



Mid Sussex Amateur Radio Society
NEWSLETTER
November 2007

Mid Sussex Matters



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FROM THE PRESIDENT'S CORNER

The Society's 42nd AGM has now taken place and we have a new set of officers for the coming year. The meeting was well attended and I was glad to note the professional way that the figures were presented. I also enjoyed the "nibbles" that followed.

I have been particularly impressed by the way that the present committee dealt with many aspects of the MSARS business during the past year. We now have a thriving Society on a sound financial footing and excellent prospects for the future.

This has not come about by accident but by a great deal of concentrated work by our Chairman Kim and his committee and I would like to thank them all for their efforts during the past year. Kim will be giving up his position soon but will not be forgotten!

I would also like to welcome our new Chairman Russell to his position at the sharp end once again and am sure that he will lead us forward into another successful year.

Band conditions are at last improving. Bob N4XAT was worked last week after his visit in person and things are looking up!

Don't forget the nets. The target frequencies are listed in this newsletter but sometimes QRM makes it necessary to move up or down, so search around for us.

Ken Gibson G3WYN

On The Cover President Ken Gibson G3WYN looks on as Chairman Kim Newland G7AIE presents a certificate of appreciation to Bob D'Imperio N4XAT during the latter's visit to Cyprus Hall on 5 October.

From the Chair

This month's "From the Chair" is the text of the Chairman's Report presented to the 42nd MSARS AGM

Good evening, ladies and gentlemen, welcome to Cyprus Hall for this, the 42nd AGM of MSARS. This report will be published in the next edition of Mid Sussex Matters for those who cannot attend tonight.

When one looks around at other various clubs and societies in the radio world, I think it is fair to say that there only a few that have had as long and successful period as us. Our membership has stayed strong throughout the years both at home and abroad (even having a visit from Bob N4XAT), so a big thank you goes to you the membership, old and new, in keeping the hobby and the society alive.

One of the first things you may have noticed this year is the excellent re-birth of our "Mid Sussex Matters" which hit our screens in PDF format or in hard copy way back in March and has continued to do so on a regular basis ever since. I am sure you will all join with me in thanking Bob G0BUX for his sterling work. On a serious note, a newsletter is only possible if there is something to put in it. So please keep your articles rolling in to Bob. And remember Bob volunteered for the post too. Also you will have noticed that the society's web site is coming together, thanks to another volunteer Nigel G1TDM. Mike please pass on our thanks.

On the same subject as volunteers, over many years MSARS has had the help of an individual, who usually on or around VHF/NFD, with the loan of trailers of various sizes, has towed them up and down the "Tank Track" and onto the Downs for us; supplied and used chainsaws, petrol hedge trimmers, etc. when we have had to cut back to gain access to our sites and this year, even a 4x4 to tow the trailer! This person is not a member nor does he ask for anything in return. I am of course talking about Mark Woodham or "Lippie", as we all know him. In recognition of his help over the years, the committee have decided to offer Mark an honorary membership of MSARS on an annual basis, which will be reviewed every year before the AGM.

On the subject of field day, may I congratulate all those who took part in what ever role. We had a great result, better than the past few years although the conditions didn't seem that good, we came 4th overall in the low powered section. Individually the results were 144Mhz = 5th; 70cms = 2nd and 50Mhz = 4th. Once again, very well done to you all.

