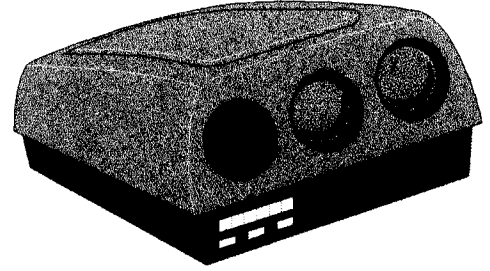
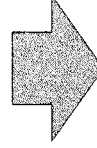
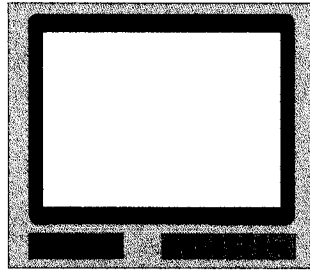
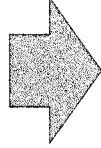
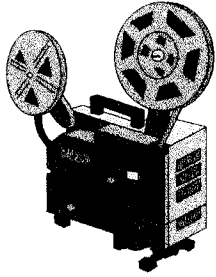




THE JANUARY MEETING



Our traditional Annual Film/Video Show is again moving with the times in terms of technology. Having graduated from 16mm cine film to Video shown on a pair of Sony Monitors, this year for the first time we will use Video Projection to enable members to view the films with ease; there is an element of experimentation in this show because it is the first time that the equipment will be used to an audience at the Marconi college.

A programme of films, including a cartoon or two, has been arranged for the interest of members.

Please note that there will be an additional feature during the evening when members will be invited to another Pick-n-Mix of components donated to club funds; some items were first seen at the November sale, but others will be on show for the first time, however, this will be your last opportunity before the surplus is passed on to other Radio Clubs.

The meeting opens at 7.30pm and we hope the WX will be better for this months event.

DATES FOR YOUR DIARY

- 2 Jan. CLUB MEETING - Annual Film/Video Show.
- 17 Jan. IMD PLANNING MEETING - QTH of GØGJS.
- 20 Jan. RSGB HQ Saturday opening.
- 4 Feb. SOUTH ESSEX ARS RADIO RALLY - Canvey Is.
- 6 Feb. CLUB MEETING - Chairmans Forum.
- 21 Feb. NFD-96 PLANNING MEETING QTH of G4KQE.

INTERNATIONAL MARCONI DAY 1996

At the invitation of Charles, GØGJS, there will be a planning meeting at 8.00pm on Wednesday 17th January, for members interested in participating in International Marconi Day, scheduled for Saturday 20th April. The club callsign GXØMWT has been submitted for inclusion in the worldwide list of participating stations and the keeper of Chelmsford's Science & Industry Museum has offered to host the 24 hour event.

Will members willing to offer their support to this special event station please contact Charles on (01245)256654.

SUBSCRIPTION RENEWAL - Ela G6HKM

Regrettably this is the final reminder for overdue subscriptions, if you are not able to attend the next meeting please send to me at the address at the end of this newsletter, please make cheques payable to "Chelmsford Amateur Radio Society". If you have already paid, thank you for your support.

CHRISTMAS DINNER

This event was well supported, we were very lucky that there were no cancellations due to flu casualties, 38 tickets sold and 38 guests attended. Everybody enjoyed themselves and the quality of the dinner and the service was up to the standard we have come to expect from the Staff at Telford Lodge.

The raffle prizes were in abundance, Harveys Bristol Cream Sherry, Wines, a good selection of boxes of chocolates and a box of shortbread.

Thank you to all those who made the evening such a success.

THE MARCONI CENTENARY LECTURE

"The Origins of Radio" by Stanley Wood, Honorary Historian to the GEC Marconi Company. (Report by Charles, GØGJS)

In this year's talk to CARS, Stanley dealt with some of the personalities concerned with the gestation period of wireless communication from 1831 - 1896, the year of Marconi's patent.

