



SURREY RADIO CONTACT CLUB

SEPTEMBER 2005 — No: 756

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>

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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 Sep 2005 PICs (Peripheral Interface Controllers) with Gareth G4XAT

"B" MEETING 19th Sep 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 September 2005 newsletter and I start with the news that your scribe has been diagnosed with prostate cancer. It has been agreed that the best course of action at my relatively young age is to have it removed. The operation timescale has been indicated as some 6-8 weeks away and I am currently awaiting the appointment letter to see the surgeon. The lesson here is to recognise the possible symptoms and not to hesitate to see your GP.

Right to business - the SRCC meetings this month start with the "A" meeting on Monday 5th September when we welcome our Chairman Gareth G4XAT for a talk and presentation on PICs (Peripheral Interface Controllers); with the "B" meeting on Monday 19th September.

NEXT "A" MEETING: Monday 5th Sep 2005 PICs (Peripheral Interface Controllers) - Gareth G4XAT



Next Monday 5th September we welcome our Chairman Gareth G4XAT to give a talk and presentation on PICs (Peripheral Interface Controllers). I first heard of these via the Picatune project and is a device which can be programmed to do

control functions or calculations.

The PIC, like the CPU, has calculation functions and memory, and is controlled by the software. However, the throughput and the memory capacity are low. Depending on the kind of PIC, the maximum clock operating frequency is about 20 MHz and the memory capacity (to write the program) is about 1K to 4K words.

The memory, the input/output ports and so on are incorporated into the IC. The efficiency and the functions are limited, but the PIC can do the job of many IC's with software. So, the circuit can be compact.

Gareth will be explaining these devices, how to program them, and illustrate some simple uses.

NEXT "B" MEETING: Monday 19th Sep 2005 FIX-IT, Advice, Chin-Wag & "MOVE-IT-ON"

The "B" meeting on Monday 19th Sep 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 1st August Defence of the UK from Enemy Bombers - John Downs

It was with great pleasure that we welcomed John Downs on Monday 1st August to give us an insight into the development of the defence of the UK, and the role of Radar in this. His talk which was much enjoyed by those who attended, it was a shame that there couldn't have been a few more - you missed a great evening.

John started by reminded us that some 65 years ago the Battle of Britain was in full swing with waves of German bombers, supported by fighter escorts, sweeping over our beautiful country.

They were trying to gain supremacy of the air prior to an invasion. Much has been written of the bravery and dedication of the fighter pilots in resisting and fighting off this threat, and rightly so. It is not widely known, however, that the defence against these air attacks was organised and controlled through the first fully co-ordinated air defence system to be used anywhere in the world. In short it was another first for Britain!! John continued to tell us about the story of the development of the system and in particular the use of Radar within it.

John served in the Air Defence Organisation of the RAF for nearly 17 years through the cold war and was privileged to take part in its transition from the rather "Heath Robinson" setup which did much to help win the Battle of Britain to its present day computer driven, digitised sophistication.

He explained that he wasn't using the term "Heath Robinson" in any derogatory sense - in fact the system used in the Battle of Britain continued to be the main stay of Air Defence throughout the war and well into the Cold War which followed.

John further explained that the aim of the Air Defence System is twofold; first and most important is the capability to stop or deter any attack delivered from the air, and secondly to be able to act as a warning system of impending attack for military and civilian authorities.

John continued with the history of air defence in which Radar was a major part of a much larger story which had its roots in World War 1. During that war some 114 air raids took place and until later in the war were mainly carried out against coastal towns.

A raid that took place in August 1917 was very significant as the bombers flew over a light ship which was able to give 30 minutes warning of their arrival. Of the 15 bombers that started, 5 were forced to turn back before reaching the coast, and of the remaining 10, 3 were shot down and little damage was done to Dover, Margate and Ramsgate. The message was given enough warning and the right conditions, fighters could be deployed to combat a raid.

