



RAGCHEW

DECEMBER 2020



From the Chairman

Who could have predicted the events of 2020 back in January? If someone had said to me back then that come March, we might not meet again at the school for a year, then I'd have thought they were crazy. Well, with Christmas approaching here we are with the prospect of that actually happening. Fortunately, we are very lucky with our hobby that the one thing the virus has not taken away from us is the ability to communicate by radio.

Several organisations have been holding meetings using online platforms such as Zoom, and we will be trying this out in January with our first online lecture. Let's hope that this will be successful, but also that we won't have to use this method for too long. I'm sure you will agree that it will be much better when we can resume the 'proper' face-to-face meetings that our members enjoy so much.

At this time, I'd like to thank all the members of the club (and the committee, of course), who have helped to keep the club alive during the pandemic. Despite the lack of meetings at the school, there has still been quite a lot to organise. This includes a get-together at Crickley Hill on August Bank Holiday Monday, the Practical Wireless 70 MHz contest, Winter Challenge and not forgetting the reports for a very much reduced AGM.

I look forward to seeing you again as soon as we can. Until then, I'd like to wish everyone a Merry Christmas and a Happy New Year.

Best 73 and Stay Safe,

Dave Tunnicliffe, G4BCA - GARES Chairman

Contest News

A full report of the club's 2020 contest news will appear in the next issue of "Ragchew"

The Editor wishes
A Happy Christmas
and
A Peaceful and Prosperous
New Year to all GARES Members
and their families

Members News

Ray G1NVS XYL Margaret has recently had an operation and we send our best wishes to her for a speedy recovery.

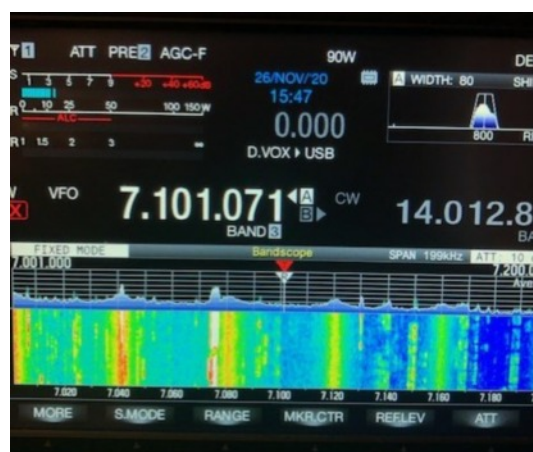
Congratulation to **James** on acquiring his new call sign **G8YYH**. He also reports that the **Cardiff University Amateur Radio Society** recently held a moon-bounce event over Zoom. Their chairman, **Derek MW0LNA** had previously worked closely with the Stanford University Amateur Radio Society, and was given a few minutes of transmit time on one of their 13cm dishes to carry out an SSB test. They then received the signal on a similar dish a few miles away. These are the recordings of the spectrum when we received the signal, and they can be put into SDR software like GQRX and demodulated.

https://www.dropbox.com/s/tex8pcixzjhu14f/2020-12-05-19_02_29.mp3?dl=0

<https://www.dropbox.com/s/ldv6pxra04mc2zt/EME%20Cardiff%20Uni.mp3?dl=0>

Tony G4CMY reports that he was inspired by the **VLF Converter** articles by **Richard M0HNK** and intrigued by the video showing the **VLF station SAQ in Grimeton, Sweden**. He has bought a VLF converter kit from Spectrum Communications, with a view to listening for their next scheduled CW transmission on Christmas Eve. It converts 3 kHz - 300 kHz up to 4 MHz (i.e. you tune 4,003 MHz - 4.300 MHz). It has a high impedance antenna input and plenty of gain to compensate for the extremely small antenna compared to the wavelength and seems to work very well although he has not had much chance to listen around yet. The Grimeton transmitter is 100 years old and generates 200 kW of RF mechanically at 17.2 kHz.

Mike G4IZZ has been suffering noise on the 40m band - here's the display on his rig. So far the source has not been traced.



Members News

During the recent lockdown, **Anne 2E1GKY** has finally managed to acquire a shed and is looking forward to operating from it when the weather warms up next year and reports "Before we moved to our present address in Up Hatherley, I had a very nice 8' by 8' summer house with verandah and being equipped with mains power, I was able to operate from it using a dual band Watson antenna. Sadly we had to leave the summer house behind when we moved, so it was just a case of dismantling the antenna which was re-erected on a 16' pole by **GP Aerials** on the back of our bungalow.

