



# SURREY RADIO CONTACT CLUB

87th Anniversary Year - Founded 1935

OCTOBER 2022 – No 962

SRCC supports the RSGB Child Protection Policy

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Club Website:	<a href="https://www.srcc.uk">https://www.srcc.uk</a>	

MONTHLY MEETINGS NORMALLY ON 1<sup>ST</sup> AND 3<sup>RD</sup> MONDAYS 7.30 FOR 7.45pm  
**Meetings at Trinity School, Shirley Park, Croydon CR9 7AT**

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**1<sup>st</sup> MEETING Monday 3<sup>rd</sup> October: Surplus Equipment Sale**

**2<sup>nd</sup> MEETING Monday 17<sup>th</sup> October: Fix-it, Move-it-on and Social Chat with John G8MNY**

## SRCC COMMITTEE 2022/23

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Committee Member (Co-opted)	G3ZPB Peter Burton	01737 551413
Committee Member (Co-opted)	G7RUX Jason Gardner	07515 357630

## EDITOR'S OPENER

Dear members & friends, welcome to the October 2022 SRCC Newsletter.

Firstly, some news about two of SRCC's longest standing members, husband and wife Maurice and Prim Fagg, G4DDY and G4CCY. Some of you will be aware that Maurice has had a few falls in the last month or two, and I have just heard that as a result he is now in St. Helier Hospital in Carshalton. While it seems that his condition is not particularly serious and that he is in good spirits it is not clear for how long he will be hospitalised. And for now, Prim, who has needed constant care for some time which Maurice has been providing, has been moved to a nursing home. Meanwhile their daughter Liz is liaising with the social services people who are "on the

case". It is likely that Maurice would be glad of visitors and if you would like to visit him, he is at the time of writing in Block A Ward 6 (which is on the sixth floor) at St. Helier.

Although there is only a tenuous link to amateur radio here (that link being the fact that Prince Philip was for many years Patron of the RSGB) it would be wrong to omit any mention of the death of our late Queen Elizabeth II. For many, perhaps most, of the SRCC membership the late Queen was the only monarch we have ever known. And although we may not all approve of monarchy as a form of government in the modern world (after all who, if deciding on a form of government now, would choose a monarchy rather than, say, a republic?) most will agree that her humanity and total commitment to duty provided a thread of continuity, dignity, and non-partisan leadership that we can be proud of. Thank you, Your Majesty – and best wishes to King Charles III for a long and successful reign.

Another correction I'm afraid! In last month's Newsletter the callsign of Jim Lugsden was referred to as M0JFL. This was incorrect and his correct call is M0JKM – apologies Jim!

### **73, Quin G3WRR – SRCC Secretary / Newsletter Editor**

## **PREVIOUS MEETINGS**

September A meeting (5<sup>th</sup> September) "Vintage Radios" by Steve G3ZPS.

Steve opened by saying that professionally he had been an RF design engineer having worked, for example, on the design of the Metropolitan Police communications network and was a FIET (Fellow of the Institute of Engineering and Technology). As an amateur he had been licenced as G3ZPS since 1969 at the age of 16. His interest in vintage radio gear had grown to the point that he had around 40 HF rigs – a larger number than most amateurs but paling into insignificance compared with W9EVT who had over 1000!

Radio technology had grown progressively during the 1920s and 30s with a wide variety of valve types and functions available and the ability to produce equipment for HF and VHF ranges by 1939. Off the shelf equipment was available but largely in the USA with relatively little in the UK, although components were available allowing UK amateurs to build their own equipment. By the onset of WW2 in 1939, communications were regarded as an essential element of warfare, and a huge amount of research and development was undertaken to meet the needs of the different services and the varying needs of each, leading to very high production levels and wide diversity of equipment types.

