

COULSDON AMATEUR TRANSMITTING SOCIETY
G4FUR  **M1FUR**
CATS WHISPERS



October 2012

Affiliated to the RSGB

CATS Committee

Chairman:	Glenn Rankin, G4FVL	☎ 020 8763 8093	glenn.m.rankin@btinternet.com
Secretary:	Steve Beal, G3WZK	☎ 01883 620730	g3wzk@whenland.com
Treasurer:	Steve Conway, G7SYO	☎ 01737 201227	sconwayuk@hotmail.com
Members:	Stuart Barber, G6CJR	☎ 01737 356201	advsport@btinternet.com
	Frank Emery, G3ZMF	☎ 07780 347906	frank@femery.orangehome.co.uk
	Dennis Noe, M0NDJ	☎ 01737 362951	radio@djnoe.demon.co.uk
	vacancy		

CATS Whispers Editor: Steve Beal, G3WZK
email address for contributions: newsletter@catsradio.org

Regular Society Meetings

These are held on the second Monday of each month at:
St. Swithun's Church Hall, Grovelands Road, Purley, Surrey, CR8 4LA at 20:00 to 22:00

Society Nets

1st Saturday of month - 17:15 - Crescenta Valley / CATS Net on Echolink/ GB3NS
Sunday mornings - 11:00 - Call on 145.400 MHz ± QRM
Sunday evenings - 17:00 - Call on 3.700 MHz ± QRM
Wednesday evenings - 21:00 - Call on 70.425 MHz

CATS Website www.catsradio.org **Email** enquiries@catsradio.org

Forthcoming Meetings

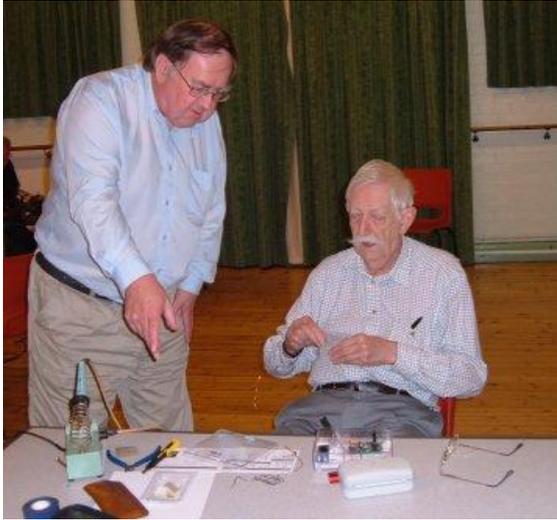
Monday Oct 8 th	Rebuilding and Refurbishing Heathkit equipment with Bob G30OU
Monday Nov 12 th	Microcontrollers with Dennis M0NDJ
Monday Dec 10 th	AGM



CATS is twinned with the Crescenta Valley Radio Club
Glendale California USA www.gsl.net/cvrc

CATS September Meeting

CATS member Dave G8VXB kindly agreed at short notice to provide us with another of his popular construction evenings. This time, the project in question was the Velleman Metal Detector Kit K7102 – intended for detecting pipes and cables embedded in walls, the watchword being “Detect before you drill!”



L-R: Dave G8VXB discusses the project with Mike G8AAI

In a nod to the Olympics and Paralympics that had been held in London in the summer, prizes were awarded for the fastest completed working kit and for the neatest version, to be judged by Dave. The idea was to divide into teams and to complete the kit – and then to prove that it worked by finding metal washers that Dave had cunningly hidden in a board he had specially made.