The first raid on London did not take place until 13th June 1917 which killed 162 people, but it was the 2nd raid on 7th July that caught the attention of the government. Some rioting took place in London, and angry mobs attacked shops that they thought were owned by Germans. It was this that triggered off the need for the government to create a committee, and as a result of their recommendations the whole of the defence against air raids in London was placed under the command of one man.

On 8th August 1917 the London Area Defence Air Command (LADA) was setup commanded by Brig. Gen. Ashmore. This was formed using a network of observers, made up of mainly Police and Coast Guards, who reported aircraft movements in their vicinity by phone to one of 30 Regional Centres. They in turn reported the plots to an Operations Room set up in Horse Guards. Here the intelligence was filtered and passed on to the defending forces. This system gave plenty of early warning as aircraft speeds were so slow that they took about an hour to get to London after crossing the coast.

Three defensive Zones were set up around London, the outer being 10 miles out from heavily populated areas. This was defended by anti-aircraft guns and searchlights which also acted as early warning of the fighters.

The middle Zone was for the exclusive use of the fighters who were ordered on patrol as soon as an attack was imminent, but they had no means of communication or control, so they depended heavily on the guns or

searchlights to show then where the attacking aircraft were. This system possibly accounts for the placement of a number of airfields around London – Kenley, Biggin Hill, Northholt, North Weald, Debden, etc.

The inner area was once again a gun and barrage balloon zone. And all this was just for London. This was the beginning of Air Defence in this country but it was unfortunately only totally operational some 4-months after the last German raid on London.

At this time the only method of warning of impending air attack was the chain of observation posts setup for LADA. This gave early warning only as far as it was possible for the human ear to detect the sound of approaching aircraft.

It was obvious that this range had to be increased, and already in 1916 a number of scientists were working to solve the problem – the trouble is that they only had the engine noise to work on.

John showed us a number of acoustic detection developments, saucer shaped reflectors carved in a chalk cliff face with a microphone located at the focal point, and polished concrete reflectors with a pair being built in 1930 on Romney Marsh. Pickup ranges of between 15 and 20 miles were achieved but condition had to be perfect. For instance strong winds affected the system but the scientists claimed that enemy bombers would not fly in adverse weather conditions, nor were they likely to fly at night! Self induced jamming was caused by patrols of our fighters just off the coast.



Acoustic Locator Dish 1928
Greatstone Kent



Acoustic Locator Wall 1930
Greatstone Kent

I liked the stories concerning the Hythe and Dymchurch railway and when developers planned an estate of two storied houses in front of the reflector site – they were persuaded to build bungalows.

The final straw came when a Dr Wimpriss, then director of the Scientific Research for the Air Ministry, and his deputy Mr AP Rowe had arranged a demonstration to the Air Marshall Dowding. It was completely wrecked by the arrival of the local milkman in his rattling float to deliver to the site.

Even so the Government decided in 1934 to build a chain of 25 of these sites around the SE coast. Delays in obtaining suitable sites and opposition by a Prof. Lindeman led to the cancellation of the order in 1937.

Fortunately, after some 75 years of existence, and having been used as targets by the Royal Navy during the War, the site has now been marked for restoration and preservation by English Heritage with a grant of £500,000. It's sobering to note that it cost £3,000 to originally build.

John then continued to tell us about the development of Radar, which I will write-up in the next newsletter.

Thank you John for a very interesting and enjoyable evening, and I also thank him for supplying me with his notes for the talk that I have been using to write the above.

Found this web site about acoustic mirrors <http://www.dself.dsl.pipex.com/MUSEUM/COMMS/ear/ear.htm> from which I have used a couple of pictures.

CHAIRMAN THOUGHT of the MONTH - September 2005



Well, the promised heat wave has sort of been and gone, although the speed and variance of the great British weather really does amaze me!!

