



SURREY RADIO CONTACT CLUB

FEBRUARY 2007 — No: 773

CLUB NET 1.905 MHz Sunday 9:30am
CLUB Natter Channel: 144.215 MHz Daily 8:30pm

CLUB Internet WEB Site:
<http://www.g3src.org.uk>

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MONTHLY MEETINGS 1ST AND 3RD MONDAYS 7.45 FOR 8pm

Normally AT THE T.S. TERRA NOVA, 34 THE WALDRONS, SOUTH CROYDON, CR0 4AZ

"A" MEETING 5th Feb 2007 30-Line Television Revisited with Jon G0GNA

"B" MEETING 19th Feb 2007 FIX-IT, ADVICE, CHIN-WAG, CLUB STATION + "MOVE-IT-ON"

Chairman & Club Meetings	G4FDN Pat McGuinness	020-8643 0491
Vice-Chairman	G4WAY Roger Holyoake	020-8689 7089
Treasurer, Liaison & Equipment	G4DDY Maurice Fagg	020-8669 1480
Secretary, Membership & Communications	G4FFY Ray Howells	020-8644 7589
VHF Co-ordinator (Co-Opted)	G8IYS John Simkins	020-8657 0454
Publicity & HF Co-ordinator	M1MRS Robert Shepperley	020-8687 0811
Technical Topics	G4XAT Gareth Evans	020-8462 2837
Members	G3RJW Graham Marshall 2E0UYP Peter Sutton	020-8647 1186 07974 296045

Dear Members & Friends

Hello and welcome to the February 2007 Newsletter which I have started a bit earlier this time! Another tax year has gone by and I have beaten the deadline by submitting my 2005-06 Tax Return on-line last weekend. I didn't notice any loss of speed in entering my figures so perhaps many others have left it right to the last minute!

I am now in the third week of my Radiotherapy treatment at the Sutton Royal Marsden, this is a daily 10-minute session 5-days a week (weekends off for good behaviour!). One doesn't feel a thing but I have had the classic side effect of diarrhoea a couple of times but a single Imodium tablet does the trick.

The SRCC meetings for February start with the "A" meeting on Monday 5th February when we welcome Jon G0GNA for a talk and presentation on 30-line Television Revisited, with the "B" meeting on Monday 19th February; more on these below.

NEXT "A" MEETING: Monday 5th Feb 2007 Sid Morley G3FWR & Ray Herbert G2KU Memorial Lecture - 30-Line Television Revisited with Jon G0GNA

For the next "A" Meeting on Monday 5th February we are pleased to welcome back Jon Weller G0GNA for a talk and presentation entitled "30-line Television Revisited".

During his talk Jon will be showing a mechanical Televisor working (it's last years now repaired); some clips of the restoration work done by Don McLean and put onto CD; and the transmission done from the Chalk Pits Museum of 30-line Baird type television across the Atlantic.

I also understand that Jon will be showing a video clip from a meeting of the Crystal Palace Society some ten years ago which has a few moments of Ray Herbert G2KU giving some reminiscences.

This will be a talk not to miss and I hope we will get a good turnout on the evening to support the efforts that Jon will have made into giving us this meeting – thank you.

In the checking the web about Baird Television I have come across:

http://www.terramedia.co.uk/documents/baird_televisor.htm
- How to build a Televisor and operate a television link between two rooms

<http://www.bairdtelevision.com/> - the Baird Television Site which has a page written by Ray G2KU on the Crystal Palace Television Studios.

NEXT "B" MEETING: Monday 19th Feb 2007 FIX-IT, Advice, Chin-Wag & "MOVE-IT-ON"

The "B" meeting on Monday 19th Feb is the regular "Fix-It" and advice evening with the extra twist. If you have a radio item or anything else that you just wish to clear out then bring it along - you never know it may be just what another member is looking for!

The Fix-It section has proved very interesting and successful so please bring along that item that has been giving you grief - rigs, PCs, whatever! The collective heads at the meeting usually come up with something.