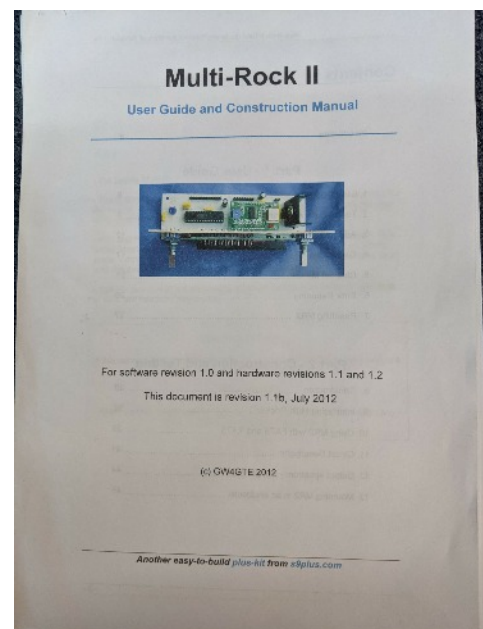


As the garden here is a lot smaller, and Sydney's greenhouse and garden frames had been installed, there was no allocated space for me! After waiting patiently for seven years, space was finally cleared for a 6' by 4' pent-roofed shed which was ordered from Waltons of Newark and arrived on 25th November. I arranged for an installer to assemble it and am now looking forward to using a portable antenna fixed to my tripod support adjacent to the shed. As at present there is no heating or lighting, I'm planning to use my heavy-duty battery to power the various rigs I plan to use"

Eighteen months ago **George G7GQC** purchased a complete but grubby 1970's vintage low-band **Pye Westminster transceiver** with the intention of re-crystalling it for 4m FM. When George discovered the cost of custom-made crystals, a rethink was needed!

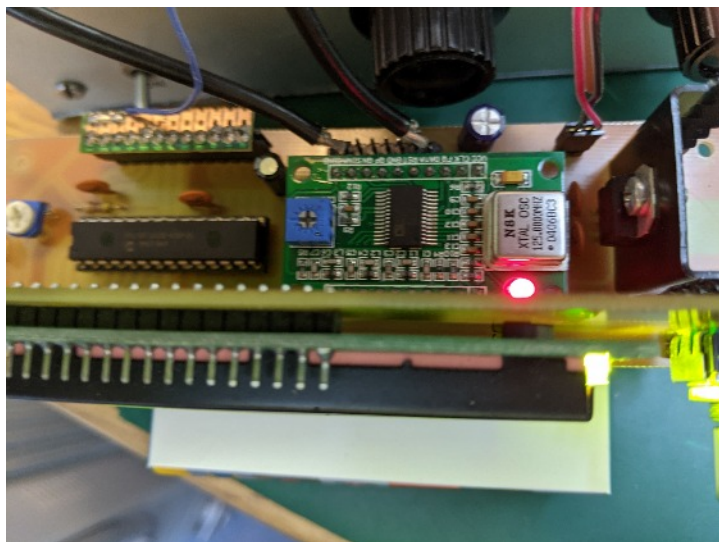
"On a wet Saturday afternoon Jenny cleaned up the radio very successfully. This is the fully transistorised unit, earlier and higher powered PYE radios of that era actually had a valve RF PA arrangement, with a crude electromechanical inverter to give the HT. The intention was to convert it for use on the 4m amateur band, and as this radio covers 68-88 MHz, it's just a case of obtaining crystals. That turned out to be a problem – Quartslab are able to supply them cut to specific frequencies, but that is expensive, at getting on for £30 all in per crystal, and two are required for each channel, so a different approach was required. The other problem is the TX crystals are in the 2.9 MHz range (yes a lot of multiplying stages are used) but the RX crystals are in the 29 MHz range. (who's dumb idea was that) – so this presented a challenge.

