GLOUCESTER AMATEUR RADIO & ELECTRONICS SOCIETY

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G2HX

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RAGCHEW

JANUARY 2021

From the Editor

Firstly, a very Happy New Year to all GARES members and I hope you were able to enjoy Christmas despite the unusual circumstances. I'm writing this the morning after our first club Zoom lecture ably presented by **Steve Shorey G3ZPS** who gave a fascinating talk entitled **'999 Emergency - Public Safety Communications Past, Present and Future'** For half an hour prior to the lecture, members were able to exchange New Year greetings and banter and it was brilliant to chat with **Tim G8PZD** direct from his hospital bed. I'm sure all members will join with me in wishing Tim good health for the coming year. Further Zoom talks are planned in the next few months and members will be notified directly with details. Many thanks to **James G8YYH** for enabling these Zoom meetings to be held.

As many of you will already know, **Mike M7THK** died on Christmas Day. Although a relatively new member, he had actively supported the various club nets, the Winter 2020/21 Challenge and latterly entered logs in the FMAC events. He will be sorely missed by many members.

Now to this month's "Ragchew"! **Tony G4HBV** writes about **"The Trawler Band"**. Located just above the Medium Wave band, many domestic radios during the 1950's covered this part of the radio spectrum, indeed it may well have been the trigger for many youngsters to explore the amateur bands, in particular 40 metres in the Short Wave band, and of course AM (Amplitude Modulation) was still the main phone mode in use.

Mike G6OTP describes the restoration of a **Regentone domestic radio** dating from 1947. In this month's article, he describes his progress to date.

Mike G4IZZ reviews the **RSGB 2020 HF Championships,** summarising the contributions made by club members. Many thanks to Mike and all those club members who have submitted entries to the various HF and VHF club-based contests.

Also in this issue is the final part of **Malcolm G6UGW's** review of the Radio Spectrum and this month he describes the 30 - 300 GHz Extremely High Frequency band.

In "**Vintage Column"** I describe a 1920's hand-driven coil winding machine which originally belonged to my Grandfather.

That's all for this month

73 Brian G4CIB

Contest Corner

As you will see later in this issue **Mike G4IZZ** has written a comprehensive review of the HF contests entered by Club members, so in this month's Contest Corner I will be summarising our VHF FMAC and UKAC 2020 results.

In the **432 MHz FMAC** the club came in **4th position** in the **Local Clubs table**, just missing out on an award certificate. Having said that, the **Tall Trees Contest Group** who came in 3rd beat us by a considerable margin, so we will need to encourage more club members to submit logs if we are to get into the top three! **Mike G4IZZ** headed the individual club results table, **Dave G4BCA** in 2nd place and **Brian G4CIB** in 3rd place. Logs were submitted by 10 members as follows:-

Les G0ULH, Mike G0UWU, Dave G4BCA, Brian G4CIB, Martin G4ENZ, Mike G4IZZ, Tony G8JAY, George M0HWT, Gary M0XAC, Mike M7THK (SK)

In the **144 MHz FMAC,** the club again came in **4th position,** with a very large gap between us and the **Tall Trees Contest Group** in 3rd. **Brian G4CIB** headed the individual club results table, **Mike G4IZZ 2nd and Dave G4BCA 3rd.** Logs were submitted by 9 members as follows:-

Les G0ULH, Dave G4BCA, Brian G4CIB, Martin G4ENZ, Mike G4IZZ, Tony G8JAY, George M0HWT, Gary M0XAC, Mike M7THK (SK)

In the **UKAC events,** the final result is still to be announced, and we are currently in **20th position.**

Starting with 50 MHz, the club came in at **17th** out of 34 Local Club entries. On 70 MHz we are in **16th position,** awaiting the December result. On 144 MHz GARES came in at **19th** out of 37 and on 432 MHz **16th** out of 35. In all 4 bands **Gary M0XAC** topped the GARES table and **Brian G4CIB** came in at 2nd place in all 4 bands (70 MHz to be confirmed). For the record the following submitted logs during 2020:-

Les G0ULH, Dave G4BCA, Brian G4CIB, Martin G4ENZ, Mike G4IZZ, Tony G8JAY, Barry M0HFY, Bob M0NQN, Gary M0XAC, Graham M0XGL.

