RAGCHEW

OCTOBER 2018

FROM THE EDITOR - G4CIB

Another club year has started with the **AGM** held on Monday 10th September and the Committee are now formulating the activities for the coming year.

A Special Event Station report features in this issue - **GB4LSP** at Llanthony Secunda Priory, Gloucester and also a Contest Station report **- G2HX/P** at Crickley Hill Country Park for the **Practical Wireless 70MHz Contest.**

Tom G3XMM has been doing a bit of delving into the history of a Morse key he possesses and urges us to rummage through our junk boxes to see if any other members have any similar ones.

This month **Tony G4HBV** discusses RF propagation with particular reference to Sporadic E, the mode which enabled **Dave G4BCA** to work **K1TO** in Florida on 6m with a loft dipole.

Also in this issue - a report on our stay on Lundy in the Bristol Channel. This was the 23rd year we have stayed on the island and have formed many friendships over that period. This year's visit as usual threw up a little problem which with a bit of improvisation, I managed to solve.

Once again - the usual plea for articles on any amateur radio, electronics or related topic. Speak to me at club or email me at g4cib@outlook.com

73 and good DX!

Brian G4CIB

Contest Round-Up

Not a great deal to report on the Contest front this month. In the **VHF UKAC** series as of the end of September the club is maintaining 19th position out of a total of 36 in the Local Clubs table.

In the **80m Club Championship** we are well up the Local Clubs table in 14th position out of a total of 46 clubs. **Bob M0NQN** and **Gary M0XAC** have between them contributed the majority of the points earned so far.

The VHF UKAC and 80m Club Championship contests are ideal for newcomers to contesting. If you would like to have a go, but don't know how to get started, have a word with any Committee member who will put you in touch with the right person.

Antenna Workshops by Brian G4CIB

Following on from the popular Antenna Workshops held at club in the last session yours truly has offered to carry on this club activity. The numbers of participants will be strictly limited so if you would like to take part, please let me know.

Two dates have been arranged:-

Monday 15th October - 2m Slim Jim Antenna using 300 ohm ribbon cable

Monday 26th November - 2m 3 element portable yagi.

IC703 vs FT817

By Brian G4CIB

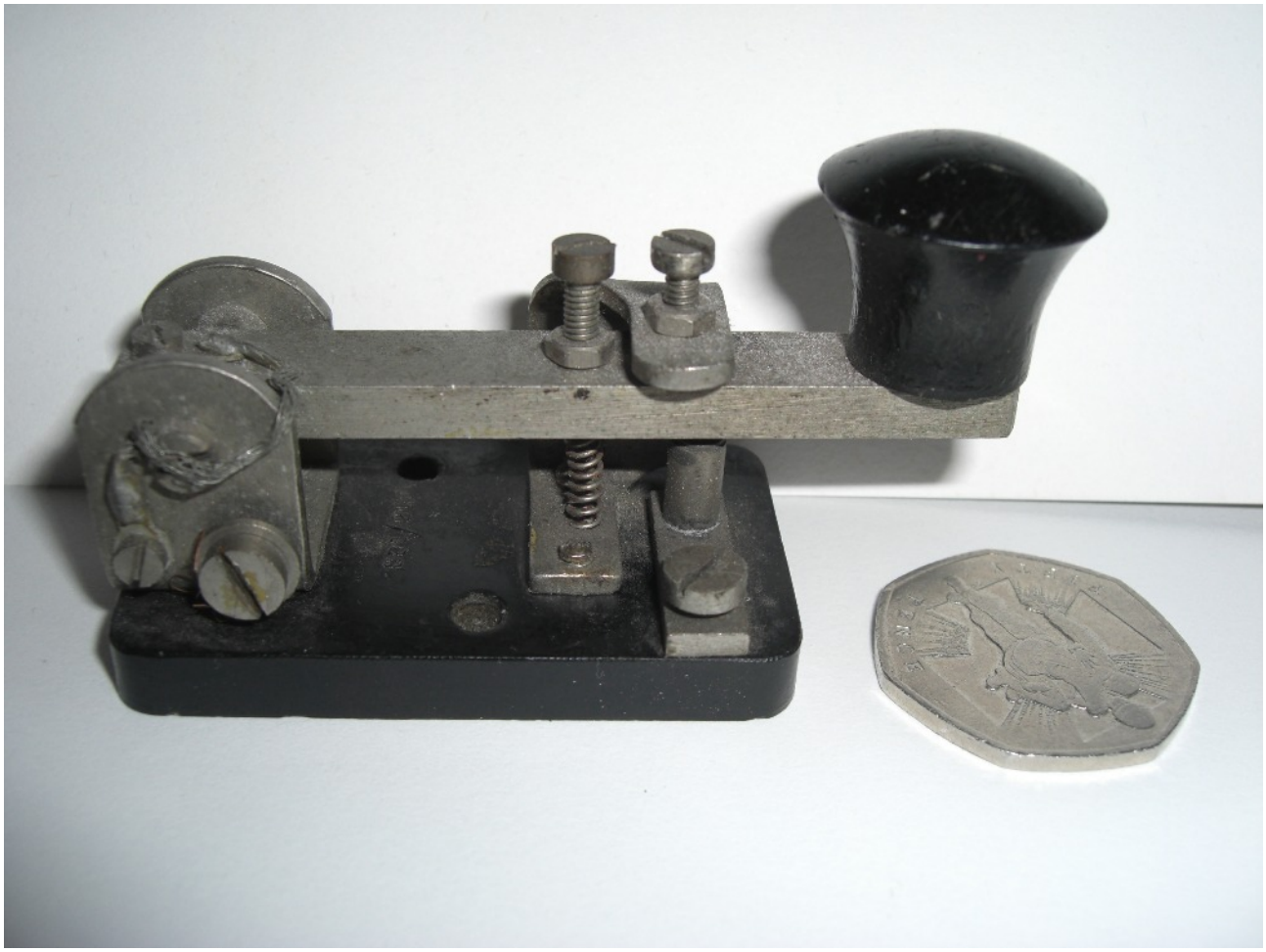
About six months ago I finally gave in and bought an FT817. It was something I had given serious consideration to about 9 years ago when I was looking for a small portable rig. For a month or so I avidly read all I could about the two contenders - the Icom IC703 and Yaesu FT817. In the end I purchased an IC703 based on the following criteria:

