

Wythall Radio Club meets from 8pm every Tuesday and Friday evening at Wythall House, Wythall Park, Silver Street, Wythall, B47 6LZ, near Birmingham. Visitors are very welcome. **Wythall Radio Club** is affiliated to the Radio Society of Great Britain. Contact g0eyo@blueyonder.co.uk

Another successful Hamfest

The club had its annual radio rally (or Hamfest) on Sunday 19th March at Wythall Park with some 500 paying visitors and thirty-six traders spread over four halls; Park Hall, The Scout Hut, the Britannia Room and the Archery building. Anita 2E0DUO, Mike G4VPD and Ian M0IDR were the main organisers and our thanks go to them for their efforts as well as the many club members, and their families who helped make the event a very successful day for the club financially. This was the 32nd consecutive year we have run a rally.

After last year's rally the Parish council had received a complaint from a Silver St resident about the parking and this was the subject of a meeting between the radio club, Wythall House, the Parish council and the police. At this meeting the police agreed to close off the road along Silver St and to mail drop the residents about the event. Wythall House agreed that, weather permitting we could park cars on the archery field.



this is a revenue earning opportunity that they can also ill afford to lose.

A new rally committee has now been formed led by Ian M0IDR and comprising John G3VHF, Winston 2E0EGP, Phil 2E0WTH and Chris G3YHF and the date of the next rally has been booked for 25th March 2018. The committee will be looking for your support on that weekend of course.

Chris G0EYO

(see last page for more pictures)

As in previous years the various halls had been booked for the day before the rally so we could set up ready for a 7am start on the Sunday. On the Saturday the organisers were faced with the possibility of not being able to use the field for parking for reasons that are not entirely clear but by the Sunday morning this had been resolved and the field was made available. Good on-site parking is the key to a successful and stress-free rally and this is only the second time in its 32 year history that the field has been made available to us. Hopefully this is a portent for the future because whether we continue to have a rally at Wythall park, depends upon the co-operation and support of our friends at Wythall House and I think at long last they have realised that



Maritime communications – from CW to GMDSS, DCS and AIS

Maritime radio communications have moved on considerably since the Titanic tragedy demonstrated the value of ships carrying radio equipment. More than that, it showed the importance of continual monitoring of the radio for emergencies; the vessel closest to Titanic could not be contacted as the sole radio officer had just completed his 12 hour watch. This was a catalyst leading to the adoption of the International Convention for the Safety of Life At Sea (SOLAS) that defines the kinds of safety and communications facilities that should be aboard vessels.

When I was first licensed (in 1969) I operated on Top Band which at that time was also home to the powerful shore stations passing traffic to and from ships - Niton (GNI) was the closest to my QTH. Besides this MF telephony, the other main maritime communication medium was HF CW. In UK waters, this lasted until satellite and digital communication systems improved signal reliability and quality.

There are two films about 1970s maritime radio at <http://www.maritimeradio.pro/uk/index.htm> The most interesting part of the first film is where cw is sent using 'pump' keys as the coast station operators make their last transmissions to each other before the service is closed - it's worth going straight to this. The other film shows how MF telephony was used in various maritime situations.

You can still hear some 'fish fone' on USB in the CW section of 80m (try around 3.520MHz). The VHF FM marine band (156 to 163 MHz) is used for local ship-to-shore communication and for inter-ship contacts. It's also used by sailing clubs – you may occasionally hear local clubs (e.g. at Bartley and Edgbaston reservoirs) at weekends on channel M1 (157.850 Mhz) or M2 (161.425Mhz), usually when race control and the safety boat are communicating about changing the location of the buoys around which dinghies race.



Commercial vessels are required to carry terrestrial radio equipment as part of the SOLAS GMDSS (global maritime distress and safety system) regulations. GMDSS comes with its own vocabulary – including DSC, NAVTEX, INMARSAT, EPIRBs, and SARTs!