On looking at the various band tables, a modest increase in our score would dramatically increase our overall position, so the usual plea - the more club members who enter, the better!

The Trawler Band
by Tony G4HBV

The international frequency allocations used to be for fixed/mobile stations between 1605 and 4000 kHz – the lower part of this band was known colloquially as the trawler band. It was used by coastal shipping before the advent and widespread use of the narrowband VHF marine band. During the 1960's, 70's and 1980's I listened often to the calling channel and emergency channel in this band. I never listened on the working frequencies of the coast stations (see below). Most of us amateurs of older generations usually were avid short-wave listeners before getting a licence – it was considered a sort of apprenticeship. In coastal areas, especially in fishing ports, many domestic receivers had a dedicated trawler band. Also, some domestic sets included a tropical broadcast band between 2300 and 2498 kHz. It was not illegal to listen to such services as long as you did not pass any information on to anyone else. In this country during that time the General Post Office controlled the radio frequency spectrum – and many of us remember them issuing licences and policing the air-waves of that era.

Let me explain a little about the band and the stations using it. There were numerous coast stations in this country and abroad. Even during the day you could often hear many of the British ones and as evening progressed continental ones would appear. I can remember hearing Lands End, Ilfracombe, North Foreland, Humber, Cullercoats, Stonehaven, Malin Head, Portpatrick, Niton (Isle of Wight) and Wick.

On the continent I can remember: Brest le Conquet, Lisboa, Arcachon, Scheveningen and Norddeich. AM was used and even a simple TRF regenerative set was sensitive enough. There was some interference in the band though: a navigation system called Loran and harmonics from television line time-base circuits. Eventually I built myself a superhet covering top band and 80 metres described in the third edition of the RSGB Handbook. Later I used it with a crystal controlled TX for some portable work on top band. The front end used OC44/OC45 transistors but it eventually died, whether of excessive RF or of transistor decay I never found out.

These coast stations had working frequencies in the band and there was also a calling frequency of 2182 kHz. The problem was that 2182 kHz was also designated the distress frequency and in such circumstances ships were to call on 2191 kHz. Sometimes distress traffic was hindered by ships calling a coast station on 2182 kHz to arrange a pilot or to pass some other routine message. I can remember hearing British coast stations trying to stop this by calling “keep off – distress'.

In the top band allocation of those days our amateur licences gave some working frequencies you had to avoid, 1855 kHz was one – Ilfracombe radio if I remember correctly. On Sunday mornings some of our coast stations would conduct tests with the local lifeboats but I could never hear the lifeboats. Ships did not use call signs, they used the name of the vessel.

I don't remember hearing many trawlers, their speech seemed heavily accented and full of obscenities. One word I do remember hearing a lot was “Gambio” which I assumed was Spanish from vessels in the Bay of Biscay.

To Be Continued ….

The Radio Spectrum by Malcolm G6UGW

Part 9 - Extremely High Frequency - EHF 30-300 Ghz

This represents a wavelength of 1cm - 1mm and is often referred to as the “Millimetric band”. Used for short-range military communications as many of its sub-bands as weakened by the atmosphere.

Many thanks to Malcolm for providing the information for this series. I know Malcolm is working on a submission for the “Ragchew” Test Equipment special in March - Ed

GARES members - 2020 HF Championship placings

By Mike G4IZZ

Thanks to a small, but keen bunch of club members who regularly represent the club in the world of contesting, GARES acquitted itself pretty well in the RSGB's league tables for 2020. In particular, the RSGB publish an HF Championship table at the end of each year which lists various contests which contribute to the overall table, and the placings of participants. From a total of 496 UK amateurs who entered one or more of the contests throughout 2020, the following were the results of the GARES members.

