



RAGCHEW

FEBRUARY 2021

From the Editor

Another month has flown by and already it's noticeably lighter in the mornings and evenings. Many thanks to **Barry M0HFY** whose knowledge of Spanish is much better than mine and has pointed out that the word "gambio" which I typed in **Tony G4HBV's "Trawler Band"** article last month should have read "cambio" - the Spanish word for "change" or, as radio operators would say in English "over". In this month's "Ragchew", Tony relates some incidents where amateurs were called by coast stations, sometimes with amusing results, along with some personal memories of calls he heard on 2182 KHz.

Also this month, **Barry M0HFY** reviews the **Wellbrook Loop Antenna** as he tries to overcome the high noise level at his QTH which has severely restricted his receive capability on the HF bands.

Gary M0XAC has been monitoring the **International Space Station** and has successfully downloaded some **SSTV (Slow Scan TV)** images.

Mike G4IZZ reports on the recent **UKEI DX CW** contest in which 5 club members took part, also a first-time entry in the contest by **George M0HWT** has prompted him to share his experience with club members. Also from **Mike G4IZZ** is an article explaining how **SCP (Super Check Partial)** works.

In **Contest Corner** I complete the review of the 2020 UKAC results and update members on the 2021 results to date.

Dave G4BCA updates us with **Local Repeater News**, also the **Winter Challenge 2020-21 Certificate Winners**.

I know that many members have an interest in old radios and in this month's **Vintage Column** I take a close look at a **PE5DE valve** in my collection.

Our club nets, virtual coffee mornings and afternoon tea gatherings cover a wide range of subjects, not necessarily amateur radio related. Continuing this theme in "Ragchew", **"Before Amateur Radio"** returns with an anonymous contribution.

Looking ahead, I'm planning a **"Ragchew - Test Equipment Special"** for March. If you have a favourite piece of test equipment that you have either purchased or built and would like to share the details with other members, email me at **g4cib@outlook.com**

That's all for this month

Contest Corner

The final UKAC 2020 results have been published and in the Local Clubs table, GARES maintained their 20th position in the table.

To date in 2021, we are in **17th position overall in the UKAC Local Clubs table**, with logs submitted by **Les G0ULH, Dave G4BCA, Brian G4CIB, Barry M0HFY, Gary M0XAC and Graham M0XGL**, along with new participant **Graham G8DLW** who clocked up a creditable 15 qsos with 2.5 watts in the February 2m UKAC.

In the January **AFS 80m-40m Datamode contest**, the club came in at **9th position** and in the **AFS 80m-40m Phone contest 24th** with logs submitted by **Martin G4ENZ, Brian G4CIB, Mike G4IZZ, Bob M0NQN and Gary M0XAC**.

Conditions for the February **80m Club Championship SSB** contest were not good but was supported by, I think for the first time, **Penny G0NVP** (who clocked up a creditable 46 qsos using 10 watts), along with **Mike G4IZZ, Gary M0XAC and Brian G4CIB**.

Winter Challenge 2020-21 Certificate Winners

by Dave G4BCA

The following have been awarded certificates for the Winter Challenge. The certificates will be distributed in due course. Many thanks to all that took part:

100W CW Section: 1st Mike Eggleton G4IZZ
2nd Tony Mann G4CMY

100W SSB Section: 1st Gary Dean M0XAC
2nd Mike Claridge G0UWU
3rd Graham Lund M0XGL

100W Conventional Data Section:
1st George Mutch M0HWT
2nd Barry Eames M0HFY

100W Weak Signal Section:
1st Steve Cole G7ITD
2nd Ron Bee G3SZS

10W CW Section: 1st Martin Church G4ENZ
2nd Brian Woodcock G4CIB

10W SSB Section: 1st Rob Knight G7CSM
2nd Mike Crossman M7THK (SK)

10W Conventional Data Section:
1st Bob Townsend M0NQN

10W Weak Signal Section:
1st Dave Tunnicliffe G4BCA

The Trawler Band (Part 2)

by Tony G4HBV

To clarify a point I made in Part 1, on the lower frequencies of the band: 1605-2498 kHz, coast stations and vessels used AM speech and did not use call signs. At the higher frequencies up to 3900 kHz, three-letter call signs and CW were used. I can remember hearing a strong G3... calling CQ on the 80 metre CW band and being told to QSY by a coast station. Dave, then GW4BCA, operating from North Wales with a Codar AT5 transmitter on Top Band, told me he was instructed to QSY by Lands End Radio once and being quite impressed by the performance of his set-up.

I can't remember where I read this, but there was an incident involving a G3... working Top Band with a kite antenna on Blackpool sands. A coast station called him to inform him that he was to be reported to the Area Radio Surveyor as his signal was so strong he must be using above the maximum power allowed. His reply: "I am using 10 watts only and I am the Area Radio Surveyor!"