Throughout the year your committee, or should I say Sue G6YPY, have tried to vary the programme of events and we have been lucky enough to have

(Continued on page 11)

Editorial

I was pleasantly surprised (“stunned” would be more accurate) to be awarded the G5RV Trophy at the AGM on 19 October. The rationale for this award was “reviving Mid Sussex Matters”. If this is true, then I believe that I accepted the award on behalf of a number of people; I was too speechless at the time to acknowledge them at the meeting so I would like to do so now. First I give thanks to all who have contributed items for publication. There have been many of you, but I would particularly like to thank Ron Glover G0WGP and Chris Saunders G4ZCS who have on several occasions pulled the newsletter’s ox out of the ditch with their relevant and well-written articles. Unlike previous editorial assignments, this one does not require me to worry about distribution of the product. These tasks are handled by Russell Nelson G7TMR and Mike Pollock G8KMP. The newsletter has been largely free of misspellings, misplaced punctuation and the other errors that plague publications. This is not my doing – I would not notice if an article suddenly switched from English into Swahili. The credit goes to my diligent proofreaders, Roger Ferrand G7VBR and my partner Brenda Hopkin. President Ken Gibson G3WYN and Chairman Kim Newland G7AIE have been unfailing in their support and in their reliability in submitting their monthly pieces. Finally, my thanks to all of you, the readers, who have been positive in your feedback and helpful with your suggestions.

One of the joys of ham radio is eventually meeting the people you have encountered on the air. I have not yet worked N4XAT via RF but we did have a couple of email QSOs earlier in the year, so it was a pleasure to meet him when he visited the club. It was especially good to see him looking so well after his bout with heart problems. I have met Sean Linehan EI7CV a number of times on the Sunday morning 80M net. I was able to put a face with the voice at the 5th October meeting which Sean attended.

The election of officers at the AGM resulted in a mixture of change and continuity, with new faces on the Committee, most of the officers continuing for another year, and a new Chairman for 2008. I am looking forward to working with Russell in 2008, which I am sure will be as rewarding as working with Kim this year has been. My thanks and best wishes go to Kim – I hope we will have a chance to hunt foxes together again in 2008, and with more success than this year.

Bob Clinton GØBUX

Annual General Meeting

There was an overflow crowd downstairs at Cyprus Hall on 19 October for the Society's 42nd Annual General Meeting. After a welcome by the Chairman, Kim Newland G7AIE, and approval of the minutes of last year's meeting, the Chairman presented his annual report which is printed in full on page 3 of this issue. This was followed by the Treasurer's report which featured a healthy surplus for the year.

The next item of business was the election of officers for 2008. Russell Nelson G7TMR was elected Chairman. Incumbent officers Secretary Gavin Keegan G6DGK, Treasurer Stella Rogers and Programme Secretary Sue Davis G6YPY all agreed to serve another year and were re-elected unanimously. The Committee members for 2008 will be Alan Cragg G8YKV, Rob Ashman 2E0RJA, Luke Milburn M3RXO and Phil Brown M5BTB, in addition to Mike Pollock G8KMP who is a permanent member.



Chairman Elect Russell Nelson receives congratulations from current Chairman Kim Newland

The Examiners of Accounts for the coming year will be Roger Ferrand G7VBR and Tony Finch G3XQM. Reserve Examiners will be Mike Munday G1TDL and Chris Saunders G4ZCS. The Society's Representatives to the Southern Counties Amateur Radio Forum (SCARF) will be Mike Pollock G8KMP, Roger Ferrand G7VBR and Bob Clinton GØBUX.

The Committee's decision to hold annual subscription rates at the present level was announced.

The final item on the agenda was the presentation of awards by President Ken Gibson G3WYN. The first annual presentation of the G3JMB award was to Luke Milburn M3RXO, in recognition of achieving his first one hundred HF contacts. Bob Clinton GØBUX was awarded the G5RV trophy for work on Mid Sussex Matters.

The formal meeting was then adjourned to an enjoyable buffet including wine, cheese and much more.

How Good is my Radio?

ATUs

My radio is better than yours 'cos I've got a built-in ATU.

Well is it? It probably cost more than the equivalent radio without one, but does that make it better?

As we all know matching an antenna to a radio is required for all applications except where the antenna is correctly tuned to the frequency we want to work (resonant). In all cases where the antenna is not matched (not resonant), an ATU will be required. Even a resonant antenna with an incorrectly matched feed line will require some "line flattening" by an ATU.