Ten contestants in five teams L-R: Kim G6JXA, Tony G4ECS, Dennis M0NDJ, Steve G3WZK, Mike G8AAI, Glenn G4FVL, Andy G8JAC, Stuart G6CJR, Steve G7SYO and Ian M3IGP

We quickly formed up into five teams:

1. Andy G8JAC and Glenn G4FVL
2. Dennis M0NDJ and Stuart G6CJR
3. Ian M3IGP and Steve G7SYO
4. Mike G8AAI
5. Kim G6JXA, Steve G3WZK and Tony G4ECS

Dave supplied five kits of parts for the five teams that entered. All kits worked first time which must say something about the level of constructional expertise in CATS! But the Usain Bolt of the evening – at least as far as speed soldering was concerned – was Mike Bues, G8AAI. He was the first to produce a fully working metal detector and was duly awarded a bottle of wine for his efforts. The prize for the neatest construction (also a bottle of wine) went to Dennis M0NDJ and Stuart G6CJR.

For more information about the project, visit:

<http://www.velleman.co.uk/contents/en-uk/p263.html>

Members ideas for future construction evenings should be sent to the Secretary.

Many thanks to Dave G8VXB for organizing this event for us.

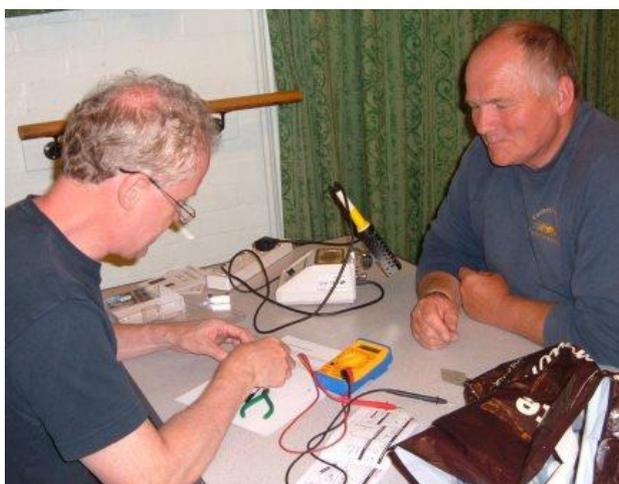
A further selection of photos follows:



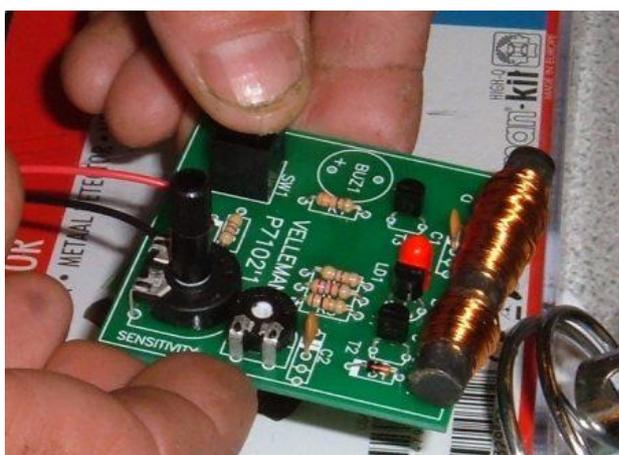
The completed project as built by the team of Kim G6JXA, Steve G3WZK and Tony G4ECS



Glenn G4FVL inserts a variable resistor



L-R: Steve G7SYO and Ian M3IGP



The prizewinning neatest version, completed by Dennis M0NDJ and Stuart G6CJR

CATS October Meeting

On October 8th Bob Burns G30OU will visit CATS to talk about renovating and

rebuilding Heathkit equipment. This will cover cleaning, realignment, metalwork, re-engineering and rebuilding, painting, lettering and front panel protection.

Bob has at least six units that have been worked on in various forms including some originals built in the Heath style that he intends to make available for inspection by anyone, including CATS members, attending this meeting.

CATS November Meeting

At this meeting CATS member Dennis M0NDJ will be giving a talk on Microcontrollers. Dennis has very kindly stepped in at short notice after the previously-planned speaker had to pull out for health reasons.

CATS December Meeting **Advance Notice Of AGM**

Annual General Meeting Of The Society

In accordance with the rules of the Society, notice is hereby given that the Annual General Meeting of the Coulsdon Amateur Transmitting Society will be held on Monday 10th December 2012 at St. Swithun's Church Hall, Grovelands Road, Purley, Surrey CR8 4LA, commencing at 20:15 hours.