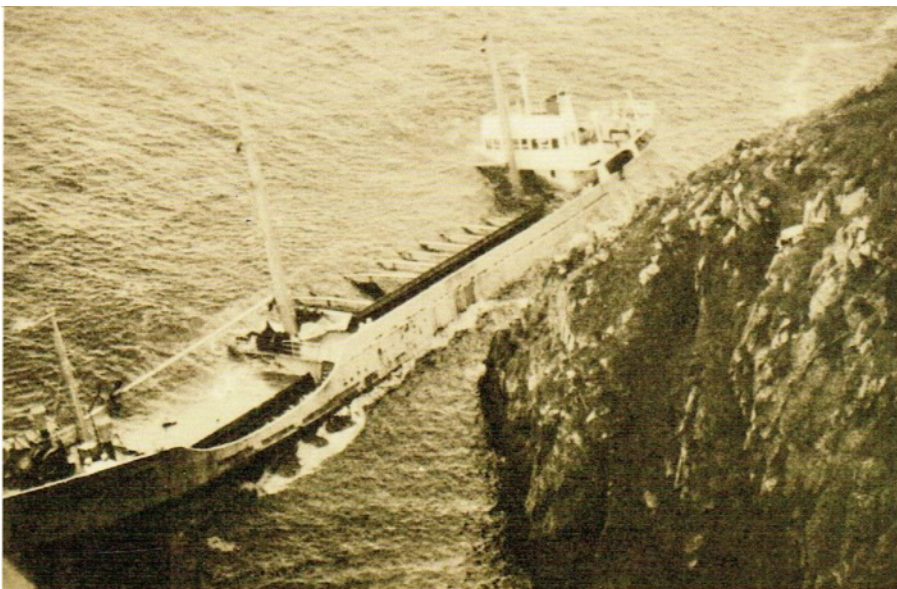
A couple of memorable transmissions I remember; one morning, it must have been a weekend when I was listening on 2182 kHz early morning before getting up, I heard Cape Cod radio calling, the AM signal coming through quite clearly. It was also a Saturday morning, 6th November, 1980 when I heard the Mayday call from the MV Kaaksburg in the Bristol Channel off Lundy Island. I think she had struck rocks and was sinking. If I remember correctly, Ilfracombe Radio handled the traffic and the crew all got away safely in boats.

Navigation was not so accurate in those days, although one of the radio navigation systems, Loran, was centred in Top Band. Ships could be heard passing their TR's to coast stations: this was the ship's name, distance and bearing in latitude and longitude and next port of call. A missed TR could sometimes indicate distress.

In January 1953 what became known as "the East Coast Floods" happened. Humber Radio was put out of action and amateurs from Grimsby and Hull dealt with distress calls from shipping. I believe they were sent disciplinary warnings from the General Post Office afterwards. The outcome was the setting up of the Radio Amateur Emergency Network.

As I mentioned before, quite simple regenerative TRF sets could be made up to cover the band and I remember once spending most of the day on Brean Down listening to traffic on 2182 kHz from ships in the Bristol Channel, including the Breaksea Lightship.

Even radio-equipped vessels sometimes caused mysteries – the motor vessel 'Joyita' was found abandoned in the Pacific with all life-crafts gone. The transmitter on board had been tuned to 2182 kHz, but would not have worked as the antenna lead-in was found to be broken.



MV *Kaaksburg* aground on Lundy just below Tibbetts Point. The ship was en-route from Sharpness to Par and ran into heavy seas near Lundy. The crew were able to abandon ship and taken to the mainland by a rescue helicopter.

Photo - Simon Dell collection.