After the war very large quantities of off the shelf ex-military equipment became available to amateurs and this stream lasted from the late 1940s until the early 1970s. One fairly common characteristic of wartime military equipment was a need for ruggedness, leading to considerable weight and this led to the introduction, mainly in the USA and believed to have originated in CQ Magazine in 1956 of the term "boat anchor" for such equipment. Equipment from this period includes:

- **19 set** – 1942 onwards, ubiquitous, three versions, some with VHF B set, 10-15W output: allowed many amateurs to get on the air. Popular with VMARS community
- **WS 62** – "cut down" 19 set, 1W output
- **WS18** – similar, ¼ W output
- **R1155** – 8 000 released from 1947: originally used in Lancaster bombers
- **CR100/B28** – used by Navy

- **BC45x series** – HF “command receivers” used in US bombers (such as B17)
- **National HRO** – plug in coil packs to avoid problems of band switching
- **RCA AR88** – developed under lease-lend. 2 models, D & L F. Mainly used in Russia and UK for listening stations (example at Bletchley Park Museum). 25 000 made between 1941 & 1951. Much revered.

Prices varied from an affordable £6-10s for a 19 set to £75 for a brand new boxed AR88 – quite expensive in those days!

After 1945 as we moved into the Cold War, new generations of equipment were made and progressively became available to amateurs, including:

- **Murphy B40** – from 1949, weight 115lb. Used by Navy on ships so weight not an issue! Available from £22-10s
- **Racal RA17** – innovative design from 1954/55 using Wadley loop principle, strip dial displaying 6ft per MHz! Largely used in listening stations.
- **Larkspur** – tactical military radio system – mid 50s – early 80s
- **Clansman** – tactical radio systems – late 70s – 2010s.

After WWII, equipment for non-military sources started becoming available. Some of the key suppliers were:

- **Collins** – named after Art Collins W0CXX. During the war they had produced massive quantities of military equipment noted for its quality and performance. In 1947 the 75A1 was introduced, branded as “the receiver for the DX hound”, which used permeability tuning and was very stable, however few reached the UK. At this time telephony had largely used AM, but in 1955 Collins adopted SSB using phasing rather than crystal filters. The 75A4 was available until the late 50s but was pricey. At this time transmitters and receivers were normally separate but W0ROW, one of the Collins engineers suggested combining both functions as transceivers (remembering of course that earlier equipment such as the 19 set had been transceivers...). One of the first was the KWM1 introduced in 1957 at a cost of around £945. It could be used mobile and there are rumours that there was one, set to CIA frequencies, aboard the U2 spy plane piloted by Gary Powers shot down by the Russians in 1960 leading to an international incident. The iconic (to use an much overused term) rig was the Collins KWM2/2A series which was produced from 1959 – 85 with around 30 000 made. This abandoned the boat anchor approach and had a wrap around case and flip up lid. It was considered reliable and bomb proof and was used as late as the First Gulf War. The entire later Collins range was branded “S line”
- **Drake** – founded by Robert Drake (W8CYE) in 1943. Drake also adopted SSB in 1957. The Drake “4 line” was produced from 1963 -78: a typical example was the TR4 with lightweight construction and permeability tuning and 300W pep output using sweep tubes (quite hard to get hold of now). Drake gear was regarded as easy to fix, but the firm kept using valve technology into the 70s finally dropping out of the amateur radio market in 2005
- **KW** – formed by G5KW and G8KW (hence the name) in the 1950s. In 1956 they started manufacturing / selling “out of a shed”) in the Dartford area. In the early days service was seen as a key feature of their offerings. The KW77 receiver and Vanguard AM transmitter were followed by the Viceroy SSB transmitter: these early products were of the boat anchor type. The prototype KW2000 transceiver was introduced in mid-1963. The architecture, styling and operation were based on the Collins KWM2 (although the internal frequencies were different). However, the early models used mechanical filters and lacked 160m, AM capability and CW filter. However, the KW2000 / 2000A / 2000B / 2000E series (branded as

G line) were in production from 1964-76, with later models including 160m & RIT. They were priced much more cheaply than USA equipment. [Steve displayed an early production model to the audience and noted that a problem with early models is the mechanical filters where the internal foam based mechanical isolation tends to turn to dust after 60 years!]. They produced a number of other products including the Vespa SSB transmitter, but, like some others, the firm stuck with valve technology for too long and after being taken over by Decca in the mid-70s just faded away