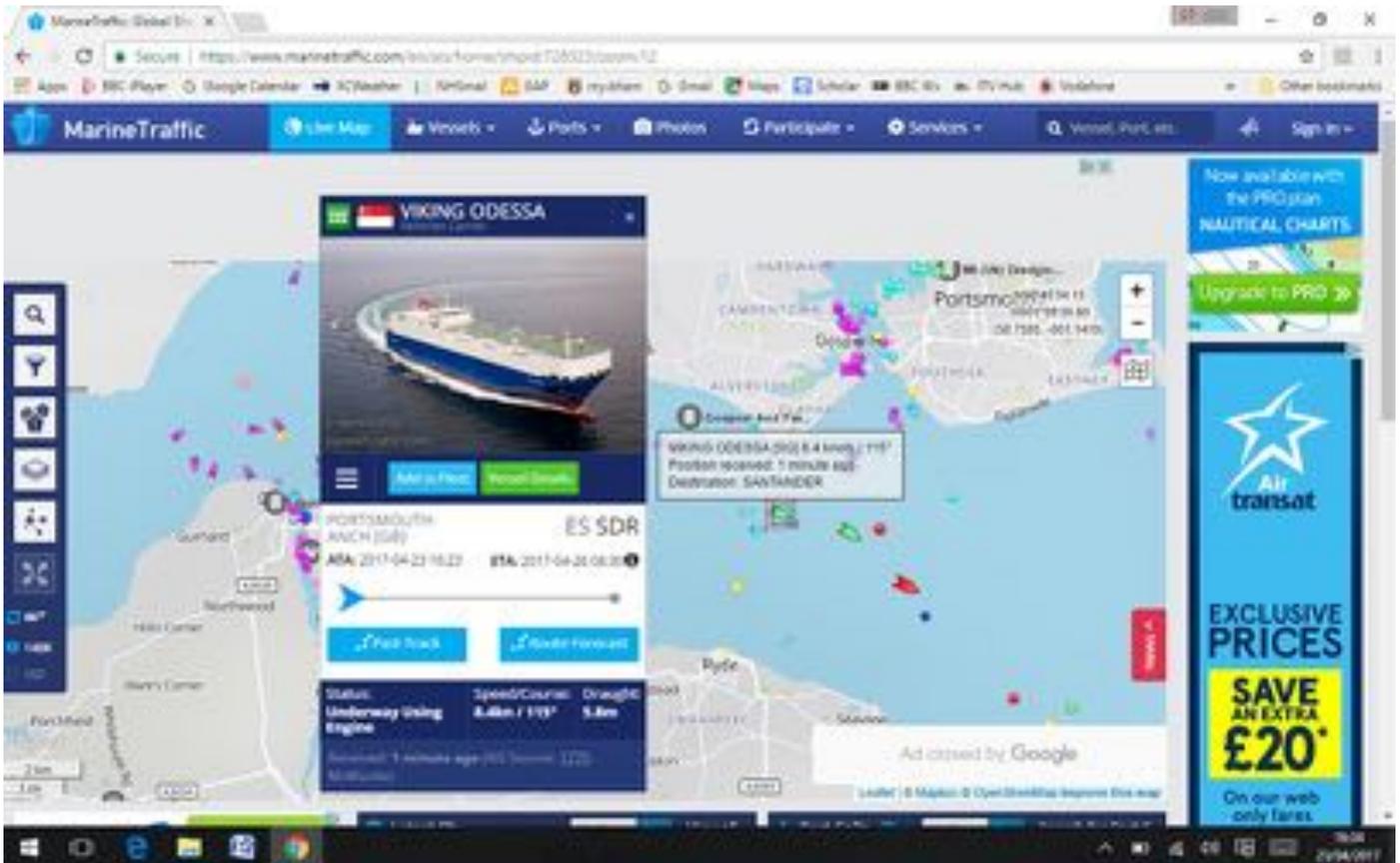
Here's my experience - my family have a boat we sail out of Chichester harbour. Surprisingly, we are not required to carry radio since the boat is under 13.7m long! But like most owners we have a marine band VHF FM handheld and fixed VHF FM set with a masthead half-wave whip antenna (that also hosts a wind direction

indicator). If we ever did ocean-going trips then we would also carry an SSB HF marine rig and vertical antenna.

Carrying a fixed radio means we need a Ship Radio Licence from OFCOM – we supply the details and the fee and the licence is granted. Our ship's call is MVUX6. I had to look this up, as typically transmissions use a boat's name rather than callsign (we are 'Pibbin II'). A Marine Radio Short Range Certificate is required to operate these VHF radios, although unlicensed individuals can use them in an emergency or under supervision. The Certificate is achieved



Maritime communications –continued



through a one day course that covers basic theory and a practical session making VHF calls and using Digital Selective Calling (DSC).