SSTV (Slow Scan TV) from the International Space Station

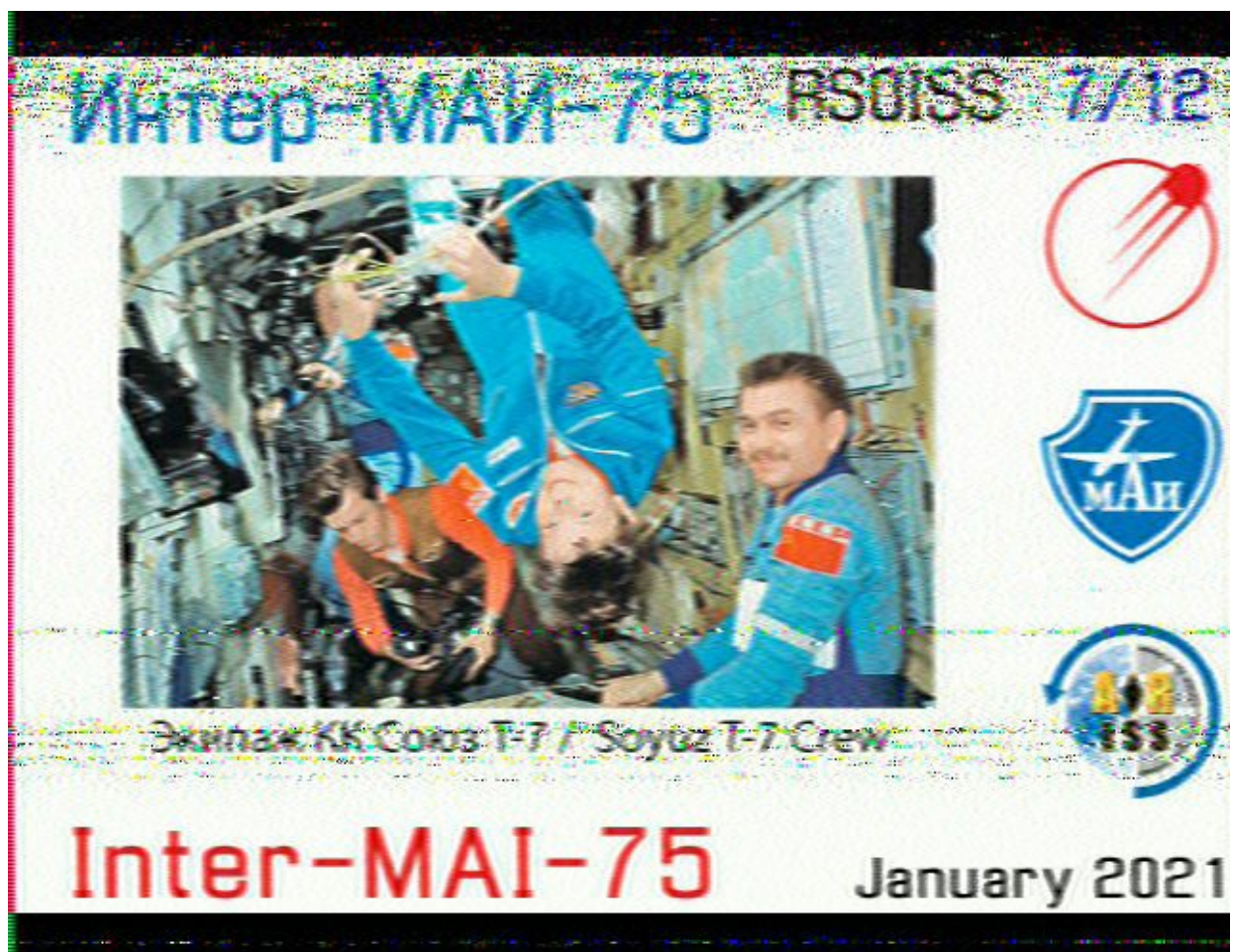
by Gary M0XAC

I remembered that towards the end of January the Russian crew were going to do some SSTV from the ISS, primarily for Russian reception so I thought I would give it a go as the orbits weren't too far away from the UK and as I was using my co-linear aerial, the orbit would need to be low anyway.

I tried on Thursday 28th January and was surprised to receive two pictures from each of two orbits. They were a bit fuzzy but discernible so it was already a success as far as I was concerned.

