

**60 years
of HARS!**



Newsletter of the Harwell Amateur Radio Society

Affiliated to the Radio Society of Great Britain
RSGB Regional Club of the Year, 2009 and 2011



QAV

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Editorial Comment

We only spent half of February in the UK with the latter half in Normandy (where I am creating this QAV!). We actually left the UK the day after the Tuesday evening 70cms contest. As time was a bit tight, we thought that we'd only do a short time on 70cms so we didn't put the mast up to full height and as the BHI digital noise filter was packed, we didn't have that available either. Oh yes, we also had a glass of wine (or so!) for our evening meal before the contest started. Well, the evening went very well and we got a bit carried away and did the full 2½ hours. The claimed scores showed us lying 2nd in our section but we were eventually placed 3rd (the leading station didn't put in a claimed score!).

So, what does this tell us? Is aerial height *really* that important? Does the BHI digital filter add any value? How much wine beforehand is best?

To be honest, I suspect it was just one of those things, but maybe not trying too hard was also a factor! It does make you think though!

73 Mike, G8CUL/F4VRB

An over from our Chairman

Last month's construction meeting was well supported with 12 entries varying from one valve radio receivers to power amplifiers and aerial bases for portable use. Some items were very high tech whilst others were simple ingenious mechanical designs. As a result of the members votes, the first prize went to Bryan, G4CXJ for his home-brewed 2m 40 Watt PA, built on a PCB masked with etch resistant pens, no clever PCB layout software! Bryan received the G2HIF trophy. Ron, G0BNC was voted second with his homemade 70cms 100 Watt PA. I know he has been working on this project for many months during which time has tried various relays until finally finding some that are coaxial at this frequency! Third place was awarded to Neil, G4BRK for his fully self-contained 70cms PA which included overload protection and preamp control circuitry. This year we presented the newly created G3LQC award, which is designed to encourage first time constructors. This was won by newly licensed David M6DNU for his splendid one valve TRF receiver. The design included some very well built wave wound reaction coupling coils.

Thanks to all the other superb entries that, although did not receive awards, were of excellent ingenuity, design and build quality.

The Harwell Rally held at the Didcot Leisure Centre seems to have been a success as usual under the guidance of Rally Organiser Ann, G8NVI. I'm sure Ann will be presenting an entry with more details. We ventured to provide in-house catering this year which I think proved successful, however due to over estimating quantities it did not make as much profit as predicted. We now have moved well up the learning curve and should provide a more balanced result next year, should the catering venture continue.

A great thanks to Ann and all that were involved in making the Rally possible.

73, Dave G8DVK

HARS reaches 60 years old!

According to the records, HARS will be 60 years old this year. So, what, if anything, would you like to see to celebrate our Diamond Jubilee? I'm sure you will have some ideas so please let a committee member know what your thoughts are. I'm sure we could organise some event or other, preferably in the summer months when it's not quite so cold and maybe even dry!

Charlie Sierra Signal Report

Twelve of us attended the February CS at Millets Farm, Farmhouse Kitchen. This included two who had not attended before. The youngest was just over a year old and was the grandson of Richard, G0REL and Liz, G0RJX! There were some notable absentees including those who had departed for their French abode.

Topics of conversation ranged from advice on stealth HF antennas; cycling statistics for the journey to the event; the cost of the special lenses developed for TV cameras used in the Winter Olympic Games; a dog joining in with an oboe player and mast head pre-amplifiers. Fortunately, we all arrived before the rush as I have never seen it so crowded. Hopefully next month will be quieter!

Malcolm, G8NRP.

The next Coffee Shop Meeting will be held on Friday March 16th at the **Harvester Didcot**, for those that did not get to the New Year's day D/F hunt. This venue is at the start of the Didcot link road at the Milton Interchange on the opposite side of the road to McDonald's. To access the site coming from Didcot, turn right at the lights before you get to the garage, follow the road round to the second left turn into the Harvester. If you are coming off the A34 or down from Rowstock and under the A34, head for Didcot and at the first set of lights turn left by Costas and then take the second left into the Harvester. Usual time, 10.45hrs, see you there and then.

John G6LNU

Radio Active

Neil, G4BRK - Been very busy with non-radio stuff so not a lot to report. I've even missed a few contests.

I've almost finished the improved version of my 70cms PA, hopefully this weekend will see it finished. Then I need some better weather so I can get the 70cms beam down and mended.

