



**RAGCHEW**

**JULY/AUGUST 2018**

## FROM THE EDITOR - G4CIB

Since the last "Ragchew", the club has taken part in **NFD (National Field Day)** and a great "thank-you" to **Cliff G8CQZ** and **XYL Beverley** for the use of their large garden for the station. More about the club NFD station in this issue along with **Tony G4HBV's** observations on Top Band on the Saturday evening of NFD in his **RF Notes** column.

The club was active for **Museums on the Air** as **GB4LMG** from the Gloucester Life Museum in Westgate Street. Thanks to all the club members who supported these activities.

The club **Spring Challenge** is drawing to a close and the conditions on the HF bands have certainly enabled the digi-mode enthusiasts to clock up some good scores. It is a shame that more members have not supported the VHF section.

The Sporadic E season is well under way and in this issue **Dave G4BCA** reports on a transatlantic QSO on 6m.

Also featured in this issue is the recent **Construction Contest**. Not many entries this year, but all were to a very high standard.

As the club summer break approaches - our last meeting at the school is on **Monday 16<sup>th</sup> July**, I am taking a month out from producing "Ragchew" and the next edition will be published at the end of August.

Don't forget however, the club **Summer Picnic** on **Monday 6<sup>th</sup> August** and we make a welcome return to **Saul Junction** on the Gloucester to Berkeley Canal. This is a fine location for doing some /P operating and socialising. **Leta G4RHK** will be providing the usual tea and coffee but do please bring your own mug or cup and food.

Articles from members on any aspect of amateur radio are more than welcome! Email your article to me at [g4cib@outlook.com](mailto:g4cib@outlook.com)

**73 and good DX!**

**Brian G4CIB**

### New Members

A warm welcome to **James Fletcher** who hopes to be taking his Foundation exam in the Autumn. James tells me he is studying Physics at school and has already covered Magnetism and Electricity so he has a head start in his amateur radio endeavours.

## RSGB Training Books and Log Books

Can I remind members that I have copies of the Foundation, Intermediate and Advanced Licence Training Manuals along with Transmitting Log Books available for sale at discounted rates at Club meetings.

**Brian G4CIB**

### Errors, Corrections and Omissions

The caption to the photograph in the June issue of "Ragchew" of **Joe Taylor** speaking at the RSGB AGM incorrectly gave his call sign as **N1JT**. This should of course have read **K1JT**. Apologies for any confusion caused!

Feel free to let the Editor know of any errors, corrections or omissions.

### Contest Round-Up

At the end of June the club is in 18<sup>th</sup> position in the UKAC Local Clubs table. On 6m, **Gary M0XAC** has put in entries every month and is well ahead in the GARES 6m table. On 4m our performance has been a little disappointing as no member has been able to enter every month and the leading GARES member is **Les G0ULH**. On 2m once again **Gary M0XAC** leads the field having entered every month. This is the most popular band with regard to members entering logs - so far 8 have contributed to our 13<sup>th</sup> place in the 2m table. On 70cm both **Gary M0XAC** (currently leading the table) and **Les G0ULH** have submitted entries every month with three other members joining in the fun when time permits.

Can I once again reiterate that the more members that enter the better our club score will be. Any of the current UKAC contesters from the club will be more than happy to give you any help and advice.

In the 80m Club Championship we are in 13<sup>th</sup> place out of an entry of 45 Local clubs. So far only the February SSB event did not have an entry from any club member, but since then **Bob M0NQN** has submitted entries in all the Data mode and CW events and is well in the lead in the club members table.

The full results of all RSGB HF and VHF Contest can be found in the Contest section of the RSGB website <https://www.rsgbcc.org>.

## RF NOTES BY TONY, G4HBV

On the weekend of NFD (National Field Day), when many stations are active, using CW from portable, off-mains sites, I thought I would use the opportunity on the Saturday evening to listen on the 1.8-2MHz band (Top Band) to witness the band opening up for sky-wave contacts. As a teenager I had often listened on my home-made, battery, valve receiver in the evenings on the trawler band. First there would be a gradual appearance of a raucous type of interference – this was line timebase harmonics radiated from the black and white TV sets of that era as people switched on for their evening's viewing. Then about dusk AM signals from coastal shipping and the coast stations would start to appear. So what happens to the propagation properties of this part of the RF spectrum to cause this?