- **Japanese suppliers** – first into the market was Yaesu, led by Sako JA1MP (hence the “MP” suffix on some of their products). The leading Yaesu rig is probably the FT101 series (including FT101, FT101B and FT101E) of which over 100 000 were made. Other Japanese suppliers are Trio (now Kenwood) and Inoue (now ICOM). These firms started small and grew quickly, excelling at innovation – assisted by the Japanese Department of Trade
- **Heathkit** – producers of a wide range of electronic kits including amateur radio. They were noted for the kits never having bits missing and the quality of their assembly instructions. Amateur radio products included the DX40 and DX100 transmitters, HW100, HW101 and SB102 transceivers and SB1000 linear. The firm still exists but their involvement in amateur radio is minimal
- **Other suppliers** mentioned but not discussed in detail were Eddystone, Codar, Swan, T.Withers, Hammarlund and Hallicrafters.

As a humorous postscript, Steve identified three instances where equipment described above had appeared in the cinema:

- an AR88 appears in the Beatles film “Help!”
- an item of Collins S line equipment appears in the Doris Day film “The Glass Bottomed Boat”
- a row of RA17s (apparently in a monitoring centre) appears in the Bond film “Dr No” – however it is rumoured that what is shown are just front panels and not entire receivers.

He concluded by saying that in returning elderly gear to life, one of the difficulties was obsolescence of parts (particularly later models where custom ICs were involved) although the internet was very helpful, particularly for finding manuals. Things he got out of working on old gear were challenge, achievement, learning, skill and **FUN**.

This was a really excellent and involving presentation which the attendees thoroughly appreciated and enjoyed. Steve noted that he also had presentations on KW Electronics and the Metropolitan Police communications network available – and the SRCC Committee will be in touch with him in due course to make bookings!

The B meeting, originally scheduled for 19<sup>th</sup> September, was rescheduled because the date coincided with that of the funeral of the late Queen. However, it has been rescheduled for the following Monday, 26<sup>th</sup> September. No write-up is available as at the time of meeting it has not yet taken place!

## **FUTURE MEETINGS**

October A meeting (3<sup>rd</sup> October) This will be a Surplus Equipment Sale –bring your unused gear

along for sale – and also cash to buy some new treasures available at good prices....

November A meeting (7<sup>th</sup> November) This will be the annual Construction Contest. Our Treasurer has been persuaded to award prizes of real money (none of this pseudo-currency stuff) for the winning entries – so why not get your thinking cap on and soldering iron out? It doesn't have to be "showroom quality" – interesting designs that do the biz are just as likely to be competitive!

December A meeting (12<sup>th</sup> December) Please note that this is the **second** Monday of the month rather than the first. This will be the annual (although the first one since 2019 due to COVID) Inter Club Quiz, which will this year be hosted by Sutton & Cheam RS – hence the (for SRCC) non-standard date. It will be held at a Scout Hall in Banstead – further details on location will be provided in due course. Traditionally this has been a three-way junket between SRCC, S&CRS and CATS. However, Chris M0TCH (the S&CRS "link man") is intending to invite the Dorking and Crystal Palace clubs along as well which should add to the fun. Clubs have fielded more than one team (of 4/5 members) in the past so why not have a talk to some of your fellow members so that SRCC can enter two (or more...) teams? But if you are not actively participating, please come along to observe – the last few (pre-COVID) were great fun! Chris has asked for estimated numbers of attendees (so that S&CRS can provide the appropriate number of beverages, buns, etc.) so I will be seeking inputs a bit nearer the date.

B meetings will, unless advised otherwise, be held on the third Monday of the month and will consist of the usual Fix-it, Move-it-on and Social Chat with John G8MNY and his test equipment. In fact, the December B meeting will be an instance of "unless advised otherwise". It will be held on the third Monday (19<sup>th</sup> December) and will be the usual pre-Christmas Social with light refreshments, soft drinks and mince pies – plus Dyson to clear up the crumbs afterwards. After last year's experiment of adding custard to the party (for the mince pies), further culinary delights are being considered for 2022....