In 43rd place – **Bob M0NQN** who entered the AFS CW (10W); AFS DATA (10W); BERU (Open); RoLo CW and the 2nd 160m (unassisted), finishing with 2970 points.

In 55th place – **Martin G4ENZ** who entered the AFS CW (10W); AFS DATA (10W) and BERU (12 hours) (Note: Martin came 1st in the first two of those contests in the 10W sections), finishing with 2456 points.

In 86th place – **Mike G4IZZ** who entered the AFS CW (100W); BERU (12 hours); the Low Power Contest and RoLo CW, finishing with 1919 points.

In 236th place – **Gary M0XAC** who entered the AFS CW (400W); AFS PH (100W); the Low Power Contest and Club Calls (160m AFS), finishing with 615 points.

In 252nd place – **Brian G4CIB** who entered the Low Power Contest; Club Calls (160m AFS) and the 2nd 160m (unassisted), finishing with 563 points.

In 312th place – **Tony G4CMY** who entered the AFS CW (100W), finishing with 328 points.

In 399th place – **Les G0ULH** who entered the Club Calls (160m AFS), finishing with 163 points.

The first qualifying event in 2021 was the **AFS 80m-40m CW** contest on Saturday 2nd January, which saw some club members enter. It'll be interesting to see if the club can improve its standings at the end of 2021. If you'd like to get involved, there's plenty of 'contest variety' to choose from – and any of the above members to seek advice from, should you want it. So whether you prefer CW, or SSB, or DATA, (or all), just have a go, and help the club improve its ladder position – oh, and have some fun doing it.

If you'd like to learn more about the various HF contests (including those that are not part of the HF Championship Table) and what information needs to be exchanged, and when they take place, have a look at: https://www.rsgbcc.org/hf/

*Postscript from **Brian G4CIB***

As this edition was being prepared, the results for the **AFS 80m-40m CW** contest were published as follows:-

GARES "A" Team comprising of **Martin G4ENZ, Mike G4IZZ, Bob M0NQN** and **Tony G4CMY** came in at **11th place** and the **GARES "B" Team** comprising **Brian G4CIB** and **Gary M0XAC** in **44th place** out of a total of 61 entries.

The club is currently in **11th position** out of 67 entries in the **2020/21 AFS Super League Local Clubs table.**

Restoring a Domestic Valve Radio

By Mike G6OTP

About twenty years ago, I was working in Bristol and one lunchtime, went for a walk along Ashton Road and went mooching into ‘The Auction Rooms’, where one of the items for sale was a Regentone Radio. I didn’t bid for it then and there as I hadn’t got the time to wait but next day it was unsold so I bought it for the grand sum of £8-94 for which I still have the receipt. It was complete and undamaged but went into my loft to be dealt with later.

Twenty years later, I was browsing the internet and at www.radiomuseum.co.uk I found my radio. It turns out to model AW66 from 1947 and fortunately I was able to down load a clear circuit diagram with component values. It is a 3 wave-band superhet with the usual sockets for an extension speaker and a gramophone pickup.

As an aside, when I first started taking Practical Wireless in 1958, one of the things to build would have been a ‘five valve superhet’ with the usual valve line up of 6K8, 6K7, 6Q7 and 6V6. I never did build one. Hands up those who remember chassis bashing 16 SWG steel. By chance, I have that very thing now but of course with a Regentone coil pack. In days of old we would have used Denco or Repanco or perhaps Wearite.

After twenty years it was time to start doing something but where to start, the case or ‘the works’? One was not much good without the other but the case seemed the place to start. Off came the knobs and out came the chassis leaving the ‘mains energised’ ‘speaker. Off next came many years of grime and after a careful rub down with grade 0000 wire wool it polished up very nicely. (There was a bit more to it than that).