It is because of the D-layer in the ionosphere. This is the lowest layer of the ionosphere at about 50 miles high. It is formed by the action of solar radiation on molecules at this height and disappears at night. During the day, this layer absorbs RF, increasingly both as the day progresses and the frequency increases to a certain limit. Absorption is pretty well total from the medium-wave broadcast band up to a frequency below the 3.5MHz band. At this frequency (about 2.6MHz) RF can penetrate the D-layer and be reflected (at HF) off the higher layers. At dusk, solar radiation ceases, allowing ions to recombine into molecules in the D-layer.

Top Band changes from only allowing ground-wave propagation of typically 30 miles or so (by diffusion across the surface of the ground) to a band allowing sky-wave propagation. All very interesting, especially when you witness this transition.

So back to the Saturday evening of NFD. Sunset was at about ten past nine, but of course there was still some light for some time after this. About half an hour before sunset I started listening on 80 metres to the contest traffic, checking now and again for signals on Top Band – but there were none. About nine I started monitoring Top Band, trawling up and down the band searching for signals – there were none.

Suddenly at 9.42pm I heard DJ5MW in noise working a GM (who I couldn't hear) and also F5IN (a regularly active CW operator). At about 9.58pm I heard F5IN working a M0 station, Previously on 3.5MHz F5IN was giving 378 as a QSO number. Next I heard G4FNL/P – a regular NFD station, followed by ON4WRC/P. At 10pm with street lights on it was still not quite dark. At 10.08pm I heard our own G2HX/P (*that was me-Ed*).

By 10.20pm some of the earlier stations seemed to have left the band presumably because not enough stations were on the band (*Which is exactly what we did at G2HX/P - Ed*). More G-stations were coming on, the last I heard before switching off was G4ALE/P. It was still not completely dark.

Thinking about this, the D-layer would presumably have to weaken both here and on the continent before sky-wave could exist allowing French and German contacts etc.

Editor's note – For many years when the club NFD station was in the capable hands of Pat G3MA we always made sure we were on Top Band by 10.00pm. Tony has described the conditions exactly as we experienced at G2HX/P, Top Band not coming to life until well after 10.45pm.

## G2HX/P - NFD 2018

After a absence of some 5 years, the club submitted an entry for National Field Day, held on the first weekend in June. We were once again able to use the QTH of **Cliff G8CQZ** and his charming XYL **Beverley**.

The photo on the left shows the antenna - the club 160m doublet fed with open wire feeder. I understand that **Beverley** was roped in to assist with the antenna installation on the Saturday morning. **Cliff** also came to the rescue with a replacement power supply unit. Many thanks to you both for being the perfect hosts.

The contest started at 1500UTC and on 20m some familiar call signs were quickly logged including **DK0EP/P** and **DL0KF/P**. These call signs have been regular NFD participants for many years and it's always a delight to see them in the log. After 3 hours on 20m the log had recorded about 84 qsos and as conditions seemed to be deteriorating it was decided to try 40m where another 3 hours of operating had brought the total up to 192 qsos. At this point - 2100 UTC - the old rule was applied - qsy to 160m (Top Band) to gain the advantage of double points. Unfortunately the band was still very quiet and with just a couple of qsos with the only two stations we could hear **DK0V/P** and **DK0ED/P**, the decision was made to give 80m a try. This yielded another 28 qsos before we gave 160m another try at 2139 UTC (*Editor's note - see **Tony G4HBV's RF Notes** for an explanation of the propagation on 160m as daylight fell*). By now the band was very slowly coming to life and by the time the station closed down at midnight the total qso tally stood at 267.

Resuming at 0641 UTC on the Sunday morning , 40m was the band of choice until an hour or so later when we moved to 20m and as the morning progressed, forays on to 15m and 10m. The rest of the contest until closing time at 1500 UTC was spent between sessions on 20m and 10m.

At the end of the contest our qso tally was 524.

Many thanks to all who set the station up, operated and then dismantled the station.

