

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



October 2013



Affiliated to the RSGB

CATS Committee

Chairman: Glenn Rankin, G4FVL
Secretary: Steve Beal, G3WZK
Treasurer: Steve Conway, G7SYO
Members: Stuart Barber, G6CJR
Andy Briers G0KZT
Dennis Noe, M0NDJ
James Flint G0SDB

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

Regular Society Meetings * Please Note New Start Time*

These are held on the second Monday of each month at:
St. Swithun's Church Hall, Grovelands Road, Purley, Surrey, CR8 4LA at 20:15 to 22:15

Society Nets

1st Saturday of month - 17:15 - Crescenta Valley / CATS Net on Echolink/ GB3NS
Sunday mornings - 11:00 - Call on 145.400 MHz \pm QRM (but see page 4)
Sunday evenings - 17:00 - Call on 3.700 MHz \pm QRM
Wednesday evenings - 21:00 - Call on 70.425 MHz

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

Forthcoming Meetings

Monday Oct 14 Dud Charman G6CJ Antenna Farm Revisited by Terry Giles G4CDY
Monday Nov 11 Acrobatic Flying by Julian Murfitt
Monday Dec 9 AGM



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

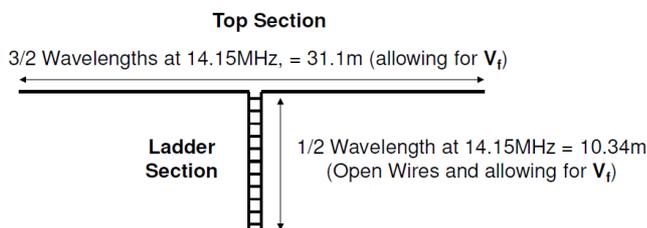
CATS September Meeting

Members will recall the CATS meeting in March this year, when Mike Parkin G0JMI from Alton Antenna Arrays gave us a talk describing the development of his Mini Beam Antennas. That day saw a *maximum* day temperature of minus 1.2 Celsius at my QTH with an overnight minimum of minus 5C and continuous light snow. Fortunately, conditions were much better on this occasion – a balmy +15 C.



Mike G0JMI setting up

Mike began by explaining about the life of the antenna's original creator – Louis Varney G5RV - and how the design came about. In 1947 the G5RV garden was about 100 feet long and his favourite band was 20 metres, so Louis came up with the idea of a centre-fed dipole with a total length of 1.5 wavelengths on 14.15 MHz ie about 31.1 metres or almost exactly 100 feet.



Basic concept of G5RV antenna

The aerial was originally fed with a half-wavelength (10.34 metres) of open wire feeder for ease of matching which would therefore carry a standing wave. The antenna worked very well on the twenty metre band and G5RV was delighted to find that it performed well on all the then current HF amateur bands (80m to 10m) although on some bands it was much better to use an antenna matching unit,

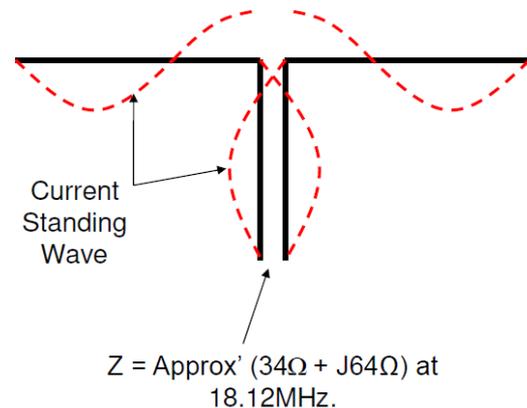
particularly on 15 metres where the antenna presented a fairly high impedance.



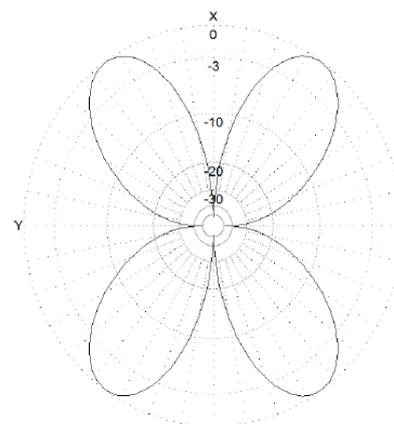
Louis Varney G5RV

Mike then described in simple technical terms what makes the antenna tick on all current (2013) HF bands including the 1979 WARC bands (30 metres, 17 metres and 12 metres). As an example, see the graphic below which illustrates the antenna's performance on the 17 metre band.

