



Mid Sussex Amateur Radio Society
NEWSLETTER
September/October 2008

Mid Sussex Matters



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FROM THE PRESIDENT'S CORNER

Now what passed for summer (with its usual rain) is behind us. All is not gloom, however, and several members have purchased new rigs in anticipation of the undoubted improvement in band conditions now becoming evident. The recent IOTA contest found all bands full of activity, a great improvement on last year.

Several MSARS members are also members of the Cape May ARC and that Club's newsletter is on line at www.capemayamateurradioclub.com It's well worth a read through. CMARC are just like us - they are into DSTAR, they've just bought a new Hustler vertical, and there is a good article on how to clean antenna wire, all in the current month's newsletter.

It's a good way to keep in touch with Bob N4XAT as well, although I'm sure that he'll be workable on 15m soon.

Of course, if you really want to see the warm beaches and the posh American bed and breakfast places at first hand, go out there for a holiday. Cape May is only a mile or so from Bob's place and all the delights of breakfasts with the gang. Several of us have already done this and Bob would certainly welcome any other MSARS members with open arms.

Keep listening then, and do call even though the band seems dead. It will be if no one calls at all!

Ken Gibson G3WYN

On The Cover

Drinks and Drawing at the Chairman's Supper. Report on page 15.

Photo Credits

Cover, 6,7,8, 15 - G8KMP

From the Chair

As you can all see the evenings are certainly beginning to pull in now, so I hope you have done all your antenna maintenance, ready for the winter months, and made your shack ready for many hours of enjoyment. My own station looks likely to be dismantled in the near future, ready for a move to pastures new. Mind you, the way the property market is moving at present this could be months away.

Some interesting things have been going on the last few weeks. First we had the annual Chairman's bash, held again this year at Sue & Geoff's QTH. There was a good turnout and I hope all enjoyed the evening. We held the usual raffle and we will send a donation to St Dunstan's Radio Club, so thanks to all for your support.

22nd August we had an excellent talk by G3SXW with slide show (and video clip on how not to go off roading in the Sahara). The logistics of this type of DX expedition puts our little trips into perspective. We will order a DVD so in the future we can show at a video evening.

5th September we had the pleasure a visit from G3LDO and his talk on SWR and all that, and he remembered that the last time he visited us we were at Marle Place and Louis Varney was in the audience.

Bank Holiday Monday saw the first of two visits to Shermanbury Place. This time it was to run a demonstration which was one of many events to raise funds for St Giles church appeal. Then on the 6/7 September we put up an HF station to take part in (for the first time in 25 years or more) the annual NFD HF 24 hour contest.

I'm sure that you have all heard comments that both these events were a shambles and should never have been allowed to happen, especially as we were using G5RV/P as our call sign. These events were both cleared by the committee. The first we had agreed to do some months previously and the second was arranged at the last minute. I think we should thank all the members who did come along and help.

This year's AGM will be held on Friday 17 October in the small hall and will be followed by cheese and wine. Remember this is your opportunity to do something for your Society. All the posts will be up for election, so lets have some new blood on the committee

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Editorial

Amateur radio is a hobby with many facets. Some of us enjoy chasing DX, others like contesting, many are avid rag chews. And on and on. However there are only three things that really justify our occupancy of the valuable radio frequency spectrum we enjoy: (1) ham radio encourages technical innovation and experimentation; (2), it provides motivation and training for those thinking of entering the field of electronics; and (3) it allows us to serve the community by assisting with communication at public events and in times of emergency. It is in the context of the third reason that I have recently become discouraged, distressed and disgusted. The cause of my dismay is the bun fight that has broken out between the RSGB and Raynet and which is being publicly aired in the publications and on the web sites of the two organisations.

The “issues” being contested are such things as whether the two organisations should share insurance coverage, whether there should be a common ID card, whether there is a need for an operating manual for both groups. Come on, people – THESE ARE NOT ISSUES! They are simply administrative matters capable of being resolved by delegation and intelligent discussion. If, for example, there really is a need for a common operating manual, then simply appoint a joint drafting committee, give them objectives and have them get on with the effort. (The US Constitution was drafted and ratified with relatively less heat than this squabble has already produced.) It is difficult to escape the conclusion that this battle has more to do with egos than with genuine issues.