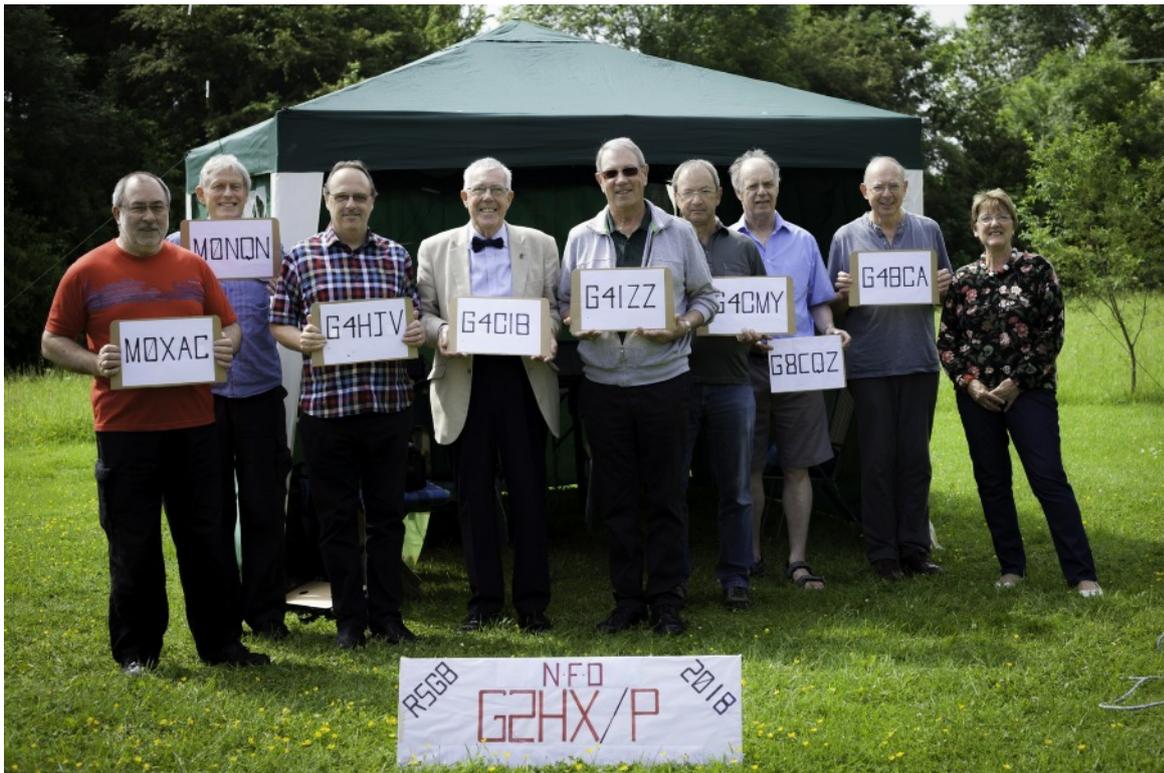
For the record the rig was a Kenwood TS-590S and the antenna a 160m doublet fed with open wire feeder.

Everyone who took part enjoyed the event and perhaps next year we will be able to operate for the full 24 hours.





