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Cockenzie & Port Seton Amateur Radio Club is affiliated to the Radio Society of Great Britain and holds the call signs MM0CPS and GM2T which are used for our special event and contest entries.

The Club was formed by Bob Glasgow BEM GM4UYZ in 1984, to help the local amateurs get to know each other.

Far from being just a local club we have members regularly attending from the Borders, Dumfries, Strathclyde, Fife and Newcastle.

The Club meets on the first Friday of every month in the lounge of the Thorntree Inn on the old Cockenzie High Street from 7pm till late.

Editorial

Like in previous years, commitments are forcing me to write my editorial a lot earlier than it should be. It is hard to believe that soon we will be moving into the major holiday period, isn't time flying by.

On the club front we had our first DF night and it was another resounding success and hopefully there will be a full report further in the newsletter. Thanks to Ron GM0NTL for putting up the Hybszer Trophy in memory of Bill GM8ZLI/MM0BXK for this event. The May Activity Day has happened so keep your support going for these operating days... The VIC GM4GGF Trophy for this year is now under way and all the new licence holders who are eligible to take part have all been informed so I hope they all take part.

To the future; this month there is one important change and that is the July Club Night will be on its normal first Friday of the month as the decision has been taken not to do VHF Field Day this year.

So what else is happening? well we are now starting to enter the main contest season for the club of which we will be entering a few, starting with the 6M Trophy and if you are interested then speak to John MM0CCC and he will tell you more about what is going on.

This month we also have on the 23rd & 24th the "Museums on the Air" weekend

again from the Museum of Flight, East Fortune. We will be operating from the Nissen Hut (Education Centre) next to Hanger 1. These Museum of Flight stations offer everyone to have a real go at HF operating using a tremendous HF set up so I hope you will take the opportunity to come along and give it a try. I didn't do a "Demonstration Station" by putting on a radio station at the Port Seton Gala Day as it is normally just me that does it and it clashed with some family commitments that I have now. Last, but not least is our own Summer Solstice Activity Day Week on the 17th June to the 23rd June. It is now the sixth Activity day of the year so I hope that many will take part. It is all for a bit of fun and an opportunity to see what can be worked. It is not a serious event but just an excuse to "play at HF or even VHF Radio". So please do not dismiss the idea about not doing it, go on and try and participate. I am interested in what people do work so any chance you could send me your logs and I will try and do a small write up on what was achieved. So, can I please have a copy of your log by the 27th June at the latest? A busy month then all round so I hope you can take part in all the events.

This month certainly has a lot of operating activities so there is something
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there for everyone. Some of the events will certainly give you an opportunity to practice some of the skills required to go contesting so why not take time out and give it a try. Events like Museums on the Air although they are demonstration set-ups can at the same time be extremely hectic. What they offer is the ability to use some of logging programs and learn all about them, and also how to handle a pile up such as we have experienced over the last few events we have set up at the Museum of Flight. It is better to play at these informal events rather than try to learn when you are involved in a major contest. The opportunity is there so why not use it.

A plea once again for any material that you can produce and submit for our newsletter as I am

May Activity Day

"YOUR" selected date between 13^h to 19th May 2018

00:00 to 23:59

This is our fifth of 2018 where you can have selected your date to operate during the one-week selected period..... so reports below on who or who didn't take part

Activity Day Rules and updated log sheet for 2018 they have now changed and can be found using the following link:

<http://cpsarc.com/downloads/>

Look under Activity Days and the files are:

2018 Monthly Activity Day Rules
2018 Activity Day Logsheet v1.7

Apologies first:

Andy MM0GYG

We're on holiday so I couldn't join in this month.

Bob MM0LBF

Too busy looking after a debilitated Brenda Bob. Severe back pain - possibly result of Malta travelling etc.

Tim MM0VTO

Sadly, I've not had the opportunity this month. I've been renovating my kitchen area all the non-working hours that god sends, so the hobby has really taken a back-seat this month. We've still got about a week's worth of work to get it all done.. which means we're into month

struggling once again to write articles. If nothing is submitted by us all then there will be no newsletter so please help. Thanks in advance for this.

That's it then for me this month, I hope you will take part in all of the events; it would be tremendous to see. Enjoy the newsletter.

Bob GM4UYZ

two of this!

Reports:

Bob GM4UYZ

Managed to get on the air for a little while during the Russian CQ-Mt. All my QSO's were on CW on 20M. Really enjoyed my operating.

Craig 2M0NBW

A few more than last time, but all FT8 again. I could not make a single contact on PSK this time around.

RK3AQ reported his QTH as RJ85 which is pretty much in the middle of the Pacific - 13170 km away... His page on QRZCQ says KO85 -2449 km way. He transmitted no prefix and so assuming there was an error in TX I've corrected the QTH in the log to KO85, much as I'd love him to have been 13 thousand km away... darn!