Let's look at the modern radio through an engineer's eyes. It is probably as small as can be made, it will be as light as it can be made and it will be made as cheaply as possible while still appearing to work well. With these practical considerations in mind, what sort of ATU can be expected to be built into a radio? It will be small, light and cheap.

Now let's look at an ideal (home made) ATU. This will be a big as possible, to allow for large inductors and capacitors. It will not necessarily be light because big components need big ventilated enclosures. Will it be cheap? Hopefully most of the bits will be secondhand or from a junk sale, but no expense will have been spared to get the RIGHT components. Why should the components be large and why will the unit need to be ventilated? A good ATU will be required to match the radio to almost any antenna configuration at almost any frequency. This will mean that some very high voltages and currents could be present in and around the inductor and capacitors. Remember even the PicaTune ATU project from several years ago required capacitors capable of withstanding 5,000 Volts! There is also a possibility of high levels of RF current circulating in the inductor and that means heat could be generated.

A good ATU will also be capable of accepting balanced feeders as well as unbalanced, so it will need a balun as part of its circuitry.

So back to the built-in ATU. Because the components need to be small, the voltages and currents that they will withstand must be reduced from the "home made" version. Reducing the voltages and currents means that the

ATU must have monitoring circuitry and a shut down facility to prevent “smoke”.

In practice a reduced range of SWR values are accepted by the ATU, thus many mis-matched antennas will result in a shut down condition, preventing the radio from operating in Transmit mode.

As we saw in part 1, you need to consider what the ATU can do for you and whether it is worth having. If you need one for a nearly resonant antenna, then the radio with an internal ATU will be good value but if, like most of us, your antenna is far from resonant on most bands, then an external ATU will be required. This makes the internal one redundant and a waste of money.

However there is an occasion when the internal ATU will be of use with a resonant antenna: when you have a linear amplifier in circuit. These beasts can present a poor match to the radio, so an ATU will then be of great benefit to gain maximum output from the linear.

To be continued.

Chris Saunders G4ZCS

From the ARRL Contest Rate Sheet:

How big is that signal really? We all know that S-meters vary in sensitivity from rig to rig, but how much do they vary, really? Greg W8WWV decided he would find out: He measured the S-meter sensitivities and calibrations of eight different radios and posted the results (www.seed-solutions.com/gregordy/Amateur%20Radio/Experimentation/SMeterBlues.htm#) for us to enjoy and ponder. In case you're interested, the IARU recommendation (http://en.wikipedia.org/wiki/S_meter) is also online. (Thanks, Kevin N7WIM)

The Extended Double Zepp is one of the most powerful wire antennas. It's a great Field Day antenna and a good one to install at a home station, too. LB Cebik has written extensively about this class of antenna at www.cebik.com/mu/mu3a.html (Thanks, Eric N0EW)

Jake K9WN contributes a Web site (www.daycounter.com/Calculators) with lots of different electronic calculators. It's got everything from Air Core Inductor design to Z-S-Y parameter conversions

Last Stagecoach into Amberley

Readers of Westerns will be familiar with the stock opening. Take, as an example, "The Last Stagecoach into Abilene".

The stagecoach rolls into Abilene, late. It comes to a halt outside the Silken Garter saloon. The first of the arriving travellers to step down is a young attractive lady, wearing fancy eastern clothes and a haughty expression. Next is a tall stranger. He tips the brim of his Stetson to the lady as she strides off across the street to the hotel while he makes his way into the saloon. The man riding shotgun, a grizzled old-timer, clammers down from the top of the stage and tells the waiting crowd, who can hardly take their eyes off the rear of the departing fancy eastern clothes, that the coach is late 'cos o' them pesky injuns who'd come a whoopin' outa the hills the other side of Rattlesnake Pass.

Some of the spirit of the Old West remains in place today in West Sussex.