New projects are arriving, including the new G4DDK Icen1 70cms transverter to replace my 40 year old existing one. I've also acquired a PCB and heat spreader for a DF91C 23cm 250W PA and tin boxes to build it plus other PAs in. Plenty of work to do in the next little while.

New to the BRK shack is a 3.6GHz Spectrum Analyser with tracking generator. It should help a lot with ongoing projects.

Bryan, G4CXJ - Thank you to everyone who voted my 2m Linear PA into first place in the February construction contest. It was built based on a very old project, (but with lots of tweaks and improvements), for M0NRK (Elle) to use with her FT817 which customarily delivers about 4 Watts on 2 metres. You don't often hear a construction contest follow up story, but here is mine.

Prior to the competition, initial shack tests on the PA unit were pretty good and apart from a couple of schoolboy errors, worked first time. Connected into a dummy load output was as expected. I was able to 'talk to myself' (across the shack) and check the signal for furry things and other spurr1. I was confident that all I needed to do was make a patch lead and trim the

input of the PA to match the FT817. Should be able to do that in a spare half hour and hand it straight over to M0NRK.....

Having made the leads and other connections, I quickly trimmed the PA for lowest SWR, keeping an eye on the watt meter, all looked OK until checking the current on the meter box (as seen in the construction contest). Doing a quick bit of mental arithmetic indicated that the PA was impossibly efficient. A tap on the ammeter face revealed that the needle was sticking, probably not unfair considering that it came from my junk box and had a manufactured date in 1984. A few days passed while a replacement (which of course was a very slightly different size) arrived via Ebay. Once fitted, (with difficulty and after first aid to the hole drilled in my finger) everything added up, except that the dummy load went O/C at that point – but that's a story for another day.

In the absence of a dummy load, the next best thing is a *real* aerial, (OK, I admit that I never actually worked anyone using the PA prior to the competition). A very loud whistle sent the watt meter needle pleasingly up the scale but when the FT817 + PA went back to receive, the atmospheric background noise level seemed awfully quiet - and I could not hear GB3VHF (although that's not surprising most days). I missed this behaviour when only firing up into the dummy load. A bit of poking around in the guts of the PA suggested a faulty aerial relay. One of the 'improvements' to this PA model was to solder the RF sniffer and aerial relay board directly to the PA main PCB at right angles. It saved two extra mounting bolts but cost me half an hour getting the PA PCB out of the die cast box in order to change the relay. Oddly,

once on the bench, the old relay tested good which was unexpected.

But (over) confidence is a great thing, I reassembled the PA PCB back into the die cast box and tested it. Receive signal was fine but the RF sniffer board did not work at all, the PA was a good as dead – not just sleeping. Another problem with a compact construction is that it's a **right pig** to work on. Another half hour while removing the PA PCB from the box - again. The aerial relays are sealed units and very quiet so it's difficult to know whether they are working or not, a LED + resistor to give some sort of indication was soldered in parallel with the relays which would later be added to the die cast box. That did draw attention to the transistor driving the relays. I must have been in a mean mood that day when making the original choice, there was not much current headroom. Could that be the problem? A beefier feller was fitted, but sadly no



change.

Out of the box, fault finding was now ongoing similar to the original testing, but in a very dodgy way. In fact, as soon as any RF was applied, Radio 4 went quiet and test leads acted as aerials displaying disconcerting readings. Several days went by with no resolution. All individual components tested just fine, the 741 op-amp was replaced anyway (thank heavens for the 8-pin

socket!) but no improvement there either. A modification for manual switching was added which bought the PA back to life, that must indicate a problem with the few components in the RF rectification circuit itself, and so it proved. While changing the 1N4148s I found a dry joint – actually the diode just fell off the PCB. Duh! On the good side, I changed both diodes for Schottky types which made a big difference to the sensitivity, just a quiet cough now activated the aerial relays. After that, all went well, of course the odd problem surfaced before the lid could be screwed down, instability in the over-voltage sensing circuit, but nothing that could not be solved with 1nF capacitors—3 of them!

The moral of the story? No project is ever done until it's done, and can I please enter Version 2 next year?

Ann/Mike, G8NVI/G8CUL - We took part in the usual Tuesday night UKAC events in February as well as the 70cms AFS contest on Sunday 4th. The new boards for the Low-power power meter arrived and I built up the first one and did some more development of its firmware. Then we came over to Normandy! Since then we have visited the Caen Radio club weekly meetings where I demonstrated and discussed with the members the Low-Power power meter project, (milli-watt meter to them).

