

Chelmsford Amateur Radio Society.

NEWSLETTER No.295

Callsign G0MWT

August 1990

NEXT MEETING - Waters and Stanton.

This month we welcome Mark Francis from the Hornchurch branch of Waters and Stanton who will describe Amateur Radio from the other side of the counter and introduce us to some of the new products available to adorn our Radio Shacks.

Mark has suggested that we include a question and answer session for members to discuss radio communication and allied products.

The meeting will start promptly at 7.30pm on Tuesday 7th August at The Marconi College, Arbour Lane, Chelmsford.

DATES FOR YOUR DIARY.

7 Aug.	CLUB MEETING - Waters and Stanton.
4 Sept.	CLUB MEETING - Stan Wood on the history of Marconi.
30 Sept.	HARLOW A.R. & ELECTRONICS RALLY - Harlow Sports Centre.
2 Oct.	ANNUAL GENERAL MEETING.

LAST MONTHS MEETING - Richard G4ICP.

Geoff, G3EDM gave us a most interesting and instructive talk about the art of beekeeping. There are of course many interesting parallels one can make between the Radio Ham and the Beekeeper. For a start, large gardens are not required in order to keep a hive, likewise it is quite possible to achieve very effective results from a small garden with a suitable vertical antenna. Perhaps it is true that like Amateur Radio, Beekeeping is neither a science or art, but a fine mixture of the two.

Beekeeping is an occupation which can easily become an obsession. The fascination is in part due to the way bees function as a social unit. Each bee is integral to the collective whole with clearly defined roles performed at set times. The general well being of the colony coming before the well being of any individual member.

The average area of country, garden suburb or town will produce an adequate supply of blossoms to support many hives. Often hives are transported to their food source. Examples of these are large fruit orchards in spring. Fruit farmers will pay a fee for the pollination work the bees perform. Other sources of food in summer are fields of clover, bean and rape.

A hive at full strength in summer can contain up to 80,000 worker bees, a few hundred drones and a queen, together with combs containing the brood in all stages of development, stores of honey and pollen.

The queen begins laying fertilised eggs at the beginning of the year. Fed by house bees on royal jelly the larvae grow quickly. Their cells are sealed with wax cappings. The larvae turn into pupae and emerge later as worker bees. They begin work as a house bee, building and repairing the comb. Later duties involve relieving the incoming foragers of their loads of pollen and nectar. They also convert the nectar into honey, storing it away with the pollen. Eventually, their duties include foraging, where water, nectar and pollen are collected. This is kept up until the worker dies from exhaustion and old age.

Drones are bees with no sting. Their main function is to fertilise the queen - which takes place in flight. At the end of the summer when their time of usefulness is over, drones are starved of food by the other bees and ultimately die.

Without a mated queen, no colony can survive. This is partly due to her reproductive function and also her presence as a cohesive force that keeps the colony together as a social unit. The queen is created by ordinary worker eggs being laid and it is through special feeding of royal jelly that the queen is developed. A queen bee is then a much larger bee than a worker, with no equipment for collecting food, and a sting which she only uses against other queens to kill off rivals. Having been mated eggs are laid. The sperm she received from the drone last her lifetime, enabling her to fertilise several hundred thousand worker eggs. The queen normally heads her colony for two to three years.

Like any other species, bees have to reproduce in order to survive, but because they can only exist in colonies, it is the colony itself which must reproduce. This is done by swarming. A swarm consists of an old queen with attendant bees. The hive she leaves will have queen cells containing her successor and enough bees to forage for her food.

The beekeeper extracts the honey from the hive by placing frames in special equipment that whirl around, the honey being extracted by centrifugal force.

Commercial products from the hive include cut comb, cappings and honey in many different forms. Beeswax of course makes excellent furniture polish. The use of honey as a healing substance is interesting too. It has been used as a cure for allergic rashes, burns and infected wounds.

Thank you Geoff for a most interesting evening.

COMMITTEE MEETING.

The August Committee Meeting will be held in the Telford Lodge (Marconi College Residence) at 7:30pm on Wednesday, 15th August. You are most welcome to join us.

ANNUAL AWARD.

One of our members has made a worthy suggestion which the committee propose to adopt, this is to have an annual award to a member of our Society who, in the view of the majority of members, has made a substantial achievement in the past year in the field of Amateur Radio.