Last month we had Charles MOBIN Elecraft K2/100 in its final stage of build (a very impressive kit) needing just a little bit of help from John G8MNY to fault a problem which turned out to be in the wiring by the Aerial socket. To quote Charles "If I can build it, then anyone can".



Inside the Elecraft K2/100 (High Quality Construction)



Yes – 100W out



Welcome back Steve G4FYF with his FT101ZD

LAST "A" MEETING: Monday 8th Jan 2007 PCB Design by CAD with Terry Giles G4CDY

This was a very instructive evening on the use of CAD systems for PCB design, and the use of add-in programs to perform circuit simulation rather than bread boarding.

Terry showed us how he uses ORCAD (a Cadence family software member) <http://www.cadence.com/orcad/> and PSpice for the simulation. Those of you that buy the Elektor magazine the Nov2005 issue had a cover DVD containing almost all of the E-CAD programs:

<http://www.elektor-electronics.co.uk/Default.aspx?tabid=30&CategoryID=5&List=1&SortField=8&Level=1&ProductID=2545> – the article was called "From Concept to Reality".

Terry showed us a simple design flow where one starts with an Idea? Next is the Schematic Capture followed by Simulation, with feedback to Schematic Capture. If this goes OK it's onto PCB layout, again with looping back to Simulation to check all is OK. Once happy with the design one can think about manufacturing the PCB. Simulation is the way to go rather than bread boarding and one can set tolerances, temperature ranges, etc.

Moving on Terry showed us the use of ORCAD to design a simple CW Filter and then perform Simulation with PSpice. We noted it was important to be careful about choice of test points, how terminated, and to ensure correct grounding in the Simulation. Circuit component values could be changed to see the impact, and once happy with the first Op Amp stage that Terry started with, he then added the Band Pass Filter stage. Using the PSpice Simulator we could see how changing a resistor value altered the resonant point.

Once this was successfully completed it was time to create a PCB layout using appropriate Templates for the rules. It can produce quite a jumble for the layout so a lot of time is needed to improve it, and a lot of skill and 3D modelling capability in one's mind!

I have found this link on the web which looks useful: <http://www.seas.upenn.edu/~jan/spice/PSpicePrimer.pdf>

Once the layout has been proved, it's then a case of getting the PCB manufactured. This is achieved by generating an appropriate file that can be read by a manufacturer, and the classic standard is Gerber. More details can be found on the Internet for example:

http://en.wikipedia.org/wiki/Gerber_File or <http://www.artwork.com/gerber/app12.htm>

This was a talk not to be missed and we thanked Terry G4CDY for taking the time out to come to SRCC and give us a fascinating insight into the world of PCB design by CAD and Circuit Simulation.

The CHAIRMAN's BLOG - Feb 2007



"Following on from Terry G4CDY's talk, I wonder how many people have tried their hand on PC based CAD systems for electronics? My own experience with programs like PSpice, MicroSim and Serenade is that one has to invest quite a lot of time before the program can be used productively. This is made easier if there is a skilled user on hand to consult but this is unlikely to be the case for most amateurs who have to struggle with a manual or on-line help. The easy part to get going with is usually circuit drawing as this can be as simple as dropping and dragging symbols on to a work space and joining them up with lines.

Simulation of the circuit is the next hurdle with problems like no DC path or no zero volts reference raising their head for example before one gets to defining stimulating signal source, amplitude, frequency, etc. Setting output parameters and scales are often not straightforward and may require fiddling with to get the graphs you want. I've done a fair amount of circuit simulation this way, which I have found very helpful at times in furthering understanding about how a circuit works or the sensitivity of component values. So far I have not felt the need to do PCB design as the limited amount of construction I do usually involves "ugly" construction, tag strips, veroboard or someone else's PCB.