Now is a good time for all members to consider any issues they may wish to raise at the meeting.

As G0SDB has resigned (see last month's *Cats Whispers*), there is already one vacancy on the Committee. Two other committee members have indicated that they are unwilling to stand for re-election at the next AGM in December.

This means that we will potentially be short of three committee members next year. So there is a pressing need for other CATS members to put themselves forward for committee service, However this is not as onerous as you might think, because some committee meetings are now run using Skype so you can take part from the comfort of your own home. Please give it a thought. CATS needs YOU ...

CATS 2013 Annual Dinner

This will be held at The Belmont, which is located at Brighton Road, Sutton. Surrey, SM2 5SU. They serve traditional pub grub, with a very good value carvery. The date for your diaries is 14th January 2013. For more information visit:

www.greatbritishcarvery.co.uk/our-pubs/belmont

SSB Field Day 1st & 2nd September 2012 – The Debrief – by Andy G0KZT

The planning of this year's effort was a little "last minute", especially with respect to the site.

During the CATS net on the previous Sunday, while this very subject was being debated, I received a text message from the farmer at Crossways Farm offering use of his field for the event. So it was to be that for the first time since 2003, we returned to Crossways, located on Reigate Hill. It should be remembered that it is a working dairy farm; the smell (which you soon get used to) and giant cow pats, made siting the tent and driving across the field very interesting.



A visitor chats to Frank G3ZMF

We were assigned a field on the right of the track, which if I remember correctly, was the same field that the club used when I attended my first contest weekend with CATS way back in 1982. Strangely, it

looked exactly the same this time as it had done 30 years previously!

At 11.30am the team consisting of Frank G3ZMF, James G0SDB, Terry G4CDY and myself, later joined by Kim G6JXA, began putting the station together. A relatively simple station consisting of two masts (a bit lower than planned at around 20 feet above the ground) and to start with an aerial that Frank had used in the 1970's, a "Lazy T", and the club Tunnel Tent.

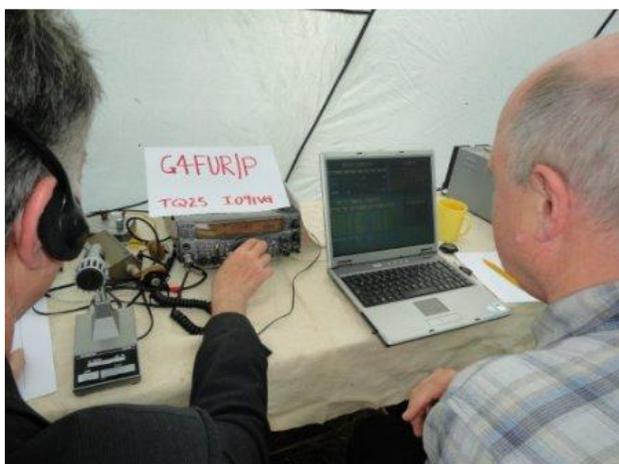
Power was provided by the club's 1.5 kW generator with my 1.3kW generator as a back-up. The rig was my Kenwood TS-2000 with ATUs provided by Frank G3ZMF and Terry G4CDY. We were a little late getting started, partly due to aerial tinkering but at 13.32 GMT we were up and running, just half an hour late.



L-R: Kim G6JXA, Terry G4CDY, Len G0GNQ, James GOSDB

Shortly after the start we had a surprise visit from Len G0GNQ who was in the area. While we were hearing stations, we did not appear to be getting out which became very frustrating. A tactical decision was made to swap Frank's aerial with Terry's Windom.

This appeared to help but it became much easier to load after adding an additional counterpoise. Operation continued for the remainder of the 24 hours. Operators on the Saturday being G4CDY, G6JXA with G3ZMF and me continuing for the night shift. On the Sunday operators were Kim G6JXA, Steve G3WZK, Frank G3ZMF, Terry G4CDY and me.



