

# Chelmsford Amateur Radio Society.

NEWSLETTER No. 277

February 1989

## NEXT MEETING - "Penny Plain and Tuppence Coloured"

Once again we welcome Mr. J.S. Wood for the next lecture in his series on the life of Marconi and the early history of radio. This time Stan will recall the period from 1903 to 1914 which is rich in stories of rival systems and the threat they posed to the now established Marconi Company.

The lecture will be illustrated with slides and we look forward to meeting you all at 7.30pm on Tuesday 7th February 1989 at The Marconi College, Arbour Lane, Chelmsford.

## DATES FOR YOUR DIARY

- 7 Feb. CLUB MEETING - Penny Plain and Tuppence Coloured - Mr J. S. Wood.
- 25 Feb. OPEN DAY - Arrow Electronics Ltd., Hatfield Peveral.
- 7 March CLUB MEETING - Amateur and PMR Repeaters - Malcolm G3XVV.
- 4 April CLUB MEETING - Computers, Some Amateur Radio Uses - Harry G2HPF.

## NFD 88 -The Contest Committee Reply - Dick G3WHR.

The October Radcom is always eagerly awaited by our NFD group - for the results.

This year we felt that we had made an extra effort and it came as a shock to see that our score was over 300 points below that claimed. Some lost points are expected, the contest had only been going for 17 minutes when some Wally sent us serial number 103 - slim chance of getting that one past the adjudicators, however, the number of points lost could not be accounted for without our entry being disqualified for an excess of unmarked duplicate QSO's.

Clearly there would have to be some enquiry to the RSGB. Those of us who were at the August meeting will remember that we met our RSGB Liaison Officer; therefore Ted Whitworth was asked to enquire, on our behalf, of the HF Contests Committee, what had transpired.

Ted reported that our enquiry was on the agenda of a recent meeting of the HFCC and according to the official records we only lost 5 points from our claimed score on 80m, this would leave us with 339 points instead of the 39 points printed in Radcom.

We have now received a letter from the RSGB confirming the above information and attributing the difference in scores to an error during the transcription of scores to the RSGB Database. Those extra 300 points will move us up from 28th to 23rd place, with 2777 points - our highest score ever! We've had higher, but not since 1976 when we came 12th with 1787 points. Comparing our previous highest score in 1986, the QSO rate up to 3am is similar but the 1988 performance climbs steadily - must be a different blend of coffee.

Well done operators and support group - NFD is a team effort, and didn't we have fun.

## LAST MONTHS MEETING - FILM SHOW - Bill G4JUW.

The mild winter weather encouraged 39 members to the January Film Show; an interesting selection of both Radio and Non-Radio related subjects: Ancient and modern productions from British Telecom, interspersed with some shorts displaying the work done by the DTI.

First on the screen was a Film about the use of the latest in Communications, Fibre Optics. The film showed that with filaments of glass fibre just 125 microns in diameter, signals could be transmitted with a loss of as little as 2 dB/KM. This was used to provide Digital Line Systems of 2, 8, 34 and 140 Megabits/S (and now 565 MB/S). The transmission medium takes up less room in underground ducts, and is impervious to the ingress of water. As it is made in 4 KM lengths, however, some sophisticated jointing techniques are required to avoid introducing large attenuations where the sections are joined.

A series of shorts from the DTI followed, describing the role of the various departments of that organisation in the fields of Fixed and Mobile radio and Broadcasting. The release of TV Band III for Private Mobile Radio by the 1982 Merriman Report was discussed with reference to the fact that this band is still in use for Broadcast Television in France, Belgium and The Netherlands.

The next film showed how Baldock monitoring station had advanced into the space age with the provision of a receive-only dish. This antenna extended the capability of the station so that frequencies from 10 KHz to 12.7 GHz could be monitored.

A film entitled "Shaping Tomorrow" showed how Radio was used in almost every facet of modern human endeavour, and how the DTI regulatory branch "policed" the bands so that every user could operate their own service without interference from others; that they cover Cable TV is good news indeed, in view of the problems this medium has caused in North America.

