Chelmsford Amateur Radio Society

Club Station Call Sign GØMWT

Issue Number 381 October 1997

THE ANNUAL GENERAL MEETING

This year we will reveal a number of radical changes in the administration of the Society.

Members will receive up-to-date reports on the status of the club's management and finances as well as the opportunity to air their opinions on past and future activities; a necessary and important function in any Society.

Following the reports prepared by the present committee, they will retire and the President will invite actions:- 1) Nominations for the new committee. 2) Voting for the committee election. 3) The setting of the subscription rate. 4) Suggestions for future meetings and A.O.B.

All the members of the present committee have offered their services if elected, however, if any nominations or volunteers are proposed to join the committee, the normal democratic process of election will be conducted.

After the election of the new committee, the meeting will be invited to submit nominations and if necessary vote for the candidates in our Annual Award of Merit. To add interest to the evening, we will draw the Jackpot Raffle for a Years free subscription to CARS, in addition to our regular raffle draw. Finally but not least, we will open a technical forum for members to exchange ideas and hopefully answer some of the problems that occur in radio and computer applications. We look forward to seeing you in the Marconi College at 7.30pm on Tuesday 7th October, (complete with technical questions).

DATES FOR YOUR DIARY

7 Oct. C.A.R.S. ANNUAL GENERAL MEETING.
17/18 Oct. LEICESTER AMATEUR RADIO SHOW.
4 Nov. CLUB MEETING - The Annual Junk Sale.
15/16 Nov. LONDON RADIO & COMPUTER RALLY.

C.A.R.S. ANNUAL AWARD

At the AGM, our **Society Award of Merit** will be presented to a member who has made a substantial achievement in the field of Amateur Radio during the past year.

Nominations should be made in writing and given or sent to a committee member.

CHRISTMAS DINNER

Your Committee have been working hard to find a new venue for this event, it's not easy to replace the superb facilities we have enjoyed over the last few years. The main requirements on our list were pleasant surroundings, accommodation of our own for the evening, must be in or near to Chelmsford and of course safe parking. This we have found with 'Writz Catering' at the Writtle Agricultural College, unfortunately like most things these days it is more expensive, however with a bit of negotiating we have managed (we hope) to achieve a price of £17. per head. Final arrangements will not be known until after this newsletter has been printed and posted, as the person dealing with our booking is on holiday.

It is hoped that the menu will consist of two choices for starters, followed by Roast Turkey and Cranberry Sauce, served with a selection of seasonal vegetables, followed by Christmas Pudding with Brandy Butter or another desert yet to be decided, and Coffee.

There will not be the facility of a Bar, however a Sherry or the famous Writtle College Apple juice will be served on arrival and a glass of wine with the dinner.

When our booking is made a percentage has to be paid as a deposit. The date that has been pencilled-in is December 6th, subject to final arrangements being made. Tickets will be on sale at the next club meeting (AGM), or by post if you wish, if paying by cheque, please make payable to E.B.Martyr, a payment of £5 deposit must be paid when booking.

COMMITTEE MEETING

The next Committee meeting will be held at 7.30pm on Wednesday 15th October, in the Marconi College, you are welcome to join us.

DF NEWS

We are pleased to announce that Andrew Mead and Andy Collett have jointly retained the DF Rosebowl for another year; it will proudly be displayed at the AGM and details of how it was won will be published next month.

Two events are scheduled for October; on Sunday 5th a Mid-Essex Double event, on Saturday 25th a Mid-Thames Treble Night event.

LAST MONTHS MEETING

Chairman John, G8DET opened proceedings with a title for the evening; "METEOROLOGY" the study of the earths atmosphere, especially of weather-forming processes and weather forecasting. Just about everyone is an 'Expert' when involved with weather, it controls all our lives. In England we like to think it changes more quickly than most other places in the world.

John went on to quote from historic records of Essex some of the exceptional conditions in temperature, wind speed, rainfall and drought; he then expanded on a theory that surrounding areas had higher average rainfall than his home patch in Danbury. With the assistance of George, G3GNQ and SWL's, John had collated a number of rainfall charts from the Chelmsford area and reluctantly conceded that Danbury is not a dry spot on the map!

John then introduced Brian, G3CVI who commenced by saying his aim was to set the general scene by tracing the origins of the main weather systems which occur in the northern hemisphere reminding us that similar events are found down south but with opposite wind directions in the depressions and highs.

