

Chelmsford Amateur Radio Society

Affiliated to the RSGB

President: Dick Brocks G3WHR

Secretary: Charles Shelton G0GJS

Club Call Sign: G0MWT

Chairman: John Bowen G8DET

Treasurer: Brian Thwaites G3CVI

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Web Address www.g0mwt.free-online.co.uk

December 1999

The December Meeting

In this life very few things remain the same for long. From year to year the changes are probably small but taken over a period of ten or twenty years changes can often appear quite dramatic. That is particularly true for amateur radio. Nowadays rigs are off the shelf items whereas twenty or more years ago the chances are they would have been home constructed, or pieces of commercial equipment modified or otherwise butchered. In those days home construction was the norm rather than the exception. Today home construction seems to be the exception rather than the rule, being mostly confined to aerials, an ASTU or, perhaps a power unit.

In an attempt to encourage DIY a **Construction Evening** has been arranged. Several Members have been persuaded, dragooned or otherwise prevailed upon to demonstrate a wide range of available construction techniques from simple soldering through the correct method of wiring coaxial plugs to the construction of prize winning projects. Yes, we are only just over six months away from the Constructors Competition. So, as a result of our next meeting we expect to see some new entrants to the Competition!

Even if you are not very interested in construction you can always gravitate towards the bar and have a chat with old friends or make some new ones. Our worthy **Chairman, John G8DET**, will call us to order and open the meeting at 7-30pm at the MASC on **Tuesday the 7th of December**. Don't forget your raffle tickets which help to maintain our solvency!

Dates for Your Diary.

- Dec. 7 CARS Meeting 7-30pm MASC.
- Dec. 9 CARS Xmas Party. The Behive, Gt. Waltham.
- Dec. 15 CARS Committee Mtg. 7-30pm. Ela's QTH.

Silent Key.

It is with regret that we have to record the passing of Doreen Elliston G4WKV. We extend our sympathy to husband Bill G3TIQ in his sad loss. In latter years they did not attend Club meetings due to poor health but they were regular contributors to the morning nets.

CARS Committee Resignations.

A Message from Our Chairman.

It is with great regret that I have to report that Charles Shelton G0GJS has tendered his resignation from the post of Secretary, and from the Committee, as from the end of February 2000.

I have tried to persuade him to reconsider without success but he feels, for many reasons, he should step down. He has been a superb Secretary, and was elected to the position in 1993, having served as Assistant Secretary for the previous year.

He has indicated, however, that he would be prepared to assist the Club, in any capacity, if and when asked. In particular, he said he would like to be involved with IMD and the Millennium. I am sure this offer will be taken up and discussed in Committee.

I also have to report the resignation of Gwyn Williams G4FKH from the Committee. Gwyn has also said that he is prepared to assist the Club in any way he can, when asked.

These are generous offers from two Club Members and Radio Amateurs who are held in great esteem.

The Committee thank them both.

John H Bowen G8DET Chairman of CARS.

The Club Net.

Apologies, I got it wrong last month! Sorry Harry G5HF, your turn will come! David is doing a fine job this November. The December controller is definitely Chris G0IPU.

Member's News.

Congratulations to Trevor who was G7XAB. He is now proud to be known as M5AKA!

A warm welcome to our new Member Patrick Smith M0AQL. He has already got a rig and to date has only been a listener. He's anxious to start sending and would be grateful for help and advice on erecting an aerial.

CARS Christmas Party.

There are still tickets available for our Christmas party and dinner at The Beehive Gt. Waltham. The dining area has been extended since last year. There is an extensive and varied menu. The event is being organised by David M0BQC, ably assisted by Jill. Book your place with him at the December meeting or ring him on 01245-602838. For those who have already booked, it's 7-30 for 8pm on Thursday the 9th of December, that's the Thursday following the Club meeting.

Last Month's Meeting.

The Bob G6AKL and Matthew Show.

READ THE MANUAL FIRST is always good advice at the best of times, but with the complexity of today's 'Black Boxes' reference to the manual BEFORE switching on is vital. This was the advice given by Bob during his address to last month's meeting. Accompanied by his son Matthew he showed us some of the latest goodies on the market, available at you know where!! Waters & Stanton no less. Spread out before us was a mouth watering display of 'if onlly'.

After setting the current scene at W & S, and telling of the very many aspects of the Company's interests, Bob went on to explain some of the difficulties involved in buying and selling equipment world-wide. The different standards, regulations, and the requirements of selling not only to the Amateur market but also to Governments, and other organisations abroad, creates many problems. W & S are also involved in many ventures using designs of their own creation and market many items under the trade name of Watson among others. All these designs have to be exhaustively tested to gain the required approvals.

Compatibility between equipments is an ever present problem due to the varying electrical standards that abound.

Bob then spoke about modern day high-tech construction techniques which require the use of very special, very expensive, component assembly and insertion machines. Because of the high cost, only a few very specialist companies have these machines and produce the bulk of PCBs required by the main equipment manufacturers. The manufacturers then build the PCBs into their equipments, this helps to keep costs down. All the PCBs required for each equipment are usually produced as one unit, to be separated later at the assembly stage of the main equipment.