Colwyn MM0YCJ

On Sunday 13th May we were out West on the Ardnamurchan peninsula, which included a visit to the most westerly point on the British mainland; Ardnamurchan Point (Ard na Murchan, means "the hill of the great sea") in Gaelic.

We had hired a well-equipped VW campervan for a long weekend from Jerba campervans, based in Halfland Barns, North Berwick. The van was comfortable and small enough to be considered as a single main car and handled the B8007 (a very long and twisty single-track road) quite easily. Importantly, there were spaces in the

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dashboard which a mobile radio would nicely fill. One of a number of retirement plans still to be realised! The evening before Sunday 13th we had discretely wild camped in the aforementioned van nearby and, despite a late breakfast, arrive early at the foot of the prominent hill close to the end of the Ardnamurchan peninsula, Ben Hiant (SOTA ref; GM/WS-294). Ben Hiant is a very modest peak being 528m high. Hiant might mean holy or might mean gaping: as of the jaws of certain insects.



The views from the summit were superlative, taking in miles of coastline, countless islands (including Tiree) and many surrounding mountains. It's also a shapely little peak in its own right - a perfect hillwalk for a Sunday morning, combined with a CPSARC activity day report. Apparently, Ben Hiant epitomises the complex geology of the Ardnamurchan region being a conglomeration of quartz-dolerite, breccias, pitchstone, basalt lavas, cone sheets and Moine schist. It is one of the places where they think Greenland split off from Scotland and the rock formations bear evidence of later sculpturing by ice. The summit is believed to be formed from the solid plug of the original volcano.

The sun was shining as we parked up and put on our boots, essential as the path to the summit is boggy in many places. The ascent took less than an hour and we reached the top with its cylindrical triangulation station, just after 10:30 hours. There was a steady breeze which required a hat and jacket on top and I set about setting up my mountaintop radio shack. The day before we had climbed three peaks and I had used VHF to successfully radio from the top of GM/WS-150, GM/WS-192 and GM/WS-249, on the western shores of Loch Linnhe. An attempt to use 20m and 40m late in the day had been useless. We had also seen several birds, including a cuckoo (we heard many but only saw one), golden eagle and white-tailed sea eagle. A splendid day in equally splendid weather, although my decision to wear shorts again (nae midges) might have seemed

over optimistic.

The hole in the trig pillar was still empty so I was able to insert the 2-element YAGI support pole which uses telescopic walking poles and sit in the lee of the summit sheltered from the wind. Switching on my Yaesu VX7 I found that the Sunday morning RSGB bulletin was still being broadcast up the west coast on 145.525MHz by John (GM3JII) from Stornoway. There was no point calling CQ until it was over, and I settled in with everyone else to listen to the list of events and propagation reports relevant to the UK.

I knew that once the RSGB broadcast is over the local operators convene a cluster, so I was able to call in and join making four QSOs just after 11:00 hours. There was some helpful chat but there were also two other stations in the cluster that I could not hear. Ben Hiant may be prominent on Ardnamurchan, but there are other hills (Skye, Rum and Knoydart) blocking line of sight contacts. I also spoke with Robin (GM7PKT) at his home QTH near Fort William.

The weather was still glorious and the prospect of rock climbing on the fine rough gabbro of the area proved too much of a temptation. Ignoring short wave, I packed the kit and we headed back down the hill. A splendid Summits on the Air broadcast in a splendid position, in splendid weather. However, my 173km QSO on VHF is unlikely to win any prizes. Life is too short for QRP as someone once had printed on a t-shirt, but sometimes 5 watts feels about right!

Tom GM8MJV

Attached activity day - little bit of Es to Finland/Sweden etc.

Geoff GM0LOD

Sadly, only one contact, but it was quite worthwhile. I have lost your elegant spreadsheet because my computer was playing up and I had to reinstall Windows 10. Ho hum. It has been quite busy as I have been doing invigilation again and getting up at 6.00 am reminds me of the word of work which for me is a mere 18 years away. Unfortunately, this is the norm for so many.

This month CW is the winning mode this month with FT8 being the predominant Data mode. Regarding modes being worked then out of the 73 QSO's made: CW = 34, SSB = 1, Data = 33, FM = 5. Best DX on Data was by Craig 2M0NBW working NW2M on 14Mhz at 5547kms into USA and on CW Bob GM4UYZ working K1RM on 14MHz at 5115Kms into USA and on HF SSB Geoff GM0LOD working GB100MO on 7MHz at 173Kms into England. With regard the rest of the QSO's they were predominantly the normal European contacts. I

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should also like to note the first 6M FT8 QSO's have also taken place by Tom GM8MJV on mostly Sporadic "E". His best DX was LA9VFA in KQ40CK at 2206Kms

The next Activity Day is any day starting on the week beginning the 17th and ending on the 23rd June 2018. Choose your day and then submit your log. The changes should now suit everyone as you are no longer tied to a specific day so from that end. I hope everyone and even more of you will at least take part and submit your logs or even if they don't make any contacts tell us about what it was like. Good DXing.