As we have a DCS-enabled VHF set, we also had to obtain a MMSI (Maritime Mobile Service Identity) number from OFCOM – we are MMSI235025198 (try remembering that in a rough sea!!). DCS enables a call to be made to one or more specific ships. We store the MMSIs of the coastguard and friends' boats in a drop-down menu in the set and then select the one we want to call. The set sends a digital signal that is only received by that boat, and we then QSY to a working channel and continue by voice (alternatively, we can put out a public voice call on channel 16 and then QSY).

However the more important function of DCS is for safety. The VHF DCS set is connected to our GPS (global positioning system) receiver. The radio has a call button under a red cover marked DISTRESS. When pressed, this transmits the boat's MMSI, GPS-derived position and details of the emergency selected from a drop-down menu. This goes out as a digital transmission on 156.525 MHz

(channel 70). All DCS sets automatically monitor channel 70, and if they are within range to receive the distress call they then emit a very loud warbling tone to alert the crew. Since the emergency's position is transmitted digitally, the receiving ship can quickly plot how close they are. They can also communicate with them using voice on channel 16 (the emergency and calling channel – 156.8Mhz), and alert HM Coastguard if they are out of range of the vessel. Luckily, we've never had to issue a DCS alert, although we have heard some (including accidental pushing of the red button - very embarrassing!!).

More recently an additional system has come into widespread use – AIS (Automatic Identification System). Large vessels must have an AIS transponder linked to their GPS. This transmits the position, course, speed, and ship details on 161.975 or 162.025MHz digital. Smaller vessels can have a receiver with a simple radar-like display, or have this linked to their digital chart plotter (see photo from a passage near Alderney - the large triangle is our boat; the blue ar-

rows are nearby AIS targets. A click on one of these displays the details). The most useful piece of information (especially when crossing the Channel!!) is that the system calculates the nearest point of approach – so we know whether or not to change course to avoid those quarter-mile long container vessels!! There are security issues about public access to AIS data, especially in areas frequented by pirates as it enables them to select their boarding targets. However AIS data is widely available on the internet, eg at <http://www.shipais.co.uk/> and <https://www.marinetraffic.com/> and there are also some web sites that give live feeds of VHF ship to shore traffic (eg Southampton VTS or Queen's Harbour-master Portsmouth).

Chris G3YHF

Easter Contest Results

The club held its Easter Contest over the holiday and 42 club members participated (up from 38 last year) Some 1243 QSOs were logged against 974 last year which is a very satisfying 27% increase.

Again members could enter one of two classes; all band all mode and 2m/70cm FM. Of the members who had QSOs some 70% submitted logs as against 50% last year so it shows that club contesting at Wythall is very much alive and well. Well done to all who participated.

Organiser Lee G0MTN gave a presentation of the results on Tuesday 2nd May and presented the certificates and Easter Egg prizes to the winners. The results are shown in the table (p5)but headline winners were

All Band/All mode Section

1st Simon G4TVR with 107 QSOs and a score of 3081 points

2nd Chris G7DDN with 107 QSOs and 2800 (it's the multipliers that do it)