The Stagecoach rolls into Amberley, late. It comes to a halt outside the station yard. The only arriving traveller to step down is me.

Nobody is riding shotgun on the Stagecoach Bus (the special Sundays-only service between Burgess Hill and Pulborough by way of Amberley, running under contract to West Sussex County Council), to explain why it's late.

I know why because I witnessed it all an hour ago when the driver of a Range Rover misjudged the pattern of the continuous line of parked vehicles in Bramber. The resulting confusion, when he ended up facing the Amberley Stage head-on with cars piling up behind in both directions, took a time to sort out. The driver of the Amberley Stage lacked the eloquence of a grizzled old-timer when he voiced an opinion of the Range Rover driver. Through the reverse image from the oversize mirror in the driver's cab I was able to lip-read every syllable of his forthright, colourful delivery and no mention of pesky was made.

It's the last day of September and there are two reasons why I'm at the Amberley Museum today. It's Autumn Crafts and Skills Day, billed as 'A chance for accompanied children to try their hand at a range of craft activities'. First job is to get the Radio Station set up with the sign 'Try your hand at Morse, send your name in Morse Code and receive a certificate' prominently displayed. There are already a few visitors circulating at one end of the building housing the Wireless exhibits. The sombre tones of

Neville Chamberlain are issuing a sixty-eight year old declaration of war from a radio set of that period. In lighter vein, from another part of the building, Flotsam and Jetsam, a popular vocal duo of that same period, are singing about little Miss Bouncer who loves an announcer down at the BBC.

I unlock a couple of cabinets, throw three or four switches and the Radio Station is ready for action. There are two HF rigs available for operation, a Trio 530 and a Kenwood 570. The 530 has a history. Formerly owned by G5RV, Louis had bequeathed it to the RAIBC. Johnny, G3MJK, the chairman of that club decided that because of its pedigree the rig ought to be preserved and accordingly donated it to the Museum, where it is fired up from time to time to keep it in trim. It's still capable of delivering 100 watts but lacks the filtering on receive found on the 570 which is a big plus in view of the locally generated static.

With the 570 running I check 80 metres to find a signal strong enough to surmount the S9 plus of noise and get an entry in the log from a /P in South Wales who is at a kite flying rally and has an enormous length of wire up. Now the serious business of the day begins. Usually the Morse key attracts a few inquisitive fingers but as this is billed as a hands-on event everyone seems to be up for it today.



With the aid of a chart of the Morse alphabet and brief instructions on the keying of a dot and a dash from me, it is no time before eager hands are clutching prized certificates. There are also questions to be answered. When, where and why did Morse originate? Is it still in use today? Have you ever heard an SOS message?

All good stuff but it's not all about Morse. Stopping by for a chat are people who have just come across the very same Wireless Set/TV that their dad brought home years ago when they were still at school. Old soldiers have just seen a 19 set and a 22 set and reminisce of times when they operated them at Catterick or was it Calcutta? The passage of time has distanced

(Continued on page 10)

their minds from the exact location but wherever it was it's good for a yarn. Then, of course, inevitably there are the Radio Amateurs. A fortnight earlier, then in company with Tony XQM, it seemed more than a co-incidence that so many Isle of Wight Amateurs were present. It was the day of the Museum's annual mid September Bus Show and it transpired that, with a bus coming over on the ferry from the island for the Show, the members of the famous Brickfields ARS were making it an opportunity for a day out. They deserved it, with the work they put in running all those special events stations. The Needles Lighthouse and the Marconi sites come to mind, so it was great to meet up with a very interesting bunch. There was the chap telling us of the bits of the original Marconi mast base that are still being turned up when the field at the site is ploughed. Another was the collector of old 405 line TVs, so many that they are housed in a 3,000 sq. ft. shed. Then there was the Intermediate License Holder who worked ZL with 50 watts and an inverted V on 80 mtrs. Makes you wonder.