Because both organisations have gone public with this dispute, we must assume that the agencies that have entrusted us with our precious segments of the radio spectrum will have taken note of it. We can equally assume that, when the time comes for our frequency allocations to be reviewed, that these agencies will recall this unnecessary dispute and question our stewardship of public resources.

I am a member of both the RSGB and Raynet and I have not taken sides in this battle. I am, however “Disgusted of near Tunbridge Wells”, with my ire directed equally at both organisations. If you are a member of either or both, I encourage you to familiarise yourself with the details and to make your views known to the officers of the organisations. This dispute has all the importance and urgency of two bald men fighting over a comb – the sooner it is resolved, the better it will be for ham radio.

Bob Clinton GØBUX

The Elecraft K3 - First Impressions

For the last two years or so I have been looking for a NEW radio to see me through my retirement. Having looked closely at many new designs, and some not so new ones, and the spec's of many, many, more I concluded that my specified radio requirements were not being met by the main stream manufacturers. I continued to look, and then came upon the new Elecraft K3, which had been announced in the USA in Spring 2007.

This radio is simply described as a software defined radio in a box, which contains all the associated hardware as well. The initial specification sheets indicated that this was the right one for me, so I placed an internet order, knowing that I could always cancel right up to the last minute.

That was back in February. In July I got my "Katiegram" (a notification that 'MY' radio was on the production line and was due to be boxed soon) A quick e-mail confirming my original specification and... less than a week later a big brown van pulled up to the front of the house! I got the box on Monday, and by Thursday afternoon I had a fully working radio.

I had elected to build my own radio from the kit form, rather than buying a completed box. So I first had to source an anti-static kit. In the USA they are \$23.00, over here £53.00, so I made up my own from flexible wire, an inside-out static bag, crock clips and a couple of 1Meg' resistors, and my metal watch strap! Cost £00.00 and worked a treat.

Being a software defined radio, the first action was to connect it to my computer and try to download the latest issue firmware packages from the Elecraft web site. This proved a little tricky for me as my rig was loaded with a 'beta test issue' and the ready to run issue was a bit out of date. Having found the beta update site I downloaded the very latest issue.

Then the fun started! The first on-air contacts suggested that the audio was just like it had been on the old 1980s rigs I had been using. I soon discovered that there is a graphic equaliser for both the receive and transmit audio paths in the radio, so a little tweaking of the hundreds of option levels and .. Near perfect audio reports.

I have found that with some careful tuning and adjusting of the transmit settings I am able to bust pileups that I would only have dreamt of a few months ago. My opinion at this early stage is that it is the improved audio

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SSB Field Day at Shermanbury Place

On Saturday the weather was very windy and wet, the River Adur was rising, but we were assured by our host, William, there was nothing to worry about. William towed the mast to the Mill field from its storage on the estate and it was erected to a height of 15m, the maximum allowed for this contest. Once it was held in position with the guy ropes the whole thing looked a lot safer.



Ken G3WYN had checked over and prepared a doublet that had seen service in the warmer climes of South Africa and this was attached to the top of the mast using a standoff pole.

In the gusty wind the tent was found to have a mind of its own with one person holding onto it while the other two rushed around putting in pegs and tying down the guys. Mike suggested that the canvas did not match



the poles as there was a large gap between the grass and the canvas on the leeward side.

Chris had suggested before the event that a second earth embedded in the river bank would make the installation safer. So a copper pipe was banged into the mud earlier in the week and by Saturday the top of the rod had disappeared under the rising waters.

When Chris arrived he mentioned that two members had called in on the club frequency and had not been answered. Apologies to those two members as we did not have a 2m radio up and running until well after the tent was erected. It was considered a high priority to get a safe enclosure for the kit and operators. (This field was okay for local 2m working but not good for the 2m club net as was demonstrated on the Sunday morning when

only Peter could hear and be heard clearly).

During the initial testing Chris discovered that we had problems with the balun so that was changed out for the spare supplied by Ken. Once operations started it was found that the generator was taking a short time to meet the demand of working at 100W and the FT847 would flash off and on. The power supply was changed out for another and this gave a slight improvement, but the problem was solved by wiring a leisure battery across the terminals of the power supply. With that sorted Chris started to get some contacts in the log.

Late afternoon all bar one left the site and the 'night watchman' did some further operating during the night hours.