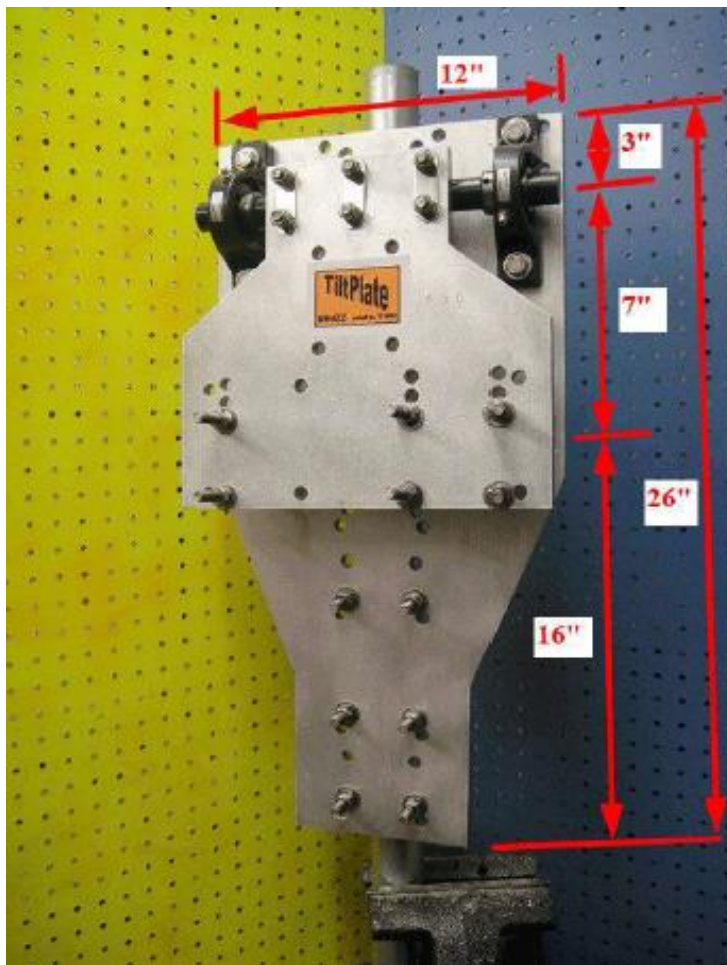
The Committee are looking at the meeting programme for 2023. Certain items are fairly regular occurrences (such as the AGM and Surplus Equipment Sales) but we are keen to have input from the membership on other topics that you would be interested in. We can't guarantee that we will be able to satisfy all suggestions (for instance there have to be speakers available with the knowledge of the subjects) but we will be glad to hear your views. One topic that has already been suggested is a Construction Project (a different activity from the Construction Contest referred to above) but recent projects considered have been stymied by the global semiconductor supply problems. So, if any members have ideas for reasonably simple projects using readily available components, we would be pleased to receive them!

## A CLEVER IDEA

I guess many of us have been in the situation shown below! The details are different in every case but the basic problem of being able to fix an antenna with a long boom onto a mast is the same. And because it's always a case of "the longer the better" to get those extra dBs, we soon reach the point where it gets downright risky standing on top of a wobbling step ladder. This picture shows G3SJX risking life and limb with G3UFY, G3VYI and G3WRR acting as Health and Safety advisers. The three element tri-bander is being prepared for erection at the G4ALE/P HF NFD station on Dartmoor in around 2012.



But there is a better way! It involves the use of a device usually called a tilt plate, which allows both mast and antenna to lie flat at ground level, enabling the antenna and feeder to be connected to the mast in safety at a comfortable height, and then tilt the mast up to vertical while keeping the antenna horizontal.



A typical example is shown here: it consists of two plates which are joined by a hinge. One plate is attached to the mast using U-bolts and the other to the antenna boom, again using U-bolts. The hinge allows the angle between the mast plate and antenna plate to change as the mast is raised from the horizontal to its final vertical position while keeping the antenna horizontal. When the mast has reached vertical, a clamping device (not visible in the picture but not unlike an old-fashioned door bolt) is operated to keep the two at right angles until it's time to lower it again. Neat, eh?

