



# Chelmsford Amateur Radio Society

Established 1936

Affiliated to the RSGB Club Call Sign: G0MWT  
President: Harry Heap G5HF Chairman: John Bowen G8DET  
Treasurer: Brian Thwaites G3CVI Vice Chairman Martyn Medcalf G1EFL



Newsletter No 530

Web Address: [www.g0mwt.org.uk](http://www.g0mwt.org.uk)

May 2010

**This Month's Meeting – Tuesday, 4<sup>th</sup> May 7.30pm at the Marconi Club.**

## **"Breathing new life into a Marconi T1154, R1155 and CR150" By Peter Bridgeman, G3SUY**

Peter will describe his experiences in renovating these old equipments and bringing them back to life and operation on today's amateur bands. The Marconi T1154 Transmitter was discovered in a very sorry condition in a garage near Manchester. It was being used as a nest box by the local wildlife after being discarded many years ago. Likewise, the Marconi R1155 had few components remaining after languishing for years in a shack "graveyard".

Peter will describe the how components were repaired together with the simple techniques he used to restore front panels using everyday materials. In addition, he will describe the changes made to the equipment to upgrade performance to make it better suited for use in today's amateur bands.

The re-built Marconi T1154 together with the R1155 are regularly used on the 160 and 80 metre bands using the AM and CW modes. The equipment is sometimes shown at the Flixton Air Museum.

CARS will have its now famous Raffle with at least 10 prizes.

### **Dates for your Diary**

Sat/Sun 8/9 <sup>th</sup> May	CARS operating from GB5SM from Stock Windmill.
Tues, 11, 18 & 25 <sup>th</sup> May	CARS CW Net starts at 8pm on 11 <sup>th</sup> ; SSB Nets starts at 8.30pm (Local)
Wed, 12 <sup>th</sup> May	CARS Committee Meeting – Danbury Village Hall – 7.30pm. All welcome.
Tuesday, 1 <sup>st</sup> June	CARS Quality Table Top Sale by Colin, G0TRM.
Sat/Sun 5/6 <sup>th</sup> June	CARS operating NFD from Sandford Mill with pre-registered Members enjoying a BBQ on the Sat, weather permitting.
Sat 12 <sup>th</sup> & Tues 15 <sup>th</sup> June	CARS Operating from Oaklands Museum (12 <sup>th</sup> ) and Central Chelmsford (15 <sup>th</sup> ) to commemorate Dame Nellie Melba transmitting on 15 <sup>th</sup> June 1920.

To be/remain a Member of CARS, send a Cheque for £12 – Adult Membership (16s and under are FREE) to:- Mr Brian Thwaites, 118 Baddow Hall Crescent, Great Baddow, CHELMSFORD, CM2 7BU. If you would like a receipt, please enclose a stamped addressed envelope with a 2<sup>nd</sup> class stamp.

**Our Treasurer, Brian notes that with the snow and ice and cancelling the January Meeting a number of Members have not had the opportunity to pay their Subscription this year. Please remember to bring your Cheque Book – yes, cheques are still legal tender!**

Thanks to Geoff, G7KLV for sending the postal Newsletters – could it go by E-Mail? Please inform Geoff, G7KLV by E-Mail of any changes to your call-sign, postal or E-Mail address, etc. E-Mail him on [g7klv@g0mwt.org.uk](mailto:g7klv@g0mwt.org.uk) Only by you sending Geoff your E-Mail address, can we ensure **WE** get it right!

Club Nets: Tuesdays 8.30pm: (2nd) 145.375: (3rd) GB3ER: (4th) 1.947/50: (5th) 28.375. All MHz +/- QRM.  
**Net Controller for May is David, M0BQC. Thanks to John, Colin & Harry for April.**

## **Last Months Meeting:- "World War II Wireless Intercept and Secret Stations" by Stan Ames, G4OAV.**

In opening the meeting, Chairman John, G8DET asked how many present had seen the article in the Essex Chronicle – quite a number of the 37 visitors had – good publicity by Stan.

A packed hall listened as Stan described the development of the network of secret wireless stations that intercepted enemy transmissions during WWII and subsequently decrypted at Bletchley Park.