On Sunday morning Phil and Alex arrived and Alex put the remainder of the contacts in the log, including Brazil. Well done, Alex. We were jealous as we had only worked European and Russian stations.

At the end of the contest the station was closed down and Mike and Rob arrived to help take down the mast and tent. The wind had dropped in power but was enough to help dry the tent.

Rob towed the mast off site as William was busy with the afternoon Church service and everyone was on their way home by 15:30.



The weekend was a challenge from the very start because of the shortage of manpower and the weather. Unfortunately the results were not very good. However, many problems were overcome and what has been learnt can be put to good use at next years event.

Many thanks to the members who turned out in bad conditions; Mike G8KMP, Phil M5BTB, Chris G4ZCS, Alex 2E0TET, Rob 2E0RJA.

Lastly our thanks to William M3VRE for allowing us to use his field again.

Roger Ferrand G7VBR

External Events Team

Following the recent external events that MSARS has participated in and the problems encountered throughout them it has been decided by the committee that an external events team should be established. This was first suggested when Kim was the chairman in 2007 but, because of one thing and another, slipped off the radar for the society. For those of you who were present on the evening of Friday 19 September the discussion that followed was very enlightening and by the end of the evening both Kim and Rob were co-opted onto the committee to share the role as outdoor events coordinator. Over the coming weeks both of us will be meeting with the committee and the membership to discuss what events you would like to participate in and also to compile a list of able volunteers. We do not expect that anyone will be able to help with all events but if you are able to help out with one or two in the course of the year this will help to ensure the events are a success.



MSARS at the Fayre

Within the team we will be looking for the following skills,

Logistics

Organising and testing of kit prior to the event. Arranging the transportation of kit to the site. Erection of equipment on site, including talk in radio, tents, antennas and radios. De-rig of equipment after event. Inspection and repair/replacement (if required) of kit after the event

Operators,

To operate and log throughout the event,

Service team,

To supply catering/refreshments to the operators throughout the contest/event

Technical Support

When something fails during the event, to repair or replace the faulty item onsite. Give guidance and advice to less experienced operators and loggers throughout the event,

If you feel you are able to assist in any of the above areas please contact either of us. For external events to be a success and for the continued promotion of the society and the hobby, the society does require support from you, the membership,

With the selection of equipment available to use for outside events there is always scope for training and there will be sessions run throughout the year either as part of the upcoming program or as a part day outside. For obvious reasons, it may prove a little difficult to set up a 90' mast in Cyprus hall.

We will be supplying updates throughout the year via the newsletter and also at club evenings but in the interim please tell us if there is something you would like to know or feel we could do differently.

Kim Newland G7AIE and Rob Ashman 2E0RJA

Birthday Greetings in September

G3GZT Reg Moores
G3MJW Geoff Davis
N4XAT Robert D'Imperio
G4YCN Richard Sharman
SWL Andrew Forsythe

And in October

G3HUA Eric Holloway
G8KMP Mike Pollock
M3VRE William Greenwell
G3TDL Richard Davis
M1CSE Chris Childs

ADVENTURES WITH A HUSTLER

My friend Tom Haylock M0ZSA bought a Hustler 6-BTV vertical antenna a while ago since the pocket size garden of his house wouldn't allow for anything grand in the way of HF antennas. He purchased the 6 band vertical with the 18Mhz add-on unit on giving 7 bands on one aluminium pole, and then set about tuning it.

After a while he rang me and said he was thinking about cutting the tubing rather shorter since it had proved impossible to tune even the basic 28Mhz bottom section to resonance. The highest frequency match he could get was around 27.5 Mhz, nowhere near good enough.

After further investigation it did seem that the Hustler was not for Tom's garden with the only possible site being only a foot or so away from the house, with no room for radials and a reluctance on the Hustler's part to tune up.

I was persuaded by Tom that it would all come right if it were installed here in my garden and after wondering whether I really did need another vertical I fell for it and brought it over to my place. The Hustler 6-BTV is a 6 band, 3.5-28MHz. vertical antenna fitted with 4 traps and a loading coil for 3.5Mhz. The 18Mhz add on unit comprises another trap mounted at right angle to the others and clamped around the 28 Mhz trap. It is tuned by two 12" rods adjustable in length by a wing nut.