On the subject of construction and the supply of components I can recommend a Californian supplier I found recently on eBay. The seller's eBay name is DPI4PARTS and is run by a Dan Peters from Placentia California. I bought 25 x J310 junction FET's for £2-62 plus 86p airmail postage. I ordered on a Saturday afternoon and they arrived the following Thursday. At the same time I also bought 25 x 2N3904 & 25 x 2N3906 NPN/PNP transistors for a combined total of £1-83 plus 86p airmail postage. These also arrived the same day but instead of 25 each I received 50 each -apparently because he didn't have any of the smaller quantities immediately to hand packaged and labelled. I think one would be hard pushed to buy components in the UK for such low cost and post and packing charges.

{Sec's Note: try this link:

http://search.ebay.co.uk/_W0QQsassZdpi4partsQQhtZ-1}

At the last committee meeting we got on to the subject of high speed Morse (I can't remember how) but I was interested to learn that Roger G4WAY was the first club member to be officially certificated for 40 WPM. Can anyone claim higher than this? It would appear that High Speed Telegraphy (HST) is a popular radio sport amongst many east Europeans and an increasing number in the west. Wikipedia even has an entry for it at http://en.wikipedia.org/wiki/High_Speed_Telegraphy.

Though we are still in the midst of winter, and snow is on the ground as I write this, the family's thoughts are already on summer and preparations are being made for the holiday. This year we will be in Ireland once more. Since I was first licensed I have always endeavoured to do some amateur radio while on holiday. Prior to CEPT one had to apply for temporary licences for each country being visited and in the 70's & 80's I held and used the calls, EI2VGI, F6EEG, ON8IA, G4FDN/PA, G4FDN/OE, G4FDN/DL, and G4FDN/W2. I can remember it taking quite a lot of time to get all the paper work in place before doing a tour through France, Belgium, Holland, Germany and Austria one summer. The CEPT arrangements certainly make things simpler and straightforward. However, under CEPT I'm not allowed to operate 6m or 4m in Ireland as permits for these are issued on an individual basis to holders of the Irish Radio Experimenter's Licence (a bit like an NoV in the UK). Having spoken with ComReg in Dublin (the equivalent of Ofcom) they recommended I take out the Radio Experimenter's Licence, which I can do as a non-resident, and then apply for the 6m permit. I got the application for the licence done at the weekend which included a section where I had to describe the form my radio experiments were going to undertake. Luckily, I don't have to take another exam as Ofcom have issued me with a Harmonised Amateur Radio Examination Certificate (HAREC) that is accepted by all CEPT signatories of which Ireland is one. The Irish Experimenters Licence Exam is very much like the old style RAE with essay style questions on theory and licence conditions. The cost of the licence is not excessive, 12 Euro initially and then 10 Euro on renewal.

So that's all for now and hope to see you all at next Monday's meeting and talk.

73, Pat G4FDN

24th Jan 07"

HDTV - A view from Roger G4WAY

Further to the question of High Definition TV I attended a talk at the Sutton Club on HDTV given by two BBC research engineers.

The first thing that came to light was that Europe has not yet made its mind up as to the final format.

During the last year starting with the World Cup in Germany (football to the non aficionados) they have been transmitting to a selected few HDTV. They have also used the 4 different formats, 1080i, 1080p, 720i and 720p

And yet again these 4 formats have 2 different frame counts 1080 @ 25 and 720 @ 25 and 50, which seemed strange to me as I thought our eyes liked 32.

Now the USA and Japan have already chosen 1080i at 25 - the BBC would like 1080 @ 50 but can't do that yet.

As usual we do like to confuse everybody, and I can only hope that they get themselves sorted soon.

Plasma v LCD, both formats are improving all the time but for now a quick rule of thumb.

If you have a nice dark environment then Plasma is slightly better but don't last as long (the blacks are blacker), if you have a bright environment, most have windows and sunlight during the daytime then LCD is better.

Their choice for the demo was a 40" Sony Bravia LCD, although during their tests the optimum size for a normal lounge was 37". On the scale of the best things to watch on HDTV, top was Wildlife and Sport, and at the bottom was Dramas (Soaps). The special recording equipment that they had ensured that the demo was top quality.