Summary of who did what:

Total QSO's = 73 where: 34 = CW, 1 = SSB, 33 = DATA, 5 = FM

Bob GM4UYZ	CW:34 x 20M
Colwyn MM0YJC	FM: 5 x 2M
Craig 2M0NBW	DATA:3 x 80M, 14 x 20M
Tom GM8MJV	DATA: 16 x 6M
Geoff GM0LOD	SSB: 1 x 40M

DF Hunt Report

DF HUNT NIGHT Friday 11th May

Our DF Nights are now an integral part of our club events where we run one in May and the other in September. Each DF night has its own characteristics, otherwise the May night is in total daylight and the September night is 80% in the dark... No matter what they both offer some interesting challenges.

Our first DF night the weather was good and overcast. Typical as up to DF Night the weather had been really good with brilliant sunshine, yes, I know a rare occurrence for us.... The fox this time was Rickie GM1PLY. Like the other previous foxes a notification was sent, this time with a phone call to say that he was in place. I informed Rickie that there were four cars involved, would have been nice to see more but never the less a good turnout for this event maybe next time more will come out and take part.

Well the 4 teams which took part this time assembled at

DATES FOR YOUR DIARY FOR THE 2018 ACTIVITY WEEKS

MONTH 2018	ACTIVITY WEEK
June	17th to 23 rd June
July	15th to 21st July
August	12th to 18th August
September	9th to 15th September
October	14h to 20th October
November	11th to 17th November
December	9th to 15 th December

Thanks for taking part and I hope you will continue in 2018. Would love to see many more on as well so why not make it your 2018 target.

Bob GM4UYZ

the new car park location where the Pond Hall and swimming pool used to be. The teams consisted of Cephas MM0INS and Liz 2M1GLD in Car 1, Craig 2M0NBW and myself in Car 2, Paul MM0VPR and Robin MM0VTV in car 3 and lastly Tim MM0VTO and his friend Kate in car 4. All the teams for this DF Hunt used a 2-element beam. Over the years a lot of people have really enjoyed taking part but alas you all seem to be missing.....it would be great to see all your support and return to make what is a really big fun event.

At the pre-requisite time of the 19:00 start we all went our separate ways to try and catch the elusive fox. I headed this year towards the car park at the top of the "Coal Road" where we took our first bearings getting a signal up towards the Garleton Monument (we thought!!). We then made stops as we headed towards the Garleton Hill, nothing.... we then stopped at the Garleton Monument, Drem Station, Museum of Flight all still nothing. Across the hill towards Haddington still nothing.... head scratching now. We then started head-

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ing back towards Port Seton and at Longniddry we suddenly started hearing the fox. Thinking the fox being devious we headed into Port Seton but still no joy but still hearing the fox. Alas by now the time was up so we headed to the Thorntree for the debrief. So, for Craig and me it was a disaster night but we both enjoyed the run around the beautiful county of East Lothian.

We have always said when DF'ing that luck sometimes plays an enormous part in the hunt and that night it was with it wasn't with us.

How did the others fare was the question well they all found the fox within a minute of each other so well done to them all? Congratulations to Tim MM0VTO and Kate for being first at 20:51, Paul MM0VPR and Robin MM0VTV at 20:52 and lastly Cephas MM0INS and Liz 2M1GLD at 20:53 and well Craig 2M0NDW and I were posted missing.

The trophy was presented to Tim and Kate and they will now keep it until our next DF night in September.



A massive thank you from us all to Rickie for taking on the role of the fox and once again producing another fun packed night. Also, thanks to everyone who turned up I know from all your comments you all seemed to enjoy it so hopefully you will all come back for the next DF night in September 2018.

Those of you who do not take part you do not know what you are missing. Believe you me DF'ing is not as

easy as you think, give it a try and you will see what I mean.

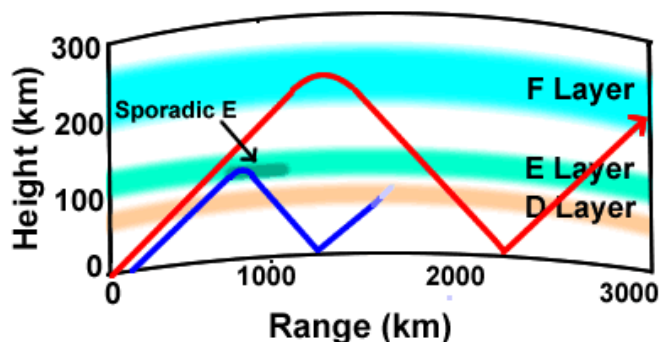
Congratulations again to the Tim and his passenger Kate for doing a sterling job and winning and commiserations to the rest...