Joshua, Reuben and myself managed a few days in Wales, fortunately the weather was kind and the view every bit a wonderful as I remembered. Joshua came to terms with his new kite, managing to 'skid' several 10's of yards along the beach as the kite pulled him along. It managed the same with me too and at nearly double his weight, certainly shows how much energy can be harnessed from the wind. Our next step is going to be a kite buggy, but at this point in time we are not sure whether or not to build or buy. The two boys have continued their aerial exploits and are becoming increasingly confident and capable (model) pilots. Their interests are developing in slightly different ways, which is good. Joshua now has a 'build to order' contract with Avicraft, our local model shop and this helps supplement his paper round money. Reuben is learning the art of proper aerobatics with a view to taking his B test later this year, whilst Joshua has perfected the art of making the aircraft hover vertically in front of him. The power to weight ratio offered by lithium polymer batteries and brushless motors is truly amazing and the use of carbon fibre and 'depron' foam (under-floor heating insulation foam board) have revolutionised model making, especially compared to the old days of balsa, tissue and cellulose dope!

Apart from the Sunday net, things have been quiet on the radio front, although I did buy a 60 watt amp for 13cm, costing a mere £58 from eBay, plus the inevitable import VAT. Those of you who have yet to discover this modern day 'Lisle Street' are in for a treat, the world of surplus is alive and well and depending on vendor, remarkably good value. The data code on the FETs is 99, so the boards is barely 5 years old, new removed from built equipment. Must have cost someone a fortune. It requires up to 1 watt of drive (eBay 1 watt 4 channel 13cm video transmitter, £9.99) and 26 volts, plus a huge heatsink. All these items pre-exist so no problem there. Price/power levels like this are cheaper than 2 metre amps and with remote sensing available on the 26 volt SMPS, the whole lot could go at the mast head. If you fancy looking at the other goodies this vendor is selling go to: <http://search.ebay.co.uk/W0QqsassZpyrojoseph> Another result of the 'global economy' was a recent offer by Macro, the Croydon based 'trade' warehouse. A 2 KW petrol generator for £99.99 + VAT. Too good to miss, almost certainly Chinese made to Honda designs, I snapped one up and will be modifying it at some point to include the G8MNY "boost-on-demand throttle tickler". Thanks to John for the access, transport and details of the modification.



Picture shows Reuben (nearest) with his mostly own design lightweight plane with Joshua just launching his kite. This beach was Port Talbot, big, empty, a bit muddy (industrial slime probably!!) and was used

as a stopping off point en-route to the Spectacular Newgale Sands, shown in next column about 1/3 of the beach in this shot.

Picture of Joshua after some kite powered skidding (very hard work but an absolute hoot to do).



THE CALENDAR SECTION

SRCC and Local Club Meeting Dates:

5 th Sep	PICs (Peripheral Interface Controllers) with Gareth G4XAT
2 nd Sep	Crystal Palace: Amateur Radio and My Career in Electronics with Ken G3DJK @ 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
9 th Sep	W&DARS – Computer History – Colossus Reloaded – Len Stuart @ 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
12 th Sep	CATS – 30 th Birthday Dinner – Meetings normally held @ St. Swithun's Church Hall, Grovelands Rd, Purley 8pm 2 nd Monday's. Contact: Dave G8VXB on 020-8546 5445 dyoung@photo-scan.com
13 th Sep	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
15 th Sep	Sutton & Cheam RS – EMC – Nick Hopper G8NLY. 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 Sep	Fix-It, Advice, Chin-Wag, Move-It-On
20 th Sep	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
25 th Sep	Crawley ARC – Microwave Round Table @ Hut 18, Tilgate Forest Recreational Centre, Tilgate Forest, Crawley – 7.30pm. Sec: Keith G8KZZ 01403 257788 www.carc.org.uk
27 th Sep	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
28 th Sep	Mitcham & District ARS (Meetings normally last Wednesday of each month) @ ATC Headquarters, Commonsides West, Mitcham. Sec: Mike Knott G0WCR 020-8764 4716
30 th Sep	W&DARS – Project Building & Club on Air @ 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
3 rd Oct	Autumn Surplus Equipment Sale
7 th Nov	Short Talks with G4FDN and G4XAT
5 th Dec	Hybrid powered vehicles and vehicle battery systems with Peter G4WPB
9 th Jan 06	TBA