18.0MHz, 17m Band



Electrical performance of the G5RV antenna on 17m



Predicted Horizontal Polar Plot of Field Strength

Radiation pattern of the G5RV antenna on 17m

Mike then described the half-size G5RV (this covers 40m to 10m) and various G5RV derivatives such as one that is resonant on the six metre band (ie is three half wavelengths long at 50.2 MHz) and works on all bands from 20m to 6m. He has also developed a G5RV derivative that is 1.5 wavelengths long on the 2m band and also works well on 6m and 10m.



The Alton Antennas G5RV derivative – 20m to 6m version

Discussions continued for over an hour after the end of the formal part of Mike's thought-provoking presentation - another very interesting evening. Thank you Mike!

We look forward to seeing Mike again at the CATS bazaar on November 24th, which he will be attending as a trader.

For more information about Mike's antennas or to place an order visit:

<http://aaa001.webeden.co.uk/>

CATS October Meeting

In October CATS member Terry Giles G4CDY will give the presentation that he developed to help commemorate the RSGB's centenary entitled "The Dud Charman G6CJ Antenna Farm Revisited."

I was a member of the Southgate Amateur Radio Club in the 1960's when G6CJ visited to give us his talk in person - a highly memorable event.

Terry's updated version has received excellent reviews from everyone who has already seen it.

The date for your diaries is Monday October 14th, starting at 8:15 pm.

CATS November Meeting

In November, Julian Murfitt will visit CATS to give a talk about Acrobatic flying. The date for your diaries is Monday November 11th, starting at 8:15 pm.

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 9th December 2013 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 and whether they might wish to nominate someone new, or perhaps stand themselves, for election to the CATS Committee.

Serving on the committee is not as onerous as you might think, because most 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 ...

Foundation licence course

The Sutton and Cheam club will be holding a Foundation Licence course at the 7th Banstead Scout HQ, Banstead, Surrey over the following dates: Saturday 9th November, Sunday 10th November and Saturday 16th November 2013. The second Saturday will start with a refresher on the main topics of the course followed by an examination in the afternoon.

Please contact Derek Poulter G3WHK if interested on 020 8330 5795 or via email at:

g3whk@blueyonder.co.uk

NB: All completed paperwork must be received by Derek by 18th October 2013.

Full details have already been sent to all CATS members.

CATS Nets

The Committee have decided that, as an experiment, the first two CATS nets of November 2013 will be held on the repeater GB3NS. The dates affected are:

Sunday 3rd November at 11:00 clock time
Sunday 10th November at 11:00 clock time

Access the repeater directly or via Echolink.

Contact Cleaning By Frank Emery G3ZMF

"Flat or dying battery? Maybe not !" I've just had that problem. I was thinking that the batteries for my hand-held rig were on the way out, until I noticed some grime on both the charging contacts and the load contacts that feed the rig. A gentle buff-up with a fibre glass pencil on the contacts on the charger, resulted in batteries charging up in just 4 hours like new, instead of 8 to 10 hours and not seeming to be "full", as was the case prior to clean-up. Even though the charge rate was less than 1Amp, the small amount of grime was enough to inhibit full contact, and hence, proper charging.

The moral is, keep those contacts clean, especially on low voltage kit. Loosing "a few volts" from a couple of hundred is not too bad, but the same loss from a low, or very low supply, is a big problem. Still working on next "Shak Nowtz", hopefully for Xmas.

73's, Mad Frank.

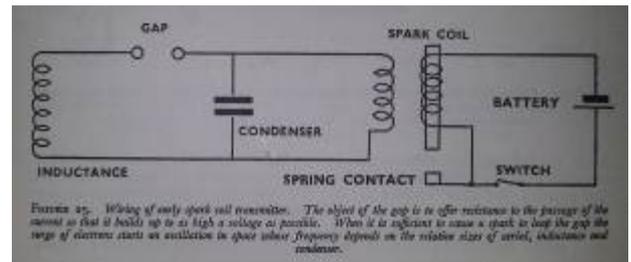
More Nostalgia

In the past two issues of CW I described some of my earliest experiences when, as a young teenager, I began to understand radio and electronics. But when did it all start? I reckon it all began when someone gave me a copy of "The Boys' Book Of Radio, Television and Radar." This book was first published in 1948, but was completely revised in 1957 and I was given a new copy of the 1958 reprint.

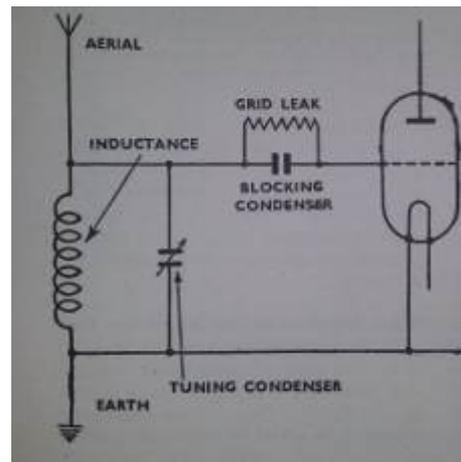
The book covered basic electricity and magnetism, before moving on to valves and the various technologies. Although the book contained no constructional projects, it DID

have circuit diagrams for a spark transmitter and a rather unhelpful valve receiving circuit.