3rd David G7IBO with 46 QSOs and 1104 points

2m/70cm FM

1st Jim 2E0BLP with 110 QSOs and 2590 points

2nd Phil 2E0WTH with 90 QSOs and 1891 points

3rd Stu M0NYP with 62 QSOs and 1891 points



Easter Contest Results cont'd

Section	Position	Callsign	Total QSOs	Best 3 days	Multipliers	Score
2/70 FM	1	2E0BLP	110	74	35	2590
2/70 FM	2	2E0WTH	90	61	31	1891
2/70 FM	3	M0NYP	62	51	31	1581
2/70 FM	4	M6IOI	61	47	27	1269
2/70 FM	5	M0IDR	49	46	27	1242
2/70 FM	6	2E0DUO	62	43	24	1032
2/70 FM	7	2E0EGP	59	43	24	1032
2/70 FM	8	G1MJO	54	41	25	1025
2/70 FM	9	M5DUO	52	37	24	888
2/70 FM	10	G0HDF	31	31	20	620
2/70 FM	11	G0MTN	42	31	18	558
2/70 FM	12	M0AEJ	37	28	18	504
2/70 FM	13	G0EYO	25	17	13	221
2/70 FM	14	G3VRF	12	12	12	144
2/70 FM	15	G7OKF	13	12	9	108
2/70 FM	16	M6FAB	7	7	7	49
Section	Position	Callsign	Total QSOs	Best 3 days	Multipliers	Score
All	1	G4TVR	107	79	39	3081
All	2	G7DDN	107	70	40	2800
All	3	G7IBO	46	46	24	1104
All	4	G3YHF	50	36	23	828
All	5	G4VPD	30	30	24	720
All	6	M0LXQ	32	28	16	448
All	7	2E0SDV	22	22	17	374
All	8	G4OJL	28	25	12	300
All	9	G0ICJ	20	20	14	280
All	10	M6RSC	14	14	9	126
All	11	M6KET	8	8	6	48
All	12	G4XLO	10	7	4	28
All	13	2E0XTV	3	3	3	9

The popularity and durability of our Xmas and Easter contests, never ceases to amaze me plus the fact that the format would appear to have never been copied by other clubs (as far as I know)

Anyway congratulations to the winners and runners up.

Special mention was given to Les M6IOI for leading Foundation licensee in the 2m/70cm FM section and Julie M6RSC for leading Foundation licensee in the All Band/All Mode section.

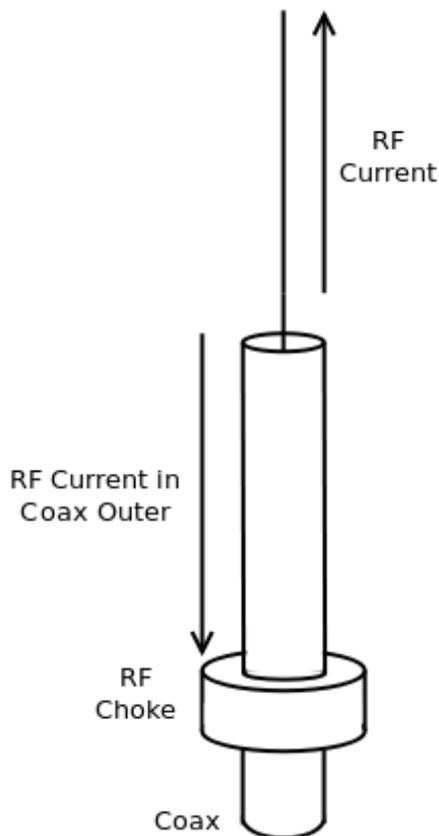
Our thanks, of course, go to Lee G0MTN for organising and adjudicating the contest and to Chris G7DDN for sorting and issuing the logging programme and transcribing the paper logs for Lee as well as organising the chocolate prizes. Only have to wait until Christmas for the next one. Well done and thanks to everyone who participated.

Chris G0EYO



Sleeve Dipoles / Coax Dipoles

A couple of years ago I had a rather interesting QSO on 40m whilst on holiday in Bude, Cornwall. My contact, G1SPC (John) in Wolverhampton explained that he was using a sleeve dipole. His explanation of this antenna was so simple, I



had a difficult time understanding him. Effectively, he was end-feeding a piece of coax 10m long and then continuing the centre conductor for another 10m.

For a simple mind like me, he explained that essentially, this behaved precisely like a regular 40m dipole. Imagine feeding the centre of this antenna, with the braid of your coax feed going to the braid of the 10m coax part of the antenna - and the centre conductor of your feed going to the remaining 10m length of your antenna. That would be a regular dipole, yes?

What happens when you feed it from the end? Well apparently, it behaves the same way. Because there's no choke at the centre, where the braid of the coax stops - and the centre conductor effectively continues, RF travels back down the braid to where your feeding, making up the other side of the dipole.

I was confused at this point as to why the RF (now on the outside of the coax) wouldn't continue its journey all the way back into the shack. John was

using a strong choke balun to ensure that he was isolating the coax at the feedpoint.

Visions of this antenna had plagued me for the last couple of years and very few articles exist to help me make this so I've been blundering in the dark. I'm even unsure what it should really be called.

It turns out that some CB antennas, the occasional Marine VHF and certainly Amateur VHF antennas are built this way with a subtle difference. They really are built with a separate "sleeve" coming back down the outside of the coax, so that the braid of the coax - and the "sleeve" are separate components. However, I have no reason to disbelieve John who had a cracking signal into Cornwall on his 100 Watts.

