



SURREY RADIO CONTACT CLUB

NOVEMBER 2005 — No: 758

CLUB NET 1.905 MHz Sunday 9:30am
 CLUB NET 144.325 MHz Friday 8:30pm
 CLUB NET 145.500 MHz and Down Thursday 7.00pm

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

Hon. Sec. Ray Howells G4FFY
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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 7th Nov 2005 Converting Computer Power Supplies for Amateur Use – G4FDN
"B" MEETING 21st Nov 2005 FIX-IT, ADVICE, CHIN-WAG, CLUB STATION + "MOVE-IT-ON"

Chairman	G4XAT Gareth Evans	020-8462 2837
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
Club Meetings	G4FDN Pat McGuinness	020-8643 0491
Members	G3RJW Graham Marshall	020-8669 8722
	G8TB Bernie Wynn	020-8660 7517

Dear Members & Friends

Hello and welcome to November 2005 newsletter which I have started prior to entering hospital on the 17th October for my Radical Prostatectomy surgery on the 18th as advised last month. I had the "grand tour" of St. George's Hospital on Friday 14th for all the pre-op checkups, etc. As some of you will know by now I was discharged on Friday 21st and recovering under the kind care of Prim G4CCY and Maurice G4DDY. I am putting details up on my Website www.g4ff.co.uk and I have updated it following my hospital discharge.

Right to business - the SRCC meetings for November start with the "A" meeting on Monday 7th November when we welcome Pat G4FDN for the long awaited talk on Converting Computer Power Supplies for Amateur Use (I hope to get to that and learn what to do with my redundant PC Power Supplies); with the "B" meeting on Monday 21st November. In between these meetings SRCC will be present at the West London Radio & Electronics Show at Kempton Park on Sunday 13th November.

NEXT "A" MEETING: Monday 7th Nov 2005 Converting Computer Power Supplies for Amateur Use with Pat G4FDN

On Monday 7th November we have the pleasure of welcoming Pat G4FDN, who works hard at putting together our talks programme, for his talk on Converting Computer Power Supplies for Amateur Use. I know that a lot of members are greatly anticipating this talk from Pat G4FDN who has kindly sent me the following synopsis:

- A brief introduction and history

- How and why he became interested in the subject
- Safety precautions
- Identifying the different types of computer PSU
- Overview of the architecture of the typical switched mode PSU - building blocks
- Stopping them doing what you don't want - interference and noise
- Identifying key components without a circuit diagram
- Simple to more complex mods
- Making them do what you do want - different voltages and improved regulation
- The PSU start up sequence
- Testing including identifying important connections
- Common component failures
- Opportunity to have your PSU tested (ATX and AT types)

Pat will be supporting his talk with a PowerPoint presentation and may ask the audience some questions. Those with best answers have a chance to win a small switch-mode power supply.

NEXT "B" MEETING: Monday 21st Nov 2005 FIX-IT, Advice, Chin-Wag & "MOVE-IT-ON"

The "B" meeting on Monday 21st November 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 - the collective heads at the meeting usually come up with something.

**LAST "A" MEETING: Monday 3rd Oct 2005
Autumn Surplus Equipment Sale**

A good turnout was achieved for this sale, which raised over £100 for Club funds. It was nice to see the visitors who, along with the regulars had an enjoyable evening being able to grab some bargains and lots of components, etc. We especially thank Bernie G8TB and Maurice G4DDY for being up front running the "show". The interplay and banter between Bernie and Maurice is a joy to watch and makes the evening very pleasurable. It wouldn't be the same without them.

We also thank Maurice G4DDY for his "behind the scene" activities in collecting the bits and pieces that form part of the items for sale for Club funds – it makes quite an impact on the Club finances and helps towards keeping the subs low. This time we had lots of items from a couple of silent keys though some of it will not be seen until Kempton. So thanks for the excellent evening go to the Auctioneer pairing of Bernie G8TB and Maurice G4DDY. Thanks also to John G8IYS who helped me in keeping the accounts in order.

**CHAIRMAN THOUGHT of the MONTH
- November 2005**



"Welcome to the thoughts of your Chairman, recovering again after a hard half term! I know it seems hard to believe, what with the long holidays I enjoy but teaching really wears you out!! I don't think it helps running our racing activities too, which have also been high priority these last two months. After repairing the damage sustained at the Bedford Autodrome heat we were all ready to go for the final. Have you ever seen a piece of square tube with not a single 90 degree left in it, twisted in two different directions - we have one in our collection now!!