Bob GM4UYZ

Sporadic E, Es Propagation

We are now moving into the Sporadic "E" season so I thought I would resurrect this previous article. The article is not my own and has been put together from various sources so I hope you find it interesting

The basics of Sporadic E or Es radio signal propagation as it is used by radio hams or radio amateurs on the amateur radio bands. Firstly let us look at the various layers of the ionosphere and their descriptions.



D layer

The D layer is the lowest of the layers of the ionosphere. It exists at altitudes around 60 to 90 km. It is present during the day when radiation is received from the sun. However the density of the air at this altitude means that ions and electrons recombine relatively quickly. This means that after sunset, electron levels fall and the layer effectively disappears. This layer is typically produced as the result of X-ray and cosmic ray ionisation. It is found that this layer tends to attenuate signals that pass through it.

E layer

The next layer beyond the D layer is called the E layer. This exists at an altitude of between 100 and 125 km. Instead of acting chiefly as an attenuator, this layer reflects radio signals although they still undergo some attenuation. In view of its altitude and the density of the air, electrons and positive ions recombine relatively quickly. This occurs at a rate of about four times that of the F layers that are higher up where the air is less dense. This means that after nightfall the layer virtually disappears although there is still some residual ionisation, especially in the years around the sunspot maximum. There are a number of methods by which the ionisation in this

layer is generated. It depends on factors including the altitude within the layer, the state of the sun, and the latitude. However X-rays and ultraviolet produce a large amount of the ionisation light, especially that with very short wavelengths.

F layer

The F layer is the most important region for long distance HF communications. During the day it splits into two separate layers. These are called the F1 and F2 layers, the F1 layer being the lower of the two. At night these two layers merge to give one layer called the F layer. The altitudes of the layers vary considerably with the time of day, season and the state of the sun. Typically in summer the F1 layer may be around 300 km with the F2 layer at about 400 km or even higher. In winter these figures may be reduced to about 300 km and 200 km. Then at night the F layer is generally around 250 to 300 km. Like the D and E layers, the level of ionisation falls at night, but in view of the much lower air density, the ions and electrons combine much more slowly and the F layer decays much less. Accordingly it is able to support communications, although changes are experienced because of the lessening of the ionisation levels. The figures for the altitude of the F layers are far more variable than those for the lower layers. They change greatly with the time of day, the season and the state of the sun. As a result the figures which are given must only be taken as an approximate guide.

Most of the ionisation in this region of the ionosphere is caused by ultraviolet light, both in the middle of the UV spectrum and those portions with very short wavelengths.

Sporadic E

Sporadic E, also known as Es (i.e. E sporadic) is a form of E layer ionisation that occurs randomly in the ionosphere. It can affect frequencies normally affected by ionospheric propagation, but as the levels of ionisation can rise very high, it can affect frequencies much higher than would be expected by normal E region ionisation. It is not uncommon for frequencies in the VHF FM band to be affected and it can extend as high as 150 MHz, and more on rare

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occasions.

In view of the fact that Sporadic E can affect amateur radio bands such as 2 Metres (144 MHz) and even 1.25 Metres 220 MHz (N American allocation), it creates a significant amount of interest amongst radio hams, enabling contacts to be made on these bands that would not otherwise be possible. Nevertheless it is also an important form of propagation that can be used on the 10 and 6 meter amateur radio bands where it can enable long distance communications during periods of low sunspot activity when ionospheric propagation would not be possible.

Sporadic E basics

Sporadic E arises when very intense clouds of ionisation start to build in the lower reaches of the E region of the ionosphere. The level of ionisation may be up to five times greater than those normally achieved at the peak of the sunspot cycle and this is the reason why signals well into the VHF region of the radio spectrum can be reflected. In view of the very high levels of ionisation, the levels of loss are particularly low and even low power stations can be heard at good strength.

In view of the altitude of the sporadic E ionisation, the maximum distances that can be achieved are generally around 2000 kilometers. However double hop skip has been noted on lower frequency on many occasions on the lower frequencies where sporadic E is more common.

The ionisation causing sporadic E is found to build up steadily. Initially only frequencies lower in the radio spectrum are affected, but as the level of ionisation increases so do the frequencies that are affected. The highest frequencies that may be affected vary from one "cloud" to another with some affecting radio frequencies only as high as about 30 MHz whereas others may affect frequencies that extend well into the VHF portion of the spectrum. It is also found that the sporadic E clouds become opaque below a certain frequency, dependent upon the state of the cloud.

