranged - see below. Everyone is welcome to join in. If you haven't a DF set - no problem, just turn up at the start and we will arrange for you to join a team. Please wear old clothes and bring a torch.

LOCAL EVENTS - Friday evenings, 7.30pm start OS map 168.

### CHELMSFORD

13th April  
11th May  
15th June  
20th July  
14th September

### COLCHESTER

30th March  
4th May  
1st June  
29th June  
3rd August  
9th November

14th October Sunday afternoon joint event, Mid Essex Trophy.

Chelmsford events start from Tiptree Heath NGR 884148  
Colchester events start from Fordham Heath NGR 945264

## RSGB Contests Calendar

29 April Oxford

20 May Coventry

10 June Northampton

24 June Dartford Heath

15 July Mid-Thames

5 Aug South Manchester

19 Aug Salisbury

9 Sept Chelmsford/Colchester

23 September National Final Slade

What good fortune - your very best chance to qualify for the National Final. Since our event is the last in the season theoretically you can come 16th on the day and still go to Slade (Birmingham).

### **TRIP TO RSGB EXHIBITION NEC BIRMINGHAM**

A 33 seater coach has been booked for Saturday 28th April for our trip to the NEC. The fare will be approximately £6 - £7 plus entrance fee, this will be booked in advance to obtain discount and avoid queuing at the entrance. I WOULD LIKE A £2 DEPOSIT FROM EVERYONE ON THE LIST BY THE APRIL MEETING PLEASE. We will be joined by members of the Southend and Braintree Clubs which has enabled us to book a larger and more comfortable coach. The coach will leave Writtle Duck Pond at 8.00am and leave the NEC at about 5.00pm for the return journey. Please note that there is a small public car park near to the duck pond. There are still a few spare seats available for anyone who has not yet given me their name.

### **ESSEX REPEATER GROUP - REPORT**

The following is a résumé of the latest newsletter of E.R.G. reproduced by kind permission.

In early December 83 a new GB3DA repeater was installed for a fortnight to see how it worked and to get the response of the users to the new facilities. After that fortnight the old repeater was returned to enable adjustments to be made to the audio response of the new repeater. However within hours of the changeover the logic failed on the old repeater, this was subsequently repaired in early January. Unfortunately the power amplifier stage blew up within three days, this also was repaired but failed again within hours. The probable cause of failure was the associated cavities being out of tune, meanwhile the audio response of the new repeater had been adjusted to give a flat response from input to output but this resulted in the logic circuits not behaving correctly, this was fixed by the end of January.

The new system was thoroughly tested and returned to service on February 9th.

A note from the Repeater Group states that you may not get a "K" acknowledgement if your deviation is low or your over is short. In addition, when accessed from cold the repeater will blank the first second of audio (to suppress the re-radiation of the tone burst) so be sure to make allowance of this before announcing your call-sign. At the time of writing the repeater is off the air again!.

### **SCIENCE MUSEUM - ERIC GBADX**

"Is it a sign of old age when, at the Science Museum, you understand more about Steam Engines and 1939/45 Radio Equipment and your offspring understands the Aerospace and Nuclear Fission sections!" Did you know that the Science Museum runs its own Amateur Radio Station, GB2SM ? While I was there 'Lionel' was working VE land 5+9. For those who have not visited the Science Museum lately, it's well worth a visit. There are some very good demonstrations/explanations of things like PCM (Pulse Code Modulation) SKIP and a whole host of information for beginners to "old hands" apart from covering the whole spectrum of Science. Entrance FREE, Nearest Tube South Kensington.

73,  
Andrew.

Witham S12316 (Day)  
Silver End B3094 (any other time)

9. Abraham Drive,  
Silver End, Witham.

### **FOR SALE**

2 METRES AR245 with charger & whip plus helical antenna, output 1 or 5 watts, BNC adaptor included. Cost £165 Accept £85.

70 CENTIMETRES GEC Envoy with mobile cradle & internal battery for portable operation, tone-burst oscillator fitted, approx: 4 watts output. £35 o.n.o.