The national final dawned a lovely blue-sky day, we had our race strategy all sorted out, although the data logger decided not to co-operate for the all-important practice laps. It had worked fine the day before.... Never mind, we re-used data from a precious race at this circuit using the same gearing, with fingers crossed. The car was running about 5 second slower than we had hoped (4:50 for a 2.4 mile circuit), but we put it down to minor alignment errors, although we had checked (and double, nay, triple checked, everything).

Either way, off we all went at 11:00 am according to plan until near the end of hour 3, during a pit stop, another errant team collided heavily with the back of our car, taking us out for ½ and hour whilst we straightened out the damage, not entirely successfully as it turned out, our lap times dropping to around 6 minutes. We did manage to work our way back up, ending up in 7th place, but 'we was robbed!!' Projection from our first hour put us only a mile or two behind the eventual winners distance and a good 15 miles in front of the nearest competition. The last two hours saw a big thunder storm and heavy rain, so heavy that the race was stopped for ½ an hour, with the missed time being added on at the end of the race as it turned out to only be 'passing shower'. Whilst the enclosed short wheelbase cars took things a lot easier, (but still managing several 360 degree spins) we ploughed on quite happily, sending up huge 3-metre high plumes of water as we scooted around the track.

We have major works to consider for next year, not least aerodynamics which we knew were important, but until this year (and one very dead motor later) we did not realise quite how important.

On the radio front 8 team members are taking their Foundation training with Bromley and District ARS (THANKS to the Bromley volunteers). That will help solve the "comms" problem as despite the supposed choice of 8 channels, 38 different DCS or CTCSS options, we still ended up with a 'squeaky' on the frequency we were using. By them all being M3 licensed (or above) we can have relatively peaceful chats about

the weather around the track, etc...and run huge aerials and high power (well, 10 watts anyway) from our comms trailer!! Watch this space for updates, we are also hoping to have GPS derived speed information coming back from the car, or at least being logged for perusal afterwards. Trying to make bike speedos, reed switches and magnets all co-operate for 6 hours without failure seems to be far too challenging! GSP 'engines' are now available for about £70, all ready to incorporate into your own circuit. Fortunately Everyday Practical Electronics has published just such an article, although it is used for location (of speed cameras) rather than speed information. Interesting times and so much more fun than a stopwatch and clipboard?

See you at the November talk, when I look forward to seeing what Pat (G4FDN) has persuaded switched mode power supplies to do for him!!

Gareth G4XAT"

THE CALENDAR SECTION

SRCC and Local Club Meeting Dates:

4 th Nov	Crystal Palace: Table Sale and celebration of their 50 th Year milestone @ All Saints Church Parish Rooms, Beulah Hill. 7:30 for 8pm. Bob G3OOU 01737 552170 (Meetings 1 st and 3 rd Fridays) http://members.aol.com/rfcburns
7 th Nov	Converting Computing PSU to Amateur Use with G4FDN
8 th Nov	Dorking & District Radio Society – Meetings 2 nd & 4 th Tuesdays @ Friends Meeting House, Butterhill South Street, Dorking – opp. Spotted Dog. Details: John G3AEZ on 01306 631 236
11 th Nov	W&DARS – Members Evening @ St. Andrew's Church Hall, Herbert Road, Wimbledon – 7.30 for 8pm 2 nd & last Friday's Details: Jim M0CON on 020-8874 7456 http://www.wadars.thersgb.net
14 th Nov	CATS – Quiz Night, local clubs all invited – Meetings normally held @ St. Swithun's Church Hall, Grovelands Rd, Purley 8pm 2 nd Monday's. Contact: Dave G8VXB on dave.young@siemens.com
15 th Nov	Bromley & District - Meetings on 3 rd Tuesday's @ Victory Social Club, Kechill Gardens, Hayes – 7.30 for 8. Alan G0TLK 020-8777 0420 www.bdars.org.uk
17 th Nov	Sutton & Cheam RS – Pings, Bursts and Such Like with Nick Read G7DND/M5DND. 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
20 th Nov	Mitcham & District ARS (Meetings normally last Wednesday of each month) @ ATC Headquarters, Commonsides West, Mitcham. Sec: Mike Knott G0WCR 020-8764 4716
21 st Nov	Fix-It, Advice, Chin-Wag, Move-It-On
22 nd Nov	Dorking & District Radio Society –Meetings 2 nd & 4 th Tuesdays @ Friends Meeting House, Butterhill South Street, Dorking – opp. Spotted Dog. Details: John G3AEZ on 01306 631 236
25 th Nov	W&DARS – Surplus Equipment Sale @ St. Andrew's Church Hall, Herbert Road, Wimbledon – 7.30 for 8pm 2 nd & last Friday's Details: Jim M0CON on 020-8874 7456 http://www.wadars.thersgb.net
30 th Nov	Crawley ARC – Ian Bateman of Radixon - UK representative of WinRadio giving a presentation on Software Radios @ Hut 18, Tilgate Forest Recreational Centre, Tilgate Forest, Crawley – 7.30pm. Sec: Keith G8KZZ 01403 257788 www.carc.org.uk
5 th Dec	Hybrid powered vehicles and vehicle battery systems with Peter G4WPB
9 th Jan 06	Building Regulations Part P - Inspection & Testing of electrical wiring & the respective legal framework with Peter G3ZPB