Kim G6JXA operates the TS2000 of Andy G0KZT

Band conditions were nothing special with the bulk of the stations gained on 80 and 40 metres (see summary on page 10.) We made good use of the auto-caller fitted to my Kenwood TS-2000 for our CQ calls. It was a big help and helped preserve our voices – but the bands were so busy that finding a free frequency on which to call was often quite a problem!



Frank G3ZMF sorts out lighting arrangements for the night shift

The station operated right up to the end and at 13.00 GMT we closed down and begun the dismantling stage. We were clear of the site some 50 minutes later, a good effort by all!

Although the team and supporters was relatively small, it was big enough to field the team and keep the station going throughout. (I wimped out at 0230 BST - sorry Frank!) The highlights for me included seeing Frank G3ZMF immersing himself in operating without having to worry about his neighbours, and Kim impressing

us with his ability to mentally record instantly the stations he was working so that his check logger could enter it into the computer. Another memorable moment was the bacon and egg breakfast roll skilfully cooked by Terry G4CDY on the Sunday morning.



Steve G3WZK logs for Kim G6JXA

At the end, the event got the thumbs up for a possible repeat in 2013, so this may become an annual event. While our entry is unlikely to hit the top three in the restricted section, it will nonetheless be interesting to see where it places us.

Besides the stupid and ludicrous default 59 reports given out by every station (although we did give out proper reports) and having to compete with another concurrent contest (All Asia), the operating experience was fun and worthwhile. The concentration of stations made it a challenge to make the exchange but wasn't as cutthroat as I thought it might be.

I would like to thank all those members mentioned for giving up part or all of their weekend to support our club effort. To be honest, I'm not sure when we last entered SSB Field Day or any other HF contests. I will find out for both the reasons of curiosity and to compare this effort with the previous entry.

See page 10 for a detailed summary of the CATS log for this event.

Editor's Note: As Andy says, the All Asia contest was running at the same time as the HF Field Day. Some stations in that

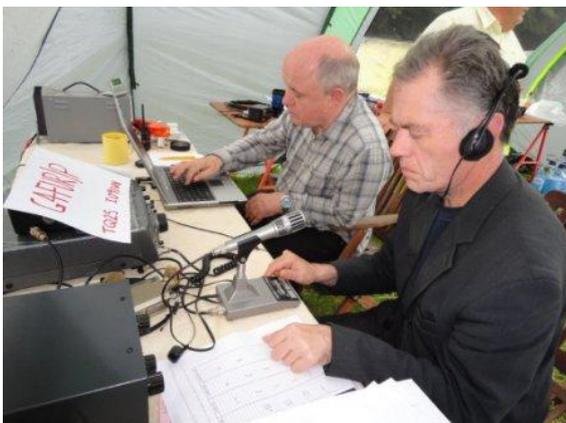
contest were willing to work us – so long as in exchange for a serial number we sent them “the operator’s age”. For simplicity, it was decreed that the age of the hypothetical CATS operator would be thirty - an interesting concept because, as far as I know, our youngest member is thirty-nine and many members, myself included, are at least double that! The results of the contest had not been issued when this edition of CATS was being finalised on 24th September but will be published when available. Many thanks to Andy G0KZT for organising this event. A selection of photos follows:



The site on the Sunday morning



Terry G4CDY operates while Frank G3ZMF makes a brew



L-R: Terry G4CDY and Kim G6JXA

CATS Archive

CATS member, Frank G3ZMF, recently came up with the idea of having a CATS nostalgia evening. Slides, photos, videos, etc With 36 years of history since CATS began in 1975, there must be masses of material out there in CATSland! Please do let us know what you have.

By the way, if you’re not a CATS member but have any CATS ephemera that you wouldn’t mind letting us have a copy of, please drop an email to the newsletter editor. Thank you!