The story began with a Post Office radio station at St Albans that was secretly reporting German wireless traffic to the Foreign Office in 1932. By the end of 1938, the military authorities asked the General Post Office (GPO) to set up a network of eavesdropping stations – the first of which was built at Sandridge, near St Albans.

The work of Bletchley Park is now well understood but little is known about the how the raw intelligence was collected. This presentation described the growth of wireless intelligence in WWII and the networks of secret wireless intercept stations and direction finding stations around Britain.

The three Armed services each built their own networks but more secret still were those operated by the Foreign Office and MI5 & MI6 who successfully tapped directly into the highest levels of German Secret Service communications.

Radio amateurs played an important role in this work including CARS President, Harry Heap, G5HF who was a Y Station Listener.

Stan showed a number of photographs of the secret listening stations between Great Waltham and Pleshey. His research had showed that originally there were two DF Stations there in 1942 but a Top Secret Military report proved that the success in being able to pin-point German submarines improved if the average of 5 station readings were used instead of one or two. This resulted in the 5 being built in 1944 by Captain Porter who stayed at a local farm. Bedell's End was also mentioned and members of the audience were able to confirm that it was in a field off the A1006, Ongar Road opposite to the turning to the Writtle Agricultural Collage.

Both sites have been returned to agriculture use.

The 1946 aerial photographs came about because after the War the RAF found that they had miles of

unused film stock and so the (correct) decision was made to photo-map the whole of the UK.

Around each DF Station it can be seen there is always a circle of mown grass – why? After extensive research Stan has found it was to enable an Operator to carry a Marconi Transmitter with a known output to each of the 36 pegs driven into the ground to check the calibration of the station.

The smaller circles are a metal Ground Plane mounted 0.5 metre off the ground to give a better result than burying it in the actual ground.

Many stories were told to Stan which assisted him to complete the picture of what went on 60 years ago in Essex.

A very interesting subject (thank you Harry, G5HF for suggesting it) well presented.

CARS had one of the best turn-outs with over 118 persons present.

## **John, G8DET**

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### **Club of the Year Award**

As reported in the April Newsletter, CARS was the winning Region 12 Club and as such was entered into the Final of the Club of the Year competition.

On Saturday, 17<sup>th</sup> April, Mark, M01EO took Martyn, G1EFL and John, G8DET took Clive, G1EUC and Gwyn, G4FKH to the RSGB AGM at the Swan Hotel in Bedford. Clive acted as a human Satnav and did a first rate job.

After the formal part of the AGM, Peter Kirby announced that the Trophies and Awards would be presented.

Steve Hartley, G0FUW and the Bath Buildathon team collected the Kenwood Training Trophy for outstanding contribution to Amateur Radio Training. This had been previously awarded to CARS in 2007.

The National Club of the Year Award was announced in reverse order (as is Come Dancing!)

The 3rd place went to Spalding and District ARS and they collected their Award.

The 2nd place went to the Verulam ARC (Hertfordshire) and they collected their Award.

Had this meant CARS had lost out!

Peter Kirby then said "The Club of the year is deservingly - Chelmsford Amateur Radio Society"

After the presentation the Regional 4 Manager introduced himself as Harold Scrivens, G0UGE, the

promoter of the Club of the Year Award and had quite a chat. He said he was very pleased that CARS had won the Award as he often seen items in RadCom (thank you Trevor, M5AKA) and noted our Training Web information (thank you Murray, G6JYB) and Training efforts (thank you Clive, G1EUC, Chris, G0IPU, Mark, M0IEO and Martyn, G1EFL). He had also noted our publicity and he was particularly strong on promoting Amateur Radio to the public (thank you David, G3SVI, Mark, M0IEO & Richard, M3YLB).

We have been given a lovely glass Trophy to keep, a framed Certificate and a monetary Award.

We had done it due to the dedication of all Members Thank you everyone.

The "Founders Trophy" was awarded to Prof. Martin Harrison - G3USF, Chairman of the PSC. As he could not be there it was accepted by Leslie Butterfields, G0CIB (Board Member for Propagation) and Gwyn Williams, G4FKH.