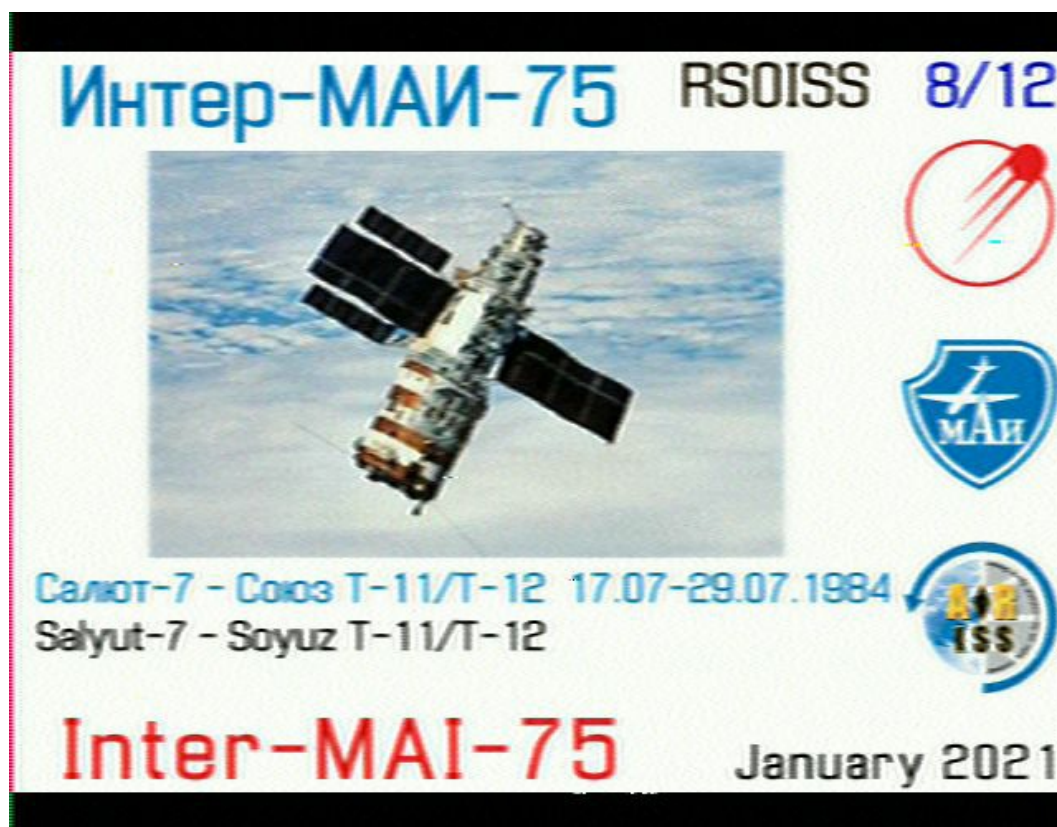
I tried again on the next day, as the second orbit was a bit higher and the second orbit brought my best pictures.

The first was received at 17.01 and the second at 17.05 both on 29th January 2021.



The frequency used is 145.800 MHz FM and I needed to download MMSSTV to decode the pictures which used PD 120, an SSTV mode. I used my Icom 7100 which is already connected to my PC via usb so the sound goes straight into the program.

You need to keep an eye on various news outlets for when the ISS is transmitting SSTV, amongst other things but these are easily found on the web. I learnt of it by way of Southgate Amateur Radio News, an Amateur Radio news outlet which you can subscribe to and receive via email.



I tracked the ISS by using an online tracker so I knew roughly when it would be nearby but you can obviously just leave things running and view the results later but then you do miss the thrill of seeing the signals come in live!

Thanks Gary for an interesting article which I hope will inspire other members to track the ISS -Ed

AN UPDATE ON LOCAL REPEATERS

by Dave G4BCA

Analogue Repeaters

The two long-established analogue repeaters on Chosen Hill, Churchdown continue to operate and are run by the Gloucestershire Repeater Group (<https://www.grg.org.uk>). These are GB3CG (output frequency 145.725 MHz) and GB3GH (output frequency 433.125MHz).

There are two 70cm analogue repeaters planned for the area, the first being GB3RC on Cleeve Hill. This repeater is being established by a group of members from the Cheltenham club (<https://gb7rc.co.uk>). A license has been obtained, the callsign will be GB3RC with an output frequency of 430.8625 MHz.

The second (also licensed) is GB3SG in Stroud. This repeater will be on 430.9125 MHz with a wide shift of +7.6 MHz (i.e. repeater Rx frequency of 438.5125 MHz). Location is unknown but it's locator will be IO81VR.

Digital Repeaters

The Salop & Borders DMR Cluster (<https://salop-repeater.weebly.com>) have established a network of DMR repeaters which (locally) includes GB7CC on Cleeve Common and GB7BJ at Malvern. There are plans to extend this network to the south by siting a new repeater at Kings Stanley, near Stroud (GB7KS).

The same group of Cheltenham club members as mentioned above has established a D* repeater at an industrial estate off the Gloucester Road in Cheltenham. The callsign is GB7RC and the repeater is operational on 430.2625 MHz (output frequency).

Further Information

To check the status of the planned repeaters, go to <https://ukrepeater.net> and search the relevant callsign.

UKEI DX CW Contest

By Mike G4IZZ

Over the weekend of 23rd/24th January, a few club members participated in the UKEI DX (CW) contest. There were several options available for people to enter, including either a 12-hour segment, or the full 24-hours. There was the usual assisted or unassisted categories (the difference being that those entering as 'assisted' benefit from having access, via the Internet, of skimmer reports showing stations calling 'CQ'). To add to these options, entrants had to decide whether to use High Power (over 100W); Low Power (up to 100W), and QRP (5W or less). It made a nice change that the UK/EI stations were 'sought after', as they were 'multiplier' stations, and had to send a two-letter code to identify their geographical area (e.g. GL = Gloucester). To encourage UK/EI multipliers to be available overnight, all QSOs made by UK/EI stations only between the hours of 0100z and 0459z were worth double points. Some of us actually did that, either fully or partially. For the first time, the UK/EI organisers invited team entries – either a team of two, or three. As there were five of us, our teams had to be unequal (one more club member would have been most welcome).