Tilt plates are available commercially - mostly from the USA where a typical price is around \$700 (yes, really). But nil desperandum – if (unlike me) you are reasonably adept with metal working they can be made by amateurs. The picture below shows a Spiderbeam at about 30ft erected using a tilt plate made by Steve G4SDM and deployed at Bognor Hill in West Sussex in SSB FD this September: the tilt plate itself is not visible – but it does show what can be done!



(With thanks to NN4ZZ and G4WGE for use of pictures).

**Quin G3WRR**

## **FROM BILL 2E0WBO**

Thanks to Bill 2E0WBO for the following:

- “1) Must make my club thanks to Pat G4FDN for "stringing" two trees allowing me to hoist (eventually) an HF antenna.
- 2) Anyone want an A3 Brother printer? Complete with A4, A3 paper and fairly full ink tanks? Contact me and you'll need to bring muscle as this was built in 2010 when printers were bomb proof.

73, Bill”

## **HERE AND THERE**

A couple of historical snippets this month.

Ted G3EUE sent me the following:

“I joined the RAFVR in 1941 at Cardington and moved on to Blackpool for wireless training. After square-bashing and passing the 12 wpm Morse test I was posted to Compton Bassett to complete the course. The kit I was issued with included a one-pint china mug which survived five years of daily use and still does what it was designed for all that time ago. The attached photographs are of the original mug”.



I wish that some of the mugs at WRR Towers of about the tenth of the age of Ted's were in such good condition...



The picture above shows an item I acquired a few years ago while clearing out the shack of my late friend Dave G3JJZ. It is (as you can see) a compass but what is interesting is that it was made in Switzerland and is dated 1915. A previous owner has scratched "RFC" on the base – which presumably means Royal Flying Corps (the predecessor of the RAF). It doesn't quite agree with a more modern compass about where North lies (about 20° difference) – but at 107 years old it is entitled to be a few degrees out! I'd love to know some of its history.

**Quin G3WRR**



## SRCC LEAGUE TABLE – AUGUST 2022

The number of entries received for this month's League Table was eight, one up on July. However three of these were null entries. Scores at the top end of the table were, like those in July, well down on those earlier in the year. This is probably in part due to the holiday season, and it will be interesting to see whether the September scores are back up to their earlier levels.

Looking at the monthly positions, Ray G4FFY is again leader, followed by Ian M0CGF who, after a month off, regains his more normal second place, followed by Steve G4FYF who retains third place. Ted G3EUE moves up one place to fourth and Rick M0LEP two places to fifth. This leaves the null entry contingent of Colin G4LZE, Peter G3ZPB and Quin G3WRR in joint last place. Perhaps they are saving themselves for big things in the September listing.....

ENTRANT	WORKED DXCC / SQUARE	WORKED SRCC MEMBER	WORKED IN CONTEST	POINTS THIS MONTH
G4FFY	69	9	10	166
M0CGF	41	0	0	82
G4FYF	25	3	0	56
G3EUE	15	0	4	34
M0LEP	10	6	0	32
G3ZPB	0	0	0	0
G3WRR	0	0	0	0
G4LZE	0	0	0	0

Despite being distracted by dog shows and a holiday, Ray is leader this month, having had quite a busy radio month. His scoring contacts were fairly evenly balanced between HF & VHF. Although he did not work any new DXCCs in August, he managed all continents except Oceania & Antarctica. Europe was dominant at 78% of scoring contacts, followed by South America (10%), Asia (7%) and North America and Africa (2%). Over three quarters were made on 20m followed by 10m (5%), 40m (10%) and 15m (2%). Apart from four contacts on SSB, all were made using FT4 or FT8. His VHF contacts were all on 6m (75%) and 70cm (25%) and 36% were made in the RSGB UK Activity Contest series. He had a couple of good runs of sporadic E to South and South Eastern Europe on 6m – interesting, as it is quite late in the season for Es. Also, he had a decent haul of nine different SRCC members, mostly on the club 80m net and “Patnet”.