CARS have received dozens of very nice congratulation E-Mails – including Jeff Stanton, G6XYU (W&S) who sponsored the Region 12 Award.

## CARS Committee

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### CQ-DX, India Calling

Continuing reports from distant CARS Members, please see below the E-Mail Forwarded by Norman, M0FZW, Sec of SEARS.

----- Original Message -----

From: MKAananthaganesan ganesan

Sent: Monday, April 19, 2010 2:46 PM

Subject: Re: RSGB Club of the Year 2009.

Dear Norman,

*Let me congratulate the Chairman, Hon. Sec and office bearers and Members of the CARS for being adjudged the "Club of the Year" by the RSGB.*

*I am really privileged to be associated with CARS as a Honorary Member.*

*Hats off to all who have made this possible.*

*I hope the Anamalai Amateur Radio Club will try to emulate all your activities and in the years to come try to get the honour received by CARS.*

*Please be kind enough to convey my heartiest wishes to the Club Members and other office bearers that your achievement is kindling me to train as many students as possible and bring them in to our fold. Your untiring efforts are giving me the fillip to do as much to the student community as possible. Keep it up and good luck.*

*Ganesan, President of the Anamalai Amateur Radio Club, India.*

Thank you very much Ganesan and Norman.

What Ganesan may not know is that we used his photograph when he was at Sandford Mill in our competition entry - so we have to thank him!

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## Radio Sport (Contest) News.

### May Radio Sport (Contests) All in UTC.

**1 May** - 432MHz Trophy - 14:00 to 22:00 UTC

**3 May** - RSGB Club - SSB - 20:00 to 21:30

**12 May** - RSGB Club - Data – 20:00 to 21:30

**15/16 May** - 144MHz May Contest - 24 Hours

**20 May** - RSGB Club - CW - 20:00 to 21:30

**29/30 May** – CQWW -WPX - CW - 48 Hours

For further information please email Steve G4ZUL [contests2010@g0mwt.org.uk](mailto:contests2010@g0mwt.org.uk)

## Steve, G4ZUL

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### Radio Path Predictions – April.

Gwyn, G4FKH was requested at the November Meeting to provide an "Only to CARS" Propagation Prediction. Thank you Gwyn.

**Asia: Dhahran** - around 16:00 on 18.1MHz for 86 percent of days, with poor signals.

**Oceania: Sydney** - around 20:00 on 7.0MHz for 60 percent of days, with poor signals.

**Africa: Johannesburg** - around 18:00 on 10.1MHz for 82 percent of days, with poor signals.

**S. America: Rio de Janeiro** - around 22:00 on 10.1MHz for 84 percent of days, with poor signals.

**N. America: Saskatoon** - around 06:00 on 10.1MHz for 70 percent of days, with poor signals.

It seems that propagation is getting worse!  
Comments are welcome. Please E-Mail Gwyn at: [g4fkh "AT" btinternet.com](mailto:g4fkh@btinternet.com)

## Gwyn, G4FKH

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### GB5HF - International Marconi Day (IMD)

International Marconi Day this year fell on Sat 24<sup>th</sup> April – a lovely day with wall to wall sunshine. CARS had 3 stations at the Science & Industry Museum, Sandford Mill.

GX0MWT was operating using SSB HF under the guidance of Brian, G3CVI from the famous Marconi "Writtle Hut" now housed inside the Museum. It was used for some of the first wireless broadcasts by 2MT in 1922/3 from Writtle. Over 100 contacts were made with a number being IMD stations on 40 and 80m in many of the "pile-ups" involved.

GB5HF was operating using CW from the "Upstairs Office" under the guidance of Gwyn, G4FKH. This was also used to "sharpen" ones operating skills before NFD on the 5/6<sup>th</sup> June. 208 contacts were made with many Countries in many Continents.

Mark, M0IEO unfortunately had a business appointment so John, G8DET provided the garden gazebo and Martyn, G1EFL provided the VHF/UHF station. The Danbury Repeater was used extensively – even as a "talk-in station" with Bob, G4MDB on the microphone. The gazebo sported CARS new banner obtained at short notice by Martyn, G1EFL – well done.