**“So how does that work?”**



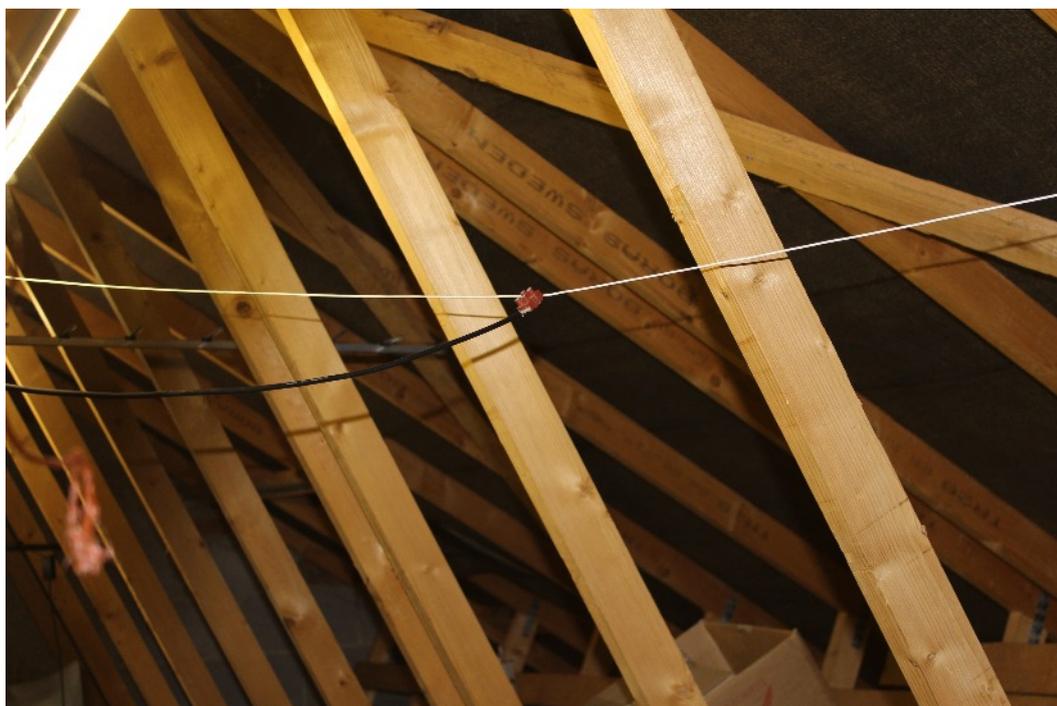
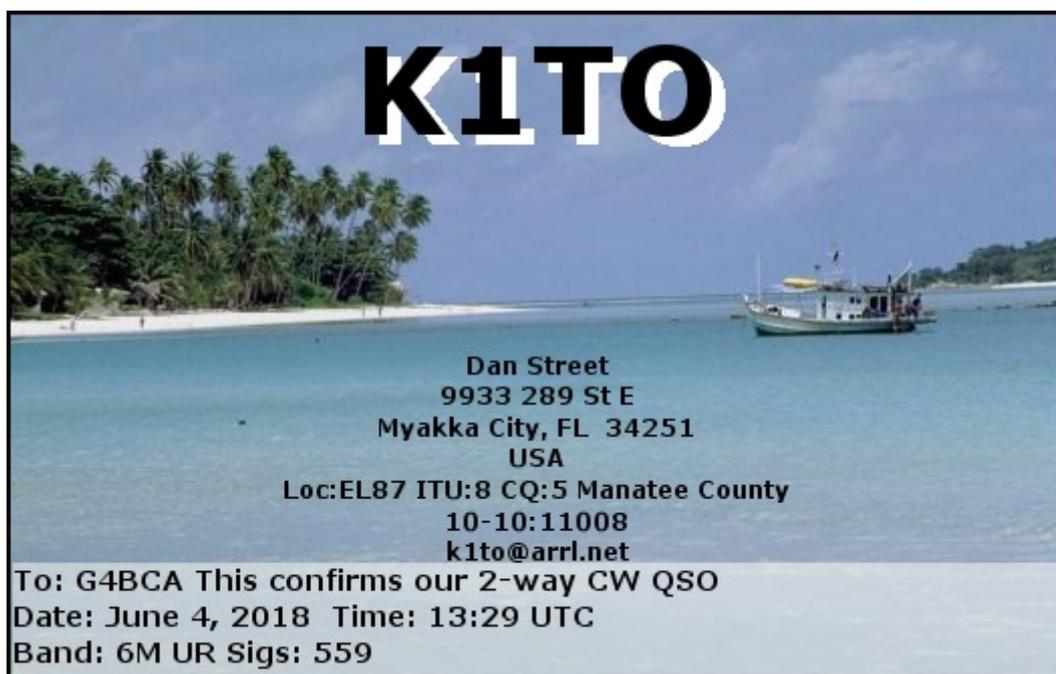
**The 2018 GARES NFD Team**