I read through the manufacturer's literature that Tom had provided and looked at the wealth of information on the web. Many of the websites said that the antenna was absolutely wonderful whilst others (and there were many of these) maintained that it was 6 dummy loads on a shiny stick but nevertheless, I decided to continue with the project.

I was then faced with an irreversible decision. If I wanted to install it where my other verticals had been, 25' from the house, I would have to cut the 7' aluminium scaffold pole I had cemented into the ground and against which many of my dipoles, inverted vees and other test antennas had been secured for years.

After much soul searching, out came the hacksaw, and off came the top of the aluminium pole, leaving just 20" protruding from the ground. Goodbye ground post, let's get on with the Hustler!

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The installation of the antenna with the base just 7" above ground and clamped against the stub with a couple of sturdy TV clamps went to plan and I connected the 4 adjacent ground rods and earth mat to the base of the vertical. My earth mat consists of 46 radial wires buried under the lawn over an area of 250 foot by 50 foot. The antenna sits about halfway down the 250 foot length and slightly towards one edge of the 50 foot measurement and the radial wires vary from 136 feet to 8 feet in length.

All the radials and earth rods terminate at busbars fitted in an upturned plastic tote box mounted on feet adjacent to the antenna base and two thick cables connect the bus bars to the base of the antenna. The coax feedline from the antenna is fed into the box where an inline lightning arrester is also fitted. The coax lead from the box is formed into a 6 turn RF choke just outside the box and the feedline is buried, passing under two pathways on the way to the shack where it is formed into another RF choke before it enters the shack. There it is fed to a two way coaxial switch, one side being earthed the other leading to the transceiver.

Starting the tune up procedure with the aid of an Antenna Analyser I soon found that the basic 28Mhz trap and tube did indeed resonate LF just like it did at Tom's place and I began to wonder if I hadn't been a little to hasty in deciding to go forward with my latest antenna project.

More thought, and a review of previous verticals I had built, led me to believe that if the tubes could not be adjusted to give the required resonant points and, assuming that this was not the first Hustler ever made, that the traps themselves needed to be adjusted. No mention of this was made in Hustler's detailed setting-up procedure supplied with the antenna but much has been written on the web about their antennas and reading through this soon revealed a method of adjusting the traps which proved satisfactory.

The whole antenna is very robustly made with all stainless fittings and the trap adjustment is in itself simple, but investigation revealed that my Hustler had a ring of plastic adhesive under each of the black top caps of the traps which prevented the top cap being slid up and down the tubing if adjustment was required.

I could find no mention of this in any of the literature on the web or anywhere else but sliding the top cap away from the trap enabled me to expose

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the adhesive and cut it away. Once the tubing had been carefully cleaned the plastic top cap was free to slide in either direction and the trap could be satisfactorily adjusted to bring the particular band involved to resonance where required.

Trap adjustment is much coarser than adjustment of the tubes associated with each band but all adjustments are fully reversible and it is simple, with the aid of an antenna analyser, to bring each band to resonance, starting of course with 28Mhz and continuing to adjust each band thereafter until the final 3.5Mhz band position is adjusted by telescoping the top whip section into its final position and securing it with the two (very small) allen screws provided.

Using this procedure, setting the tube lengths to as near as possible to my required SSB positions and if necessary adjusting the traps, I began by trying to bring 28Mhz into line at 28.5Mhz. This still proved impossible but more reading suggested that, if radials are to be used, ground rods should not, so off came the connections to the four 4 foot copper rods I had installed around the base, one being reserved for connection to the lightning protection unit fitted in the coax feedline.

I also found that any metal near the antenna affected the settings. Moving a steel pole with a weathervane atop, which was originally 10 feet away, to another position 18 feet away made a considerable difference for example.

I can't wait till conditions improve I and I can really assess the antenna but I can unhesitatingly recommend it for those with sufficient room for an efficient ground mat and with enough space to install it at least 20 feet from any metal object or building. I also imagine that it would work very well against a single ground rod near the sea but have no intention of uprooting mine to find out!

Ken Gibson G3WYN

Ken's adventure with the Hustler will be continued in the next issue of Mid Sussex Matters

From the Chair (Continued from page 3)

At the suggestion of Rob 2E0RJA we have decided to create a new post. This is the Outside Events Coordinator and will be filled by a member of the committee. We believe this will fall in line with our insurance policy requirements.