The administration of this award is very straightforward:-

- 1) Nominations for the award should be made in writing (not more than 100 words) and sent or given to a committee member by 7th August, i.e. the next meeting.
- 2) All nominations received will be published in a supplement to the September Newsletter together with a voting slip.
- 3) Each voting slip will be worth 10 points for members to allocate in their own scale of achievement to the nominees.
- 4) Completed voting slips should be sent or given to the President at or by the AGM in October.
- 5) The votes will be counted at the AGM and the winner will be presented with a Trophy to be held for the coming year.

A CHEAP AND EASY WAY TO GET ON 4M F.M. - PART TWO - Andrew G4KQE.

In the last article I described the outline to this conversion and described how to modify the driver multiplier stage. This article deals with the P.A. and will complete the conversion of the transmitter.

Remove the P.A. cover plate, which is purely a piece of etched single sided P.C.B., noting the warning!, "DO NOT DAMAGE THE TRANSISTOR MATERIAL AS IT IS TOXIC IN DUST FORM".

The P.A. stage consists of four P.C.B's with transistors between boards 2-3 and 3-4.

Remove P.C.B.2 and 3 and replace P.C.B.2 where P.C.B.3 was. Remove the two turn coil from the ex-P.C.B.3 and wind a new coil using the same thickness wire but with four turns on a 7/32" drill bit, space the turns as far apart as they will go to span between the two mounting holes in the P.C.B. This board now goes where P.C.B.2 used to be.

One final check with the P.A. is to see that both the RF chokes between base and emitter of the transistors are paralleled with a 10 Ohm resistor. If either of them is not, then fit a new 10 Ohm resistor.

Replace the cover, and the P.A. is now ready for tuning up.

This completes the conversion of the transmitter and the next and final article will deal with the receiver conversion, and for those of you who want to get ready, you will need the three 22pF capacitors removed from the TX amplifier board, two 8.2pF capacitors, some thin enamelled wire and a soldering iron - no more than that!

VISIT TO BACKNANG - Ela G6HKM.

One evening in June we had a surprise phone call from Peter, DK7SP to tell us that a coach party was being arranged by Maureen Frewin and Malcolm Bartlett for a weekend visit to Backnang, Roy followed this up and found there were just two seats left!

10 days later we were on our way to Backnang, departing from Chelmsford on the evening of 21st June, arriving the following day at 6.13 p.m. Our 2M handhelds were most useful on the German repeaters towards the end of the journey to inform Peter that we were running late. Peter and his friend Bernd, DGBSCG met us at the Busbahnhof (Buspark) and after a short drive to Peters home in Rietenau, we were greeted by the rest of the family.

On Saturday morning we visited the station of Alois, DL3PD who had a very impressive collection of equipment and gave us a demonstration of the 23cms ATV repeater. In the afternoon we toured a Vineyard in Aspach, rounding off with a meal and wine tasting session. In the evening Peter and his family escorted us round the Backnang StraBenfest (Music Festival), the streets were packed with people and it was quite exciting.

On the Sunday our coach made a day trip to Schwabisch Hall which is a picturesque town about 30km north east of Backnang, very good for photography! During the evening we joined Peter in his radio shack for the 80M net back to Chelmsford.

Next morning it was time to start the long drive back home. Our sincere thanks to all those who made our stay so enjoyable. It was wonderful to see the other end of our "radio twinning" and we hope it will not be long before we can return the hospitality to Peter and possibly Bernd.

73 from Roy & Ela Martyr, G3PMX & G6HKM

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MEMBERS ADVERTISEMENTS

FOR SALE

YAESU FT101B Transceiver in excellent condition, fitted with CW filter. DC power cable, AC mains lead and manual included. £225 Roy Martyr G3PMX. Tel: (0245)360545.

FOR SALE (any offer considered)

Two MULLARD 5-10 Audio Amplifiers (10 watt valve) c/w PSU's & manual.

LEAK TL-12 Audio Amp. (valve). also WEM Audio Amp. (100 watt valve).

Mains Isolation Transformer, 1:1, 100VA, RS type 207-489, new boxed.

CUSTOM SOUND CS-700 Sound Mixer, 12 channel with many facilities.

Various bits & pieces for BAUER BOSCH VCC-526 CAMCORDER (clone of PANASONIC M7).

Two Chrom: Flexible Microphone Stalkes.

Eric Lawley G8ADX. Tel: (0277)353127.