So, it all began at 12 noon on the Saturday, and each of us pursued his own strategy, either worked out beforehand, or on a 'hope for the best' basis. (*Mine is always a hope for the best strategy! - Ed*) Those taking part were: G4ENZ (Martin), G4IZZ (Mike), G4CIB (Brian), G4CMY (Tony) and M0HWT (George). Only G4ENZ entered as 'assisted', the others as 'unassisted'. Mike, Tony and George were all in the low power section, and Martin and Brian were QRP. Only George entered the 24-hour section, the remainder were in for a (up to) 12-hour stint.

The results were declared a few days after the event, and consisted of an overall points score, plus various tables showing the split into entered groups. Basically, the four main headings were Everybody, UK/EI entrants; European entrants, and DX entrants.

How we all fared:

	G4ENZ	G4IZZ	G4CIB	G4CMY	M0HWT
Overall posn (out of 1080)	98 th	117 th	561 st	569 th	1074 th
Power section	QRP (<5w)	Low Power (<100w)	QRP (<5w)	Low Power (<100w)	Low Power (<100w)
Overall posn in power section	1 st (out of 74)	32 nd (out of 618)	25 th (out of 74)	276 th (out of 618)	600 th (out of 618)
Posn in solely UK/EI (out of 137)	38 th	41 st	97 th	99 th	135 th
Posn in assisted or unassisted	QRP (12 hours) Assisted 1 st (4)	LP (12 hours) Unassisted 1 st (32)	QRP (12 hours) Unassisted 3 rd (5)	LP (12 hours) Unassisted 19 th (32)	LP (24 hours) Unassisted 11 th (12)

George is the least experienced of the 'CW contesting' members, and his thoughts of this, his first time in a CW contest, are elsewhere in this issue of "Ragchew".

Lastly – how did the teams do? There was a total of 47 teams that entered, and our placings were: Martin, Mike and Tony, in GARES 1, came 11th and Brian and George, in GARES 2, came 39th, but of course, with only two of them.

The sharp eyed amongst you may have noticed that, in the overall placings, Brian was slightly ahead of Tony, so would normally have been in team 1. BUT – we had to declare our teams soon after the contest had finished, and at that time, the provisional scores had Tony slightly ahead of Brian. It matters not – we all agreed afterward it had been good fun, and good practice for similar future events. The RSGB 80m CW Club Championships will be coming up very soon.

Anyone else fancy it? You'd be most welcome.

UKEI DX CW Contest Using FLDIGI

By George M0HWT

The UKEI DX CW was my first attempt in a contest using FLDIGI in the CW configuration. At the conclusion of the contest, I used FLDIGI to produce a log of the activity.

Using FLDIGI in the contest mode

Prior to the contest, I compiled 4 macros with the CW exchanges I would need for a successful QSO with fellow contestants. Before commencing I set up the necessary exchanges namely UK/EI District Code (GL) for Gloucester in the exchange box, and the log counter to start at 001. Once the contest started and I made a successful QSO with a fellow participant, the only details I needed to enter manually in the boxes to produce my log, were his details such as:-

Call sign, QSO number and District code (only if UK or EI station)

At the end of the contest all I needed to do was select the Cabrillo log option. I could then produce, check and correct the Cabrillo log for any mistakes or omissions before submitting to the UKEI website.

After the contest I realised that I needed to add 2 Macros, an increment and a decrement, to give me control of my log number if necessary, without affecting the log details.

I think I may possibly be the only participating club contesting member to try FLDIGI in the CW configuration. The only minor (rarely used) option is with FLDIGI in the CW mode of operation and the FT991A transceiver set to DATA USB, the morse key option is not available for hand sent morse.

I am still undecided whether to change to the popular and versatile N1MM logger. However, I do use N1MM for RSGB FM contest logging and find it very good.