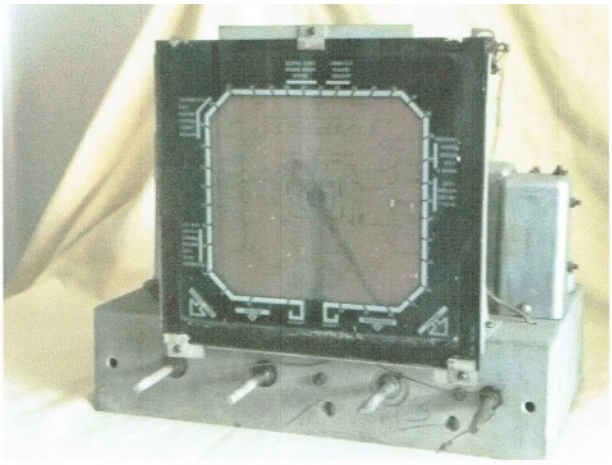
Time for a warning. Mains electricity may kill you. That’s not strong enough. Assume it WILL kill you so if you are not familiar with working with mains voltages, get sound advice first.

I removed the valves and gave them a bath in the sink to get rid of 70 years worth of grime and took them to Jim 2E0GKN who very kindly tested them for me and while the rectifier was dead the others were fine. Be very careful with valve top caps. I secure mine with super glue.

Deeper and deeper.

Next was the glass dial, also very grimy but fortunately painted ‘on the back’. Warm soapy water worked a treat and all was fine but I did remember to take a photo as the markings might easily have dissolved. The tuning drive was the next challenge. Not one but two spring loaded cords giving a compound drive from front panel knob to the pointer. Unfortunately, both were broken but I managed to figure them out. For those who have never encountered such things, dial drive cords were routed by sadistic gnomes so always take what photos and notes you can, otherwise you will regret it. A cunning plan was needed when replacing them as there was no way to tie knots with a spring pulling in the opposite direction.

There was also a great deal of blowing and brushing and hoovering and the speaker had to come out after all. The speaker grill cloth was still tight and undamaged but the cone was full of 70 years’ worth of dust. I cleaned the wave change switch and lubricated all the control spindles but there I must rest. I think I have overcome all the ‘show stoppers’ so far but I know there are many more to come.

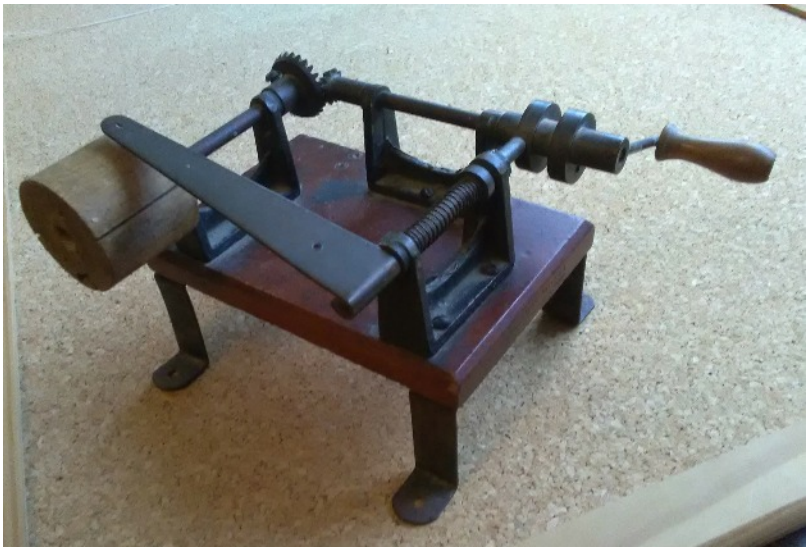


The cabinet is now re-assembled and is awaiting the chassis. The photos show the work so far.