The last entry, "Special Cargo", showed how the first telephone cable between Spain to England was laid. The C.S Alert, which is still in service today, laid cable from Bilbao to Goonhilly in 1970. At the time quite a large capacity cable, at 5 MHz and 480 circuits it is dwarfed by today's 45 MHz cables. Some 500 miles in length, a repeater was required every 10 miles; and a joint inserted every 7 to 11 miles, the cable left the ship at a rate of 5 miles per hour, except when a repeater went over the stern when everything had to go "Dead Slow". The bottom of the sea isn't flat, it has hills and valleys just like the land. Thus when the cable is laid, it hangs on the peaks of the hills and sags into the valleys. When laying the cable, a taut wire is also payed-out so that the amount of "slack" can be calculated.

Our thanks to Les, G4CUT, whose VCR was used to show the above program.

## VISIT TO AIRPORTS UK LTD. (AUK) SOUTHEND - Brian G3CVI.

On Tuesday 20th December, at 7.30pm, 14 members were shown round the ATC (Air Traffic Control) tower and facilities at Southend Airport. It was not till after the briefing (in the briefing room, naturally) that we began to understand how privileged we were to be taken into the "Air-side" of things. Mr. Terry Murphy, SATCO (Senior Air Traffic Controller), gave us a history of the airfield, past, present and future and then divided us into two parties. One group to see the radar with Mr. Phillip Lewis, Senior Telecoms Officer and the remainder entered the tower itself with Terry...given time for our eyes to dark acclimatize, we learned that the airport is fourth in UK in its throughput traffic. A suprisingly large number of aircraft movements and freight tonnage is handled annually there being a considerable increase since AUK took over in 1985. The ever expanding passenger routes to the continent, especially to Scandinavia, bode well for the future. No less than fourteen major cities are served now and more are forecast in 1989.

In the tower we were told details of the airfield itself...the main runway is 1605 metres long, asphalt covered and in direction  $005^{\circ}/235^{\circ}T.$ , and the crossed runway  $146^{\circ}/326^{\circ}T.$ , with slightly longer undershoots than the main, due to the railway, housing estates and roads adjacent to it. The duty controller can actually operate the traffic lights on the public road concerned if an extra large machine is to be flown in hot weather when such would require all the distance available. We all found the airfield lighting most fascinating to watch and we finally got our bearings by closely observing the closed circuit TV screens which cover the blind spots not visible to the duty controller. The array of lights in several different colours was explained and we noted that the staff were justly proud of their newly installed Precision Approach Path Indicators (PAPI) and cloudbase recorder. All manner of variables were on display to the controller such as wind speed and direction, air temperature and humidity, barometric pressure, runway visibility, cloud base etc. One noticed the "Panic" button for summoning the emergency services in the event that they should be required.

Fortunately an aircraft arrived at the right moment and we were able to follow the process from first sighting to the "Stand" and shuty-down under the very windows as we watched. The clipped exchanges between pilot and the tower, familiar to those of us who eave-drop on the air-bands (119.7MHz), appeared to mean something as we followed "him" on to the ground and then round the taxi-way to disgorge passengers and mail-bags.

Terry gave us a detailed rundown of the procedures involved specially showing us the assistant controller (I'm only here to make the tea) handling the FPS (Flight Progress Strips) in their frame. They carry hand written data for each flight and are up-dated whenever new information is received by Telex, phone or radio. Speed, height, altitude, (not the same thing) routing, ETA callsign. squawk idents destinations etc., are all abbreviated and recorded on the strips for the entire time the aircraft is within the control of the particular field. All conversations are recorded on tape, we were assured as are radar records (when the gear is finally installed).

A relaxed atmosphere was very evident for such is necessary to enable the duty staff to get through their nine hour shifts maintaining top alertness yet underneath we detected a cool professional confidence which was most comforting to behold. Particularly was this noticed when we were taken by a "Swish of a Curtain" into the Holy-of-Holies...the radar room where the approach controller (as opposed to the tower) was "talking them in" from the moment they entered Southend SRZ (Special Rules Zone) which extends from the surface to flight level 65 (6500 feet) linking in on the eastern side with the Cross Channel SRA (500ft to 6000ft) whence most of the approaches commence. Once again an aircraft obliged as we watched it appear at about 50 miles on the newly installed Marconi S/511 L-band Radar...the quality of the presentation is superb...and minutes later it was seen on the short range high resolution X-band set until touch-down and then to the Stand. Many questions were asked and Terry spared no pains to elucidate on the techniques involved. The staff are not beyond a bit of improvisation as demonstrated by a baby-alarm two way device to back-up another system for intercom twixt radar and duty man at the tower desk. (Money is short...).