Super Check Partial

by Mike G4IZZ

There are testers out there who can remember every call they have ever worked. For the rest of us, it is all we can do to remember who we worked in the contest just hours before! The Super Check Partial database consists of a list of call signs provided over recent months to the database maintainer, Stu K6TU, by active testers around the world. Once you've downloaded the database, usually via a command in your logging software, it allows the logging program to automatically display a 'suggested' call sign in a side window should you only hear part of the call. For N1MM that's the 'Check' window, and for Skookum Logger it's the 'matching pane'; other loggers no doubt have their own similar viewers. Once at least 3 characters of a call sign have been typed, you're prompted with the likely versions of what the call should be. Note that the partial nature of the match means that, for example, entering G0D will typically match both with calls starting G0D (e.g. G0DWV) and those including the pattern, such as DG0DRF. If you hear only part of a call sign after calling CQ, a glance at the SCP will often give a good hint of what to suggest to the station for confirmation along with his exchange, rather than requiring several more overs each to get the call correct. Experienced testers will typically type any partial call they hear and pursue it, rather than simply wait and call again whilst entering nothing in the logger. The whole call sign can always be easily selected and over-typed should an initial partial hunch have been an error. Used correctly, it can help you more quickly pull a call out of the QRM. After a contest, you can, should you wish, contribute your logs to Stu using the appropriate option on your logging program. This simply opens an e-mail with your Cabrillo file attached, and you always get an automated reply confirm reception of your log. It's a good idea to regularly force an update of the latest SCP database, again via whatever method your particular logging program uses. Summary – SCP, if used wrongly, e.g. to guess calls, can result in stupid mistakes and score reductions. But used correctly, it can enhance your testing experience and resultant score. Caveat emptor!

Using the Wellbrook Loop as a Receiving Antenna

By Barry MOHFY

Living in a housing estate with only a small garden has left me with few options as regards an HF antenna. Ever since obtaining my foundation licence back in 2011 I have relied on an inverted L to do the job. This has evolved over the years and now consists of a 12m Spiderpole with about 17m of wire attached to a cord and stretched over the apex of the house. Along with quarter wave raised radials, a 9:1 unun and a remote tuner I can, more by luck than judgement, operate on all bands 6m – 160m with equal inefficiency.

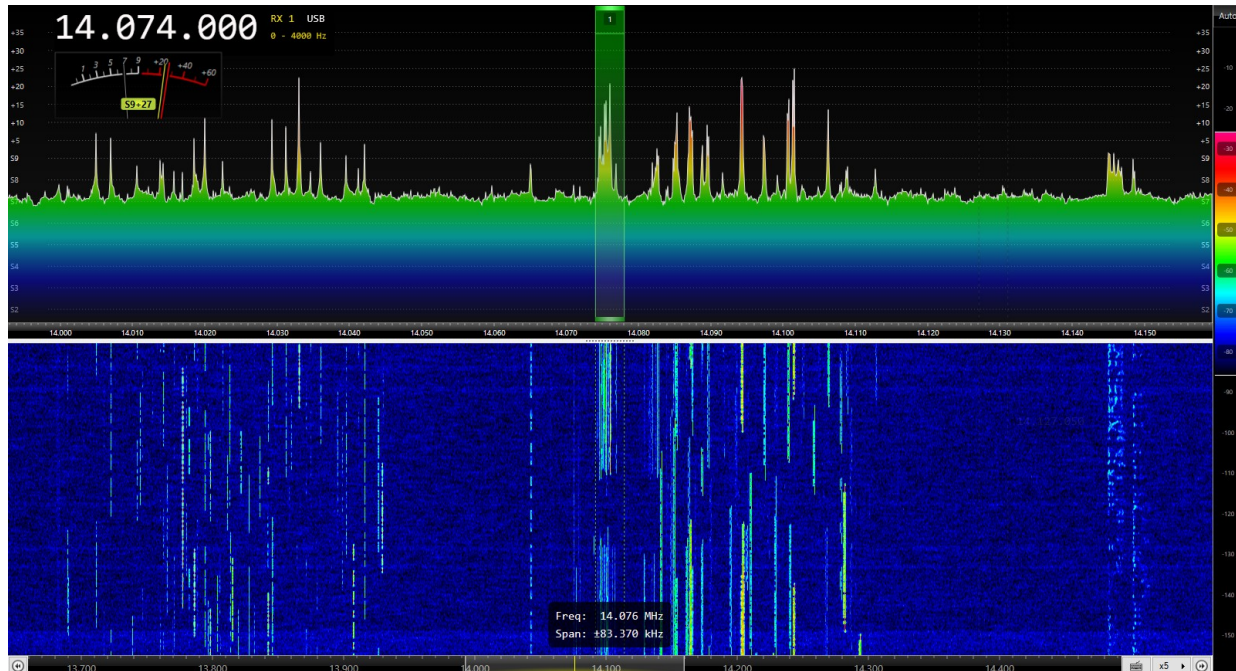
Like so many others over recent years I have been suffering with increased noise levels and because of this along with the solar minimum, I have found myself operating mainly with weak signal data modes on HF with very little SSB operation. I thought it was time to experiment a little to see if improvements could be made.

I spent some time trying different antenna arrangements but found very little improvement until I resurrected an old magnetic loop. I was surprised to find by how much the noise levels were reduced with only a minimal change in received signal levels. However, whilst being good on receive it wasn't so good on transmit, I was receiving poor signal reports using this loop compared to the inverted L. Also, I didn't really want the aggravation of having to retune the loop each time I changed frequency. So, the idea of separate antennas for receive and transmit was born.