Don't forget we intend to take part in the 2 meter AFS contest on Sunday 7 December from our shack. More details will follow. On Friday 12 December we are having our annual dinner at the Thatched Inn, Hassocks. Sue will start collecting a deposit soon.

73 till next time

Russell Nelson G7TMR

Elecraft K3 (Continued from page 5)

quality that is the most benefit, enabling the DX to hear my call clearly in all the noise. This alone has made the purchase worthwhile. The log book is filling up a lot faster than it used to do. The real bonus, though, is now I am able to work the low bands in complete comfort with all the arrays of filters, DSP, noise suppressors, etc.

Because this radio is a SDR there are plenty of toys to play with. Some are a real treat, such as the on-panel decode of PSK 31 signals, and the pseudo stereo monitor function for headphones.

My conclusions at this early stage are that this is the best radio I have ever used, and that includes some that sell for the best part of £10,000. and, the price is, I think a real bargain. I can thoroughly recommend one to anyone with a "new" radio in mind, and six months' worth of patience, as they are now delivering this week's orders in April 2009!

Look at the Elecraft web site. It is full of interesting information and has links to some great sources of data, in addition to the sales blurb.

Chris Saunders G4ZCS

I need to repair my DAIWA SWR/Power meter model CN615. and seem to have lost my original handbook. In particular, I need data on the diodes, type numbers and ratings, and would be very grateful for any help.

Sean Linehan EI7CV. sealine@dunshaughlin.com

Mid Sussex Happenings

3 Oct	Jon Ruff G4RGV - "Working aurora with a shoe string" (D)
10 Oct	Radio Night (D)
17 Oct	AGM - Wine and Cheese (D)
24 Oct	John Humphrey G6XTW - "CCTV part two" (U)
31 Oct	Chris Saunders G4ZCS - "Oscilloscope Basics" (D)
1 Nov	St Wlifred's Bonfire Fireworks
7 Nov	Roger Ferrand G7VBR - "My Other Hobby"
14 Nov	Radio Night (D)
21 Nov	Radio Night and Table top Sale (D)
28 Nov	Tba (U)
5 Dec	Radio Night (D)
7 Dec	AFS 2m Contest (D)
12 Dec	Christmas Dinner at The Thatched Inn
19 Dec	Christmas Quiz and Mince Pie Evening (D)
26 Dec	Shut
2 Jan	Meet the Committee and Round Table Evening (D)

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 NET TIMES

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

Sunday	08:00	3.74MHz + 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 + QRM SCARF

Deadline

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

24 October 2008

CHAIRMAN'S ALFRESCO SUPPER

Our chairman Russell G7TMR, had handed out personal invites to the Chairman's Alfresco Supper to members for Friday 1 August 2008 at 7.30 p.m. I picked up Luke 2E0ZLM and we made our way over to the QTH of Sue G6YPY and Geoff G6MJW, the QTH for the supper.

When we arrived Russell and his wife Val were busy preparing the food and drinks. Our president, Ken G3WYN and his wife Stella were already there and soon other guests started to arrive. First there were drinks, including a

barrel of beer, crisps and nuts. The table in the lounge was then spread with coronation chicken, ham, crab sticks, three quiches and various other salad items. Members and wives soon started to tuck in to the food. As it was a dry but cool evening some of the guests sat under the cover of two large gazebos erected in the garden. Then pavlova and fruit salad were laid out on



the table for dessert.

After everyone had eaten, Russell drew the raffle tickets. Proceeds from this year's raffle will be donated to St. Dunstan's Radio Club. The special prize of a mini stereo unit was won by Sandy, wife of Gavin G6DGK. A very good evening was enjoyed by all.

Mike Pollock G8KMP

BT Award

During the 'Parish Notices' at the Society meeting on 22 August, Rob 2E0RJA presented the Chairman with a surprise cheque for £475.00. This was the result of a successful application made by Rob about three months ago on behalf of MSARS to the BT Community Award scheme. The money is to benefit the Society and there are no stipulations about how it should be spent.

Roger Ferrand G7VBR

Mid Sussex Amateur Radio Society

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Examiners of Accounts	Roger Ferrand G7VBR, Tony Finch G3XQM		
Reserve Examiners	Mike Munday G1TDL, Chris Saunders G4ZCS		

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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