- 10 watt output.
- Internal auto antenna matcher
- Relatively large display

On the down side - an external psu / battery was required but as the internal battery of the FT817 was pretty feeble I decided that was not really a limiting factor. Also on the down side, the IC703 only covered up to 50MHz compared to 432MHz on the FT817.

The IC703 has given me tremendous pleasure over the years I have had it and now I'm getting to grips with my recently acquired FT817ND. The internal battery is still pretty feeble so an external battery or psu is a must for any serious operating. The coverage up to 432MHz is a big plus - no more lugging a separate VHF rig to Lundy! I am using it conjunction with a little Heath QRP Antenna Tuner HFT-9 which I've had for many years, and although it is physically similar in size to the FT817, it is fairly lightweight.

I am slowly building up operating experience with my FT817ND and I am sure it will become as much treasured as my IC703.



A Rare (and Valuable!) Telegraph Key
by Tom G3XMM

This little key has been sitting in a cupboard for some years. I do not remember from where it came but I do remember someone suggesting that it was probably a telegraph linesman's key. Interesting enough but there the matter rested until recently. Scrolling through some images on the web I noticed a key that looked like mine together with the suggestion that it was something much more interesting than I had been led to believe. The crucial clue, if it is there, is moulded on the Bakelite base beneath the key lever. With mounting anticipation I peered under the lever and there it was – type number S81/2R.

So what is all the excitement about? During World War II SOE (Special Operations Executive) agents operated in occupied Europe and needed to communicate with stations in the U.K. In order to do this radio operators equipped with “clandestine” radios were deployed, usually by parachute or STOL (Short Take-Off and Landing) aircraft, You may well have seen this depicted in films and documentaries. Communication was by “Morse” and hence a telegraph key was needed. If you are fortunate enough to have a key type S81/2R it was almost certainly produced during the early 1940s for clandestine use. In addition you are doubly fortunate because, apart from the historical interest, these keys are very rare and thus fetch quite large sums of money when they come up for sale. A search through your cupboards, drawers and junk boxes could well prove profitable!

A windy day at the Priory
GB4LSP

On Saturday 8th September the club put on a Special Event Station for Churches and Chapels On The Air or 'CHOTA', for the first time in two years. It is the SES that we used to do at the Cathedral but are now unable to do there. We were situated at Llanthony Secunda Priory, Llanthony Road, Gloucester, which is the remains of an Augustinian Priory which was founded in 1136. The site has its own website which is easily found on a quick search. The remaining buildings have undergone renovations and a new one added and there some remains of the Priory which is now open to the public.