In view of the much higher levels of ionisation that are required for reflecting signals into the VHF portion of the radio spectrum, some of the openings that occur high in frequency, e.g. on the 144 MHz amateur radio band may only be very short lived. Sometimes they may last an hour or more, but at

others they may only last a few minutes. It is also found that the openings that affect the higher frequencies are much less frequent than those that only affect the lower frequencies.

The ionised clouds that give rise to sporadic E vary greatly in size, but they are very much thinner than the E region in which they occur. Typically their dimensions are measured in metres, in comparison with the E region that is measured in tens of kilometers. As a result the reflections from sporadic E clouds occur as a result of an extremely sharp change in electron density. The shape in other planes also varies considerably with some clouds being very approximately circular while others may be relatively long and thin. In many respects the shapes are not of great importance but they do help explain why some stations may experience sporadic E propagation whereas others may not experience it or the areas where stations they can hear are totally different. They are also surprisingly thin.

It is found that the sporadic E clouds are very mobile. The winds in the region of the atmosphere where they are formed can reach speeds of 400 km per hour. As a result the ionised clouds can move very quickly, and this can lead to the areas where the signals are reflected to changing quite rapidly.

Sporadic E often enables radio signals well into the VHF portion of the spectrum to propagate over great distances. It also provides a means of radio propagation at the top end of the HF spectrum when normal ionospheric propagation may be at the low point as a result of the sunspot cycle. While sporadic E can enhance communications in most instances it can also degrade them in others. The very high levels of ionisation in the clouds will reflect any signals in the HF radio bands and thereby prevent them from reaching the higher F region where they might also be reflected, but reach greater distances because of the greater altitude. As a result when sporadic E is in existence short-range signals might be detected when longer range signals would be expected. However the sporadic nature of them and the mobility of the clouds mean that any effects are likely to be relatively short lived.

Predicting Sporadic E radio propagation

As the name suggests, the occurrence of sporadic E radio propagation is not easy to predict. However a large amount of statistical data has been collected

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and from this it is possible to judge the times when it is likely to occur.

In temperate regions, i.e. those in the mid latitudes between the equatorial regions and Polar Regions, sporadic E is found to occur mainly in summer. In the northern hemisphere the months of May to August yield the highest number of openings with a peak in June, and as a result it is found that the two Meter openings generally only occur in June and July. Surprisingly a small peak of sporadic E occurrences in general is also noticed in December, although these openings rarely affect the higher VHF bands. A similar pattern is also apparent in the equivalent months, November to February in the southern hemisphere.

The time of day also has a significant effect on sporadic E. There are two main peaks that occur. The first is around midday and there is another at around 7 pm. It is found that there are fewer occurrences in the afternoon and particularly in the morning. There are also very few at night.

The occurrence of sporadic E is rather different outside the temperate regions. In equatorial regions the occurrence of sporadic E is primarily a daytime phenomenon, and because of the proximity to the equator there is little difference over the course of the year. In Polar Regions what is often termed Auroral sporadic E occurs and again there is little difference between the seasons but it is found that the ionisation for the sporadic E usually occurs in the morning.

Using Sporadic E

One of the main keys of being able to take advantage of a Sporadic E opening is to be able to be available when the opening occurs. Obviously the methods of operation tend to be slightly different dependent upon the band in use. Radio contacts, for example on the ten-meter amateur radio band will tend to follow the normal format for a DX band. The radio contact will tend to be short and to the point as conditions may change. However there is probably little difference in the operation compared to that undertaken for normal ionospheric radio propagation. In addition to this, as the ten meter amateur radio band is relatively low in frequency, the openings will last for longer than higher in frequency.

On amateur radio bands such as two metres where the sporadic E openings may be short lived, activity tends to increase very rapidly as news of the opening spreads. Contest style contacts are normally made, with exchanges consisting of just callsign and report. Additionally it is likely to be found that the area to which the opening exists will change as the Sporadic E clouds are blown about in the upper atmosphere. Radio amateurs who are operating should be prepared to change the headings of their antennas to follow the opening.

The rewards of operating on the VHF bands during a sporadic E opening can be very high. Accordingly it is worth monitoring band conditions as much as possible during periods when openings are possible. In this way it can be possible to make the most of any sporadic E openings that may occur and the maximum number of contacts with other radio amateurs can be made.

FUTURE ARTICLES

"I know I have put the following in the Newsletter in the past and I give no apologies for putting it in again. It is a real struggle to write articles and if I am honest I am finding it harder and harder to do so your help would be so much appreciated"

As always we are always looking for articles for the newsletter and at the moment I am certainly struggling each month to think about what to write about, in fact I have noticed recently if it wasn't for my input and the occasional contributor there would be no newsletter at all. It isn't fair, as I know there would be a huge outcry if no newsletter was produced so come on please put "fingers to the keyboard "or" pen to paper and do something. It doesn't have to be a huge article anything will do. I get lots of people saying I must do something but it never materialises so be positive for a change and do it. The lack of time is no excuse as I am continually "up to my ears" as they say, and struggling for time but I am aware if nothing is written then there will be no newsletter.