My research has therefore been on understanding choke baluns. I've looked high and low for information on this but naturally not being an electronics man, I find ferrite cores and chokes a bit of a minefield. Rather than reinvent the wheel, I used the research that that G3TXQ did on ferrite rings and air-chokes found over at <http://www.karinya.net/g3txq/chokes/>.

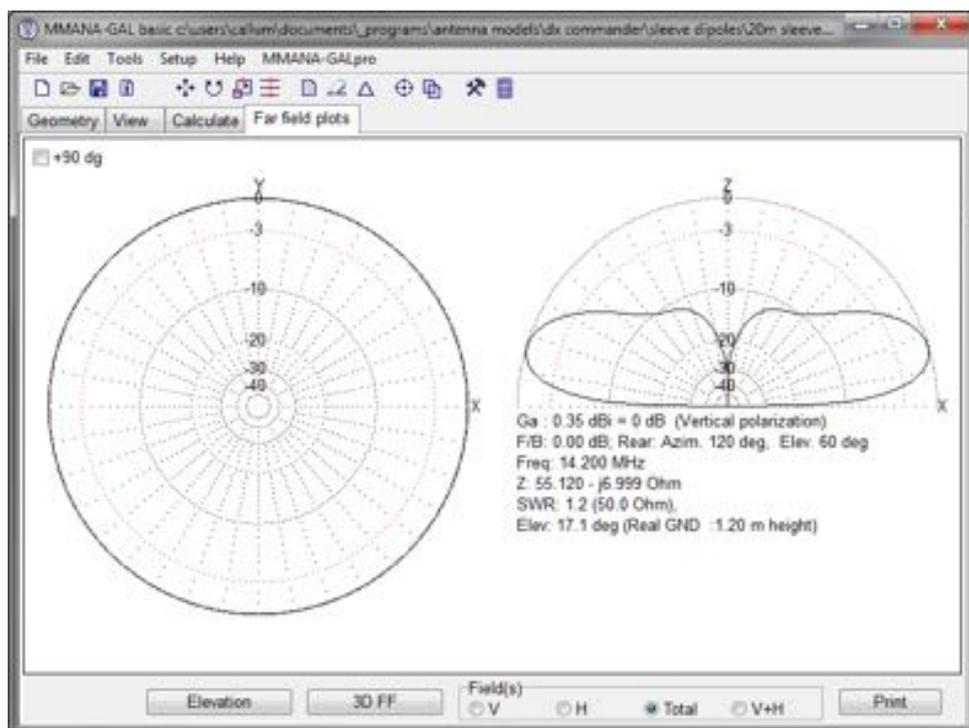
His work showed that I can achieve a very high choke impedance (is that the right word?) using a pair of ferrite type FT240-52s and 11 turns of RG58. Being a bit of a high-power nut, I've used



RG400 instead. Not quite as bendy as RG58 but lovely coax. I don't normally make "bits" so I was rather pleased how this turned out.

This journey has been a little more difficult than planned because I don't know my type 52 ferrite from my type 43s or 41s. So I may have accidentally over-specified this, I have no idea. If someone can enlighten me, please let me know.

Finally, I also discovered that choke baluns are frequency specific. Winding a few turns of coax on a 2.5l paint tin is a bit of guess-work. G3TXQs research shows that the number of turns is very specific to the frequency you need to



Sleeve Dipoles / Coax Dipoles, cont'd

choke off. One size does not fit all after all.

I've subsequently read about a capacitor being required somewhere in all this but I'm afraid I'm at a loss as to how that bit works. I'm hoping this works "out the tin". I shall report back.

Construction ideas:

For vertical polarisation, construction for 20m and up seems pretty straightforward. Take a 10m telescopic pole and construct q/wave of coax and q/wave of a centre conductor (approx 10m total length). Mount appropriately (with choke at the base) and you should achieve pretty good results. Possibly better than having a regular 1/4 wave with radials because your feedpoint is effectively higher.

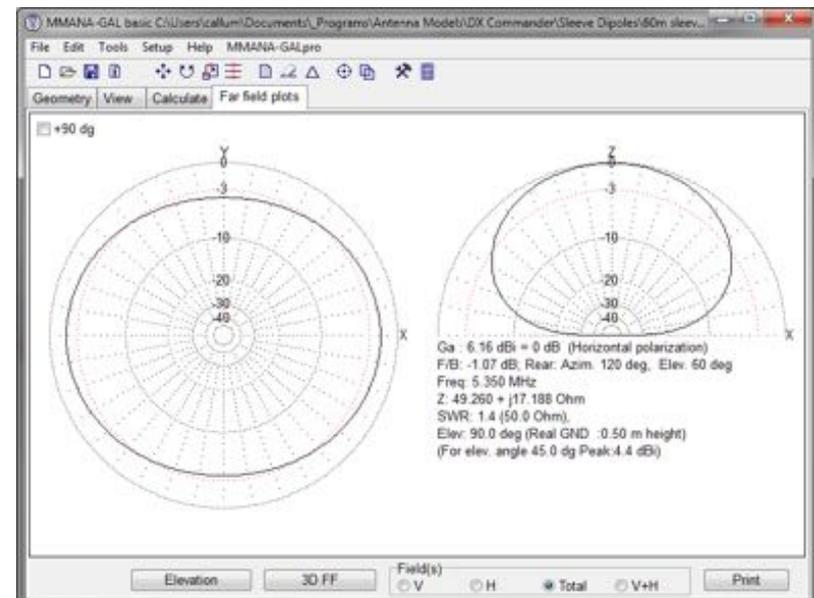
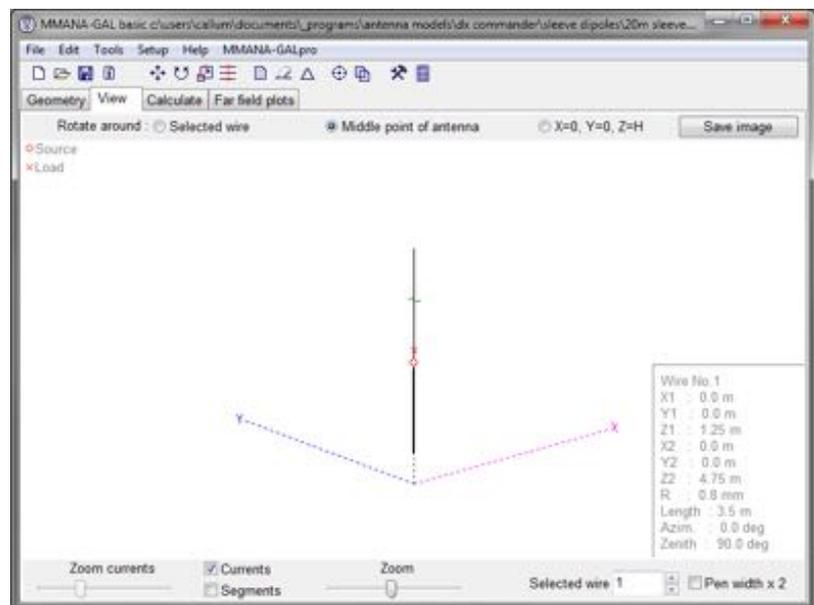
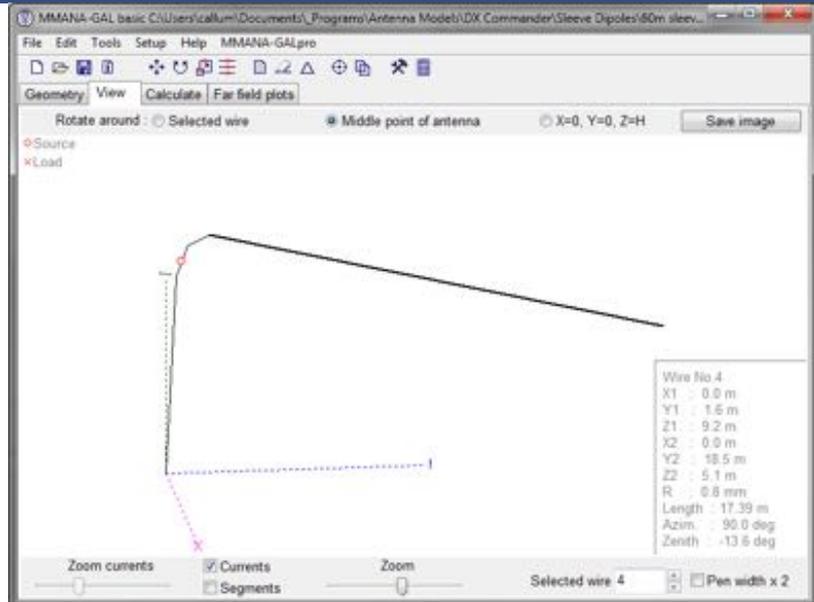
For 30m, you could do the same and in light of the allocated narrow bandwidth for 30m, you could easily load-up the top of your dipole with a small coil to bring your effective 14 or so metres of dipole down to 10 or so.

