



Ridgeway Repeater Group. Newsletter Third Quarter 2021

Messages/Notices

As we've just had our AGM (Virtually) I'm not going to add reports from the NoV holders to this newsletter as you should have received the yearly reports via email that you can peruse at your liesure, enjoy.

This Quarter I have two articles only an update on my progress of the home built loop project, and the second part of the Metric system written by Richard G4MUF.

Thoughts on the Metric System

Part 2

The Metric System spread like a enormous flood over the world, but a few islands remained defiant, or only temporarily covered. Metrication of the calendar and of time lasted only a short while, but only in France. Similarly, the degrees-minutes-seconds for angles and latitude/longitude never caught on outside France. The latter case is enlarged upon below.

Today we have naming of 'parts'

A development over the last 100 years is (re)naming quantities after the scientist who worked in that field. Thus kilo- and megacycles per second' to measure radio waves became 'kilo- and megahertz'. New units which had 'no previous abode', such as volt, amp, ohm, coulomb, henry, farad were named after scientists at the outset of electrical research and came about out of the blue as new entities. Pascals for pressure instead of bars is another example of 'name-dropping' (or name-picking-up).

Centigrade for temperature morphing into Celcius is more involved. There was a specific reason for changing the word "Centigrade": it should in theory mean 1/100th of a grade, but a range of temperature from 0 to 100 C was never called one 'Grade'.

See next section for the other reason.

The 100-degree right-angle and French maps

The word Grade was already taken up to 'metricate' angles, i.e. 100 Grades per right-angle instead of 90 degrees, by the Academie Francais in the 1790s. Known as a centesimal (i.e. hundredths) system, each grade (or grad, sometimes) is further divided into 100 equal parts called centigrades, and each centigrade is further subdivided into 100ths. These two subdivisions can alternatively be called "centigrade minutes and seconds". French survey maps, produced by Institut Geographique National (IGN) have always been based on this metric version of latitude and longitude (and Paris as its central meridian, not Greenwich!).

The latitude of Paris might be written on a map's margins as 54g 25 or as 54,25 gr (continentals swop commas and full-stops with numbers, compared to anglo-US etc use).

The North pole is thus at latitude 100g 00 or 100,00 gr. On a map's W or E edge, these latitude ticks vary slightly in length (as do degree latitudes) due to the Earth having a greater radius at the equator than the poles. Nevertheless these centigrads are very close to 1-Km apart, in the same way as one nautical mile is very close to a hexagesimal

minute of latitude, so are a ready-to-use scale on every chart. As an aside, some IGN maps refer to 'Myriametres' for gridlines spaced 10 Km apart. This seems to be the only use of the Myria- as a prefix for 10,000 units. In France one may find a toposcope (Table d'orientation) being a panoramic display on a mountain top showing the skyline, and a few of these, mostly created at the behest of the Touring-Club de France (1906-1957), have bearings in grades, so for example 100 gr for East and 200 gr for South instead of 90, 180 degrees, at Grand Taureau in the Jura mountains, as shown here:-



The Grad system for angles is one branch of the metric system that never took off internationally. Sailors and astronomers prefer degrees-minutes-seconds so that one arc-minute of latitude equals one nautical mile on the chart, and the hours-minutes-seconds used for timekeeping meshes and kept things simpler. The Academie Francais tried to introduce decimal time, with 10 months in a year, 10 hours per day, subdivided into 100 minutes, but that did not last even in France. The years measured as Anno Domini were replaced with a new Year Zero, being the French Revolution, and that too lasted a very short time.

Richard G4MUF June 2021.

Update 3 on my home built loop antenna project.