**SEE THE GARES WEB SITE FOR A FURTHER SELECTION OF  
NFD 2018 PHOTOS**

## 6m QSO with USA

By Dave G4BCA

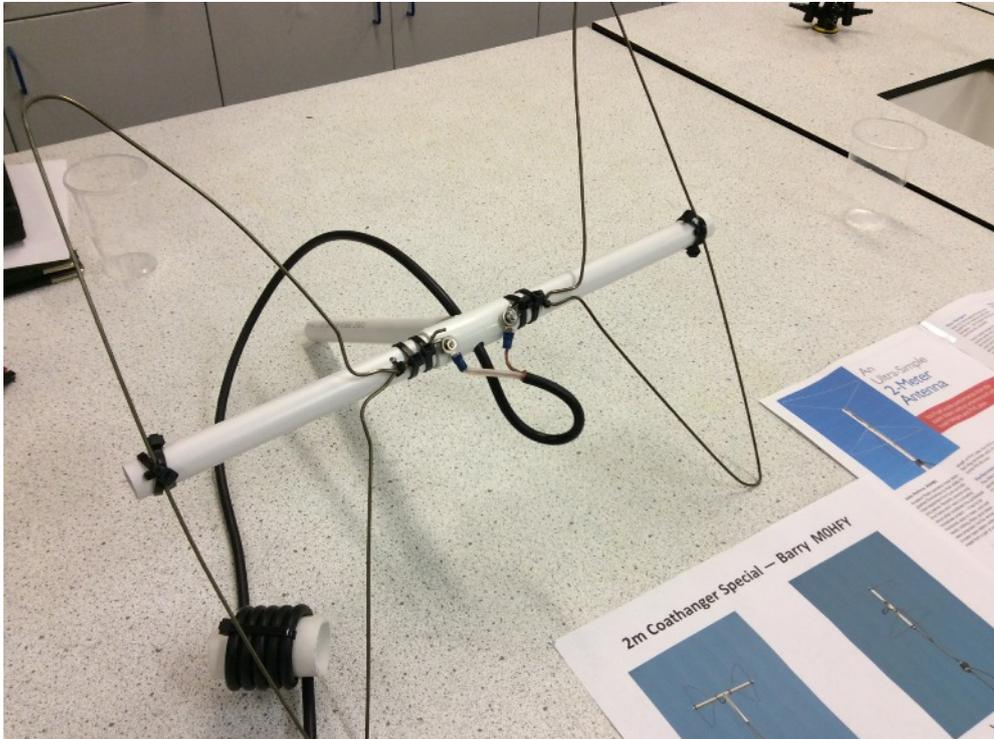
The "Magic Band" - 6m - lived up to its name recently when I worked **K1TO** on CW using my TS-590S running 100 watts into a loft dipole. I did not realise at the time he was located in Florida, which is not the normal W1 area. The eQSL I received is reproduced below. The Sporadic E season is now well under way and when the band is open it is amazing what you can work with modest antennas. I also recently heard **9H1TX** on 4m but was unable to work him owing to a local rag chewing and splattering over the band. He is not a GARES member!!