SRCC Meetings indicated in **BOLD** with venue of Terra Nova unless otherwise stated.

Rally Calendar, etc:

4 th Nov	CPREC Table Sale 7:15 for 8pm
13 th Nov	West London Radio and Electronics Show – Kempton Park – Feature Event: "Train the Trainers"
14 th Nov	CATS Quiz is back 8pm at usual St. Swithun's Church Hall QTH

WEST LONDON RADIO & ELECTRONICS SHOW 13th Nov 2005

The premier rally for the south of England will be held on 13th November 2005 at Kempton Park Racecourse with doors opening at 10am, entrance fee held at £3.50.

The SRCC will be having a table and volunteers to man the table, etc will be welcomed. Please contact Maurice G4DDY regarding our table, or Paul M0CJX for more details on the rally. See www.radiofairs.co.uk

Coulsdon Amateur Transmitting Society

CATS QUIZ is back

Monday 14th Nov 2005 – 8 to 10pm

Venue: St. Swithun's Church Hall QTH. This meeting sees the return of the famous CATS Quiz hosted by the Quiz Inquisitor Andy G8JAC ably assisted by XYL Jan taking the scores. Teams of four will compete for stunning prizes and not least, the honour of being names Quiz Winners 2005. As is traditional, CATS have extended an invitation to their nearby clubs to visit them and take part by entering a team, or two. If previous years are anything to go by, an instructive and entertaining evening should be enjoyed.

So, here's the first question: Back in the early 1960s, who was the original "Quiz Inquisitor"? Answer on the night.

Crystal Palace Electronics and Radio Club Table Sale

Friday 4th Nov 2005 – Doors Open 7:15pm; runs 8-10:30pm latest

Venue: All Saints Church Parish Rooms, Beulah Hill.

Rules:

- The meeting room will open at 7:15pm and the meeting will commence at 8pm. Finishing time will be 10:30pm latest.
- Sellers will purchase the use of one or more tables at £3 each on which to sell their wares. Sellers may share a table if desired
- The usual meeting fee of £1 will be levied on all visitors
- Refreshments will be provided
- Subject to the sellers agreement, any goods remaining may be auctioned during the latter part of the meeting for which the club will not levy a further fee
- Buyers and Sellers must settle all outstanding amounts before they leave
- All unsold goods must be removed by the end of the evening by the sellers
- All disputes will be settled by our Chairman Brian Cannon G8DIU

Members News

- Pat Spenceley G8LZA

It is with sadness that I announce that Pat G8LZA died suddenly in the early hours of Friday 30 September at Yeovil District Hospital after a long illness. The Funeral service was held at Yeovil Crematorium on Monday 10 October at 2 pm. May I extend our condolences to the family at this sad time.

No Flowers were requested donations if desired may be made to the League of Friends at Crewkerne Hospital, c/o the Treasurer, the League of Friends, Crewkerne Hospital, Middle Path, Crewkerne, Somerset T18 8BG.

- Ray Herbert G2KU

I have recently received the following from Richard G Elen, Editor-in-Chief of Transdiffusion.org, which I will in due course also put up on the Club Website:

Dear Sir,

We too were saddened by the passing of Ray Herbert. He had been a wonderful source of information for us at Transdiffusion.org, where we document the history of broadcasting in the UK. My own article on Baird Television Limited at the Crystal Palace - <http://www.transdiffusion.org/emc/baird/bairdity/> - for example would have been impossible without his assistance.