Here are a list of ideas for articles that spring to my mind, I am sure there are many more but they elude me at the moment. The ideas are:

- Fitting a radio into a vehicle. There are lots of new amateurs out there so it could be used to describe the do and don'ts of a Mobile Installation.
- Working Portable. Going out portable and setting up a station from scratch i.e. erecting poles, fitting antennas, station layout, etc, etc.
- Setting up a station at home. Again some do's and

don'ts.

- What is your main interests CW, SSTV, Data Modes, etc? Tell everybody about how you got into it; what gave you the buzz with the mode? Etc, etc.
- What made you decide on Amateur Radio as a hobby?
- Anything else you can think of.

The ball is now back in your court so come on then let's see what you can do.

Please send your articles to John MM0JXI john.innes@gmail.com as John puts the newsletter together.

Bob GM4UYZ

Club Attire

The club has a design for Club T-shirts, Polo-shirts, Sweat-Shirts, Fleeces and Jackets and all of these can be obtained from Patricia Bewsey Designs

When making an order please quote 'Cockenzie & Port Seton Amateur Radio Club' to ensure that the Club Logo will be placed on the required garments.

Cost will depend on garment and should cover the garment and logo, call sign addition will be extra.

If you wish to add your call sign to the logo then please ask at the time of the order.

Order from:

PATRICIA BEWSEY DESIGNS,

Tel/Fax: 01620 850788

Mobile: 07970 920431

Email: patricia.bewsey@gmail.com

Note: the shop at Fenton Barns is now closed

June 2018 CONTESTS

For anyone interested in contesting there is something for everyone. Contesting is not just about winning although that is the aim; it is about taking part, having some fun, honing your operating skills, helping you understand propagation and It is also a good opportunity to test out your station at home to see how it is performing.

Happy Contesting.....

Extracts are from the RSGB Radio Sport VHF & HF contest and the WA7BNM Contest Calendar

(<http://www.hornucopia.com/contestcal/perpetualcal.php>)

June 2018

10-10 Int. Open Season PSK Contest	0001Z, Jun 2 to 2359Z, Jun 3
Wake-Up! QRP Sprint	0600Z-0800Z, Jun 2
SEANET Contest	1200Z, Jun 2 to 1200Z, Jun 3
RSGB National Field Day	1500Z, Jun 2 to 1500Z, Jun 3
RSGB 80m CC DATA	1900Z-2030Z, Jun 4
VK Shires Contest	0600Z, Jun 9 to 0600Z, Jun 10
Asia-Pacific Sprint, SSB	1100Z-1300Z, Jun 9
RSGB 2 nd 144MHz Backpackers	0900Z-1300Z, Jun 10
SKCC Weekend Sprintathon	1200Z, Jun 9 to 2359Z, Jun 10
Portugal Day Contest	1200Z, Jun 9 to 1159Z, Jun 10
GACW WWSA CW DX Contest	1500Z, Jun 9 to 1500Z, Jun 10
REF DDFM 6m Contest	1600Z, Jun 9 to 1600Z, Jun 10
ARRL June VHF Contest	1800Z, Jun 9 to 0300Z, Jun 11
RSGB 80m CC CW	1900Z-2030Z, Jun 13
All Asian DX Contest, CW	0000Z, Jun 16 to 2400Z, Jun 17
RSGB 50MHz Trophy Contest	1400Z, Jun 16 to 1400Z, Jun 17
Run for the Bacon QRP Contest	0100Z-0300Z, Jun 18
RSGB 50MHz Contest CW	0900Z-1300Z, Jun 24
Ukrainian DX DIGI Contest	1200Z, Jun 23 to 1200Z, Jun 24
His Maj. King of Spain Contest, SSB	1200Z, Jun 23 to 1200Z, Jun 24
RSGB 70MHz Cumulatives #4	1400Z-1600Z, Jun 24
ARRL Field Day	1800Z, Jun 23 to 2100Z, Jun 24
SKCC Sprint	0000Z-0200Z, Jun 27
RSGB 80m CC SSB	1900Z-2030Z, Jun 28

January to December Monthly Contests 2018

144MHz FMAC	1900-2000 (Local) Every 1st Tuesday
144MHz UKAC	2000-2230 (Local) Every 1st Tuesday
432MHz FMAC	1900-2000 (Local) Every 2nd Tuesday
432MHz UKAC	2000-2230 (Local) Every 2nd Tuesday
50MHz FMAC	1900-2000 (Local) Every 2nd Thursday
50MHz UKAC	2000-2230 (Local) Every 2nd Thursday
70MHz FMAC	1900-2000 (Local) Every 3rd Thursday
70MHz UKAC	2000-2230 (Local) Every 3rd Thursday
1.3GHz UKAC	2000-2230 (Local) Every 3rd Tuesday
SHF UKAC	2000-2230 (Local) Every 4th Tuesday (Jan-Nov Only)

Test Your Knowledge

1. **A balun is**

- a. used instead of a dummy load
- b. used to connect a dipole to coaxial cable
- c. a particular type of antenna
- d. A type of feeder.