Just under 80% of Ian's scoring contacts were on HF, with the rest on 6m. His HF contacts were with two (FT8) exceptions all on SSB. The majority of them (79%) were with European stations, followed by 15% with North America and 3% each with Asia and South America. As with Ray, the majority of his HF contacts (59%) were on 20m, followed by 24% on 40m, 12% on 17m and 6% on 80m. His 6m contacts were evenly balanced between SSB and FT8 and were all made via sporadic E in South Eastern Europe.

All Steve's scoring contacts with one exception (PY – Brazil) were with European stations and were made on 40m or 20m.

Ted's scoring contacts were as usual all made on CW, the best DX being JA1 (Tokyo) on 15m.

Rick was back from Kenya for the August reporting period and managed to find a bit more time for radio. He made a number of contacts with USA stations in their POTA (Parks On The Air) scheme which seems to be similar to the European SOTA scheme, but as POTA activators are allowed to power their stations from vehicles they are often running higher power than SOTA and hence easier to work! Most of his SOTA contacts were made during a brief (half hour or so) visit to Pen-

y-Fan in the Brecon Beacons. Like Ray, he also worked a number of SRCC members on the 80m net and "Patnet".

Peter, Colin and Quin all submitted null entries due to higher priorities, which since this was August may refer to holidays. Peter comments "I spent too long away enjoying myself to play radio!!!!" – perhaps a good example of a balanced life style....

As expected this far through the year, changes in position in the cumulative annual listing are limited. The top three entries remain the same, Steve moves up one place to fourth and Colin down one to fifth, Rick moves up one to sixth and Quin down one to seventh, Ted moves up one place to eighth and G3SRC down one to ninth.

ENTRANT	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	TOT
G4FFY	166	153	207	164	252	536	205	166					1849
M0CGF	102	87	108	86	194	424	0	82					1081
G3ZPB	90	123	0	31	54	46	32	0					376
G4FYF	36	42	68	36	32	16	44	56					330
G4LZE	0	73	42	0	84	51	39	0					289
M0LEP	18	26	20	34	52	14	8	32					204
G3WRR	0	66	60	0	0	4	48	0					178
G3EUE	22	0	0	0	0	27	34	34					117
G3SRC	66	15	0	0	0	0	0	0					81

My statement last month that the summer 6m season was drawing to a close seems to be premature, and on HF the now volatile SFI continues to be on an upward trend.

### 73, Quin G3WRR - SRCC Leaguemeister

## SRCC NETS

The following is a list of structured nets on which members of SRCC meet regularly. They are sometimes joined by members of other local clubs, who are always made most welcome. The net is not usually led by a nominated controller, but stations normally transmit cyclically in the chronological order in which they sign in. If any member wishes further occasions and frequencies to be added to the table, please let me know at [q.g.collier@btinternet.com](mailto:q.g.collier@btinternet.com).

BAND/FREQUENCY/MODE	DAY OF WEEK	START TIME (clock)
160m / 1905 kHz / LSB	Sunday	9.30 am
80m / 3710 kHz (+/- QRM) LSB	Monday	9.00 am
10m / 28.078 MHz / JS8	Wednesday	10.00 am
6m / 51.55 MHz / FM	Tuesday	8.00 pm
4m / 70.30 MHz / FM	Thursday	8.00 pm
2m / 144.6125 MHz / Digital Voice	Friday	7.30 pm
2m / 145.35 MHz / FM	Friday	8.00 pm

\* The Friday night Digital Voice net usually starts with D-star.

In addition to the regular Club Nets, several members monitor the local repeater channels, particularly GB3XP (145.6875MHz 82.5Hz CTCSS FM)

## THAT'S ALL FOLKS.....

That's all for this month. Just a reminder that I am always pleased to have inputs from the membership – the more you provide the broader the spread of subject matter and the less of my text you have to endure! And if you don't fancy doing a full item, a snippet or two for the "Here and There" section would be welcome.

**73, Quin G3WRR    Newsletter Editor**