When Bob began to show us some of the miniature equipments in detail it became very obvious that highly skilled repair technicians are essential. Specialist jigs, techniques and software are necessary to repair some of the very small hand held marvels available today, with components too small to see unaided. Additionally, the use of multi-layer PCBs only adds to the complexity. Perhaps it will help us to understand why we are presented with those high repair bills when faults develop. Some of the handhelds are, in fact, almost unrepairable and almost cheap enough to throw away when failure occurs. A handheld at under £40 bears this out. The smallest handheld was the size of a credit card and not very much thicker.

Bob brought along a wide selection of equipment for us to see, including not only handhelds but base stations, test equipment, power supplies and ancillaries. Bob not only extolled the virtues of each item in turn but also gave honest and informed opinion, based on experience and with some achieving much praise.

The Icom IC706 MkIII which covers HF, 6m, 2m & 70cm was very well thought of indeed, and was certainly in the category of READ THE MANUAL first. The Alinco DX70 and the Yeasu 847 also fared very well. The smallest mobile came from the Yeasu stable, it was the FT90 and it turned a few heads, measuring about 1"x4"x4" (25mm x 100mm x 100mm if you prefer). This dual-band VHF/UHF produces 50 Watts, has a detachable front panel and many other features, but according to Bob, very difficult to repair. Surprise, surprise!

A base station was next in line for attention and it was the turn of the Yeasu FT 920. This 100Watt HF rig was, according to Bob, a pretty good machine with excellent facilities and well worth considering if one was in that market. This is particularly so at the moment as they are being offered at a very good price. It has been replaced by the very much bigger and much more expensive FT1000.

Bob did make the point once or twice that however good they might be, not all rigs liked all aerials, particularly Long Wires. He was very aware that our own antenna specialist YTG (Youthful Tony Gilbey) spoke highly of them but they do have to be used with great care to prevent damage to precious output transistors.

The discussion then turned to the ancillaries, firstly a couple of items from MFJ, starting with a DSP filter. This could prove very useful in some cases, but which would not do much for a very good receiver. Next the 259B, the latest version of the antenna analyser, which is a much improved device with many extra facilities; highly recommended. A number of power supplies were shown, some by independent manufacturers and some by W & S themselves. Power supplies seem to be getting smaller and lighter these days due to switch-mode operation.

After tea Bob and Matthew turned to the surprise topic which they had promised. For some time now they have been developing something close to their hearts and, as it turned out, close to many of ours. Yes! A newly designed valve audio

amplifier. After studying past and present designs, modern valves, power supplies and output transformers they have achieved outstanding results. The pre-amp is still on the drawing board but they are confident in time they will have a superior product built by themselves to very high standards. They certainly brought back many memories to quite a few Club members who built valve amps. back in the dark ages, myself included. I still have a working one hiding in the shadows of the garage. They rounded off the evening answering very many questions from a very appreciative audience who enjoyed an excellent and very well presented address. Many thanks indeed to Bob and Matthew, we look forward to a future date when we can see and hear their completed Audio Marvel!

Report by Colin G0TRM.

CARS Visit to the PO Sorting Office.

A visit to the Sorting Office at the Boreham interchange had been arranged by Chris G0IPU on the 23rd. September and was attended by eighteen Members, wives and friends.

The party assembled at the large light blue steel building which is opposite the Chelmsford Market. We were met by Terry Breen, and his assistant Malcolm Thomas, who welcomed us on behalf of SE Anglia Post Office. After a general short talk including procedures in case of a fire alarm, we were split into two groups.

The building was vast and cost some £40m to build & equip. At the time of our evening visit there was a constant stream of arrivals in the familiar red vans. This sorting office deals with mail from the CM, SS, CO and IP post code districts. We were told this was the busiest time of the day - the aim being to collect, sort and deliver the First Class mail by the next day, ideally 9am. As the vans came in they were met by an array of 4 wheeled high cages, each for different pre-sorted mail, if possible. All 2nd Class mail being wheeled off to a holding area to be dealt with later on or the next morning. Mixed mail was gently shaken into a large tray. A conveyer took it up to a huge revolving drum, part of a machine made by AEG and costing £1m each and referred to as an IMP (Integrated Mail Processor).

The object of this drum is to arrange the mail to be the correct way up and facing the right way. It rejected any mail that was too heavy or too fat etc. Once pre-sorted it was whisked through an optical reader looking for the post code. This is why it is important to always write the code clearly and to have it on a separate line. This machine sorts 35,000 items per hour.

Overseas mail is separated and taken away for sorting in London.

If an item has no post code or the machine could not read it, a bit map scan is presented to a VDU operator in a room 200 yards away where, with a combination of experience and machine help, a correct bar coded post code is written on the item. All such mail is held in a moving delay line. The operator typically was expected to determine the Post Code in 15 secs but often does it in 2 or 3! Special and registered mail is sorted in separate and secure rooms.

The number of staff employed surprised us! However, it was then pointed out to us that some 800,000 items are dealt with every day! Not bad at all! Our hosts were thanked for an extremely interesting and informative visit. Our thanks also to Chris IPU for organising the visit.

Report by John G8DET.

Can Anyone Help Please?

Andrew G4KQE wants an 'old style meter' 4cm. in diameter. Either 100 or 250 uA would be acceptable but he needs one suitable for night time DF work. He wants one with a white arrow head pointer and a black scale. Normal meters have a black pointer and a white scale. Good price paid for the right one!

He's waiting to hear from you on 01376-583094.

Joint Editors

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• **Deadline for the next N/L is Wednesday 15th. December.**