2. **Two receiving stations are situated on clear open ground 5km and 10km from a VHF transmitter. The further station will**

- a. receive a weaker signal because the signal has spread out more
- b. receive the same signal because they are both in clear ground
- c. receive no signal if it is directly behind the closer station
- d. Only receive a signal if it is correctly licensed.

3. **The ionosphere is**

- a. another name for the air we breath
- b. conductive gasses at heights of 70 to 400km
- c. a type of spherical transmitting antenna
- d. a piece of amateur radio test equipment

4. **Amateur transmissions might be picked up by**

- a. any wiring in the neighbour's house
- b. only wiring which is longer than 2 metres
- c. only wiring that does not have an earth lead
- d. Earth leads only.

5. **One way of reducing the possibility of interference from a single sideband (s.s.b.) transmitter to a television receiver in the next house is to**

- a. use an indoor transmitting antenna
- b. increase power input to the transmitter
- c. decrease power input to the transmitter
- d. Decrease the number of frequency multiplying stages in the transmitter.

6. **Why is it advisable to purchase a ready made filter for fitting in the mains lead of a radio receiving device?**

- a. A home made device may not let the radio signals through.
- b. A purchased item will look much nicer.
- c. The filter may not work well.
- d. It is dangerous to put home made devices in the mains.

7. **The difference between a CQ call on 2 metres FM and one on HF SSB is that the call on FM**

- a. is usually much shorter than when on HF SSB
- b. must be made at the lowest possible power
- c. needs to be repeated many times while somebody is tuning in to your signal
- d. Is only permitted on the set calling channels. -,

8. **In the 2 metre band plan, the frequencies from 144.994MHz to 145.1395MHz are allocated to**

- a. fm simplex channels
- b. fm repeater inputs
- c. SSB and CW only
- d. Satellites.

9. **An adult should be present when erecting an antenna because**

- a. it is a hazardous activity
- b. heavy items will need to be lifted
- c. they have more knowledge of First Aid
- d. The antenna must be placed out of reach of a child.

10. **Turning the power off in an emergency is made easier and quicker if**

- a. all the switches and plugs are colour coded
- b. proper fuses are used in each plug
- c. Each socket has indicator lights when they are on.
- d. There is a single switch controlling all the power.

HOW TO IMPROVE YOUR OPERATING SKILLS ...

This subject that we as radio amateurs should always be trying to improve, it could mean the difference of making that "elusive" DX contact or not. When we are operating from home, normally with a very restricted set-up, it comes even more prevalent as we normally have to work harder to make contacts compared to a full blown contest station with its mono-band aerials, linear's and general set-up.

The key areas covered are as follows:

- Your "ears"
- Radio Controls
- Antennas
- Logging software
- Keyboard skills
- Propagation
- Strategy

Your "Ears":

Basically listen first and see what is happening because if you can't hear the stations then you certainly cannot work them. Your ears are the best decoders going and are far better than any software decoders. They have the ability to pick out something that no decoder will. Good advice as well is to use a good set of headphones i.e. HEIL headsets as this concentrates your listening plus they have the ability to cut out any local background noise.

Radio Controls:

From the transmitter side the main controls are Mike Gain and Power Output. It is important that the Mike Gain is set properly and is good advice to set it as per the manufactures recommendation. Do not overdrive the radio by too much gain or by too much power as this can cause distortion, unreadable signals and interference, basically we want our signal to be clear and clean so that we can be heard. If people do not hear you then they can't work you.

On the receiver side there are various controls that can help you receive a signal better. There are Dual VFO's to allow fast switching between frequencies for both Receive and Transmit. The RF Gain and DSP can be used to adjust the signal level to bring out that signal that you want. Then there is AGC and here people have their own preferred setting but the contentious of opinion is

set it Fast for CW and Slow for SSB. This controls the signal level through the IF of the radio with an aim to make it easy listening. Lastly there are filters. Depends on what mode you are receiving in to whether by default the IF filters will be wide or narrow. Normally Wide for SSB and narrow for CW but by adjusting these no matter what the mode they can be used to bring out that elusive signal.

Lastly on the radio side there are headsets and a PTT footswitch. Certainly for contesting the recommendation is the HEIL headset with a 5 insert as this produces a good contest signal but to be truthful they are ideal for home shack use as well. The advantage with headsets and using a footswitch for the PTT is that it allows hands free operating. It is also important to mention that if a headset is used that the radio's mike gain is checked and adjusted if required.