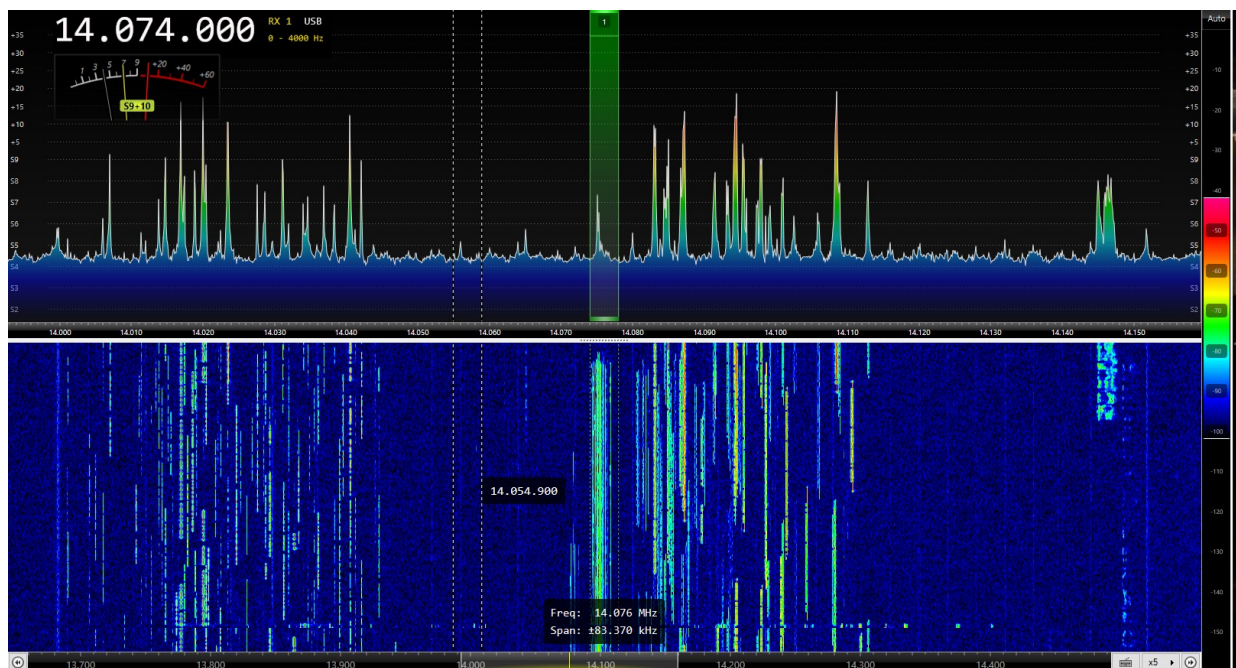


As a late Christmas present to myself I ordered a Wellbrook ALA1530LN loop antenna. It is receive only, 50kHz – 30MHz, and consists of an aluminium loop, 1m in diameter, attached to a low noise amplifier powered by 12v from a bias-T. It is supplied with a 12v wall wart, but can be powered from a standard 13.8v supply. It can be mounted at ground level but I have mine mounted on a 4' pole.

As an example I have included 2 screenshots below taken from SDR Console on 20m during CW & RTTY contests. You can see on the spectrum display that the noise level is reduced from S7 to below S5 when switching from the inverted L to the loop with minimal effect on signal levels. The scales on the spectrum display are the same for each screenshot.



20m activity using the inverted L antenna



20m activity using the Wellbrook loop

Obviously everyone's circumstances will be different but I have been very pleased with the results I have seen so far, mainly on 20m, 40m and 80m, but I am optimistic of also seeing some improvement on the higher bands. Hopefully this will enable me to take advantage of the better conditions when they finally arrive.

Vintage Column

By Brian G4CIB

I mentioned in last month's Vintage Column that many of the old wireless components in my possession originally belonged to my grandfather. He, along with the Science Master of the Central Technical School in Gloucester and who ran the lunch-time Science Club, encouraged me to make my first crystal set. Not wishing to play around with lumps of crystal and cats whiskers, I must confess to spending some of my pocket money on a germanium diode from Ted Bird's emporium in Barton Street. Having wound a suitable coil on a toilet-roll cardboard former, connected it up to a tuning condenser, aerial, earth and headphones I can still recall the amazement at actually hearing a signal - the BBC Light Programme on 1500m Long Wave transmitted from Droitwich and on Medium Wave the regional Home Service stations notably the Midland Home Service also from Droitwich and the Welsh Home service which I believe was transmitted from Washford in Somerset. It was customary when the BBC closed down both its radio and TV stations for the night that the National Anthem was played and when the Welsh Home Service closed down the listener was treated to a lusty rendition of the Welsh National anthem "Hen Wlad Fy Nhadau" - Old Land of my Fathers. I soon wanted to progress and my grandfather gave me a box of valves. The problem was how to power a valve set. Well the solution turned out to be easy. My grandparents also owned a little Ever Ready "Sky Baby" portable valve radio. This was powered by a combined HT/LT (90v/1.5v) battery. The 1.5v powered the filaments of the indirectly heated valves and typically the 1.5v would be drained of all capacity before the 90v HT, so they would pass on to me the "dead" battery - which still had enough HT capacity to enable me to experiment with a valve. It was easy to get hold of a separate 1.5v battery to power the filament. My first valve set used the **PV5DE** valve (pictured here) in a very simple circuit, the valve effectively replacing the germanium diode detector.