Some web surfing and I stumbled on the "Multirock II" kit from S9plus.com – this uses a PIC micro-controller, a DDS synthesiser module, and a backlit LCD display. The software allows the programming of display offsets, and a plethora of other things. It fitted the bill (well sort of as there is only one output). More Googling revealed the spec of the high speed 74HC4017 version of the ubiquitous 4017 decade counter would operate at 29MHz easily. One of these kits was ordered along with a couple of 74HC4017's, and a small Veroboard module was constructed, incorporating the chip configured for divide by 10, and a 7805 regulator with the usual capacitors. A small BT type DPDT relay (with protection diode) was connected to the PTT line, powering the 74HC4017 only in TX mode. The Multirock II has the option of a square or sinewave output, and the square wave output at 5V was just the ticket for driving the divider

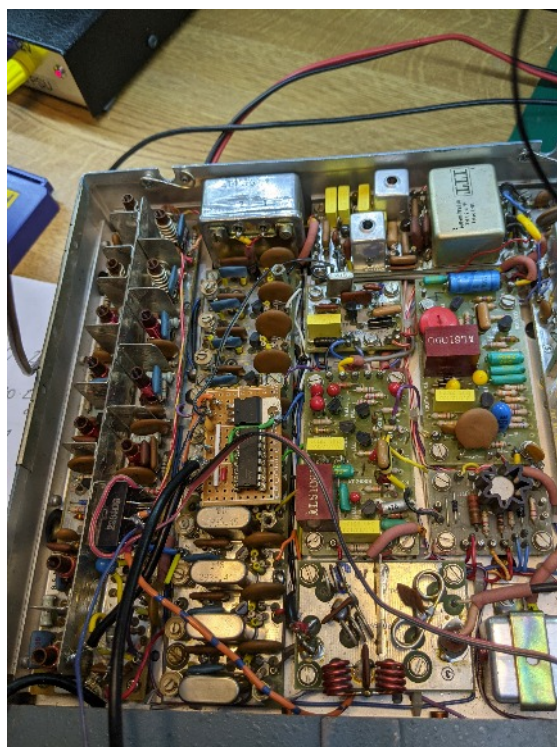


However it turned out the output would not drive the multiplier chain, so a 2N2222 NPN transistor was used as a buffer. The sine wave output was used to drive the RX multiplier chain, again with a 2N2222 transistor.

Something of a learning curve was required in setting up the various offsets for the IF, and the TX and RX frequency, so the display read the actual frequency that was in use. I now have the fully synthesised Westminster up and running on the bench (and it even has a new power lead with the now standard for our shack Anderson Powerpole connectors). It now awaits the metal bashing required to incorporate the Multirock into the front panel."



DDS Synthesiser



TX Divider (above)

Multirock kit configured (below)



To see more of **George G7GQC's** other Ham Radio and Electronics projects (including his "Stargate" clock previously posted on Facebook), go on to his website:-

www.furcot.com

It's great to see some old vintage kit being given a new lease of life with the aid of up-to-date technology. Keep up the good work George! (Ed)

Some 'Other Countries' Contest News

By Mike G4IZZ

As many club members know, the amateur radio authorities of several countries 'sponsor' H.F. contests which are open to any amateur having the inclination to participate. I think these contests are good fun – time just flies by - and your operating skills must be enhanced by taking part. You certainly don't have to go 'hell for leather' to be able to enjoy them. So, at our Editors' request, here's how I've been getting along in some of the recent ones.

During the weekend of 31st October - 1st November, the Russians held their World Wide Multi-Mode Contest, which offered the participant a choice of several modes (BPSK63, RTTY45, SSB and CW) and several frequency bands. For example, you could use all of the modes, on all of the contest bands, or just a single mode on a single band. Being a simple soul, I chose to use only CW but on all bands. Fellow club member, **Gary (M0XAC)** entered the RTTY section, also on all bands. It was an "everybody work everybody" affair, meaning each entrant could contact anyone else in the contest, be they Russian or not. Like other similar contests, it runs for 24-hours – though I did about 8 hours total, ending up with 287 QSOs, which is a long way behind the leaders. Because of the various options, i.e. multi band, multi mode, single band, single mode, there are many sections for the organisers to list, but generally speaking, the leaders in each bit tend to have logged anywhere between 800 and 1200 contacts. In my particular section, my current league position is 67th out of 228. I say 'current' because the 'official' placing have yet to be declared.

That contest was followed by my involvement in the **Ukrainian DX** on 7th - 8th November. This was for either SSB or CW, or a mixture of both, and various band options. Again, it was only CW for me in the 'all band' version. This time I logged 333 QSOs, and probably managed about 10 hours total over the weekend.