Also they were able to seamlessly split the screen with HDTV on one side and standard TV on the other.

When asked the majority of those sitting within the first 10 ft could not tell the difference. Much to the lecturers surprise those of us at the back 15 to 20ft away could easily tell the difference in the dramas (black backgrounds had a deeper depth of detail).

Overall I personally expected more but don't get me wrong the pictures were stunning. I already have a 32" LCD (720) and as I demonstrated to Peter G4WPB later it also has a stunning picture with Wildlife and Sport.

Yes, I will upgrade later this year and it will be 1920 x 1080 at 37" might let them twist my arm to 40" but that would probably be the limit for my front room.

Roger G4WAY
Ps I sit about 10ft away.

27th Jan 07"

Taking the end of cans and things - G8IYS

"The way to take the ends off tin cans is to use a tin opener of the "cutting the end off cans below the rim - which leaves the level of the liquid above the cut line and lets it run all over your worktop" variety. They are usually cheaper than the "cut a trench in the lid just inside the rim" variety and should be buyable in virtually any supermarket. The longitudinal cut is best done with metal shears - which are not cheap - at least the good ones aren't.

One of the probs with tinplate from tins is that the layer of tin is very thin and quickly rusts in a less than dry atmosphere and when abraded. i.e. good indoors and inside a case, but less so elsewhere. Also the cut edges can be lethal so the material can be unfriendly unless you treat it appropriately. I am certainly one of its fans but be wary.

John G8IYS

5th Jan 07"

THE CALENDAR SECTION

SRCC and Local Club Meeting Dates:

1 st Feb	Sutton & Cheam RS – 'Natter Night'. Meetings @ Vice Presidents Lounge, Sutton United Football Club, Gander Green Lane, Sutton –8pm. Sec: John G0BWV 020-8644 9945 www.scrs.org.uk
2 nd Feb	Crystal Palace: AGM @ All Saints Church Parish Rooms, Beulah Hill from 7:30pm. Bob G30OU 01737 552170 (Meet monthly on 1 st Friday) http://members.aol.com/rfcburns
3 rd Feb	Sid Morley and Ray Herbert Memorial Lecture – 30 Line Television Revisited with Jon G0GNA
9 th Feb	W&DARS – "On Air" and Construction @ Martin Way Methodist Church, Buckleigh Avenue, MERTON PARK SW20 9JZ – 7.30 for 8pm 2 nd & last Friday's Details: Jim M0CON on 020-8874 7456 http://www.gx3wim.org.uk/
12 th Feb	CATS: The work of the RSGB EMC committee by G3YCR – Meetings normally held @ St. Swithun's Church Hall, Grovelands Rd, Purley 8pm 2 nd Monday's. Contact Andy Jackson G8JAC on 020-8651 2727 g8jac@btinternet.com
15 th Feb	Sutton & Cheam RS – 'Backyard EME' by Paul Whatton G4DCV. Meetings @ Vice Presidents Lounge, Sutton United Football Club, Gander Green Lane, Sutton – 7.30 for 8pm. Sec: John G0BWV 020-8644 9945 www.scrs.org.uk
19 th Feb	Fix-It, Advice, Chin-Wag, Move-It-On
20 th Feb	Bromley & District – TBA - Meetings normally on 3 rd Tuesday's @ Victory Social Club, Kechill Gardens, Hayes – 7.30 for 8. Paul M3PGW bdars@greenwand.net or www.bdars.org.uk
23 rd Feb	W&DARS – Talk by Evan Duffield RS 196070 entitled 'Radio Astronomy' @ Martin Way Methodist Church, Buckleigh Avenue, MERTON PARK SW20 9JZ – 7.30 for 8pm 2 nd & last Friday's Details: Jim M0CON on 020-8874 7456 http://www.gx3wim.org.uk/
26 th Feb	VHF NFD 2006 Inquest and 2007 Planning Meeting @ John's G8IYS – RSVP
27 th Feb	Dorking & District Radio Society – normally meet on 4 th Tuesdays @ Friends Meeting House, Butterhill South Street, Dorking – opp. Spotted Dog. Details: Walter Blanchard, G3JKV on 01306 884359 wb@g3jvk.co.uk
28 th Feb	Crawley ARC – TBA @ Hut 18, Tilgate Forest Recreational Centre, Tilgate Forest, Crawley – 7.30pm. Sec: Keith G8KZZ on 01403 257788 www.carc.org.uk
28 th Feb	Mitcham & District ARS (Meetings normally last Wednesday of each month) @ ATC Headquarters, Commonsides West, Mitcham. Sec: Mike Knott G0WCR 020-8764 4716
5 th Mar	Spring Surplus Equipment Sale
24 th Mar	Annual Club Dinner – Beefeater Park Place, Mitcham, 7:30 for 8pm. £5 Deposit per person to Ray G4FFY please to reserve your place.
2 nd Apr	AGM
14 th May	Constructing Evening
4 th Jun	BBQ
2 nd Jul	Construction Contest