Our Club Secretary, Rita, came up with the idea of doing it at the Priory and the Heritage Manager at the site, Emma, was most accommodating although we did have to jump through some risk assessment and health and safety hoops first. It was also the second SES in two weeks (BiWOTA at Epney previously) so a busy time considering the club was in its closed period.

At the commencement of proceedings at 8.00am on the day the forecast light showers arrived and sometimes were not so light but everything was duly erected and installed but we did have to reduce the height of the main mast to 10 metres due to it whipping around in the breeze a bit. Nice to have the option though!

The club's new pop up Gazebo had its second outing and was put up very quickly under a nearby tree. The mast adjustment slowed us a bit but everything was ready to go by 10.15 am local time. It is a lot to do but many hands etc and it went well.

(Photo - Gary M0XAC)

Once transmitting operations started we found that we had a low noise level on 40 metres but poor inter G propagation in fact poor propagation generally, whereas on 80 metres the opposite was true, a high noise level, S9, but with better propagation. We did however lose a few which we would have got with a lower noise level.

I have no idea why the noise was so high on 80 metres as nothing in the immediate vicinity gave a clue. A total of 35 qso's were made including other GB SES's. From about midday the breeze got stronger and at one point we almost lost the Gazebo but quick reactions saved it. The structure itself proved to be quite sturdy though so no damage was sustained. We kept a hand on it for the rest of the day never the less. Lessons were learned for the next time!

Equipment wise we used the trusty TS-590S and a 134 foot Doublet aerial fed with 300 ohm ladder line. We also made use of a recently donated MFJ antenna matching unit (amu) which is quite adequate for these events although not as good as our Palstar amu.

(Photo - Gary M0XAC)

We did start packing up about 30 minutes early as it was getting increasingly harder to make contacts and the wind was blowing the Gazebo alarmingly at times but a good day was had.

Thanks go to the rest of the team on the day: Les, Alan, John, Dave and especially our doughnut lady and packing specialist Rita! Our newest member James also attended and assisted with some operating. He will hopefully gain his own licence later in the year. Thanks also go to Emma, the Priory's Heritage Manager for making the event possible. The Committee intends to make a donation to the Priory as it survives on donations and has no direct funding and lastly thanks to those who visited on the day.

That almost concludes what has been a busy summer starting with CW Field Day and the Museums on the Air SES in June, the Low Power CW Contest in July, the BiWOTA SES in August and this event at the Priory in September. There is one more event to go at the time of writing, which is the Practical Wireless 4 Metre contest on Sunday 23rd September then it will all be over, until next year!

Gary M0XAC

And a Chilly Day at Crickley!

G2HX/P

On Sunday 23rd September Gary M0XAC accompanied by Arron M0HNH, Matt 2E0MFH, Brian G4CIB and later in the day Anne 2E1GKY met up at the Crickley Hill Country Park to activate G2HX/P for the Practical Wireless 70MHz Contest. Once again the new club gazebo proved its worth providing some shelter against the persistent rain in the morning. Arron supplied the beam antenna and mast which was quickly erected, meanwhile Gary was set up the Icom IC7300, 4m amplifier and logging software on the laptop. The forecast for the afternoon was for the cloud to clear - which it did, but it was mighty cold. Band conditions were not good and we managed to get 39 qsos in 9 locator squares logged by the time the contest closed, which is down on last year's total. Anne 2E1GKY set up her 4m dipole and monitored our progress on a small handheld.

G2HX/P - Crickley Hill Country Park

(Photo - Brian G4CIB)

Brian G4CIB operating, Arron M0HNH logging

(Photo - Anne 2E1GKY)

Anne 2E1GKY's /P set up with 4m dipole

(Photo - Anne 2E1GKY)

G4CIB & G4RHK on Lundy 1st -15th September

Our annual visit to Lundy always presents new challenges and this year was no different. No matter how much pre-planning and checking takes place, there is always something that stops you in your tracks. Our property this year was Castle Cottage, originally the Cable Hut and Post Office, which we had last stayed in in 2002. A recent upgrade to the property led to the first problem - sealed double glazed windows have been fitted so my antenna cable route was longer than originally planned for. No problem - I had packed away a long coax lead terminated with PL259 plugs. A shame I forgot to take an inline coupler! It's amazing what you can do with a couple of elastic bands, a small metal screwdriver and insulating tape!