Jamboree On The Air (JOTA) 2012

This takes place over the weekend of 20th/21st October this year. If anyone wants to help Stuart G6CJR with the event he is organising at Banstead, please would they contact him direct as soon as possible.

Helpers needed for Kempton Park rally and CATS bazaar

It’s now only a month or so until these two regulars in the CATS’ calendar. If you would like to help at either or both of these events, please contact James G0SDB (who will be in charge of the Bring & Buy stands at both events) or any committee member.

The dates for your diary are:

Kempton Park - November 11th - Help needed on B&B stand

CATS Bazaar - November 25th – Help needed to set up on the early evening of 24th November and to run the event, including the B&B stand, on 25th November.

Contests Coming Soon

Oct 6: 1.2 GHz Trophy/ 2.3 GHz Trophy
Oct 6-7: 432 MHz – 248 GHz IARU
Oct 7: 21/28 MHz Contest
Oct 21: Second 50 MHz Contest
Nov 3-4: 144 MHz CW Marconi
Nov 10: Club Calls Contest
Nov 17-18: Second 1.8 MHz Contest

WIMBLEDON AND DISTRICT AMATEUR RADIO SOCIETY SUMMER CAMP 2012 by G6JXA and G0KRT

CATS Member Kim G6JXA writes:

"Hello everyone, here is my report on the WDARS Camp 2012 held every year on Reigate Hill for 8 days beginning on the last Saturday of July.

First let me hand over to Eric G0KRT for his contribution.

"As always thanks to all those who made the camp possible including, Jim Gale, Andrew Maish and David Love.

"I had a new small pop up tent that requires must less effort to put up and take down.

"I think we had the most rain since I first came to camp (1995 I think). There was no 2 metre tent up until the Tuesday, so we missed the WDARS 2 metre net on Monday. The weather on the Friday evening was fine so we had a very nice BBQ in the dry. I took my tent down on the last Sunday morning; there was rain and at one time thunder. As the tent was wet I had to put it up in my garden on a dry day several days after we got home.

"Mary (2E0FMY) was a day visitor several times and worked on 20metres. She worked several European stations and some very desirable DX in Saudi Arabia and the Philippines.

"Tent and equipment supplied by John G8MNY to whom many thanks are due... IC735 with Drake L4B Linear Amp. 400 Watts, 3element TH33 with high power traps 3 band antennas at 40ft.

"I think we had the best 20metre propagation for many years; there were QSOs all over the world. I had my best spell of HF operating as my log excerpt shows:

Callsign: G3WIM

20 Metres 400Watts SSB

2/8/2012

UTC

2056	JA1FNO	Japan
2111	VK3MO	Australia
2112	VU2PHD	India
2127	9A/S56CW/P	Croatia
2141	IZ1REP	Italy
2151	PT7AN	Brazil
2202	VE1TV/M	Canada
2208	CT3NG	Madeira

"The above is the best period of operating I have ever had. On ten metres I also worked:

400Watts SSB

1729	PU5IK	Brazil
1953	OE3WBA	Austria
2104	IZ5WTC	Italy

"I do not have the club logs so cannot give any more information."

73 de Eric G0KRT

Thank you Mary and Eric for your report and participation in this year's camp.

I would like to thank both Mary,<2E0FMY> and Eric,<G0KRT> for their very kind donation to the club of their surplus-to-requirements tent. It was used to house the 2m station and, I trust, will be put to good use by WDARS in forthcoming club events.

Now to myself.

The highlight for me was 28MHz. On two separate days I tuned around the band and found only a beacon, SK0CT in Stockholm, Sweden. Calling CQ brought a reply from Enfield, Middlesex. Then I called again and Swedish stations were worked followed by Italy, Spain, and stations all around Europe. I think I worked around 20 on one day and also had a number of QSO's on 20m. On two metres, I worked a mobile in Peterborough on 2m SSB, exchanging 5 and 9 reports both ways. The mobile was running around 200 watts to a pair of stacked halo antennas on the car. Yes, he was actually driving around and not sitting on a hill top! At the

GX3WIM end we were running 200 Watts to an 11 element Yagi at 40ft. We could hear a Dutch Beacon on 144.416 MHz, but I am not sure if we worked outside the UK on 2m.