Colin G0TRM displayed his vast Morse collection and also giving his very popular demonstration of his 100 year old automatic mechanical Morse transmission and reception system. The help from Peter, M0ZBU and Richard Meadows, M0SBU and from Ken Pallant, G0OSI was much appreciated.

Geoff, G7KLV spent many hours arranging a display of Broadcast Receivers through the ages demonstrating their development from 1920's Crystal Sets to the very latest DAB Radios. Some hitherto unseen artefacts from the Museum store as well as examples from private collections were also on view.

It was nice to see Dr Geoff Bowles and Trish on duty and hear Adrian, M0ABY on the microphone (all the way from St Albans).

Thanks to the many CARS Members who turned up to operate, log, host and support this event.

The Friends of Chelmsford Museums provided Hosts and refreshments - 299 Visitors were logged by the gatekeeper.

The Marconi Veterans WebMaster, Chris, has taken some nice photographs and put them on their Web Site – thanks. Click on: -

<http://www.marconi-veterans.org/?p=1157>

## John G8DET

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### CARS Nets

As is advertised in each copy of the CARS Newsletter & Web Site, CARS run a series of Radio Nets on the Tuesday evening after the Monthly Meetings.

In keeping with CARS principle of promoting CW, Steve, G4ZUL (and others) run a CW Net on the 2<sup>nd</sup> Tuesday in the month starting 30 mins before the VHF FM Net, namely at 8pm.

The last 4 Nets have been successful and note the following took part.

13 April 2010. Start 20:09 finish 21:06, stations worked: G4LAM, F8FJG, M1AGY, SQ5JUP, G3PMO.

09 March 2010. Start 20:00 finish 21:10, stations worked: G4FKH, M1ETX, G0RPX, DK6KT, G0NXA.

09 February 2010. Start 20:03 finish 20:45, stations worked: G4FKH, G0IBN, G3XSJ, OH5FNI.

08 December 2009. Start 20:00 finish 21:06, stations worked: G4FKH, DK7SP (a CARS German Member), G3HQS, DL3NAT, G0IBN, F5LMJ, DF9BW, IZ2ONZ.

All times are local using GX0MWT (op G4ZUL)

## Steve G4ZUL

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### Plessey makes Marconi and Marconi makes Plessey by Geoff G7KLV.

I never cease to be amazed at the stuff handed in to the Museum at Sandford Mill, sometimes with the comment that the alternative is the tip! A crystal set was one of their latest acquisitions and a real gem at that.

It was a Marconiphone Type RB2, Crystal Junior, and has an MWTCL roundel, with black lettering on a white background, approx. 3/4" diameter, on the lid. It is contained in a box approx. 5¼ X 8 X 5¾ when closed and covered in black Rexine, the latter slightly the worse for wear.

The few components are mounted on an Ebonite chassis and, apart from a few missing pieces, in very good condition. Plug-in coils in the form of a card, referred to as a blocks, were available for specific ranges and the inductance could be varied by a form of a metal plunger protruding from the side of the box, which was in effect a shorted turn. The card attached covers the range 300 - 450 Meters. The tuning capacitance was formed by the aerial cum earth system. Two aerial connections were provided, connecting to the tuning coil via preset capacitances according to the aerial length.

These capacitances, together with an RF bypass across the headphones, consist of brass tubes covered with an insulating layer. Bare copper wire is wound over the insulating layer, the capacitance effectively determined by the number of turns.

Provision is made for two different kinds of detector: a galena and "Cat's Whisker" and a "Carborundum Crystal", the latter requiring a 1.5 volt bias battery. The battery is housed in a container provided with a spring clip. The circuit is very simple and typical of the time.

However, the manufacturing history of these crystal and early valve under the Marconiphone label sets is very interesting and I am indebted to Jonathon Hill's 1996 masterpiece of a book "Radio! Radio!" for

information that doesn't seem to be mentioned in the history books relating to Marconi. In 1922 Marconi did not have the production facilities available to meet the demand of the home entertainment market but concentrated on the manufacture of equipment for the commercial market.