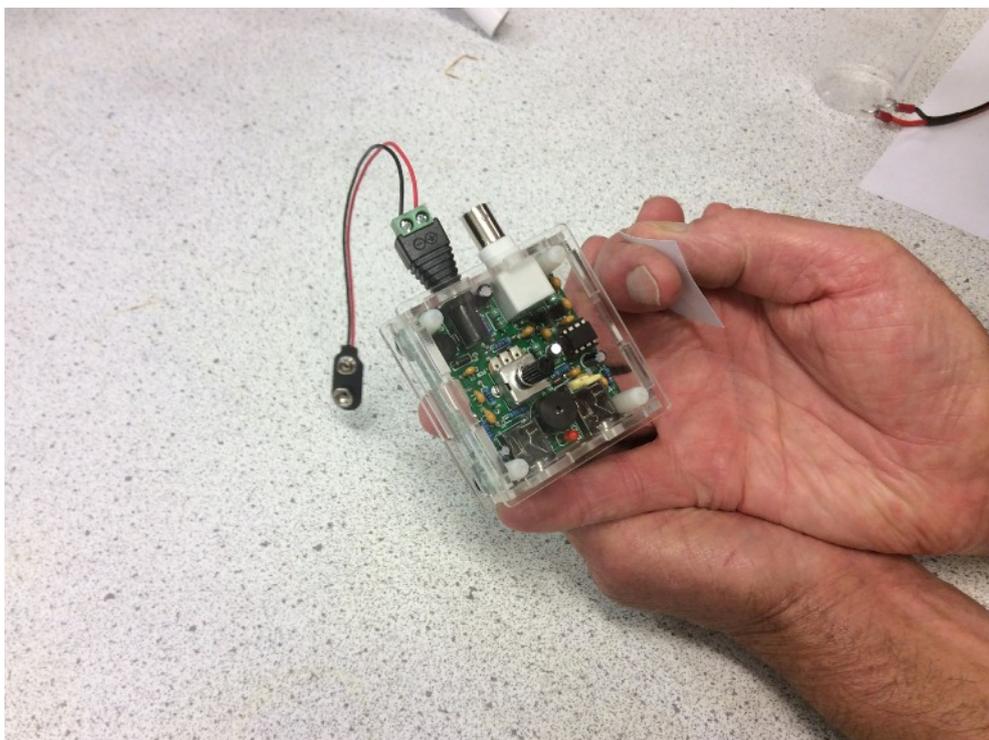
Loft mounted 6m wire dipole at G4BCA's QTH

## CONSTRUCTION CONTEST

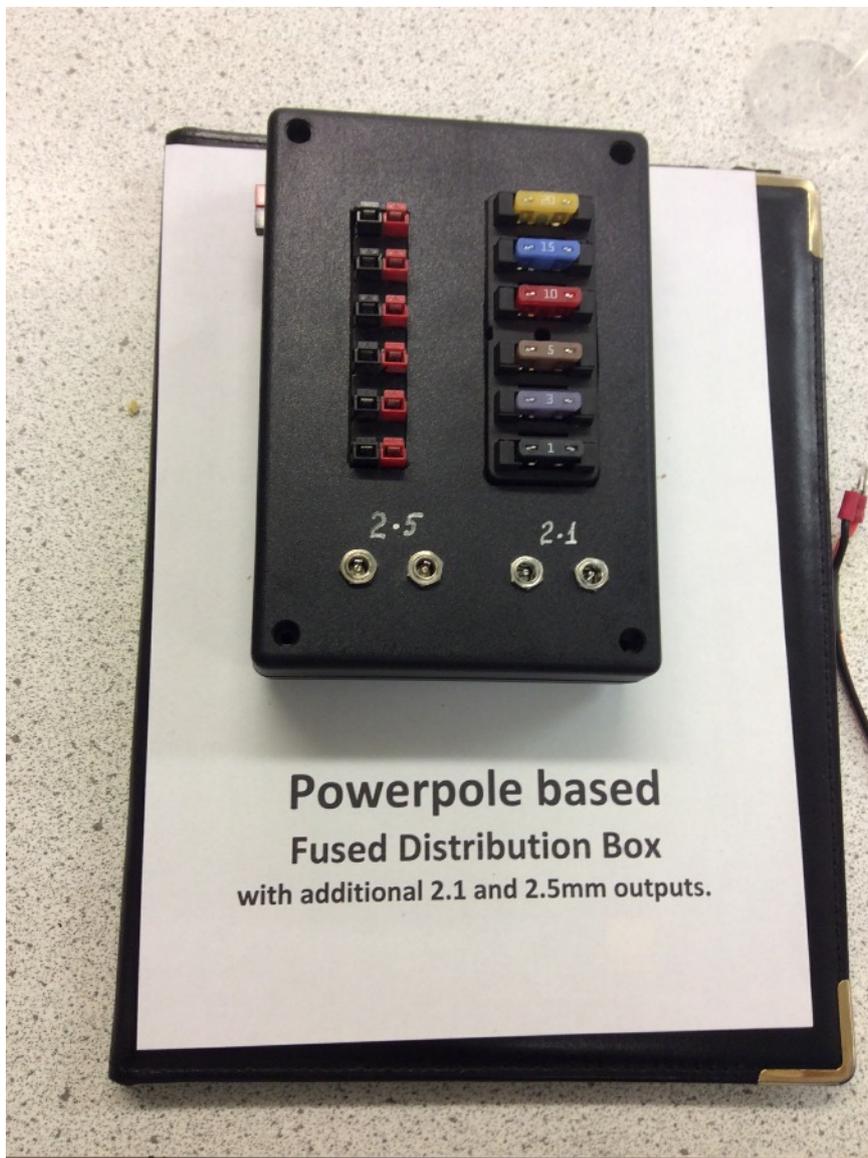
There were only four entries this year and all in the “Simple” Section - perhaps another effect of everyone hooked on digi-modes and leaving the soldering iron cold? After a close finish involving a recount of the votes cast, the winner was **Barry M0HFY** with his 2m “coat hanger” antenna. This was featured in the April 2018 “QST Magazine” and Barry’s example has certainly proved very effective when he has used it on the club 2m nets. I’m still not sure about the theory of how it works!