The valve carries the BBC logo surrounded by the wording "Type Approved by the Postmaster General". From the website "The Dawn of Wireless in the UK" which are extracts taken from the book "The Setmakers" by Keith Geddes and Gordon Bussey it seems that three BBC stamps were used in the early days of broadcasting. The one on my valve which features both BBC and Post Master General was used from 1st November 1922 until September 1924. All sets had to be submitted to the Postmaster General for 'Type Approval' and if granted the sealed pattern set had to be maintained without alteration by the set manufacturer.

By the late 1950s, transistors were becoming available, and once again Ted Bird relieved me of more pocket money supplying "green/yellow spot" (RF) and "red spot" (AF) transistors. I think these were actually out-of-spec rejects of Mullard OC44/45 and OC72 devices. Suitable, however, for making simple radio sets, and of course no HT battery required.



Before Amateur Radio

It must have been about 1953 and we were on a coach bound for Teignmouth for our annual holiday. Coach travel, indeed any road travel in that pre-motorway era was a long drawn out affair. I seem to recall that coaches and trucks carried 30 mph plates - their maximum allowable speed. A journey from the famous coach station at Cheltenham to Devon could take the best part of 8 hours with many stops followed by the traditional traffic-jam around the notorious Exeter by-pass. So it must have been late afternoon when our coach drifted down towards the sea-front at Dawlish, the location of the railway station. Suddenly the magnificent sight of a green, highly polished locomotive No 1021 "County of Montgomery" pulling a rake of coaches swept into the station. I was transfixed. From that day on I became obsessed with train-spotting.



Castle Class 5004 Llanstephan Castle on a down express at Dawlish in the early 1950s

Photo - P.W.Gray/COLOUR-RAIL

My pocket money of 1 shilling a week had to be carefully disposed of - 2d (tuppence) worth of sweets purchased on the way to school, the Beano comic 2d a week, Meccano Magazine 1/3 (one shilling and thrupence) monthly. The small surplus was carefully hoarded until I could buy an Ian Allan ABC book for 2 shillings, my first one listing all the Western region locomotives. This was followed by the Midland region book, and when in 1955 we went to Bournemouth for a holiday, again by coach, a Southern region ABC. I would have a notebook with me at all times and note down the number of any locomotive I saw. Then at home, I would carefully underline the numbers I had spotted in the appropriate ABC book. In 1960, when I had managed to amass the small fortune of ten shillings and sixpence I purchased what was called a Combined volume covering the whole of the British Railways fleet. I still have all my ABC books. It was a family tradition that during half-term holidays my mother and grandmother would go for a day out shopping in either Bristol or Birmingham. This was a golden opportunity for me to indulge in my passion! We would catch the train from Gloucester Eastgate and arriving at the destination I would be left on the station to be picked up later in the afternoon to go for a slap-up meal (actually it was always fish and chips) in one of the big department stores. Would leaving a 10 year old child on a big railway station to look after themselves today be acceptable? I mentioned this once to my mother and she laughed and told me that when I was one year old, we went to Torquay for a holiday. Just after the war a lot of surplus ex-Navy launches were sold off and used for speedboat rides at seaside resorts. By all accounts my Mum and Dad wanted to have a ride in the speedboat so they left me in the pushchair in the care of a lady who just happened to be sitting nearby! A different era indeed!

I still have an interest in railways and although I have huge admiration for all the work done by volunteers at the numerous preserved railways, to my way of thinking it can be a bit of "rose-tinted nostalgia" A few years ago I was sat on a bench in Tewkesbury and an old chap came and sat by me. It turns out he had been a fireman in BR days. As he said, it was a tough, dangerous, unglamorous job, with atrocious working conditions where you were lucky to survive into retirement, and if you did, life expectancy was not good. When I mentioned the local preserved railway at Toddington his comment was a dismissive "They're only playing at trains". I'm glad I was around to see the real days of the steam train.