He showed how fronts develop especially the polar one which effects our weather in Europe and traced the arrival and "roller-coaster" behaviour of the jet streams which bring low pressure air down to the surface and kick the fronts into west to east travelling waves. Such a wave with its curved foot-print at the surface produces the "text-book" frontal shape in our depressions or centres of low pressure. There followed some facts and figures relating to the frontal slopes and attendant cloud formations by which we are able to see the approach of a low when the high Cirrus clouds are visible in the western skies.

Brian reminded us that, although there is some atmosphere still detectable at 150 km. above the Earth, the fronts rarely extend much above 30 to 40 thousand feet (He apologises for mixing the units!!!). His blackboard sketch concluded by showing the disposition of the highs and cols with respect to the lows and the associated wind directions.

G3CVI closed by suggesting we re-read "Jim's" presentation in the light of the evening's talks and then handed back to John.

John then introduced Roy, G3PMX who began by saying that his contribution would be some practical advice in obtaining weather forecast charts from sources other than TV, from which you can deduce your own predictions and not have to rely on Michael Fish, etc.!!! (and avoid loosing valuable radio masts).

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LAST MONTHS MEETING - continued.

Most Personal Computers are capable of downloading WeatherFax images from short wave radio or graphic files from the Internet.

Using a low cost Serial Interface, JV-FAX software and the audio output of a short wave receiver, a whole host of FAX pictures can be obtained, particularly in the 80m band with Northwood (London) on 3652KHz and Offenbach (Hamburg) on 3855KHz being the most reliable, however, Northwood often suffers QRM from uninformed radio amateurs!

Roy illustrated with sound recordings how to adjust a receiver for best results, this being to tune down by 2KHz on the Upper Sideband of the published SSB frequency, this allows the computer to form an image from the shift keying where 2KHz=White and 1.4KHz=Black. To further illustrate, Roy played a recording of a typical FAX transmission and with the aid of a viewfoil explained the function of the various sounds.

Roy thanked Harry, G5HF for the introduction to WeatherFax and the subsequent improvements in software that has mutually improved their reception over the past 5 years, however, as the average period to receive a weather chart is 15 minutes and more than one chart is required to make a prediction the whole business can become very time consuming, so Roy has changed his allegiance to the Internet where weather forecast charts from the World Meteorological Organisation (WMO) can be downloaded within a three minute local telephone call and they are in colour!

Roy concluded his contribution by showing a series of viewfoils of the charts received by the methods described.

After the customary tea break John introduced Harry, G5HF for his contribution "The Future of weather forecasting"

Harry said that current weather forecasts over 24 hours are excellent and the 5-day forecasts are better than 80%, but everyone wants longer term forecasts, so what is the chance of getting them?

The next generation of satellites will improve the accuracy of forecasts still further and possibly enable 6, 7 or even 8 day forecasts to be made. The first of the new generation of satellites is due to be launched this month and this will carry improved radiometers that should, for example, measure temperatures to 0.1°C, a tenth of the present accuracy of about 1°C.

However, the next major step will be to include the oceans of the world in addition to the atmospheric models used for forecasts. 71% of the world's surface is ocean and, as the heat capacity of water is many times that of air, it is logical to expect oceans to influence the weather. We have known for many years that the Gulf Stream warms the British Isles about 6°C above the temperature expected for its latitude and the next area to be researched is in the Pacific Ocean, where the El Nino current is known to be linked to weather disasters, almost all over the world.

A cold current flows northwards along the West coast of S. America, bringing huge amounts of plankton (fish food) with it and enormous quantities of fish live off the coast of Peru. Another current, the El Nino, runs westward across the Pacific and this is a warm current which warms the air above it and evaporates water into the trade winds, which also blow westward and bring heavy rain to Indonesia and the East coast of Australia.

Harry translated El Nino from the Spanish for "Boy Child," more specifically the "Christ Child," and it is named after the Peruvian Christmas festival which is accompanied by a warming of the waters off Peru. The El Nino reverses its flow and the winds blow heavy rain-bearing clouds towards S. America, causing great floods in an otherwise dry region. The West Pacific, Indonesia and Australia, now experience severe droughts, sometimes followed by bush and forest fires. India's monsoon, which carries 80% of the annual rainfall, is delayed and sometimes fails altogether. Russian crops fail, Africa has a drought in Sudan and Ethiopia, N. America has a cold winter and there are severe storms in the North Atlantic. Because all these events occur when the reversal of the El Nino lasts more than a few days, it has been suggested that monitoring the El Nino flow and temperature might enable scientists to forecast extreme weather in many parts of the world.