This seems to be becoming a bit of a saga as I've had some setbacks and some light bulb moments in the past months since the previous newsletter. Not going to dwell on all my mishaps as I'm slowly progressing with the construction of the motorised tuning setup for the variable capacitor that I'm using, the first setback was when testing the electric motor that has a gearbox attached to it failed and I could not get it to turn forwards or backwards. So checked power input i.e. the rechargeable batteries in a pack designed to hold 8 AA batteries and after a quick check with the voltmeter, I still had around 9 volts which should be enough I thought to drive the motor. Just in case this wasn't enough I found another battery holder which would hold 10 AA's I filled the holder with the appropriate amount of batteries and checked the voltage again and had around 12 volts which I thought would be enough to drive the motor even under load. Then re-connected the batteries to the motor again only to find nothing turning, so I investigated the issue by taking the gearbox apart and trying the motor again only to find that the motor was working okay it was the gearbox that was faulty. I now turned my thoughts to finding a suitable replacement and I spied what I thought was an ideal replacement motor with a gearbox but this gearbox was open in a cage so could if need be easily diagnosed and possibly fix if it went wrong. So I duly ordered said item only to find when it arrived to be so small, it was about an eighth of the size of my original motor* so it was useless, so if anyone needs a very small or should I say minute geared electric motor please contact me. So this made me take a look at what I've been given to see if I could adapt my design of a bracket to hold one of the motors, and of course this wasn't possible, so attempted to make a new bracket, but after not concentrating properly it turned out a bit lopsided so it got put to one side and I thought to myself calm down leave it for a while (nearly a week) and perhaps I could come up with a solution. By doing this I now have two brackets spare apart from the original one, so I'm well prepared for the next step which is working on the gearing between the motor and variable capacitor spindle before going any further. The light bulb moment was the setup of power to the switch to make the motor turn in both directions forward and backwards. I had been given a switch that was centre off left and right to switch on but when switch lever is released it returns to the centre, the light bulb moment comes now if I put the feed to the motor on the centre pins of the switch I can feed the batteries one lot connected +/- in the normal way and the second side in the reverse order to supply -/+ to make the motor turn backwards so that part has been manufactured and the motor works well with this setup so I will class that as an easy win for me, but I still need to sort out the gearing issue but as I said earlier I'm making progress so please bear with me until it is completed and in a working state.

Authored by Your Scibe Ken G1NCG.

- 3 Views of small motor with a penny to show size.



Update on Happenings at Liden Lake.

It is most unfortunate that the flurry of hatchings from the four Swan Pen's that hatched cygnets, with medium to large clutches of cygnets from one with eight to most of the others with four and all but one Pen, that has four surviving cygnets the rest have disappeared. Which we are presuming have been eaten by possibly pike in the lake or most probably foxes are the culprits but as we have not seen anything like partially eaten carcasses which I've seen in past years, these cygnets just disappeared and this happened over a short period of about ten days. The thing that makes me think the predators are bankside based as there are small waterfowl like moorhens and coots which are about the same size as the cygnets and these birds are still swimming about the lake so I think the fish theory is not a feasible one. It still amazes me that we still have some of last years cygnets residing on the lake and are only now just becoming adult Swans as it was only a month or so ago that some still looked like the ugly duckling with muddy marks on their feathers and not fully coloured beaks. It's funny when you wander or walk around places that have thriving populations just how much you can observe and the different lengths of time these birds take to develop. So when you are out walking take a moment to observe flora and fauna in your surroundings. Please take notes and pass them onto myself.

Foraging This Year

On my daily walks I look to see if the plants i.e. elder bushes and blackberry bushes are growing and when will they be ready for harvesting. The elder bushes look as if they could supply a bumper crop this year as most of what I have come across have lots of berries growing on them, just have to wait for them to ripen. The blackberries are quite late this year as most are only just forming the green fruit and we are getting close to the end of July, because last year by this time the fruit was colouring up and beginning to swell in size. I'm anticipating that August and slightly beyond will be the harvesting months and hope we do not get too much rain to spoil the fruit as happened last year. I expect to be able to make elderberry wine and blackberry wine plus I want to try and make some hawthorn berry wine this year as I didn't have enough storage to make some last year. If anyone has some recipes for wine that the ingredients can be foraged for please pass them along and I will publish them if you don't mind.

I don't have any thought's for the last word this quarter but if anyone else thinks they would like to write something then I would be please to add it to the next newsletter.

Stop Press!! Last Word

Just heard that there has been an incident with one of the electric scooters in London I think. A little girl was knocked down by one of these silent death on wheels, and it has caused the child to have life time consequences with the injuries caused by the electric scooter. So is time to start a petition to have these vehicles classed like other motorised vehicles so that they need to have licensed drivers and are taxed and insured like the