The name of Michael Faraday was right to the fore as the English physicist and chemist who made many notable contributions to chemistry and electricity. Faraday was born in Newington, Surrey, England, on 22 Sept 1791. The son of a blacksmith, he was apprenticed to a bookbinder at age 14 and read all the scientific books in the shop. He attended lectures given by Sir Humphry Davy who was then President of The Royal Society and was so impressed with young Faraday that he gave him a job in his laboratory. He achieved outstanding work in organic chemistry (viz. electrolysis), but Faraday's greatest achievement was the discovery of electromagnetic induction. He found in 1831 that when he moved a magnet through a coil of wire, a current was produced. From this discovery the electric generator developed which led to the foundation of a mammoth world-wide industry. In 1846 he wrote a speculative letter to a friend suggesting that electric and magnetic forces might be transmitted by wave motion. Stanley said that Faraday had great vision and deposited a "100 year" letter with the Royal Society which when opened in 1931 foretold events with great accuracy. Faraday died at Hampton Court in 1867.

James Clark Maxwell was born in Edinburgh in 1831. He fundamentally interpreted Faraday by precisely surmised mathematical equations based on the latter's work in magnetic and electrical theory. In his famous work with electricity and magnetism, he suggested that electromagnetism moved through space in waves that could be generated in the laboratory. By calculating their velocity he found that the speed of electromagnetic waves was the same as that of light waves. He concluded that light waves are electromagnetic in nature.

(continued on page 2, column 1)

THE MARCONI CENTENARY LECTURE - continued

At the time there was no evidence of comparable waves that could be transmitted or detected over any considerable distance. He planned Cambridge's famous Cavendish laboratory and was its first Professor of Physics. He died in 1879.

Heinrich Hertz, (1857-94) a German physicist, carried out research at Karlsruhe Polytechnic. Maxwell's hypothesis was put to the test by Hertz in 1887. He constructed an oscillator of polished brass knobs which were attached to two metal plates (Hertzian dipole), each connected to an induction coil and with the knobs separated by a tiny gap over which sparks could arc. If Maxwell's predictions were correct then Hertz reasoned that electromagnetic waves would be radiated during each series of sparks. Hertz made a simple receiver of looped wire the ends of which were connected to two small knobs separated by a tiny gap. The receiver was positioned a short distance from the oscillator. If electromagnetic waves were spreading from the oscillator sparks, then Hertz was convinced that they would induce a current in the loop that would send sparks across the gap. This occurred when Hertz turned on the oscillator, producing the first transmission and reception of electromagnetic waves. Hertz also conducted experiments with electromagnetic waves and light transmission showing that an EM wave could be focused.

Stanley told us of other parallel work by a Professor Hughes who indeed carried out transmission and reception (outside his home in Portland Place over a distance of 200/300 yards) using a microphone/coherer but much of it was by chance and was not published in scientific journals, it being only mentioned to a historian some 20 years after the event.

In 1890 Professor Branly of Paris was credited with the invention of the coherer - a glass tube of zinc and silver filings which changed their conductivity when subjected to a spark discharge in their near vicinity. Stanley also spoke of the work of Sir Oliver Lodge, of his consideration that EM waves existed even before they were proven but was diverted by Fitzgerald, a brilliant Dublin mathematician who insisted that Maxwell was wrong, and so Lodge lost 4 years. He did work on lightning flashes and knew that they were oscillatory and simulated them with the charge and discharge of a Leyden jar. He also demonstrated the resonance effect "syntony" and the existence of standing waves along a wire. Despite this work in early wireless communications, Lodge was not convinced that it would ever compete successfully with the world-wide cable network. It was in this arena that the twenty one year old Marconi arrived and applied for the world's first patent for wireless telegraphy on 2 June 1896; it was duly granted. It encompassed much of the work discussed plus many innovations which culminated in highly successful demonstrations on Salisbury Plain in the same year. In this he was supported by William Preece, the Chief Engineer of the GPO, a sworn enemy of Sir Oliver Lodge!