Marconi therefore decided to get the two crystal sets and a two valve set manufactured by sub contractors. Eventually a £30,000 contract was awarded to Plessey to manufacture 5,000 valve sets and 5,000 crystal sets. At that time Plessey had a small tool and jig business operating from two rooms in Holloway, North London. The size of the contract transformed Plessey overnight, establishing them in the forefront of the emerging wireless manufacturing industry. Within twelve months they had relocated from the shared premises in Holloway to premises of their own in Ilford. The rest is history, as they say! Hence the title of this article!

### **Geoff, G7KLV**

Editorial Note; sadly the Plessey Ilford premises are no longer but for 70 years or so turned out a tremendous range of telecommunications equipment.

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### **For Sale – Free , Yes FREE!**

ADVANCE Oscilloscope OS2100.  
Complete with Instruction Manual, seems to be working OK but I am no expert. Quite a big beast, FREE to a good home –

Phone 01277 656325 (Billericay).  
davidt.james "AT" virgin.net (Note the "t").

### **David M1DCJ**

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### **Mills on the Air Weekend**

During 8/9<sup>th</sup> May radio amateurs all over the country will be setting up stations in windmills and watermills.

CARS will be operating GB5SM from the picturesque Stock Windmill near Billericay. Since it isn't possible to operate from inside the windmill itself Patrick Xavier M0XAP arranged with Essex County Council for the club to set up a station in the grounds adjacent to the mill.

Mark Sanderson M0IEO is kindly providing his "Communications Caravan" for this event. The stations will be set up at 10am on the Saturday and operation is planned on both HF and VHF until 5pm Sunday afternoon. It is hoped that CARS members will attend what will be a very enjoyable weekend. The Mill is open to the Public on the Sunday.

For map to Stock Windmill, postcode CM4 9RY, see <http://tinyurl.com/StockWindmill>

### **Patrick, M0XAP & Trevor, M5AKA**

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## **90 Years of British Broadcasting 1920 – 2010 - MZX Chelmsford**

On the June 15<sup>th</sup> 1920 the famous Australian Prima Donna, Dame Nellie Melba gave her historic thirty minute concert from the Marconi New Street works in Chelmsford. The experimental Station MZX transmitted on a wavelength of 2,750 metres using a 15KW transmitter and a 'T' aerial at 450 feet.

To commemorate this event CARS propose operating on Saturday, 12<sup>th</sup> June from the Education Room, first floor of the new £5million Extension of Oaklands Museum, Moulsham Street, Chelmsford and on Tuesday, 15<sup>th</sup> June from central Chelmsford.

Note these dates in you diary, please. We will need Operators, Loggers and Hosts for this prestigious event.

Tim Wander, G6GUX's new book "2MT Writtle" is to be published for June (has been delayed).

"2MT Writtle" "The Birth of British Broadcasting" website is at: <http://www.2mtwrittle.com/>

Details next month.

### **John G8DET**

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### **First In The Field - The Secrets Of Radar**

A new play by local playwright Suzanne Hawkes to be performed at various local venues Spring 2010.

An Island of Secrets – rumours of a Death Ray – strange towers rising above the Manor flashing lights in the dead of night and the ever present threat of invasion. Will life for the villagers of Orford and Bawdsey ever be the same again?

This is the story of the ordinary men and women who worked at Orfordness and at Bawdsey Manor in the years leading up to the pivotal battle of the skies in 1940.

Suzanne has written a number of successful plays about local issues and now "The Secrets of Orfordness, Bawdsey and RADAR".

We now have confirmed performance dates for this exciting new play which are as follows:

- Sat 1st May Bawdsey Manor 2.30pm & 7.30pm
- Sun 2nd May Kesgrave Community Hall 7.30pm
- Tues 4th May Waldringfield Village Hall 7.30pm
- Thurs 6th May Landguard Fort, Felixstowe 7.30pm
- Fri 7th May Landguard Fort, Felixstowe 7.30pm

Tickets: £8/£7 (concessions) are available by phoning 07821162879 or email

[info@bawdseyradar.org.uk](mailto:info@bawdseyradar.org.uk) or from The Wharf 102 Hamilton Rd, Felixstowe or 6 Thoroughfare, Ipswich.