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

Rally Calendar, etc:

30 th Sep 1 st Oct	Leicester Amateur Radio Show
15 th /16 th Oct	Jamboree on the Air
30 th Oct	CATS Bazaar
13 th Nov	West London Radio and Electronics Show – Kempton Park – Feature Event: "Train the Trainers"

Members News

- John G3BFP

John is currently trying to clean up his garden and has a collection of surplus tubing for disposal as follows:

Plastic: 46" x 2.11/16" OD Black Drain Pipe
Aluminium: 100" x 2" OD x 1/16" Gauge 82" 1.3/4" OD x 1/16" Gauge 54" x 1.7/8" OD x 3/16" Gauge 43" x 1.7/8" OD x 3/16" Gauge 62" x 1.1/2" OD x 1/16" Gauge 100" x 1.1/4" OD x 1/16" Gauge 83" x 1" OD x 1/16" Gauge - few holes along length 101" x 1" OD x 1/16" Gauge - few holes along length
Galvanised Steel: 95" x 1" OD x 1/16" Gauge - some galvanising is coming off.

- Ray G2KU

Ray's funeral was held on Friday 29th August at Croydon Crematorium. I and other members of the SRCC attended the service and heard the eulogies given by Bernie G8TB and Don McLean. These can be found on the Ray Herbert G2KU tribute page on the club website www.g3src.org.uk. I would welcome further memories and contributions to this page.

- John G3BFP - Kenley Air Show 13th Aug 2005

John recently sent me an E-mail about his visit to the Kenley Air Show:

"Hazel and I went up to the Kenley Air Show today and ended up as a party of the Wynn's, Naylor's and Burton's and also John Alger who you may remember, plus countless neighbours!! Damn good show, at no cost, apart from the programme and thankfully the rain held off right to the end. The Battle of Britain Memorial Flight was cancelled due to the weather at their end... Shame



The main flying events were the Hercules which was excellent and you will see one of his low runs. They also had a couple of wing walking girls (twins actually) who put on a fantastic show. God knows how they can stand being looped and flying upside down on the two Stearman biplanes. Also had four small aircraft coming down to deck level and flying through 'goal posts' – John G3BFP"



FUTURE OF AMATEUR RADIO LICENSING

I trust that you all got your responses in – the formal Club response can be found on our website www.g3src.org.uk but I can't find it yet on the Ofcom site <http://www.ofcom.org.uk/consult/condocs/aradio/>. A statement is scheduled to be issued by Ofcom during September 2005.

USEFUL WEBSITES:

"Hi Ray;

Yet another useful website if you want information on valves. You will find pin-out connections and characteristics information available for many hard to find and obsolete valves. <http://www.r-type.org/>

Regards, Dusty G4DSY"

70th ANNIVERSARY CELEBRATIONS

"Due to a variety of circumstances (not least the death of Ray Herbert, G2KU) and a lack of response from the wider membership we have decided to re-schedule the 70th Anniversary dinner to coincide with our annual dinner in March/April 2006.

Would members please consider if they would wish to attend this combined event and if yes, whether or not they would be happy to use our normal venue, the Park Side Beefeater, Mitcham Common, where a range of rooms are available to suit numbers. Numbers don't look anything like what was achieved for the 50th anniversary and we have to bear this in mind in any advance planning we do. Please help us by letting any committee member know if you wish to attend sooner rather than later.

Thanks, Gareth, G4XAT"

SIGNING OFF:

That is about it for this month and I hope I have remembered everything, apologies for anything I have missed. John G8MNY advises that Susy Radio is back on the air from 27th Aug for the usual 4-weeks – listen on 531kHz or try this web link:

http://www.susyradio.com/index.php?option=com_content&task=view&id=18&Itemid=58

Please support the "A" meeting on Monday when we welcome Gareth G4XAT for his talk on PICs.

Ray G4FFY

73 and 88

Posted: 2nd Sep 2005

SRCC Subscription Renewal Form September 2005

Name: Callsign/RS:

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