

# Chelmsford Amateur Radio Society.

NEWSLETTER No.256

May 1987

## NEXT MEETING - How to work VHF-DX by Meteor Scatter.

Quoting from the Amateur Radio Operating Manual "Meteor-scatter (ms) is a dx propagation mode which is open to exploitation by most serious vhf operators; it should not be regarded as the province of a few specialists. However, it does require a higher level of station organization and operational competence than random tropo dx chasing."

"Most amateur ms operation takes place on 144MHz, although 28, 50 and 70MHz bands are also good. The distances covered by typical ms operation are similar to those possible via sporadic-E; assuming most signals are reflected from a region at altitude 110km, the maximum range possible with an antenna exhibiting low angle radiation is about 2000km".

This month we are pleased to welcome Ken Willis, GBVR, to explain and illustrate this phenomenon, on which he often reports in his VHF columns in Radio Communication.

The meeting will commence at 7.30pm on Tuesday 5th May at the Marconi College, Arbour Lane, Chelmsford.

## DATES FOR YOUR DIARY

- 5 May - How to work VHF-DX by Meteor Scatter - Ken Willis GBVR.
- 19 May - Visit to Bradwell Power Station.
- 2 June - Constructors' Competition.

## LAST MONTHS MEETING - Short Waves and Beams - Brian G0BDS.

The history of Marconi is as we know a catalogue of dates all slowly building up to the formation of a company which had and still leads the world in many fields.

At the last meeting we had the privilege of hearing a second lecture on Marconi from Stan Wood the Honorary Consultant to the Marconi Archives. Stan's lecture gave an insight into the early allocation of wavelengths when he told us that the Government of 1912 assuming that all wavelengths below 200 metres were useless then went ahead and allocated anything below that figure to the Army and amateurs. All the early pioneers had never really been interested in the commercial aspects of radio, only the scientific, and it was not until "Lodge & Muirhead" published their work that the real commercial interests began to emerge. Marconi was in fact experimenting in Italy when Lodge published the papers, and not too long after came to England where he was helped by Sir William Preece, Chief Electrician of the G.P.O. on shortwave and centimetre wavelengths, experiments which he was to abandon in favour of longwave experiments. Several years went by during which distances of W.T. contacts increased gradually. In 1899 Marconi gained a contract to instal on H.M.S. Juno and two other large cruisers radios of wavelengths between 100 and 200 metres. The distance of contacts across the sea had now been established as being better than over land and the Navy exercises were good demonstrations of this.

The High Power (300kw) station at Caernarvon had worked into America on long wave, and some of the American built stations in the south of France were operating up until 1920. The beginning of World War One was the end of the "Spark Era" and not too long after experiments of Centimetre radio using "Beam Aerials" began again because it was realised that longwaves using high power was not the way that radio would best progress.

By this time Marconi had enlisted the help of C.S. Franklin to be his assistant, and experiments on 2 and 3 metres with a Crystal Receiver and tuned wire reflector aerials started. The first significant thing they would appear to have found was R.F. interference from automobiles, however, experiments with the Italian Navy on 2 metres using beam aerials gave results of over 6 miles.

The "French Valve" which was a 'Jack of all Trades' valve from 1916 on long waves but had to be modified with 'Horns' to improve H.F. ability in the early 1920's.

The MT2 Valve designed in 1919 ran in production until 1930 showing that valves were slowly becoming available to deal with the shorter wavelengths.

Marconi with the aid of Franklin was now aware that propagation changed on sky waves between day and night, and with the aid of his yacht "Electra" which was a floating laboratory, they worked from Poldhu to the Cape Verde Isles, a distance of 2500 miles. Further tests showed that a reduction in power often gave no loss of signal strength.

Big Power long wave stations were still used and built however, and Poldhu was often radiating an E.R.P. of 17kw and did indeed contact the S.S. Cedric over a distance of 1400 miles. At this time the only way to overcome the H.F. propagation was to run very big long wave stations which at least could be relied upon to a greater degree.