It was a pity that more club members did not visit but, I realize that not everyone can get the time off work.

I had a very good time and would like to thank all those that help and organize the WDARS Summer Camp every Year.

Sorry there are no log extracts from me. I do not have the logs and am working from memory.

Thank go to 2E0FMY, G0KRT, G4DDY, G4WYJ, G6DTW, and the family of M3PIC for transport off the site as there is no bus service past the site at Reigate Hill in the evenings.

Thank you to June and Dave G4RBQ for the catering, and pictures.

Thank you John G8MNY for your part of the station and the technical help you provide each year.

I always enjoy WDARS camp. Yes. As someone said to me, I am extremely fortunate that there are people who were willing and able to give me transport off site back to a Bus or Station.

73, Kim, G6JXA

Local Rallies & Events

12/14 October RSGB Convention

Horwood House, Little Horwood, near Milton Keynes
Convention and lectures
www.rsqb.org/rsqbconvention

11 November 2012

West London Radio & Electronics Show

Kempton Park Racecourse.

Open 10:00. Parking, trade stands, catering, disabled facilities. Contact info@radiofairs.co.uk

NOTE: CATS involvement in this event. The CATS bring and buy sale is a permanent feature of this rally.

www.radiofairs.co.uk

25 November 2012

CATS 35th Annual Radio and Electronics Bazaar

1st Coulsdon Scout Group headquarters, Lion Green Road in Coulsdon, Surrey.

[Map](#)

Open 10:00 to 13:00

Parking, trade stands (still including Sycom), Bring and Buy, Refreshments, RSGB

Contact: enquiries@catsradio.org or

www.catsradio.org

20 January 2013

7th Dover Radio Rally

Whitfield Village Hall, Sandwich Road, Whitfield, Dover, CT16 3LY.

Open 10:00

Admission £2

Parking, Boot Fair, Refreshments.

Bring and Buy

Talk in on GB3KS

Contact: Ian, G3ROO, 01304 821588 or

ian.g3roo@gmail.com

www.doverradiorally.com/index.html

3 February 2013

28th Canvey Radio & Electronics Rally

'The Paddocks', Long Road, Canvey Island, SS8 0JA

Open 10:30

Parking, Catering, Disabled Facilities, Trade Stands

Major Amateur Radio and Electronic component

exhibitors Selling New and S/Hand equipment .

Freshly made refreshments. (And by popular demand the famous Canvey Radio Rally Bacon Rolls are back on the Menu).

Free car parking with space outside main doors for disabled visitors

Contact: Dave, G4UVJ, 01268 697978 (evenings)

rally@southessex-ars.co.uk

www.southessex-ars.co.uk/

16 June 2013

26th Newbury Radio Rally & Boot Sale

Newbury Showground, M4 J13.

The Rally takes place at one of the biggest showgrounds in the south of England.

Newbury Showground is located right next to junction 13 of the M4 Motorway.

Nearest Post Code: RG18 9BB

Open 09:00. Free parking, trade stands, catering, disabled facilities.

Contact rally@nadars.org.uk

www.nadars.org.uk/

28-30 June 2013

Hamtronic Show, Friedrichshafen

Messe Friedrichshafen, Germany

Open 09:00 each day

- 63rd DARC Lake Constance Meeting
- with lectures and meetings
- HAM RALLYE - Friday and Saturday
- HAM tent camp
- HAM NIGHT - Saturday

www.hamradio-friedrichshafen.de/ham-en/index.php

Other Club News & Contact Information

BROMLEY & DISTRICT ARS

Website: www.bdars.org.uk/

Email: info@bdars.co.uk

Meetings: 3rd Tuesday of every month at Victory Social Club, Kechill Gardens, Hayes, Kent, 19:30 for 20:00.