Using a buzzer, some earpieces, wires and batteries, I fiddled about with the spark transmitter circuit (no aerial connected) – see below. In doing so, I inadvertently made an audio transformer – two coils of thin cotton-covered wire on a Meccano rod. I could clearly hear clicks and buzzes in an earpiece connected to the secondary winding. I tried to extend the range of the "receiver" by moving the secondary coil further away with poor results and even added a receiving aerial connected to the secondary.



The spark transmitter circuit from which I (slowly) developed my first radio receiver



The unhelpful radio receiver circuit (eg where do you plug in your headphones?)

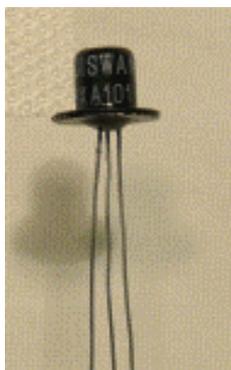
My breakthrough came when my uncle, having heard about my experiments, gave me a crystal diode. The book I had did not describe how to make a crystal set, so I simply fiddled about with the crystal diode in my "secondary" circuit. It didn't make things any better until I suddenly found an arrangement that gave me a lot more than clicks and buzzes. I could hear voices – but only very faintly – and soon I realised that I was, somehow, picking up a broadcast radio transmission. It was all very confusing – but what was it? After a while it dawned on me that I could actually hear *two* BBC Transmissions at once – the Light Programme on 247 m and the Home Service on 330 m - which I later discovered were

coming from Brookman's Park, not too far from where I then lived in North London. I had made a radio - albeit one that received all stations simultaneously - but one that consumed no power at all.

Thanks to a neighbour who donated to me an old pre-WW2 wireless set, I soon acquired a variable capacitor for my own radio. The old wireless was housed in a large wooden cabinet and was intended to be powered by three batteries - one LT, one HT and another for grid bias, judging by the labels on the sockets at the back of the set. The cabinet was full of mouse droppings and I made no attempt to repair it. However the set provided me with a large air-spaced three-gang variable capacitor of unknown capacitance, a 750 pF mica dielectric variable capacitor that had been used as a reaction control and a large (about 8 inch) "Stentorian" loudspeaker complete with integral audio transformer.

I used the 750 pF capacitor in my experiments to make my radio tuneable but had no success - until I abandoned my coils so lovingly wound on Meccano rods. Old toilet roll worked much better! I can't really describe my sense of achievement when at last I had a tuneable radio. For me it was a major breakthrough as at that stage, I had never even seen a circuit diagram for a crystal set.

However, as my knowledge continued to grow I realised that what I needed next was amplification. In G3EQP's shop window (see last month's CW) various components were neatly displayed on cards, including transistors. I decided to buy one - an Ediswan PXA101. The price was four shillings (20p.)



A PXA101 transistor (PNP germanium)

Using the PXA101, I soon cobbled together an audio amplifier stage. By trial and error I discovered that by connecting a 150 kohm resistor between the Base and Collector I could dramatically increase the gain. In fact the

radio would now even drive the Stentorian loudspeaker mentioned above. Before long my bedroom was resounding to the pop music of the day - such as "I Get Around" by the Beach Boys and "The Girl From Ipanema" both of which came out in 1964 when I was 14. Then, late one evening, I heard something new at the high frequency end of the band. It was Radio Sofia from Bulgaria - my first DX - and all done with a homemade radio. I began to imagine that by adding more audio amplifiers, and perhaps different tuning coils, I would eventually be able to hear signals from anywhere in the world. In short, I had "caught the bug!"

To be continued.

Jamboree On The Air (JOTA) 2013

This takes place over the weekend of 19th/20th 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. (Details on page 1 of *Cats Whispers*.)



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 and more helpers are needed for both events. If you would like to help on either or both of these occasions, even if you only have a couple of hours to spare, please contact Graham 2E0XDZ (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 10th - Help needed on B&B stand

CATS Bazaar - November 24th – Help needed to set up on the early evening of 23rd November and to run the event, including the B&B stand, on 24th November.

Transponder Net Report



Mark W6MW writes:

“Another edition of the Transponder Net was held on Saturday, October 5 at 9:15 AM Pacific Time / 17:15 UK Time. We had great participation on the

UK side and we had two members on the US side. It was great to hear our friends on the other side and catch up on their lives.