## DSPKR SPEAKER.

I recently treated myself and bought a DSPKR noise cancelling Speaker. I already have a NES 102 Noise Eliminating Speaker but this is rather small and as I am completely deaf in one ear I find it difficult to hear. I do use headphones some times, but I prefer not to if I can help it.

I saw an advert in a radio magazine for the DSPKR Speaker and I sent for a leaflet. It appeared to be just what I wanted so I rang up for more information which looked good and so I purchased one.

It is nice looking, very easy to use and it matches my Yaesu FT-897!

The size of the Speaker is 135(W) x130(H) x 85mm. It has 10 watts RMS audio output and fully adaptive noise cancelling 9-35dB. On the top of the Speaker there is a Volume knob, a Status Led and an Audio Level Led.

I would recommend this Speaker from "bhi Ltd". If you want any further information please contact me.

## Martyn Medcalf. G1EFL

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### Video of G3RJV QRP Talk

The excellent talk given by Rev. George Dobbs, G3RJV, at the Lough Erne ARC Rally titled 'QRP Why and How' can now be seen on the web.

To watch the video follow these steps:

Go to <http://www.batc.tv/>

Click on the 'Film Archive' icon at the top-left

Select G3RJV QRP Lecture from the drop-down list

Click on the > icon to start the player and click on the

icon to the left of the volume control to display the picture full screen.

There is a link just under the player to save the video to your computer.

British Amateur Television Club (BATC)

<http://www.batc.org.uk/>

## Trevor M5AKA

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### Gigabit Powerline Adapters

A video showing the pollution of the radio spectrum up to 370 MHz caused by Gigabit Powerline Networking adapters can be seen on YouTube. Not even DAB radio is safe from these devices.

The YouTube description reads:

EMC Engineers have long known that Powerline Networking adapters cause unacceptable interference to radio and breach the European EMC Directive since they do not comply with the Essential Requirements.

This adapter, the Belkin F5D4076, has been tested by a UKAS Accredited Notified Body (laboratory) and found to be exceeding the permitted levels by a notable margin. These adapters will also interfere with the following amateur bands:- 6m, 4m & 2m.

Because these operate on VHF in addition to the HF spectrum, the interference caused will vary considerably from house to house, day to day as electrical items are plugged in or switched on.

<http://www.youtube.com/watch?v=z3yVu5lfaEY>

Official test results on Belkin Powerline Adaptor

[http://plt.g7cnf.me.uk/belkin\\_3.htm](http://plt.g7cnf.me.uk/belkin_3.htm)

RSGB Spectrum Defence Fund

<http://www.rsgb.org/defencefund/>

## Trevor, M5AKA & Peter Franklin, G1FOA

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### Volunteers Needed

CARS held their first course in January 2002 and the club has been running training courses almost every Thursday evening since. So far over 250 people have attended CARS courses.

The courses are usually held at the Danbury Village Hall although the club has also run courses for pupils and teachers at the King Edward VI Grammar School (KEGS) in Chelmsford.

We need more volunteers willing to assist the training in a variety of roles from teaching, helping unload/load equipment, acting as out-stations, exam marking and ensuring there is always tea and coffee available.

If you think you can spare the time to help train the Amateurs of tomorrow then talk to the Training Coordinator Clive G1EUC Tel: 01245-224577 Mob: 07860-418835

E-mail: [training2010@g0mwt.org.uk](mailto:training2010@g0mwt.org.uk)

## Clive, G1EUC & Trevor, M5AKA

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### And Finally:-

John G8DET edited this edition. Material by; Trevor, M5AKA; Steve, G4ZUL; Gwyn, G4FKH; Ken, G0OSI; Ivan, G4VAD; Andy, G0IBN; Geoff, G7KLV; Norman, M0FZW; Peter, G1FOA; Clive, G1EUC; Martyn; G1EFL & Richard, M1DCJ.

Items for the next Newsletter, including your experiences with your latest rig or antenna, tips on working DX, or your latest project, to be sent to the [editor@g0mwt.org.uk](mailto:editor@g0mwt.org.uk) by Saturday, 22<sup>nd</sup> May: