



Mid Sussex Amateur Radio Society

NEWSLETTER

From the Chair Jan 2021

This is the last Newsletter for this year and what a dreadful year it has been. No meetings since mid March and it looks like it will not change till April 2021. However, at least we have managed to keep in touch via various nets and Zoom meetings. Hope most of you have at least joined in when ever you have had the opportunity.

The new Email system seems to work although not member to member system.

On the subject of last month I apologised to Bernie, but I had completely forgotten that Adrian MOTCD had set up Group.io about 3 years ago which a few members have signed up for, including I'm sorry to say myself. So sorry Adrian.

I recently asked Tony if he had any answers to the question posed in the October Newsletter. Well I can tell you I think the 3 Gentlemen are from L - R Gerry Birkhead E19DZ, Ken Gibson G3WYN and Sean Lineham E17CV. Has anybody anymore information, if so please let Tony G3XQM Editor know, and he can include it in a future newsletter issue.

The membership rate for 2021 has yet to be decided.

We will let you know our suggestion as soon as possible and then ask you for your approval (in leu of the AGM).

Finally may I take this opportunity to wish all our members and families a very happy Christmas (within guidelines) and a healthy 2021.

Till next time

Russell Nelson G7TMR

Hon Chairman

MSARS



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A Mini Moxon Antenna for the HY Repeater.

Thanks to a great deal of work by a few members, the HY Repeater is now running again, and enables MSARS and others to keep in touch over a wide area using only a few milliwatts of transmit power from tiny transceivers.

These come fitted with a rubber duck which has questionable efficiency, and whilst the use of these antennas locally is sufficient to break the repeater, users a little further away could do with something better.

This prompted me to set to and design a small Moxon antenna which has some forward gain, is far better than the rubber duck and cheap and easy to construct.

A Moxon antenna is a 2 element beam consisting of a driven element with a longer parasitic reflector behind it with the ends of both elements bent in towards each other with a small critical dimension between the ends.

For HY this is only a tiny device measuring 249mm x 95mm overall and can be made up from the wire from two coat hangers, welding rods or any similar metal rods easily obtainable from a variety of sources. Since there is no soldering involved in this antenna the rod can be made from whatever metal can be found.

The diagram gives the dimensions of the three pieces of rod required, one of 341mm and two of 213.5mm but it is easier to cut all pieces slightly longer and trim the elements exactly to length once bent. When you are measuring any length remember to measure from the inside of the bend not the outside.

To make up the antenna, cut one length of rod to 350mm, measure 50mm from one end and stick a length of masking tape on the rod to allow you to mark where the first bend should be. Measure 249mm along from this mark for the second bend position and put the rod into a vice and make the first 90 degree bend carefully. Give it a tap with a hammer to make a sharp right angle bend and then do the same for the other bend 249mm away.

When you are happy that the distance between each bend is 249mm, cut each short length to 46mm to complete the parasitic element of the antenna.

Now for the two identical front elements. You need to allow extra length on each of them to bend back to fit the terminal block which connects the coax to each of them so, cut two pieces 180mm long and bend one end back 32mm from the end. Then measure 121mm from inside the bend and bend back the remaining length which goes into the terminal block.

The photograph shows the terminal block I used, translucent plastic with two sets of screws, but anything you can get hold of will suffice. If you can only find single connectors then stick two together with superglue.

Now you have 3 bent wires which require fitting together and to the coaxial feeder. I used a sheet of polystyrene foam as a backing board but corrugated cardboard or any stiff board will suffice.

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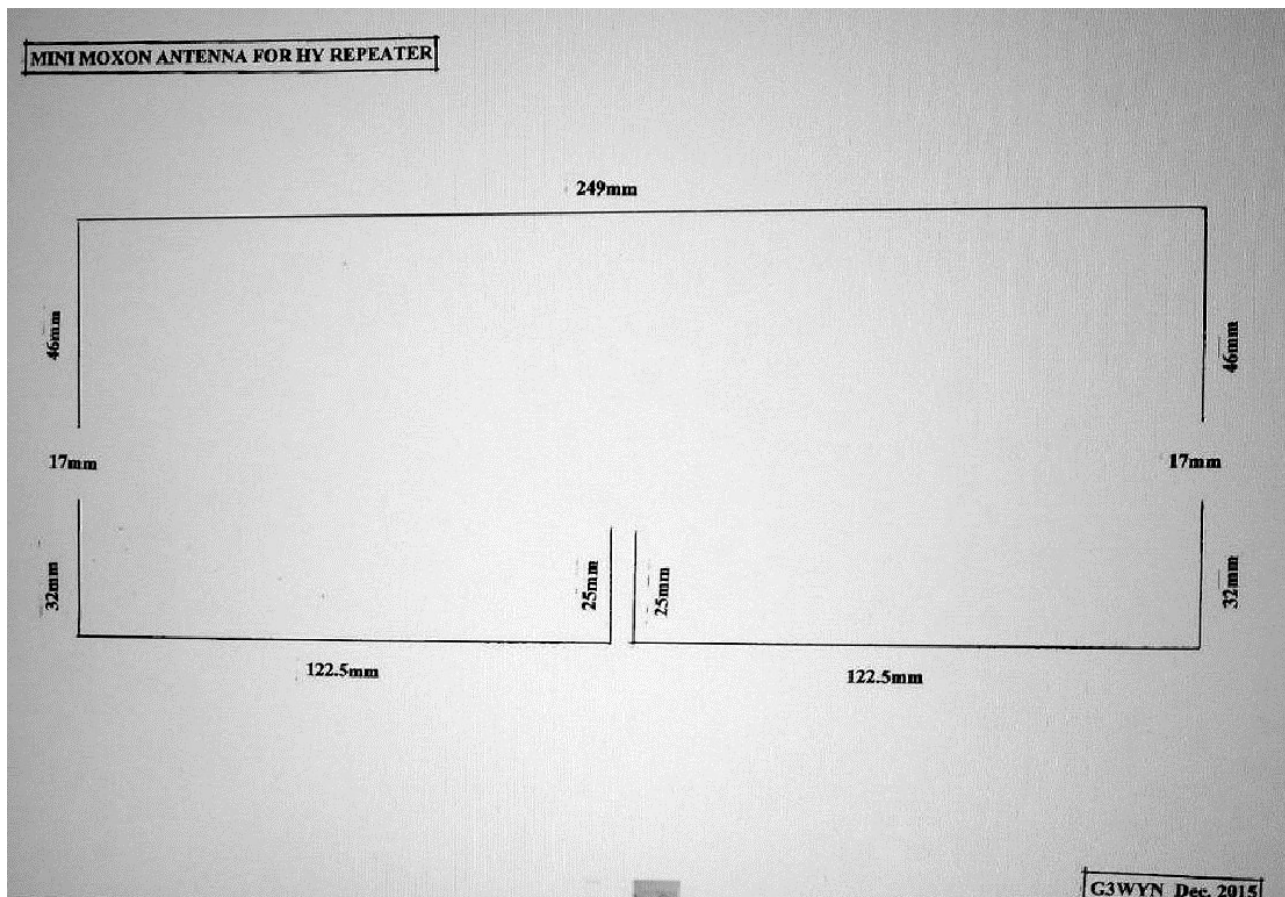
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To maintain the 17mm spacing between the ends of the elements, find a small length of plastic tubing that will just fit over the rod, and cut two lengths each 60mm. Now find a smaller diameter plastic rod that fits inside the tubing, or use a length of matchstick if all else fails, and cut this to 17mm. Push the thinner rod into the tubing and keep it in the centre of the tube with a little super glue and secure the elements into place in the same way.

Fit the terminal block and trim the ends of the driven element off if they protrude from the terminal block. Fix the completed antenna to the backing board with tie wraps and you are ready for the coaxial feeder. I used mini 8 coax and formed a two turn RF choke secured with more tie wraps. Fit a plug at the other end of the coax that will match your transceiver, and hang the completed antenna up with the feed point side facing towards the water tower and you're off.