And on to the next: on 14th - 15th November, it was the turn of the **Czech Republic** to host what is known as the **OK/OM/OL contest**. In this, participants can only use CW. Amateurs inside the Czech Republic etc must only contact amateurs who are 'outside' of their countries, and 'outsiders' must only contact calls beginning with OK, OM or OL. I managed 257 QSOs in that one, again over something like a 10 hour period total.

And finally, over the 21st - 22nd November, the **Bulgarians** ran their **LZ DX contest**. A choice of CW or SSB saw me, as usual, opt for CW. This contest had an interesting scoring system where you got 10 points for working an LZ station, 3 points for working a different continent, and 1 point for working your own continent. It was difficult gauging how you were doing in this because there were no serial numbers exchanged, just RST and ITU Zone (LZ stations sent a 2-letter area code instead of their zone). Mind you, receiving ITU Zones was handy in seeing quickly if a Russian station was in Europe or Asia. A total of about 11 hours of logging over the weekend resulted in 365 contacts. Scores will be multiplied by the number of LZ districts worked and ITU Zones recorded, so it'll be a while I guess before the final placings are announced.

(Many thanks Mike - you really have got the contest bug - Ed)

FROM THE EDITOR

2020 will live long in our memories as the year when life for all of us changed beyond recognition. Sadly since early Spring we have not been able to meet at Churchdown school. The Committee led by our Chairman **Dave G4BCA** have been working quietly in the background in an attempt to maintain the "club spirit" and I'm sure all members will join me in thanking everyone who has in some way contributed by submitting material for "Ragchew", partaking in the club nets, also the virtual "morning coffee" and "afternoon tea" gatherings. Thanks too to all those who have entered in the various club-based contests.

Recognising that the club strength lies in the fraternal bond between members, I have dedicated this issue of "Ragchew" to you, the members - and may we meet again in 2021.

Brian G4CIB

From the Archives



Christmas buffet 2000



Christmas buffet 2004

The Art of Communications

Managing Director to the Production Director

“Tomorrow morning there will be a total eclipse of the sun at nine o’clock. This is something we cannot see happen every day, so let the work-force line up outside in their best clothes, to watch it. To mark the occasion of this rare occurrence I will personally explain the phenomenon to them, If it is raining we shall not be able to see it very well and in that case the work-force should assemble in the canteen.”

The Production Director to the Production Manager

“By order of the Managing Director, there will be a total eclipse of the sun at nine o’clock tomorrow morning. If it is raining we shall not be able to see it very well on site, in our best clothes. In that case the disappearance of the sun will be followed through in the canteen. This is something we cannot see happen every day.”

Production Manager to the Departmental Manager

“By order of the Managing Director, we shall follow through, in our best clothes, the disappearance of the sun in the canteen tomorrow at nine o’clock. The Managing Director will tell us if it is going to rain. This is something we cannot see happen every day.”

Departmental Manager to the Foreman

“If it is raining in the canteen tomorrow morning, which is something we cannot see happen every day, the Managing Director, in his best clothes, will disappear at nine o’clock.”

Foreman to all Operatives

“Tomorrow morning at nine o’clock, the Managing Director will disappear. It’s a pity we cannot see this happen every day.”

The Half-Wit

The Department of Work and Pensions recently received a report that a local farmer was under-paying his staff so they sent an Officer to the farm to investigate. The Officer asked the Farmer to explain who he was employing on the farm.

“Ah - I have a cow-man, he works an 8 hour day for just 5 days a week, I provide free board and lodging and pay him £400 a week. Also I employ a young lady as a trainee shepherd. She also works for 8 hours a day, 5 days a week and I also provide her with free board and lodging and pay her £350 a week. I also have a part-time lady who lives in the village and looks after our chickens. She comes in for 2 hours a day, Monday to Friday, and I pay her £90 and she has a dozen eggs a week “on the house”. Oh - I nearly forgot - I employ a half-wit. He does 90% of the work on the farm, works 7 days a week, gets paid £10 a week if he’s lucky. I buy him a bottle of whisky on Fridays and he occasionally sleeps with my wife”

“That’s the person I want to see!” said the Investigation Officer

“You’re speaking to him” replied the Farmer.