Antennas:

There is a wide range of antennas from wire, verticals, Multiband Yagi's and Monoband Yagi's. What you choose will really depend on what your effective aim is. For example in the CQWW contest the best antennas are the Monoband Yagi's whereas if the requirement is to work "local G's" then the best would be low slung dipoles. The bottom line is to decide on your requirement and use the correct antenna. I know that for many the antenna is what we have at home and that is that as we don't have the luxury of the contest level set-up. Then the answer is making the best with what you have. With regard to the club's activities we certainly have the luxury of using any of the antennas in the list so when we are out and about we decide what we need and then set that up.

Logging Software:

There are many on the market all with their own advantages and disadvantages. As a club we have gone for Win-Test as it covers all the contests and activities that we are involved in. The major advantage is that only one program has to be learnt rather than numerous. It offers then slicker operating. Another major advantage it offers is the network of computers in a Multi-Multi scenario and if a "computer crashes" then there is no worry as it fully recovers the log, believe you me that is a fantastic step forward.

(Continued on page 13)

Keyboard Skills:

It is marvellous if you have already got good keyboard skills and can touch type as it speeds up the logging process. If you do not have this the golden rule is when logging, "single finger" mode is that you type as you speak i.e. logging GM4UYZ then type "G", say "G", then type "M" then say "M", etc, etc in that way you control the logging. Speed and knowing the keyboard comes the more you actually type.

Propagation:

The Ionosphere layers which we use for DX contacts and when they are available during the day affects the transmitted frequencies to use, basically frequencies up to 10MHz are Night time bands and frequencies from 10MHz to 30MHz are day time bands with regard to HF propagation. Know what bands are open and when, so that maximum advantage can be taken of them. The use of the "Grey Line" to make long distance contacts when one place is at dawn and another place in the world is at dusk is a technique that is used and is always studied by those wanting to work DX stations.

Strategy:

The strategy concentrates on dealing with a contest. Important points that need to be stressed is the reading

of the rules, manpower, working as a team, role of a manager for decision making and crisis management and the ultimate aim of the contest.

Reading the rules needs to be done by everyone and not by a few so everyone knows what needs to be achieved, basically we are all singing from the same hymn sheet. A suggestion of a "Role Manager" was made which we have to a certain degree with his responsibility ensuring that the right bands are being used and when and what mode. At the end of the day the person is the principle decision maker. One thing from our own experience it is important that we all work as a team because without it the ultimate aim will never be achieved. The aim is to win the contest ultimately but I see it really is to always try and improve on where you reached before. It is also important that everyone enjoys themselves because without that you may as well have not taken part.

The above is just a guideline and an insight and you may see things differently or maybe can offer other advice but I think there and something in it for everyone from the casual operator through to the experienced operator

Bob GM4UYZ

Clublog Tables

Rank	Callsign	160	60	40	30	20	17	15	12	10	6	DXCC	Slots	Range
1	MM0GZZ	0	0	68	78	62	60	0	0	11	14	125	293	10 yrs
2	GM8MJV	0	0	62	2	72	14	10	0	0	25	104	185	40 yrs
3	M0RNR	0	0	28	0	59	0	3	0	1	0	63	91	19 yrs
4	MM0XXW	0	0	36	35	32	12	9	3	1	0	58	128	12 yrs
5	MM0XAB	0	0	12	26	3	9	4	0	0	0	48	54	4 yrs
6	GM4UYZ	0	0	5	0	35	0	2	0	0	0	38	42	38 yrs
7	MM0GYG	0	0	17	0	11	2	1	0	0	0	26	31	9 yrs
8	MM0GPZ	1	0	14	0	11	0	0	0	0	0	23	26	13 yrs
9	2M0BEC	0	0	0	0	15	0	0	0	0	0	15	15	12 yrs
10	MM2N	1	0	10	0	0	0	0	0	0	0	10	11	6 yrs

Club Events

1 June	Club Night
10 June	Practical Wireless QRP Contest
23/24 June	Museums on the Air weekend at the Museum of Flight
6 July	Club Night
7/8 July	RSGB VHF Field Day
28/29 July	RSGB IOTA Contest from Tiree
3 August	Club Night
10 August	25th Annual Mini Rally
18/19 August	Lighthouses Weekend from Barns Ness
7 September	Club Night
21 September	2nd 144MHz DF Hunt
5 October	Club Night
19 October	Club Talk (TBA)
27/28 October	CQWW SSB Contest from Barns Ness
2 November	Club Night
16 November	Club Talk (TBA)
7 December	Club Night
8 December	Christmas Meal

Answers from June 2018 newsletter "Test Your Knowledge":

1B, 2A, 3B, 4A, 5C, 6D, 7A, 8B, 9A, 10D