2m Coat Hanger Antenna - Barry M0HFY

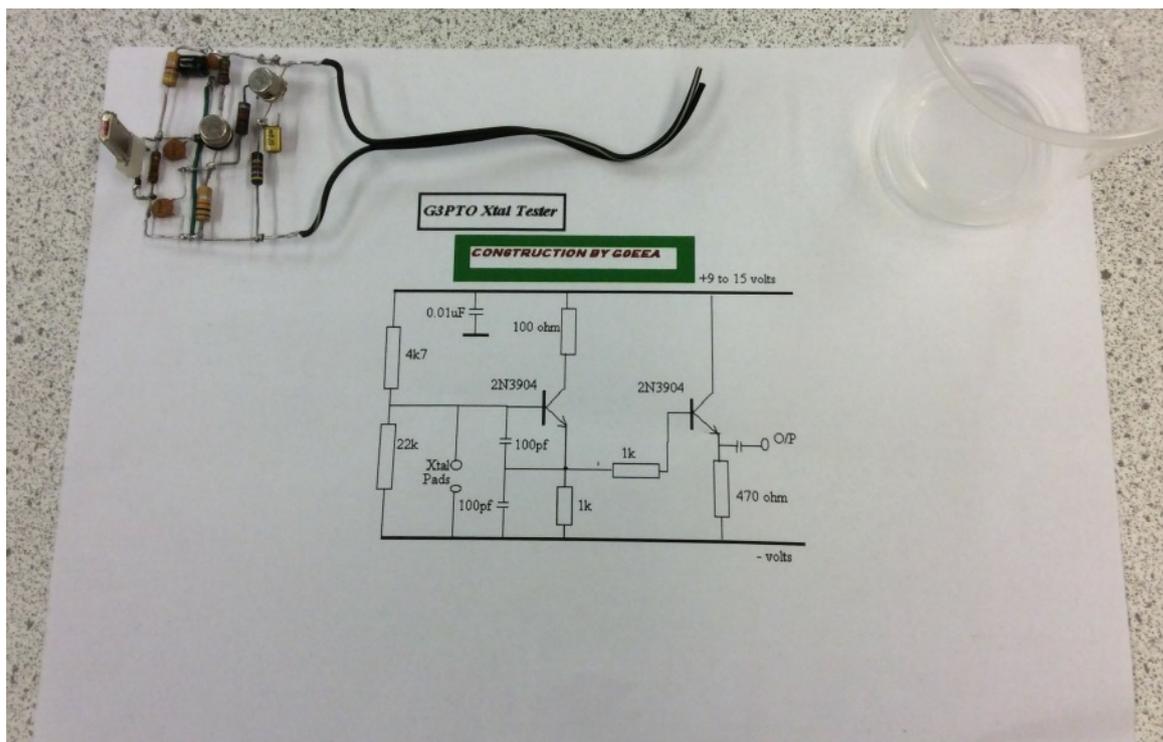


“Pixie” transceiver - Dave G4HJV



**Powerpole based  
Fused Distribution Box  
with additional 2.1 and 2.5mm outputs.**

**Powerpole Distribution unit - Cliff G8CQZ**



**Crystal Tester - Graeme G0EEA**