Half time came all to quickly and the parties exchanged guides. Phillip escorted us, after radio permission from tower via a hand-held set across the apron to the radar hut where the new Marconi gear purred away quietly. The previously mentioned set has a facility whereby the scanner can be nutated (nodded) from the tower so as to assist in the reduction of close-in clutter from adjacent buildings and houses etc., the purification of the PPI scan being very obvious as we watched the monitor. The output is about 600KW peak and we saw that the DC current to the "Magy" was about 38mA...we were not able to discover the pulse value!!!... but a guess at the voltage suggested it was "highish".

Finally back in the briefing room where the walls are papered with the latest NOTAMS (Notices to Airmen) chartlets and weather forecasts we continued to question our guides, examine the airways charts and learn a few more statistics about the airfield. "What's the time?" someone asked ... "Not too late"... so we all repaired to the Bar and entertained our worthy guides in the time-honoured way. Eventually, thanking them for a marvellous evening, we departed for home at about 9.50pm.

Kindness upon kindness...a day after the visit a package or useful documents full of technical info arrived on your scribe's doormat enabling him to quote accurately. Thanks again Terry and Phillip.

## MORSE TUTORS

If you have a Morse Tutor on loan and would like to return or extend the loan please arrange this with Ela G6HKM at the meetings, both Tutors are out at the moment, however your name can be put on the waiting list.

## DF NEWS - Dick G3WHR.

Our first event in 1989 took place on Sunday 15th January. This was a two station event with Colin Baisden G0IKU and myself as the hidden stations.

Seven teams assembled on Tiptree Heath for the start. The WX was very kind to the operators and hunters - being unseasonably mild, there was even some sunshine.

Most of the competing teams set out for Woodham Walter, where Colin had concealed G0IKU/P in 'The Wilderness'. Some teams convinced themselves, and others, that the station was on the riverbank; whilst others approached via the opposite end of the woodland - by doing so they circumvented the multi-earthstake aerial but gave themselves a long run in, and out.

Just one competitor decided to try G3WHR/P first. A pretty strong signal was received at the start, so it wasn't too surprising that the bearing crossed in Feering. Between the railway and the river there's a rather swampy area next to the cricket ground, and there was G3WHR/P, in a thicket.

After my first competitor had been and gone, the next people to approach the Tx were a family out for an afternoon walk. Their youngest child found the small gap in the thicket irresistible, since it was just the right height for a three year old. However, by the time his parents had crawled through after him, the hole was considerably enlarged and gave an obvious clue to the whereabouts of the hidden station.

Afterwards, it was Tea at Wickham Bishops, on our usual DIY basis.

### RESULTS

		StnA	StnB
1	Philip Cunningham	3.08	2.21
2	Roy Emeny	2.31	3.11
3	Ian Butson	2.37	3.24
4	Andrew Mead	2.29	3.27
5	Andy Collett	2.27	3.28
6	Mike Hawkins	2.57	3.33
7	Alan Williams	3.07	3.47

Well done Philip - Sorry, there are no points for the Snowman.

The local and National programme of DF events for 1989 has been arranged as follows:-

2 April	RSGB G T Peck
7 April	Colchester
14 April	Chelmsford
23 April	RSGB Oxford
5 May	Colchester
14 May	RSGB Banbury
19 May	Chelmsford
2 June	Colchester
11 June	RSGB Northampton
25 June	RSGB South Manchester
30 June	Colchester
7 July	Chelmsford
16 July	RSGB Salisbury
30 July	RSGB Grimsby
4 August	Colchester
11 August	Chelmsford
20 August	RSGB Dartford Heath
10 September	RSGB Chelmsford/Colchester
15 September	Chelmsford
24 September	RSGB National Final
29 September	Colchester
15 October	Mid Essex Trophy
3 November	Colchester

If you would like to take part - or perhaps operate the hidden station, please contact me at any club meeting or phone me on Maldon (0621)891868.