“Participants included:

UK
G0KZT - Andy
G8JAC - Andy
M0JXN - Paul (via iPhone)
G3ZMF- Frank
G4FVL - Glen
G6JXA - Kim

US
AD6IZ - Larry
W6MW - Mark

“Special thanks to David, M6DUE who helped me confirm & test my Echolink connection and of course a big hat tip to Denis (G0OLX) for use of his GB3NS Repeater.

“The Transponder Net is a regular monthly get-together between members of the Coulsdon Amateur Transmitting Society and the Crescenta Valley Radio Club. It's a chance for members of these twinned clubs to stay in touch and communicate the things that are important in their lives with their counterparts across the ocean. If you are a member of either club, you are invited to join us as Kim chose to do this month. We welcome new participants!”

73 de Mark W6MW

Contests Coming Soon

<u>Tuesday Activity Activity</u> <u>Contests 2013 – all begin at</u> <u>8pm local time</u>	
Oct 8	70 cm
Oct 15	23 cm
Oct 22	6 metres
Oct 29	4 metres
Nov 5	2 metres
Nov 12	70 cm
Nov 19	23 cm
Nov 26	6 metres
Dec 3	2 metres
Dec 10	70 cm
Dec 17	23 cm
Dec 26	Christmas
Dec 27	Cumulatives:
Dec 28	70cm, 2 metres, 4
Dec 29	metres, 6 metres

Other Contests

Oct 9: 80m Club Sprint CW
Oct 20: 50MHz AFS Contest
Oct 24: 80m Club Sprint SSB
Nov 2-3: 144MHz CW Marconi
Nov 9: Club Calls
Nov 13: 80m Club Sprint SSB
Nov 16-17: 2nd 1.8MHz Contest
Nov 28: 80m Club Sprint CW
Dec 1: 144MHz Affiliated Societies Contest
Dec 26-29: 50/70/144/432MHz Christmas Cumulatives Contest

Local Rallies & Events

11-13 October RSGB 2013 Convention
Horwood House, Little Horwood, near Milton Keynes
Convention and lectures
<http://rsgb.org/main/about-us/rsgb-centenary-convention/>

10 November 2013
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

24 November 2013
CATS 36th 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, bring and buy, refreshments
Contact: enquiries@catsradio.org or
www.catsradio.org

2 February 2014

29th Canvey Radio & Electronics Rally

The Paddocks Community Centre, 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: Vic Rogers G6BHE Tel 01702 308562

NVR@blueyonder.co.uk

www.southessex-ars.co.uk/canveyrally.html

9 February 2014

Harwell Radio and Electronics Rally

Didcot Leisure Centre, Mereland Road, Didcot, OX11 8AY, Oxfordshire.

Radio, electronics and computing trade stalls, secondhand stalls, special interest groups, displays.

Refreshments. Entrance £2.50.

Open 10:30 to 15:30.

Contact: Ann Stevens 01235 816379 or

rally@g3pia.org.uk

www.g3pia.org.uk

23 February 2014

Rainham Radio Rally

Rainham School For Girls, Derwent Way, Gillingham, Kent, ME8 0BX

Talk in on 2metres using G0BRC.

RSGB RAIBC RSARS RNARS Peter Weatherall / QRP club, Clifton ARS contest Group

Traders incl Sycom

Contact Trevor, G6LYW, 07717 678795 or

trev@wig1.co.uk

www.brats-qth.org

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.

15 Oct – Funcube pro + SDR dongle

19 Nov - Build-a-thon

17 Dec - Mince Pie Night/Quiz

CPREC (CRYSTAL PALACE)

Website: www.qsl.net/g3oou/ or <http://www.g3oou.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

1 Nov - Maxwell's Equations and their Practical Applications by Nick Stapley

6 Dec - Computer Construction by Alan O'Donovan G8NKM

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.

22 Oct – Ham Radio Deluxe

26 Nov – AGM/How Valves Work by M0SXD

6 Dec - Christmas Dinner at the White Horse, Dorking

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

7 Nov – CARC – HARC challenge

21 Nov – Club curry night

5 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

11 Oct – Junk sale

8 Nov – AGM

13 Dec – Christmas Dinner

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

4 Nov – Short Talks Evening

2 Dec - 4-square phase steerable beam antenna for 21MHz by Garth Swanson G3NPC

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

17 Oct – 'Dud Charman G6CJ Antenna Farm Revisited' by Terry Giles G4CDY

21 Nov – TBC

12 Dec – Christmas Junk Sale

WIMBLEDON & DISTRICT ARS

Website: www.gx3wim.org.uk (currently unavailable also checked 28.01.13))

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

11 Oct: GB3NS by Denis G0OLX

25 Oct: AGM

8 Nov: Morse Code On The Air

29 Nov: Surplus Equipment Sale

13 Dec: Christmas Social

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