40m brings an interesting concept in that you could have this either as a stand-alone inverted V, slung over a tree, and for *I/P*, one could still use a pole by placing a 10m length of say RG58 up to the top of a pole and pulling it over by a single wire, under tension to a tree or a fence point or similar. Oddly enough, the software modelling looks just fine in this "NVIS type antenna".

How about an off-centre fed dipole for 5Mhz or the 80m band? Strangely due (probably) to the close proximity to the ground, both behave the same as the pulled-over 40m version, just extend the length of wire for the band in question rather than use more coax. Both bands look excellent although the 80m band looks to have narrow bandwidth. For permanent use, suggest you use a full q/wave of coax as one side of the antenna.

I shall shortly be going to Cornwall to experiment and have already made my >8k ohm choke balun in preparation. I shall report back. Hopefully, the darned thing will work!

Callum M0MCX



Having problems revalidating your licence?

Many radio amateurs are now realising that they should have revalidated their amateur licences within the obligatory 5 years and are finding that when they come to do so their licence has been revoked. On top of that those that do remember to revalidate their licence find that since a new computer system was introduced in August 2016 their old user name and password are no longer recognised. If you allow your licence to lapse you can end up paying £20 to re-activate it (unless you are over 70 years old).

Amateurs who have fallen foul of the new system have attempted to log into the Ofcom licensing site and it didn't recognise either their e-mail address or password. In this situation it is best to ring Ofcom on the appropriate number, which is 0207 981 3131, and often the very helpful person you will re-validate your licence there and then, and e-mail you a link to re-register.

This from the Ofcom site:

Existing customers:

If you previously registered on the old portal using your email address as the username please re-register using the same email. If you can't remember or have changed your email please contact us so we can update your details to allow you to register.

If you previously logged in using an Ofcom generated username please contact us with the following information:

- Valid email address
- Existing Licence number
- Call sign and your postcode

<https://www.ofcom.org.uk/manage-your...ensing-service>

It is worth checking your details to make sure you can get into your account on the new system, notice that all it says is when you last validated your licence – it doesn't give you the expiry date, albeit it's no great chore to add five years to that.

When Ofcom introduced the free licence with the condition that you had to re-validate it online every five years and would not get any reminder as to the

expiry date, it was inevitable that a fair proportion of amateurs would forget, and would risk operating unlicensed and their licences would end up being revoked. According to David G4EBT back in 2015 this was raised as a news item on the Southgate Amateur Radio Society and Essex Ham websites, where it was stated that at the end of 2013, 47% of licences hadn't been re-validated. If any of those licensees were operating on air, they'd basically be 'pirates' and be committing a criminal offence, though whether Ofcom would make a big deal of that is anyone's guess. Towards the end of 2015, Ofcom started writing to those who'd not revalidated, advising that their licences may be revoked

So be warned, if you don't validate after 5 years, Ofcom may - after due process - revoke it, and it will cost you £20 to re-apply for your licence if you want to be able to operate on air.

YOU HAVE BEEN WARNED!

Chris G0EYO

The role of the QSL manager

Many people would see the bureau as a free resource provided by the national radio society (RSGB) to help Radio Amateurs send QSL cards around the world. Nothing in life is free of course, and to show you the real cost of sending cards through the bureau system I will show you some statistics from my own work here as a QSL manager for many DXpeditions and radio hams operating from locations that generate a lot of QSL cards, like PJ4DX, Steve Telenius-Lowe.

You may recognise Steve as author of many RSGB books and also HF Highlights columnist in Practical Wireless, also 9M6XRO, John Plenderleith, John is a Scot that has lived out in Borneo, Malaysia since 2005 and is very active as a DXpeditioner, contester and regarded as one of the world's top DX CW operators.