You could make up a waterproof version of the antenna and mount it outside, but mine is hanging in my ground floor shack and working fine so why bother. Just get to work and you'll be ready to tell your friends all about your low cost HY beam that is putting in a 5+9 signal into the repeater. Mine is, and so will yours soon I hope!



Completed project overleaf....



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Completed Mini Moxon Antenna for the HY Repeater.

Built by Ken G3WYN





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On air operation from West Burgess Hill.

This year has been a weird one for us all, loads of opportunities to spend days on end at the radio, but no! Lots of fine weather to exercise in the garden, followed by “too hot to do anything”, followed by “its too wet to leave the house to check the antenna”.

However, I did get the chance to do some antenna maintenance, only to be beaten by a steady increase in “noise” up to S9 at times. That, together with rubbish propagation meant little meaningful time in the shack.

Now Autumn is with us I decided to have a go anyway. On the 24 -25th of October the CQWW contest was held so I had a go. All the antennas were on tune and a couple of new log books in stock, just in case!

Terrible conditions here but surprisingly some new band slots especially on the very short skip. I think its my first time to work Belgium on 20M. Long haul Dx was for me far east Asia with a bunch of UA9s and westwards to the west coast of USA. The bulk were relative locals in Europe and east coast USA.

I could hear some south America but could not get through the pile ups.

What did surprise me was that I worked nearly 300 QSO's on the 3 high bands of 20, 15, & 10 Metres.

A few days ago, I had a prompt from the organisers to submit my log (I had forgotten to do it).

While checking their web site I discovered that I had been awarded two certificates for the 2018 event.

I made into the UK top 10! Now that was a nice surprise.

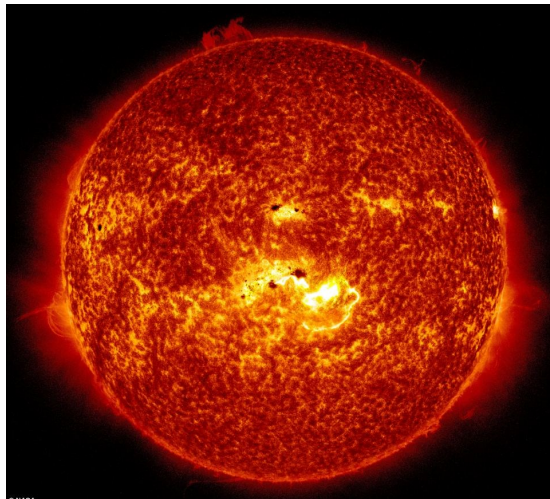
In the last week or so I noted that the solar flux had jumped up! At last! Only to have dropped back a bit. The technical web sites now state that the minima was last December and that we are now well on our way into cycle 25, which they predict will probably be just a bit better than 24 was. But nothing like cycle 19 that I can remember back in the late 50s.

Now to step back & wait for the “experts” to argue amongst themselves till we reach the next peak!

Good DXing

Chris

G4ZCS





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Mike G8KMP looks back over the last few years at some of our outside events.



GB0DWS Station at 'Aspidistra' with Kim - 20 May 2012



GB0DWS Station at 'Aspidistra' with Alan & Gavin - 20 May 2012



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Haywards Heath Town Day - 13th Sep 2014



Fox Hunt with Peter and Tony - 29th May 2015



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Junk Sale 4th Nov 2016



Christmas Meal - 9th Dec 2016



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Russell and Kim at Mills on the Air - 14th May 2017



Back from the Fox Hunt to the New Inn Hurstpierpoint 1st Sept 2017



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Haywards Heath Town Day 9th Sept 2017



Bowling Evening at Barcombe 29th Sep 2017



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Mike G8KMP Presenting G5RV cup to Ken G3WYN 13th Oct 2017



VHF NFD with Sue and Russell up on the Downs 7th July 2019



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Dear Members,

I have been very fortunate to receive good copy from a number of you. I have thoroughly enjoyed putting the articles together.

However, I have chosen to hang my 'Newsletter Hat' up, and in doing so, hopefully another member will step forward to have a go.

If you are interested let me know, I can talk you through what is required.

My Contact details are as follows:

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Tel 01444 254511 or 07519 374 575

Many Thanks

Tony G3XQM