At this point Stanley was very much out of time and apologising for not giving due credit to such eminent people as Nicholas Tesla and others who also played important parts in this incredible pre-Marconi era. He reluctantly concluded promising to do better next time. A fascinating evening, so well presented and fellow radio enthusiasts, it was only a hundred years ago.....

MEMBERS NEWS

This month we welcome the return of Carl Thomson, G3PEM.

NATIONAL FIELD DAY 1996

At the invitation of Andrew, G4KQE a planning meeting will be held on Wednesday 21st February for members interested in participating in National Field Day on the weekend of 1st/2nd June. Details of the agenda will be published in the next Newsletter.

COMMITTEE MEETING

The next Committee meeting will be held at 7.30pm on Wednesday 10th January, in Telford Lodge, you are welcome to join us.

With the adverse weather conditions reported over Christmas in the north of the UK, we thought members may be interested in this slice of history researched for our Newsletter, Ed.

THE GREAT STORM - Harry, G5HF

It was Midsummer Day (24th June) in 1897 when the celebrations to mark Queen Victoria's Diamond Jubilee were rudely interrupted by thunderstorms, following high humidity and temperatures in their 90'sF. The storms hit a large area in the southeast of England and the worst damage happened in the Chelmsford area - any members remember it? Some public correspondence of the day might be of interest.

The Rev. J.Bridges Plumtre of Danbury Rectory wrote:

"At 3.10pm the wind was blowing a hurricane and huge hailstones were hurled upon us. My rain gauge measured 0.83 inch during the 26 minutes. No hailstones were found in the gauge, though the ground all round was strewn with them. Owing to the velocity of the wind, the hail fell at an unusually acute angle. Almost every pane of glass on the west side of the house was shattered."

Alfred Roslin of Hatfield Peverel reported:

"Fairfields, a house on my farm, had 54 windows broken out of a total of 76. Some of the hailstones were slabs of ice larger than the palm of your hand, and Mr Corder of Writtle told me he measured one 4.5 inches by 3.5 inches and it weighed 5 ounces."

Mr Coverdale of Ingatestone Hall said:

"I was driving with my son and coachman, a man named Gray when the storm came on. We jumped out of the trap and hastened to Mr.Kortright's house. Down came the top of a tree. My man Gray managed to get the cob under the sides of the house and we went to assist. The hailstones immediately riddled my umbrella and beat me back. The pony sustained a cut right down his nose and his whole body was covered with lumps about the size of hens' eggs. My man's chest and arms looked afterwards just as if he had had five minutes with a bruiser. The force with which he was struck may be estimated by the fact that although he was wearing a mackintosh, livery coat, sleeved waistcoat and shirt, he was black and blue. His tall hat was dented in. My son got a crack on the head through his hat and there was bump on his head as big as an egg."

Enormous numbers of birds were killed, young ones being drowned and old ones struck dead by hailstones. Crows and wood pigeons fell from the trees as if shot by guns, with their heads split open by falling ice. Over 200 fowl were killed in Little Baddow, at Margaretting Hall one lamb and several chickens were killed and at Woolmongers Farm in Stondon 50 chickens were lost. The corrugated-iron shed of Messrs. Hodge and Taylor was riddled with hail "as if it had been shot at" and some 25 sheets of iron were pierced.

(From Philip Eden's Book "Weatherwise")

*A Very Happy New Year
to all our readers.*

73 from Roy & Ela Martyr,
G3PMX & G6HKM

☎ (01245)360545

1, High Houses,
Mashbury Road,
Great Waltham,
CHELMSFORD,
Essex, CM3 1EL.

BARGAIN CORNER

For Sale, GENIUS SCANNER Model B105

This hand-held unit is suitable for Black & White and True Grayscale scanning. The resolution is up to 400dpi and 256 grayscale levels.

Boxed as supplied new, complete with interface card to fit in spare slot of IBM compatible computer and powerful software packages for Photo/Image editing and Optical Character Reading (OCR). Examples of its use are in recent Newsletters No.354 and No.355 (two pictures).

Best suited to a fast processor, i.e. 486, etc. £35, contact Roy, G3PMX