Sufficient unto the day…

Vintage Column

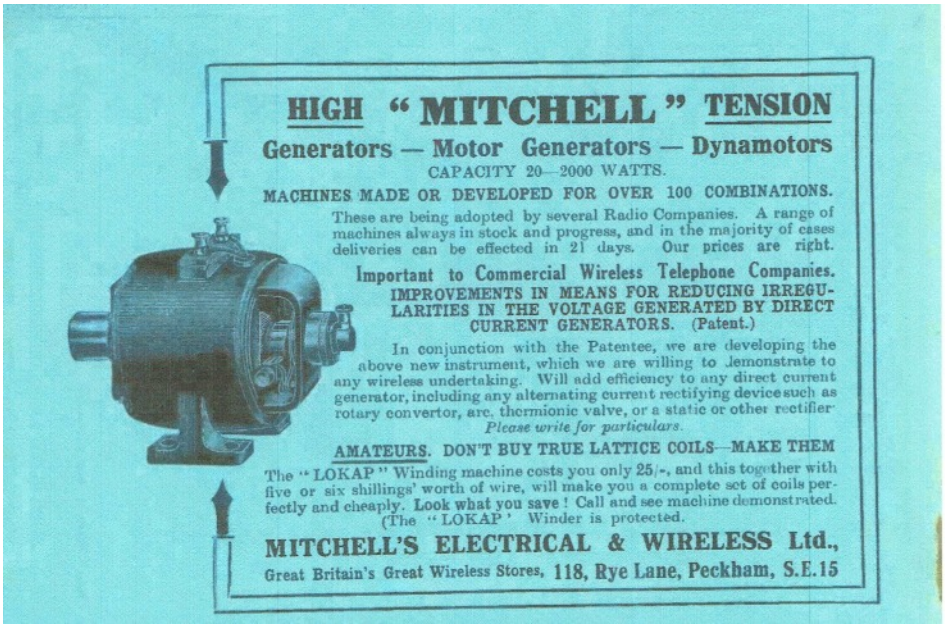
By Brian G4CIB



In my shack I have a small collection of vintage items which originally belonged to my Grandfather. As a lad he had become fascinated with “wireless” and encouraged by the Science master at the Sir Thomas Rich school, he began experimenting. The majority of his equipment was confiscated at the outbreak of WW1 and when he returned from France he began dabbling with radios. Among the items I have is this small, hand-driven coil winding machine. Engraved on the underside of the wooden baseplate is the following - “The Lokap Winder Regd No 066868/1022” Underneath this in large figures is the number 379

Searching on the internet I found a reference to a “Lokap Winder” in the June 30th 1923 copy of the “Wireless World and Radio Review”. Under the “Wireless Clubs Reports” section is a note that the Wolverhampton and District Wireless Society possessed one of the winders and it was available for loan by club members. Noting that this report was dated 1923, I concluded that the “10/22” on the underside of the winder is probably a date code for October 1922 and the large number 379 some sort of inventory number. Many years ago, in the mid to late 1970s we had a club station at the Chequers Bridge Leisure Centre (formerly known as the Drill Hall). An annual event at the Leisure Centre was a fete and the club put on a demonstration station and I made up a display cabinet of vintage wireless components, including this coil winder. Imagine my surprise when a little old lady came up to me and told me she had used one of these machines in a small factory in Gloucester in the 1920s but sadly I cannot recall the name of it. A further search on the internet uncovered this advert in the “Wireless World” for January 7th 1922 which seems to confirm my thoughts about the date code.

In this advert for Mitchell’s Electrical & Wireless Ltd, amateurs are encouraged to buy a “Lokap Winding Machine” to make “True Lattice Coils” rather than buying them!



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(The “LOKAP” Winder is protected.

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Great Britain's Great Wireless Stores, 118, Rye Lane, Peckham, S.E.15

In this advert for Mitchell’s Electrical & Wireless Ltd, amateurs are encouraged to buy a “Lokap Winding Machine” to make “True Lattice Coils” rather than buying them!

I have yet to try winding a coil on this machine, however I have found a suitable reel of enamel-coated copper wire. All I need now is to fabricate a suitable coil former.

In the meantime, if you have some vintage components or other related items you feel may be of interest to GARES members, email me at g4cib@outlook.com