In 1929 Cable & Wireless was formed becoming a direct competitor of Marconi who had five years earlier obtained a contract from the Government to provide D.X. contacts worldwide after the so called Imperial Chain of stations idea had been abandoned.

Some of Marconi's H.F. stations we were told were still in use as late as the 1950's although today's Health & Safety Inspectorate would have a nightmare if they had seen them.

This was the second lecture of five that Stan can give based on Marconi's history and I am sure we all look forward to a return visit in the future to hear the third lecture.

P.S. The author gives no guarantee to the accuracy of the above facts because his pen could not write quick enough.

## FIELD DAY 1987

Preparations are under way for the CARS entry to this event. There will be a meeting at 8.00pm on Tuesday 12th May at the QTH of Dick G3WHR to discuss the strategy, equipment and the operating schedule.

Assistance is required but please let Dick know you are coming, Tel: (0621) 55707

## D.F. NEWS - Dick G3WHR.

In the DF world there are a number of trophies to be won. Pride of place goes to the RSGR National DF Trophy. However, there are others like the Bert Simmonds and the Geoff Peck. Of more local interest are the Mid-Essex Trophy and the Colchester DF Trophy. These are now joined by the Chelmsford DF Trophy - to be awarded for the first time at the end of the current season.

The Chelmsford Trophy will be awarded to the competitor with the highest score in the Chelmsford local events. Scoring is as in Grand Prix motor racing, with 9-6-4-3-2-1 points for the first six places. The best 4 results will be used to calculate a competitors final score.

The first event of the season took place on the 27th March. I was the hidden station and had chosen a site at Tollesbury. The transmitter was hidden at the base of the sea wall, on the seaward side. The aerial was run across the mudflats to a stake in another part of the sea wall, with a dummy aerial nearby for people who like to follow aeriels.

Despite the rain and howling gale blowing, 8 teams set out from Tiptree Heath. It was soon dark, but that didn't stop Ian Butson from recording a very good time.

## RESULTS

1	Ian Butson	8.10
2	Paul Clark	8.17
3	Pat Cranmer	8.18
4	Mick Farmer	8.18.5
5	Philip Cunningham	8.19
6	Frank Pearson	8.22
7	Roy Emeny	8.25
8	Richard DeLaRue	8.29

## VISIT TO BRADWELL POWER STATION

Final arrangements for the party from CARS to visit Bradwell on the evening of Tuesday 19th May will be announced at the next meeting. The size of the party will be up to 25 and there are still a few vacancies left. Members are requested to arrive at the Power Station by 7.00pm and to offer a lift to those without wheels. If you are interested in joining this extra activity arranged by the Society, please give your name to the Hon. Sec. Andrew, G4KQE at the next meeting or by phone.

## CONSTRUCTORS' COMPETITION

How are you getting on with your entry?, only four weeks to go for one of the valuable cash prizes at the June meeting!

## 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.

## CLUB LIBRARY

Brian, G3CVI, is in charge of this service, see the list of books, which is continually updated, on the notice board at the meetings.

If any member would like to contribute a book to the collection, Brian will be glad to add it to the list.

## CLUB NETS

Remember that for up-to-date information on the activities of the society between meetings join in the Tuesday club nets.

The 2 Metre FM Net begins at 7.45pm, on 145.225MHz (or nearby if this channel is already occupied) and the 10 Metre SSB Net on 28.325MHz starting at 8.30pm.

## COMMITTEE MEETING

The May Committee Meeting will be held in the Marconi College Residence at 7:30pm on Wednesday, 13th May. You are most welcome to join us.

73 from Roy & Ela, G3PMX & G6HKM  
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## MEMBERS ADVERTISEMENTS

### FOR SALE

WOLSELEY MAJOR, 4h.p. garden cultivator, in excellent condition, only used for a few hours, fitted with reverse drive attachment.  
A bargain at £275.

Roy G3PMX, Address as above.