SRCC Meetings indicated in BOLD with venue of Terra Nova

Rally Calendar, etc:

4 th Feb 07	22nd Canvey Radio & Electronics Rally Paddocks Community Centre, Long Road, Canvey Island, Essex. Situated at the end of the A130. Doors open 10:30am www.southessex.ars.btinternet.co.uk
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3 rd -4 th Mar 2007	Firepower, The Royal Artillery Museum , Royal Arsenal, Woolwich, SE London. Vintage radio display. Demo and radio junk sale (no computers). Open 10:30 both days. Details: 020 8654 2582. Email: M1CCF@talktalk.net Web: http://tinyurl.com/y2jaze
17 th Mar 07	Crystal Palace Radio & Electronics Club Annual Spring Sale , St Johns Church Hall, Sylvan Road, London, SE19. 10.00 – 13.00. Contact: Bob Burns G30OU g30ou@aol.com
15 th Apr 07	West London Radio and Electronics Autumn Show – Kempton Park www.radiofairs.co.uk – Additional attractions of a craft fair on the 1 st floor, and RSGB Top Ham Contest. Programme should also include VHF Talk-In managed by Whitton, 'Byte-Size' Lectures, and Bring & Buy Sale run by CATS. Restaurant on the 2 nd Floor with those glorious views over the racecourse.
20 th May 07	Dunstable Downs Radio Club Boot sale . Details: http://www.ddrcbootsale.org/
15 th Jul 07	McMichael Rally and Boot Fair Reading RFC, Sonning Lane RG4 6ST Open 9:30am, entrance fee £2.00. Details http://www.radarc.org/MMRally.htm

Web-Site of the Month

From Charles M0BIN this month take a look at:

Did you know that on January 6th 1838 - Samuel Morse successfully tested the electrical telegraph for the first time: http://en.wikipedia.org/wiki/Samuel_F._B._Morse

Revised Hans Summers site now up again: <http://www.hanssummers.com/>

Tektronics Guide to Oscilloscopes:

http://www.tek.com/Measurement/App_Notes/XYZs/

What to Look for When Choosing an Oscilloscope:

http://www.picotech.com/applications/oscilloscope_tutorial.html

Winding Toroids:

<http://ww2.netnitco.net/users/wt9w/Toroids.html>

ARRL:

<http://www.arrl.org/>

A very useful web site for amateurs:

<http://www.ifwtech.co.uk/g3sek/in-prac/components.htm>

In Practice – GM3SEK:

<http://www.ifwtech.co.uk/g3sek/index.htm>

Article by K2 Designer:

<http://www.elecdesign.com/Articles/Index.cfm?AD=1&ArticleID=10751>

Ready built Elecraft Kits available direct from QRPproject:

<http://www.qrpproject.de/UK/eleready.htm>

SRCC Club Dinner: 24th Mar 2007

At the last committee meeting it was agreed that we should hold another Dinner at the Beefeater Park Place in Mitcham where we have had successful dinners over the past few years. I shall be pleased to take your bookings on a first come first served basis – secretary@g3src.org.uk - or as per Secretary contact details – thank you. It's £5 per head deposit please – cheques payable to Ray Howells – thank you.