We arrived on a misty and murky Lundy after a smooth crossing and made our way to the Tavern for lunch and await the message that our property was ready. Knowing it was the weekend of the 144MHz Trophy contest, I was keen to unpack and get on the air. I had taken my FT817ND in my haversack so was able to have listen on the band while waiting for our luggage (containing antennas etc) to be delivered. Imagine my surprise at the first station I heard - F6CKZ/P in IN99 square - just on the small rubber-duck antenna! When our luggage eventually arrived I hastily unpacked and assembled the 2m dipole and very quickly had F6CKZ/P in the log along with G0VHF/P in JO01. Other squares worked were JO00, JO03, IO74, IO81, IO82, IO84, IO90, IO91 and IO92. Not a bad haul for 5 watts into a dipole.

Having had good results on 2m, it was time to try some HF, but space limitations in Castle Cottage meant that a vertical antenna was the only option - or so I thought! (see later). The HF antenna I used was a 6m telescopic glass fibre "roach pole" and initial results on 20m were encouraging as I worked UR5FA/MM (Maritime Mobile) on a bulk carrier near Italy. Also logged on 40m CW was DK2FE who I worked on our very first visit to Lundy in 1995.

Listening on 80m on the middle Saturday of our holiday I came across the club SES GB4LSP with strong signals. Many thanks to Les who occasionally listened out for me, but 5 watts into a relatively short vertical antenna was not going to make it.

During our first week on the island, the Tour of Britain cycle race passed through North Devon and I was very pleased to have a 2m contact with the Special Event Station **GB2TOB** located at Barnstaple.

The UKAC series of contests featured heavily in our stay with 2m on the first Tuesday, 70cm on the second Tuesday and 6m on the second Thursday.

The photo left shows my 2m dipole on a short mast. The site is about 100m asl and as you can see the edge of the cliff is only a few paces away from where I am standing - so an excellent sea-path take-off from North through East to South. On the 2m UKAC using just the dipole and 5 watts I managed to work 19 stations in 10 squares: IO70, IO71, IO72, IO74, IO80, IO81, IO91, IO92, IO93 and JO01.

I used the same antenna with limited success on the 70cm UKAC logging just 3 qsos in squares IO71, IO92 and JO00.

For the 6m UKAC I improvised a wire dipole and also had 3 qsos working G4BCA/P (our worthy Chairman) in IO70, G3TBK/P in IO93 and GD0AMD/P in IO74.

As the coast of South Wales is visible from Lundy, many Welsh stations appeared in the log including a good haul of SOTA activators. Quite a few were helped in the task of fulfilling the qso quota as I was able to pass the rig to Leta who was able to contact them using her own call sign G4RHK.

I regularly monitored the QRP CW and SSB calling frequencies on 40m but virtually no inter-G stations were heard. More success was obtained on 30m and 40m CW with EU stations.

Looking again at the layout of the cottage and the surrounding ground I realised that there was the possibility of a 20 metre sloping dipole (thanks to Mr Pythagoras) and I was able to scavenge enough wire to try the idea out and managed to bag some CW qsos in the log along with some PSK decodes using a little WolphiLink interface to my mini iPad using the PSKer app.

Many of you will know that for the past four years I have been awarding the “Lundy Old Light” award to the club member who has attempted to maintain contact with me or assisted in any way during our stays on Lundy. This year the award goes to **Dave G4BCA** as he actually responded to a call I put out from the top of the Old Light. The qso was not pre-arranged and it was a pure coincidence that both he (located near Bude) and I were out with our hand-helds at the same time!

G4CIB/P at the top of Old Light in QSO with G4BCA/P

When I was setting up my dipole for the 50MHz UKAC I was amazed at how low **GB3MCB** (Mid Cornish Beacon) was in signal strength. I knew from staying in other properties on the island that the beacon located at Hensbarrow Downs near St Austell should be end stop. Then I realised that our cottage, built on the north wall of the Marisco Castle was completely blocked to the south west by the granite structure of the castle. Using my FT817ND and my 2m dipole antenna (which was easier to carry than a 6m dipole) I then did some comparative tests at various locations with the following results:

Benjamins Chair (a ledge on a south facing cliff with clear take-off towards the south west) approx 75m ASL: **S9**

Marisco Castle Parade Ground (to the east of the Castle and slightly shielded to the south west) - approx 100m ASL : **S8**

Castle Cottage (on small patch of ground to the north of the Cottage, completely shielded to the south west by the Castle) - approx 100m ASL: **S1**