16 Oct - RSGB Re-Organization by Alan G8TLK

20 Nov - Construction Contest

18 Dec - Mince Pies and Quiz

CPREC (CRYSTAL PALACE)

Website: www.qsl.net/g30ou/ or <http://www.g30ou.co.uk/>

Club Net: Wednesdays 20:00 on 145.525 MHz

Meetings: 1st Friday at All Saints Church Parish Rooms, Beulah Hill at 19:30

5 Oct - The GB3VHF Beacon Project by Chris G0FDZ

2 Nov - The Cassini Mission to Saturn by Dr Chris Arridge

7 Dec - Christmas Social

CRAWLEY ARC

Website: www.carc.org.uk

Club Nets: Tuesdays 20:00 on 145.550 MHz and Fridays 19:00 on 1.970 MHz

Meetings: Every Wednesday at Hut 18, Tilgate Forest Recreational Centre, Tilgate Forest, Crawley from 19:30, and Sundays, 10:30 to 13.00.

CRAY VALLEY RS

Website: www.cvr.org

Contact: Malcolm Bryan G8MCA (see website)

Club Nets: Wednesdays 21:00 on 145.500/QSY and 22:00 on 3.720 ± QRM, and Sundays 11:00 on 3.720 ± QRM

Meetings: 1st and 3rd Thursdays at 1st Royal Eltham Scouts HQ, Rear of 61 - 71 Southend Crescent, Eltham, London, SE9 2SD.

4 Oct – SDR by G3OQD

18 Oct – Metalwork without tears by G0FDZ

1 Nov – Surplus equipment sale

15 Nov – ADS-B

6 Dec – DX-ing from W5 by Mike WM5DX

20 Dec – Christmas drinks

DORKING & DISTRICT

Website: <http://www.ddrs.org.uk>

Email: ddrs.secretary@yahoo.co.uk

Contact: George Brind, G4CMU

Club Nets: Sunday 08:15 on 3.770 MHz & Thursday 20:00 on 144.775 MHz

Meetings: Friends Meeting House, Butterhill, South Street Dorking at 19:30.

23 Oct - Receiver architectures and assessment of their performance. Peter Hart G3SJX

27 Nov - The Elecraft K2 transceiver. Roger Eeles G0SWC/VP8DBR

7 Dec - Christmas dinner

HORSHAM ARC

Website: www.harc.org.uk

Club Nets: Saturdays 21:30 on 144.725MHz and Sundays 10:00 on 3.722 MHz

Meetings: 1st Thursday at The Guide Hall, Denne Road, Horsham, Sussex

Western, G3SXW

4 Oct – Junk Sale

1 Nov – Frequency standards by G3JKV

6 Dec - AGM

MID SUSSEX ARS

Website: www.msars.org.uk

Club Nets: Sundays 08:00 on 3.740 MHz and at 11:00 on 145.350 MHz, Wednesdays 20:00 on 145.350 MHz and Daily 13:30 on 21.330 MHz

Meetings: Every Friday at Cyprus Hall, Cyprus Road, Burgess Hill, West Sussex for 19:45

5 Oct - Radio night and post event equipment testing

16 Nov – Construction Contest

7 Dec – Club Xmas meal

21 Dec – Christmas Quiz

REIGATE ATS

Website: www.qsl.net/rats

Email: rats@qsl.net

Club Nets: Thursdays 20:00 on 145.500 MHz and Sundays 20:00 on 3.740 – 3.760 MHz

Meetings: 3rd Thursday at RNIB, Redhill College, Philanthropic Road, Redhill for 19:30

SRCC

Website: www.g3src.org.uk

Contact: John Kennedy G3MCX, 020 8688 3322

Club Nets: Sunday 09:30 on 1905 kHz

Daily natter channel – 144.215 MHz at 19.30.