Back to today and I'm still putting the children through their paces, or is it the other way around? Most of the names are short, Josh, Emma, Max, so the certificates are issuing thick and fast. I complain of the need for a rest and then there steps forward a young lady who is going to help me out because she tells me she has a really long name. I'm occupied tidying up the shack whilst she sends. "So you're Madeleine?" I ask her. She smiles and nods her head. Her mother comments that it was clever because I wasn't even watching. But mum is wrong, what was really clever was that this little ten year old has laid her hand on a key for the first time and sent her name at a fair clip, faultlessly. Just before closing for the day another high spot occurs. By a combination of arm-twisting and leg-pulling an entire family, three children, mum, dad and grandma are talked into taking their Morse tests and as they meander off, still chuckling, past the mock-up of the bomber wireless cabin, each is grasping a certificate.

Signing out and making my way along the path to the station yard I reflect on the last few enjoyable hours, but what is to come and the second reason for my visit today is not so pleasant. The contract for the Sunday bus service is expiring today, probably because of a tightening of the purse strings by West Sussex County Council. So cos o' them mean ornery critters at Chichester I'm about to climb onto "The Last Stagecoach into Amberley".

Ron Glover GØWGP

(Continued from page 3)

more than just one Fox Hunt! (despite the ban!). It is a difficult job trying to fill those empty pages in a diary and yes, I know, "We're a radio club" but could *you* do the job with a radio related subject every week? A lot of clubs meet monthly and they have the same problems! We have had talks from Graham Sommerville of Bhi and his DSP modules/speakers and a very popular and interesting two part talk by our own Ron G0WGP about the life and times of Louis Varney G5RV....Ron, you really should write a book you know.

Staying with Louis G5RV, I'm sure that you all recall that I have visited Friedrichshafen Ham Fest over the last few years, along with other members, meeting up with Sean EI7CV, Gerry EI9DZ and Aden EI9HW, but this last visit was a little special, I was met by two foreign amateurs, who had pinned a note to the G5RV QSL card that I had put up on the QSL wall. They both had known Louis and wanted to know about us, MSARS and our connections with Louis. Then it was suggested that not many people knew Louis the man. We all know his antenna, but what other wonders did he get involved in? Thus it has been suggested that we take a small "Club stand" one year at the show to promote Louis the man, and us, MSARS. An idea for the future?

The future? I would like to thank Chris G4ZCS for all his efforts running the Foundation courses over the year and also his dedicated team of helpers that are bringing new blood into the hobby. It is also nice to see that this new blood is staying with us (Luke, Alex and William, thank you). These people are the future of our hobby. It's a shame that M3's are looked down upon in some quarters still!

Finally, it is time for a change both on the committee and for me as your chairman. I did hint last year that I would be willing to sit in the "Big Chair" for a year or *possibly longer*. Unfortunately, like so many others, pressure of work and personal reasons I am finding it more and more difficult to dedicate the time required to be an effective chairman. Also, there is the very strong possibility that by this time next year, I will not be living in the area, therefore finding it difficult to attend the meetings. I know that two other members of the committee are standing down after four or five years of service so, all in all, we are looking for three replacement members. Perhaps you could offer something back to your society?

I therefore would like to close my report by thanking you, the membership for your support that you have given both me and the committee over the last year, by the end of tonight you will have a new committee and Chairman ready to take over on the 1st January 2008, please support them as you have supported me.