When I was informed of his death, I wrote the following item in our MediaBlog:

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Television Pioneer Dies

We are sad to note the death of Ray Herbert, one of John Logie Baird's co-workers, on 20 July 2005.

Ray Herbert was one of the last remaining former employees of Baird Television Limited, joining the company after it had moved to the Crystal Palace in South London and suffered in the disastrous fire that destroyed the building in 1936.

While Ray was not directly involved in Baird's 30-line experiments in the late 1920s and early 30s, nor in the development that proceeded on 240-line transmissions for use by the BBC Television Service in 1936 (alongside the EMI-Marconi system that succeeded it early the following year), he helped to develop the Intermediate Film technique for additional applications, including installing a system in a French military aircraft for reconnaissance, and the transmitters and other equipment used by Baird for his large-screen, colour, high-resolution and stereoscopic television experiments. Like many television engineers, he worked extensively on radar development during the War.

In his later years, Ray Herbert went on to assemble an extensive archive of photographs and other materials showing the work of Baird and his company through the years from the very earliest experiments onwards, and remained one of the few able to document the period of Baird Television's activities at the Crystal Palace, a formerly widely forgotten aspect of the history of British television. Ray made his materials, and his knowledge, widely available to researchers such as the current writer (making articles like <http://www.transdiffusion.org/emc/baird/bairdity/> possible) and his knowledge, support and kindly helpfulness will long be remembered.

Not only has television lost a pioneer; it has also lost a light on the past that illuminated our understanding of the very birth of television in Britain. Ray Herbert will be sadly missed, and we pass our condolences to family and friends.

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Best,

Richard G Elen

Editor in chief, Transdiffusion.org

Greenpower National Final 2005



TSR-2 leads the pack out of the Goodwood chicane, Greenpower National Final 2005. Speed about 35 mph at this point.

FUTURE OF AMATEUR RADIO LICENSING

Just released is the MORI report into the reform of Amateur radio Licensing from a sample of 1572 returned questionnaires by the deadline of 20 June 2005 out of 4500 sent out. The link for the reports is: <http://www.ofcom.org.uk/radiocomms/ifi/licensing/classes/amateur/mori-report/> and the MORI site <http://www.mori.co.uk/polls/2005/ofcom.shtml>. I am not sure if any real conclusion can be drawn and also still awaiting the Ofcom response to all our submissions – unless you knew better . . .

CATS Bazaar - 30th Oct 2005

I trust you didn't miss this annual "Social event with Sale" at which SRCC had two tables and was able to make over £100 towards Club funds. I understand it was quieter than normal – this may have been the new date that was chosen and not everyone was aware of the change. Using the Sunday when the clocks back is actually an inspired choice as the extra hour gained allows people to get there without having to get up any earlier. I'll trust that CATS will keep this date in their calendar – we will soon get use to it and thus have the numbers attending returning to their normal levels, if not more.

LAST "A" MEETING: Monday 1st August Defence of the UK from Enemy Bombers - John Downs - Part3: Early Equipment

In continuing this series I describe some of the early equipment that was used.

RDF and AMES Type 1:

What we now call Radar was then called RDF. It was given an Air Ministry Experimental Station Number (AMES Type 1) and because of the initial chain built around the coast was also known as Ch.

The wavelength was 10 – 13 metres and signals were transmitted in pulses in the horizontal plane. This was chosen because it was thought that the wavelength should approximate the aircraft size and they flew in a horizontal plane.

The transmitter array was suspended between two metal towers, which were 360ft. A reflector array was suspended just behind it to concentrate the energy in front of the station. An imaginary line, which stretched from the centre of the array, was called the line of shoot.