FORTHCOMING AGM 2nd April 2007

May I take this opportunity to formally advise you all of this, probably, the most important meeting in the Club year. It will be the opportunity to review the past year, elect the committee for the forthcoming year, and have your say on how the club should be run and plan for the coming year.

GB3NS Repeater Information

I was recently advised of www.gb3ns.com which contains details of the GB3NS repeater – it seems to be coming back.

** - Please note change of frequency - ** Channel RU73
 TX freq 430.9125MHz - RX freq 438.5125MHz
 CTCSS 82.5Hz – Locator: IO91VH
 Repeater Keeper - Denis Stanton G0OLX

Antenna erection was completed over the weekend of the 20/21 January.

Coverage tests will now be held over the weekend of 3/4 February, with the repeater in base station mode with Denis G0OLX providing local control using the callsign of G8CUX/P. Base ERP will be 25W for the duration of the tests.

Operational times are as follows:-

Saturday: 0900 to 1200; Sunday: 1000 to 1700

Please Note: - There will not be any repeater talk through for these tests. Please email all reports to denis@gb3ns.com

SIGNING OFF:

I think that is it for this month - if I have missed anything I give my apologies and hopefully remember it next time.

For our main meeting on Monday 5th February we welcome Jon Weller G0GNA for a talk and presentation on 30-Line Television Revisited. We hope there will be a large turnout to support Jon for taking the time to come to SRCC. The “B” meeting is on Monday 19th February, and on 26th February will be the Inquest and Planning Meeting of the VHF NFD Group at John’s G8IYS from 8pm (RSVP please).

I need to do a bit more work on the membership list so will be sending this out with next month’s Newsletter, those on e-mail should get it earlier than that.

Please find below a spreadsheet from John G8IYS which gives an analysis of last year’s VHF NFD entry for further consideration on the 26th.

Ray G4FFY

73 and 88

Posted: 1st Feb 2007

VHF NFD 2006

At long last the results have been published (see: <http://www.vhfcc.org/results/06/nfd/nfd.html>) and SRCC came a close 2nd in the Mix and Match section, Telford beat us again. Congratulations to all involved and we have now scheduled the first meeting of the VHF NFD Group for Monday 26th Feb 2007 at QTH of John G8IYS. Please advise John of your intention to attend to ensure sufficient sandwiches! Thanks. Below is a spreadsheet produced by John giving an analysis of last year’s entry and a statistical view of what we need to do regarding increased number of QSO’s/Points to win.

Surrey RCC CG	Section & Call	R – G3SRC/P	R – G3WIM/P	R – G3ZPB/P	LP – G8MNY/P
IO91XG	Admitted QSO’s	70	278	118	41
	Claimed QSO’s	75	289	124	45
	QSO’s Lost	5	11	6	4
	% QSO’s Lost	7	4	5	9
	Admitted Points	52362	60109	24096	8048
	Claimed Points	54495	63282	25815	8947
	Points Lost	2133	3173	1719	899
	% Points Lost	4	5	7	10
	Av pts Claim QSO’s	727	219	208	199
	Av pts/Good QSO’s	748	216	204	196
<i>Target 2872. Achieved 2772</i>	Normalised Pts	499	888	947	437
<i>Convert Norm Pts to Band Pts:</i>	Band Pts per Norm pt	105	68	25	18
<i>To get 100 more Norm Pts</i>	Band Pts per 25 Norm	2623	1692	636	460
<i>With each band getting 25:</i>	Extra QSO’s needed	4	8	3	3
<i>Could we have achieved this? :</i>	Scoring average pts				