Kim Newland G7AIE

October Scrapbook

5-10-07



G3WYN & EI7CV

19-10-07



**Waiting for the AGM to commence:
Secretary G6DGK & Chairman G7AIE**

26-10-07



**Auctioneers: G7TMR, G7AIE,
G8KMP, G6XTW**

5-10-07



G4AKG & G6MJW

5-10-07



N4XAT & M3RXO

Have a look at these sites.....

www.youtube.com:80/watch?v=vBGldf0VjQ4

www.batee.com/projectsanddesigns/balloon/index.html

QRZ.com is rolling out a new QRZ 2.0 application called GridFinder. It can be used to determine the Grid and Lat/Lon coordinates for just about any point on the planet (please don't be too picky about the Arctic regions). Give it a try at www.qrz.com/gridfinder and see what you can locate! (Thanks, Fred AA7BQ)

Users of computer software to generate schematics and PC board layouts may be interested in another of the many open-source software projects. The gEDA project (www.geda.seul.org) offers a mature suite of free software applications for electronics design, including schematic capture, attribute management, bill of materials (BOM) generation, netlisting into over 20 netlist formats, analog and digital simulation, and printed circuit board (PCB) layout. (Thanks to the ARRL Contest Rate Sheet)

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ELECTRONICS
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PUBLIC CAR PARK (Rear of)
IN LION GREEN ROAD
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18th
NOVEMBER
2007

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Please e-mail cats@qsu.net

Real Solder

Rapid Electronics have supplies of 18 and 22 swg 60/40 tin lead solder. Part numbers 85-0610 and : 85-0595 (www.rapidonline.com)

Mid Sussex Happenings

Nov 2	Talk (U)
Nov 9	Radio Night (D)
Nov 10	St Wilfreds School Fireworks ?
Nov 16	Radio Night and Table Top Sale (D)
Nov 23	Talk (U)
Nov 30	Radio Night (D)
Dec 7	Christmas Dinner
Dec 14	Christmas Quiz and Mince Pie Night (D)
Dec 21	Radio Night and Table Top Sale (D)
Dec 28	Meeting at a Pub
Jan 4	Meet the Committee and Round Table Evening (U)
Jan 11	Radio Night (D)
Jan 18	Radio Night and Table Top Sale (D)
Jan 25	Battery Operations (U)

Meetings are held on Friday evenings starting 7:45 at
Cyprus Hall, Cyprus Road, Burgess Hill, West Sussex, unless other-
wise noted. U=upstairs, D=Downstairs

Visitors are always Welcome

Club membership pin

Featuring the club windmill logo, in ruby to celebrate
our 40 years.

Available from Chris G4ZCS.

Price £2.00 each. Plenty of stock!



Please Note

Please note that all bills should be presented to the Treasurer for payment. Also please do not take monies owed to you from Club funds that you are holding pending passing to the Treasurer.

Many Thanks

Hon. Treasurer

Welcome a New Member

Please welcome Rob Barter as a new member of MSARS. Although Rob has long been interested in ham radio, family and work demands have kept him from getting licensed until now. He is working on getting licensed, so give him any assistance you can. Rob lives in Plumpton Green and works as a computer project manager for an investment bank in the City.

Deadline

The deadline for items for the December issue of Mid Sussex Matters is

15 November 2007

CLUB NET TIMES

Join in if you can. All times are UK CLOCK times.

Sunday	08:00	3.74MHz <u>±</u> QRM
Sunday	11:00	S14 (145.350MHz)
Sunday	20.00	HY Net 433.125Mhz
Wednesday	20:00	S14 (145.350MHz)
Weekdays	13:30	21.330MHz. Work the USA
Tuesday	20:30	3.725 MHz <u>±</u> QRM SCARF

Mid Sussex Amateur Radio Society

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Committee	Russell Nelson	G7TMR	01444 236795
Committee	Rob Ashman	2E0RJA	01444 232129
Licence Holders	Chris Cook (G1ZMS, G3ZMS) Gavin Keegan (G5RV)		
Auditors	Geoff Davis G6MJW, Hugh Wright 2E0HMW		
Reserve Auditors	Roger Ferrand G7VBR, Tony Finch G3XQM		

Club Web Site: www.msars.org.uk

Newsletter

Contributions are invited from all club members. The cut off date is the 15th of the month prior to publication.

Address all contributions to the editor:-

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