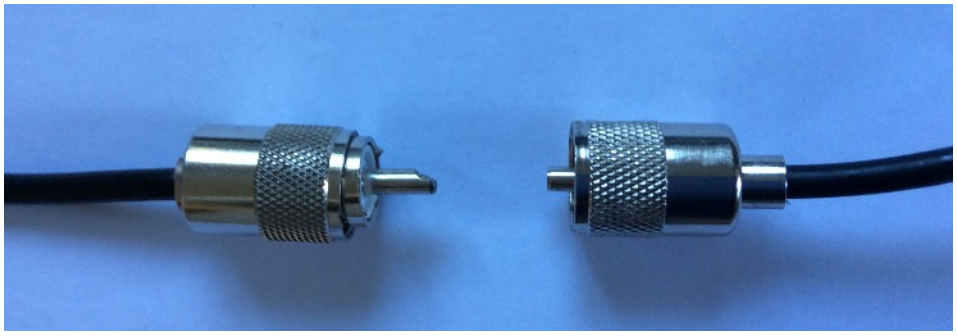
Looking on the internet I see there are several learned papers of the attenuating effect of granite!

A Lundy Improvisation

(or a Bodge by any other name)

By Brian G4CIB

As mentioned in my Editorial column, I managed to forget to take a PL259 - PL259 coupler to Lundy. My antenna feeder run was longer than anticipated as sealed double-glazed windows had been installed in our property so I was unable to pass the feeder through any opening windows. Luckily I had taken enough feeder but I needed to connect it to the feeder on the antenna.



The Problem

As I had no soldering iron to remove the connectors, for a brief moment my hand hovered over the wire cutters - but I just could not bring myself to chop the connectors off and attempt to join the coaxial cable inner conductors together and the outer braids. Looking through my various odds and ends I had taken with me, I spotted a small metal screwdriver. Also I had a roll of insulation tape and a good supply of elastic bands.

The component parts

Now wrap the insulation tape on quickly!

Tightly wrapping one elastic band around the shell of one of the plugs, I was able to jam to screwdriver handle under the band against the connector body.

I then wound the other band tightly around the body of the other PL259 plug and insert the screwdriver blade against the connector body.

By jiggling the assembly I was able to get the centres to jam together. Having checked that continuity of the centre conductor was OK, I quickly wrapped insulating tape around the whole assembly.

It survived the two weeks we were on Lundy and it appeared to have no detrimental effect on the performance of the 2m dipole.

Another problem encountered was the fact that the property still had old-fashioned round pin 5 amp mains sockets - but I won't go there for fear of upsetting the "Elf and Safety" brigade!!!!!

RF Notes by Tony, G4HBV

Dave's, G4BCA, achievement in working K1TO on CW using 100 watts into his loft dipole on 6 metres (50MHz) was a considerable one. That it was possible at all is thanks to the presence of Sporadic-E layers in the ionosphere during the summer months.

However, for some people this wasn't always a good thing, in fact sometimes it was a downright nuisance. What am I talking about? Well, some of you may remember Band 1 television in the days of black and white TV during the 1950s and 60s. In Band 1 there were 5 channels between 45MHz and 66.75MHz (*surely Mc/s in those days? Ed)* and during the always hot summers of those days pictures would often start rolling as interference caused loss of synch as a result of Sporadic-E bringing in long distance (I suspect continental) interference. I can even remember sometimes there were news items about "Indian music being picked up on AA patrols 2-way radio".

Turning this round on itself makes me wonder whether Band 1 TV audio signals were ever heard across the Atlantic - the Americans have had a 50MHz allocation much longer than we have, and for instance, the Kirk 'o Shotts TV transmitter of those days broadcast sound on 53.25MHz, vertical polarisation and a good few kW of power.

Turning to the physics of Sporadic-E, which is not at all an unusual occurrence, it is said to consist of horizontal sheets around a kilometre thick and spreading for up to 100km. These sheets can be stationary or may move about. Each Sporadic-E, or E-S for short, layer produces a single hop, but if separate layers exist then a double hop is possible, as also is the involvement that other propagation modes may be present e.g. ionospheric ducting. The Sporadic-E ionisation may last for several hours before it disappears.

Dave's QSL card from K1TO confirms what I read in my old ARRL Handbook that it is most common in May, June and July, in the mid-morning or early evening periods. I believe that its formation is not wholly understood so that prediction is not certain - which in my old fashioned eyes is a good thing. Sometimes in amateur radio a band suddenly coming to life unexpectedly is a pleasant surprise!

Editor's note: Many thanks Tony for another interesting article. It brought back happy memories of my grandfather twiddling the horizontal and vertical hold controls on the back of their 405 line 9 inch screen black-and-white TV complete with magnifier lens on the front!