We are always pleased to welcome new faces and its a great way to enjoy amateur radio in the open air; even if you don't find the station, there's always the 'Tea' afterwards.

## MEMBERS NEWS - E1a G6HKM.

The Society extends a welcome to Paul Forteau G4INZ and Roy Collett G0KSV.

We have obtained from the Department of Trade and Industry, copies of Radio Amateur Information Sheet No.9: CEPT Amateurs (UK Licensees). This contains valuable information if you are thinking of operating in Europe or can be useful if you have a friend from Europe visiting this country. If you would like a copy please see me at the meeting.

Star raffle prize this month is a desoldering pump, an asset to any shack.

## CLUB NET

The 10 Metre Net, held on the Tuesday evenings between meetings are proving to be very popular. Please join us on 28.325MHz at 8.30pm local time.

## COMMITTEE MEETING

The February Committee Meeting will be held in the Telford Lodge (Marconi College Residence) at 7:45pm on Wednesday, 15th February. You are most welcome to join us.

Please note the new starting time.

## ANNUAL SOCIAL REPORT - Andrew G4KQE

For many years, the Committee has strived hard to find an ideal venue for the Christmas Social, somewhere to have a good meal at a reasonable price, with 'withdrawing' facilities - a room to ourselves afterwards. We have scoured Chelmsford town and surrounding areas over the years, and indeed found one or two ideal places. This year, at a Committee meeting discussing the Social, a chance remark led us to realise that the ideal venue had been right on our doorstep all the time - the Marconi Residence next to the College where we hold the monthly meetings.

So it was on the evening of December 17th that 27 or so members and xyl's gathered in the bar of the residence for a drink and a natter.

At about 8.30pm we QSY'd to another room in the residence, where the staff had laid out a sumptuous buffet of vol-au-vents, chicken drumsticks, salmon boats, assorted sandwiches and other delights. Christmas crackers had been provided to add to the festive spirit. After the 'first course' it was time to sample the 'sweet' - a tempting selection of Gateaux or mince-pies and cream. To round off the meal coffee was provided.

By this time, much merriment was being had and everyone appeared to be enjoying themselves. To record the evening for posterity, Roy took a few photographs, which were on show at the last meeting.

## CLUB LIBRARY

There are some new titles in the library this month:-

ARRL REPEATER DIRECTORY.

H.R.S. ELECTRONICS PLC. Catalogue.

METEOR SCATTER by John Mathews.

ZMT WRITTE - THE BIRTH OF BROADCASTING by Tim Wander.

These have been included in the list on the notice board at the meeting, Brian G3CVI is in charge of this service the fee is only 20p a book per month. If any member would like to contribute a book, Brian would be pleased to add it to the collection.

A reminder that Brian also has the Clubs BEROL Security Pen for loan as required.

## LOST, STOLEN OR STRAYED ?

The library book "H.F. ANTENNAS FOR ALL LOCATIONS" by Moxon is long overdue. Will the member who has this copy please return it, otherwise we will have to buy a replacement out of club funds to reimburse the person who kindly loaned it for library use.

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

### FOR SALE

Mains Isolating Transformer, 240V to 240V @ 500VA, RS Components 207-469, boxed as new, direct equivalent to 208-513 in current catalogue. £20.

Eric G8ADX, Tel No. Ingatestone (0277)353127.

### FOR SALE

Closed Circuit B/W Television Camera, type CamEra CV91, 625 line, Vidicon, 240Vac, size 4.5"x 3.0" x 11.0", fitted with 8.5mm f1.5 lens, focus 8" to infinity. Offers ?

Eric G8ADX, Tel No. Ingatestone (0277)353127.

### FOR SALE

IAMBIC CW Paddle, made by S.E.M. for use with an electronic keyer, complete with heavy base. £16.

Richard G4ICP, Tel No. Silver End (0376)84478.

### WANTED

Input for your Newsletter, dateline for the next edition is 25th February.