As a QSL manager, I am not permitted to send cards through the RSGB Bureau due to the sheer volume of cards that I send, so in 2010, I set up my own Outgoing QSL Bureau so that I was able to honour the QSL Bureau as a route for QSL requests. This weekend was set aside for the work to be done

on our May 2017 QSL Bureau mailing, I was joined by M0OXO, Charles Wilmott a QSL manager from Barnsley, by working together we are able to keep our costs down as low as possible. A total of 27,477 QSL cards ready to go!

A breakdown of those Via M0URX 11,126, Via M0OXO 10,695 and 2E0SDV 4,656. Jamie is now the YOTA QSL manager for all YOTA activities throughout the year which is generating a lot of outgoing bureau cards. It took a total of 12 man hours to parcel up the cards to the 84 IARU world bureaus. A weight of 102 kilograms and a postage bill of £458.95. We use a business account with Royal Mail to give us the best discount in International post, without which I doubt we could do any of this work. In fact to actually be able to have access to the account we need to spend £10,000 on International postage every year.

With QSL printing on average for high volume printing costing about £40 per thousand cards, the cost of printing 27,477 cards for this mailing will have cost £1,099, bringing the total of just this bureau posting up to £1,557.95 plus

all the stationary needed like packing tape and boxes. So when you see people asking for \$2 for a QSL you can now see where the costs come from. We very much enjoy the work we do in QSL management, it is very surprising when you see all the costs written down. Happy QSLing!

Tim M0URX



Training Report

After our successful class-room Foundation course with its examination at the end of February, we decided to put on another on-line Foundation course which started on the 13th March. In the end although 13 students signed up for it, 5 failed to complete the course. Of the remaining 8, six took the Exam on April 30th and five of those passed (mostly with high scores). The remaining three are due to take their exam on 14th May in the shack.

So congratulations go to (left to right) David from Stratford, Ian (rear) from Warwick, young Ben (aged 10) from Swadlincote, South Derbyshire and Kim from Stratford upon Avon. Not in the picture is Carl from Redditch. If Ben isn't an Advanced licence holder in the next 18 months I will be very surprised.

Thanks go to Roger M0GWM who invigilated and John G4OJL, Peter G4LWF, David G0ICJ and Lee G0MTN who helped out at the practical assessments for the group.

A couple from the course are interested in becoming club members and are keen to learn CW with John M6KET on a Tuesday night.

The on-line course had observers from other clubs and some interesting feedback was gained which might encourage us to put together an on-line Intermediate course later on. The course material would be similar to what we use for the class-room but we would have to re-think how to run the practical assessments especially if we had more people than the class-room can accommodate.

Intermediate Course

We started an Intermediate course on May 1st and we have 9 signed up to do this course, which will run for 10 weeks every Monday night, apart from Whit Monday, with a Saturday session for the practical work. It is good to see some of our old Foundation students having a go, even if they got their M6 calls in previous years. Because some people are unable to be present every Monday night we continued the policy of providing a USB stick with all the course material, notes, homework, videos and other useful stuff for them to study at home (right). The exam for the Intermediate course is set for Monday 3rd July.

Advanced Examination

We have been asked to provide an Advanced examination on July 15th for two West Midlands based home-study students and this may be our first opportunity to try the new online examination format being piloted by the RSGB. If any of our failed Advanced members want to do a retake at the same time we should be able to accommodate them.



Chris G0EYO



Foundation Practical Assessments in the shack

Name	Date modified	Type
course Notes in pdf	24/04/2017 14:33	File folder
course slides in pdf	02/04/2017 17:41	File folder
practical assessment materials	03/04/2017 09:06	File folder
syllabus and examstuff	03/04/2017 09:07	File folder
Technical worksheets	03/04/2017 09:13	File folder
Useful information	03/04/2017 09:15	File folder
videos	03/04/2017 09:15	File folder
Intermediate calendar May 2017 V1.1	13/03/2017 10:05	PDF File
maths primer	29/04/2017 08:50	PDF File

Course Materials on a USB stick (420Mb)

Hamfest pictures



The café area?



Doorkeepers; Les, Alft, Neal and John



David G7IBO and Darren GW7HOC



Chris G3YHF and Winston 2E0EGP



Head of Parking; Lee G0MTN



John M0JMM

The next issue of the Wythall Radio Club Newsletter will be published at the beginning of July 2017