The difficulty is that sometimes the warm water reaches Peru and no weather disasters occur elsewhere, so serious and widespread research in many countries is being carried out to build an Ocean model of weather that can be linked to the existing atmospheric model and in this way, hopefully, enable long term, perhaps even seasonal forecasts to be made. The cost of this work would be more than justified if it is successful by the enormous economic savings to be made in the regions most affected. To help this work along about 80 buoys have been placed in the Pacific to monitor the temperatures, flow and weather. These are Automatic Weather Stations relaying data continuously to the research centres via satellites. Harry said, "who knows? One day it might be possible!"

John wound up proceedings by thanking all contributors for a most interesting and informative evening.

THE 1997 CHELMSFORD SPECTACULAR

Report by Colin, G0TRM

As many members will know, the Society was asked by Geoff Bowles of the Science and Industry Museum to set up an Amateur Radio display during the 1997 Chelmsford Spectacular weekend at Highlands Park. Our attendance was requested in order to form part of the Museum's exhibition on the theme of Communication. Several members responded to the call and as a result on Sunday 24th August Chris G0IPU, Jan G7UVP and Tony G4YTG provided and set up equipment to demonstrate some of the aspects of our hobby to the many visitors to the CARS display. The Society's newly commissioned striking 10 foot banner advertised our presence.

Jan set up a very compact packet station, using a lap-top computer together with an MFJ interface unit and an AKD transceiver.

On 144.625 MHz, he made contact with many other stations via TCP/IP operation and he demonstrated the reception of INTERNET information over amateur radio using JNOS decoding software.

With a Racal 1217 receiver and a Spectrum computer employing the RX4 program, Tony showed CW signals being instantly decoded and displayed on a 22" TV screen. The information was mainly of maritime interest and strong signals from a shore station were displayed showing traffic lists and frequencies with regular requests for a particular ship to 'call in'.

Chris set up a station to receive alternately SSTV pictures and Digimode signals. He used a program called GHS-PC by DL4SAW for SSTV pictures, and HAMCOM 3.0 for RTTY. Outstanding pictures were received by Chris using his 166 MHz computer and a 23" monitor (without magnetic attachment). WXFAX from Northwood was also featured. Thanks to Chris, Jan and Tony for all their hard work.

Special thanks to the often heard but unseen members who throughout the whole afternoon, provided the essential pictures and signals for Chris to resolve. This background team of Brian G3CVI, Geoff G3EDM and John G3VMJ, worked in relays transmitting 'on cue' from their home bases all the information required by Chris to keep his screen active for the visitors. Some very fine colour pictures were displayed as well as regular RTTY and AMTOR traffic all of which created keen interest with the visiting public.

On Monday 25th August, I took over from Jan and showed some early mechanical Morse apparatus working. The exhibits I provided were a tape perforator, a Wheatstone transmitter and a Morse inker which printed received Morse symbols onto a moving paper tape; this equipment - some 40 or 50 years old - contrasted well with Tony's up-to-date display of decoded Morse.

The display was well attended throughout both days, with occasional quiet spells when we were able to rest our voices and restock our stomachs!

Many thanks to Charles G0GJS for his co-ordination and encouragement before the event and over the two days to members at Highlands. Special thanks must also go to Tom G4INM for his guiding influence regarding the 2m engineering link established at the site, enabling members of the background team to be prompted when to transmit. Daniel and Matthew, the sons of Chris deserve a special mention for their interest and help with my exhibit. Finally, thanks to Geoff G7KLV our display manager who co-ordinated with Geoff Bowles, organised the special entry permits, provided the necessary information to members and generally made sure we attended to all requirements "with good order and discipline". Geoff was even heard on the air from time to time, a very rare event in the annals of Amateur Radio. (See DX Newsheet for his QSL Manager details).

MEMBERS ADVERTISEMENTS

FOR SALE

TERMINAL NODE CONTROLLER - G0BSX design, boxed and fully working, £45

MASPRO 5 Element Beam Antenna for 2 Metres, c/w pole clamp, little used, £10

Contact Dick, G4DJC. Tel: (01245)256416

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Deadline for the next NewsLetter is Saturday 25th October