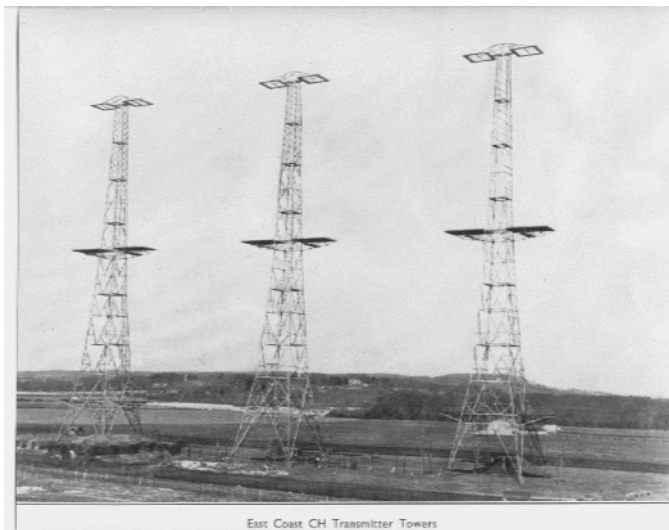
Receiver aerials were simply two crossed dipoles on wooden towers, which were 240ft high. As the received signal returned from an aircraft was only a fraction of the transmitted signal the wooden towers stopped further absorption.

Transmitted energy would floodlight an area of 60 degrees either side of the line of shoot, giving a detection range of 80 miles (24 miles at 200mph). The operator display was on an "A" scope – the transmitted pulse triggered the X-plate of the CRT to send a pulse from left to right across the screen, the returned signals triggered the Y-plate to create signals in the vertical plane.

It was very accurate for range, quite good for height but the bearing accuracy depended upon the skills of the operator. These skills were paramount to the success of the chain, as was tragically borne out by an incident very early on in the war.

Although the transmitter aerial display was fitted with reflectors to beam most of the energy to the front, there was always some back radiation, and so echoes could be received which were in fact behind the station. It was the duty of the operator to test suspect echoes by switching in reflectors on the receiving aerials – if the echo got smaller it was an indication that the aircraft was behind the station, and could be ignored.

Only three days after the war started an aircraft was picked up coming from France – a friendly who had not filed a flight plan. Fighters were scrambled and when they too showed on the radar the operator failed to sense whether they were in front of or behind the station, so they were plotted as unknown, possibly hostile. More fighters were scrambled and these too were misidentified. The situation was compounded by observer corps errors and led to the filter room at Stanmore plotting over 20 unidentified tracks over the Thames estuary. Failure to co-ordinate these formations caused one Spitfire section to attack a Hurricane squadron – two planes were lost and a third shot down by anti-aircraft fire. Later investigations revealed that it was unlikely any enemy aircraft were present.



East Coast CH Transmitter Towers

This first unfortunate series of errors was an inauspicious baptism of fire for the Air Defence System and became known as the Battle of Barking Creek!!!! John thought that it would be a fair certainty that nobody on that unit would fail to use the sensor again!

The main disadvantage of Ch was the lack of cover overland – pilots had to be taken over by ROC as soon as they crossed the coast and discrepancies did occur. The role of filter centre was paramount.

Layout of the Air Defence system in 1939/40. Main problem was time taken for pilots to reach group and sector plotting tables. The colour-coded clock was used to indicate the age of a pilot on the filter table. This was used at Filter Centre, but not at Radar and ROC.

This was basically the picture until war's end except that the PPI was developed that allowed Radar to become a 360-degree facility. This allowed tracks to be plotted over the coast and overland, and fighters to be controlled on to specific targets. Control of fighters was taken over from the sector airfields by dedicated radar units called GCI Radars. On the whole, mass daylight raids faded out and the emphasis was on streams of bombers attacking at night. The airborne interception Radar was being developed which meant that a single controller at a GCI could place a night fighter into an attack position from where the navigator could take over the final interception.

First to be developed was the AMES Type 7 – once again a metric device and accuracy of plot left a lot to be desired. These remained in operation until the 1950s.

Invention of the magnetron allowed conversion from metric to centimetric (microwave) giving a much greater definition on screen. First of these was Type 13 and 14. Very compact and suited to a mobile environment.

It is of interest to note that we gave the Americas the Magnetron for further development in about 1941/2 (one was flown to the States on a special flight) and they immediately coined the name Radar (Radio Detection and Ranging), so poor old RDF was put to sleep!!!

In 1944/45 Ch stations were run down to a care and maintenance basis. Yet by the end of war there was over 250 Radar stations dotted all over England with romantic names like Seaton Snook, Barnton Quarry, and Stoke Holy Cross.

Once again I thank John for the use of his talk notes allowing me to write the above.

SIGNING OFF:

That's it for this month. As you can read I concluded this letter following my successful Radical Prostatectomy Operation and may be able to get along for the meeting with Pat G4FDN on 7th Nov – make sure you do anyway!!

Ray G4FFY

73 and 88

Posted: 2nd Nov 2005