Pye PM2 Three channel, hand portable with two batteries, output 1 watt. £40 o.n.o.

Les G4CUT, QTHR, Tel: Chel: 267111 Ext: 2043 or Chel: 266993.

# CHELMSFORD AMATEUR RADIO SOCIETY

## THE G4VF PROJECT

April 1984.

As you already know Jim G6ZC has suggested that the society may like to celebrate the 90th birthday of Ron G4VF by re-equipping his radio station antenna system with an easy-to-use HF multi-band array matched to 50 ohms.

The following members have volunteered to assist in this project:-

J. Watt G6ZC	A. Butcher G3KPJ	R. Brocks G3WHR	P. Neave G4DAN
W. Cole G4JUW	G. Williams G4FKH	I. Maslen G4BYR	M. Nixon G6ADF
J. Donnithorne G8MKX	A. Mead G4KQE	L. Turner G4CUT	R. May G3KTF
R. Martyr G3PMX			

On Sunday 25th March G6ZC and G3PMX visited Ron to propose the idea and to survey his QTH. Ron was receptive to the plan and showed us his adequate garden space, it is long enough to accommodate an 80 metre dipole and wide enough to run a separate 160 metre long-wire, there is a substantial tree stump half way down the garden which with some heavy pruning of side branches will support Ron's Ham-M Rotator and three element Tri-Band Beam antenna.

Ron was asked if an invasion of able-bodied aerial erectors could take place on Saturday 7th April at approx: 2pm, this was agreed.

The plan will be to carry out the following installation:-

1. Replace the existing 40/15 metre dipole (recently fitted by G6ZC) with a 40/80 metre trap dipole, supported by two existing poles at each end of the garden; the pole near the house will need a back-stay.
2. Install a 160 metre long-wire antenna (approx quarter-wave) between the house and the pole at the bottom of the garden.
3. Provide an earth connection or counterpoise for the 160 metre antenna to the upstairs radio shack.
4. Construct a preset A.T.U. to match the 160 metre antenna into 50 ohms.
5. Prune the tree (a ladder is available but a chain-saw will be required) to fit a short stub mast to support the rotator and tri-band beam antenna, at the time of writing the best method suggested is to cross drill the tube and directly attach to the tree with coach bolts.
6. Assemble the tri-band beam antenna on a short stub mast to the rotator, this in turn will be mounted on the tree stub mast, the coaxial cable from the antenna and the 6 core rotator control cable will then be attached along the boundary fence to the radio shack.
7. Provide an antenna switching unit with three inputs.

So far the following contribution have been made to the project:-

For item 1, G4FKH has contributed a pair of quality trap coils for the 80/40 metre dipole and G6ZC has contributed the coaxial cable.

For items 4 and 7, G3KTF has constructed a combined antenna switch and A.T.U. together with the short patching lead to the transceiver.

For item 6, G4CUT is refurbishing the tri-band beam antenna which has been on loan to C.A.R.S. for field day activity.

For the testing of the antennas G3PMX will provide a Bird THRU LINE Wattmeter with suitable elements and a 50 ohm, 150 watt load.

### OUTSTANDING ITEMS REQUIRED.

Approx: 50 metres of 50 ohm coaxial cable for the tri-band beam antenna.

Approx: 50 metres of 6 core cable for the rotator control unit.

Approx: 50 metres of lightweight wire for the 160 metre long-wire antenna.

4 lightweight aerial insulators for the trap dipole and long-wire antennas.

2 short lengths (36 to 48 inches) of 2 inch diameter aluminum alloy "scaffold" tube for stub masts.

2 coach screws, 6 inches long for tree fixing.

1 mains plug 13A, 3 pin, with 2A fuse for rotator.

Arrange loan or hire of chainsaw to prune tree.

EVERY ONE ATTENDING, PLEASE BRING AN ADEQUATE SUPPLY OF TOOLS!.

G3PMX