Meetings: 1st & 3rd Mondays at Trinity School, Shirley Park, Croydon CR9 7AT 19:45 for 20:00

Wed 17 Oct - Autumn Surplus Sale: NB change of date

5 Nov - Codes, Cyphers, & Cryptography

Peter Burton, G3ZPB

3 Dec - Talk (TBA)

SUTTON & CHEAM RS

Website: www.scrs.org.uk

Contact: John Puttock G0 BWV 020 8644 9945

Club Nets: Monday 20.00 on 145.500 MHz

Saturday 11.00 on 145.500 MHz

Meetings: 3rd Thursday at Sutton United Football Club, The Borough Sports Ground, Gander Green Lane, Sutton. 19:30 for 20:00

18 Oct - Radio From The Falklands – VP8 by Roger Eeles G0SWC / VP8DBR

15 Nov - 'CAMS HAMS DX-PEDITION TO THE ISLE OF MULL' by Gavin Nesbitt M1BXF & Rob Chipperfield M0VFC

13 Dec - Christmas Junk Sale

WIMBLEDON & DISTRICT ARS

Website: www.gx3wim.org.uk (currently unavailable also checked 26.11.11)

Contact: Andrew Maish G4ADM 020 8335 3434
andrew.maish ATntlworld.com

Club Net: Mondays 20:45 on 145.500 MHz

Meetings: 2nd & last Friday of each month at

Martin Way Methodist Church, Buckleigh Avenue, Merton

12 Oct - On The Air

26 Oct - AGM

CATS Whispers is published monthly by
S J Beal G3WZK on behalf of the
Coulsdon Amateur Transmitting Society. © CATS 2012

SSB HF FIELD DAY SEPTEMBER 2012: **SUMMARY OF CATS ENTRY – G0KZT**

What follows is the output generated by the contest software - Supa Dupa by EI5DI. This proved popular compared with using paper logging and separate check log sheets). The advantage of using a computer makes spotting duplicates (of which there were none) and calculating points and multipliers so much easier than the old method of doing it manually.

The points were made up of 2 points for fixed stations in IARU region 1, 3 points for fixed stations outside IARU region 1 and 5 points for portable/mobile stations in IARU region 1.

	80m	40m	20m	15m	10m	Total
Valid QSOs:	116	104	46	13	9	288
Mults:	16	15	24	11	4	70
Points:	544	494	186	43	30	1297

Claimed Score: 90790 points

Country Multipliers for 10m Metres

9A DL G UA9

Country Multipliers for 15m Metres

5B EA ES G HC K PY SV UA9 V5 VE

Country Multipliers for 20m Metres

9A DL EU G GM GW HA I LA LZ OH OZ PA S5 SM SP
SV TK UA UA9 UR VK YO ZA

Country Multipliers for 40m Metres

DL EI G GM GW HB I JA LA ON OZ PA SM SP UA

Country Multipliers for 80m Metres

DL EI F G GI GM GW HB I LA OK ON OZ PA S5 UA9

Rate Analysis

	QSOs	Mults	Points		QSOs	Mults	Points
13:00 - 13:59	10	4	44	01:00 - 01:59	14	2	67
14:00 - 14:59	13	5	62	02:00 - 02:59	8	1	37
15:00 - 15:59	14	2	67	03:00 - 03:59	2	2	8
16:00 - 16:59	4	0	20	04:00 - 04:59	3	2	15
17:00 - 17:59	8	3	37	05:00 - 05:59	4	1	20
18:00 - 18:59	11	5	43	06:00 - 06:59	6	3	16
19:00 - 19:59	5	3	19	07:00 - 07:59	10	2	44
20:00 - 20:59	5	4	17	08:00 - 08:59	20	4	94
21:00 - 21:59	7	7	30	09:00 - 09:59	11	4	34
22:00 - 22:59	31	7	149	10:00 - 10:59	7	3	29
23:00 - 23:59	29	4	133	11:00 - 11:59	18	0	87
00:00 - 00:59	33	2	156	12:00 - 12:59	15	0	69

73 de Andy G0KZT

Non Exec Contest Secretary