Malcolm, G8NRP - I started this month by managing to make thirteen contacts in the 144MHz UKAC which was a record for me at my QTH. I also managed a number of contacts on the HF bands and the rather strange REF HF contest. I was pleased to work a station in Sardinia to prove that a TX I managed to sell at the HARS Rally was working. I have dusted down my

Wouxun 144 and 433MHz hand held ready for the next GB3DI net on Wednesdays. I was surprised exactly what I could hear using a vertical antenna mounted outside rather than the supplied whip antenna.

Tim, M0KEP - I haven't made a QAV contribution for a few months now so this is an update about what I've been up to with my station. I'm gradually adding bands and can now operate on every band (some better than others!) from 160m to 23cm. I'm modifying a Yaesu 847 to operate on 4m (but still haven't got this working properly), but I was pleased to get 8 QSO's up to 125km in the February 70MHz cumulative using a kit built transverter with under 10W output. I use a dual band MOXON beam on 6m and 4m, X-quads for 2m and 70cm, and a panel antenna for 23cm. All of these antennas are mounted on the same mast with full azimuth and elevation control for satellite work, although I still haven't managed to hear myself bouncing off the moon yet! I fear my antennas do not have enough gain. My HF capability recently shrunk due to wind interaction with the HF vertical so I'm researching what to put up next in very limited space. I have panel antennas for 13, 9 and 6cm ready to go on the mast but I need to finish building a remote switch for these rather than running even more coaxes up the mast. I have a Teledyne 6-way coax switch and I'm planning to build pre-amplifiers to go in the switch box. I have several eBay purchased power amplifiers that should give a few watts TX on each band. Thanks to Mike, G8CUL and our construction contest I now know how to measure power output on these bands without spending thousands on commercial equipment. I'm waiting for Chinese new year to be over when I should receive a few modules from eBay to build a power meter. I've just

finished building a MiniTiouner digital ATV receiver purchased at the Rally and I'm looking forward to testing it. I'm planning to use an SDR to transmit ATV and generally operate all frequencies above 23cm. Many thanks to all club members that have helped answer questions for me. No doubt there will be many more to come!

(I've successfully modified 2 847s for use on 4m, so get in touch! - Ed)

Clint, M6YCG - I finally managed my first QSO - with G1ZMA on 70 cms, using my Baofeng GT3 MKII and a home brew colinear antenna temporarily mounted about 4 metres above ground level. I also copied the inaugural HARS Wednesday night net on GB3DI using the same set-up, but reception was generally quite poor from my QTH in Eynsham. I'm still to set up my inverted L antenna for HF work, but hope to do so soon. My review of the Tecsun S-8800 was published in the February edition of Radio User magazine and I've just submitted my next article to the magazine - a review of the SDRPlay RSP1A SDR receiver. I've been asked by the editor to write further articles which I will try to do, work and family permitting. I attended the electronics and radio rally on the 11th and was super impressed with the scale of the event and the organisation, but had been feeling unwell for a few days prior, so was only able to attend for a couple of hours. I did however have a good look around and bought some connectors, cables and a vintage Sony receiver to add to my collection lol. Finally, I was approached by a German antenna company about a month ago to test a prototype wide band E-field antenna they currently have in development. I'm trying to fit this in around work and everything else going on right now.

Construction Contest 2018

This year we had a new trophy donated by the late Ray Evans, G3LQC. This is awarded annually to the newly licensed/first time construction contest entrant.



This year it was awarded to David Seymour, M6DNU, for his MW reaction receiver.



In the 'normal' construction contest, the first place and the G2HIF trophy was awarded to Bryan Mussell, G4CXJ, for his 40w 2m PA and metering box.



Second place went to Ron Flemming, G0BNC, for his 70cms 100w PA.





Third place went to Neil Whiting, G4BRK, for his 70cms 100w PA.



Well done to all the entrants, it was good to see so many of them!

Thinking Day on the Air 2018

Trying to arrange a Thinking Day on the Air station this year proved difficult. After several years with low attendance it would have been nice to have a big event, but in their wisdom Abingdon Division planned a large scale celebration choosing the 'wrong' weekend. If some 230 girls and leaders attend a Guide event one weekend they are unlikely to factor in another the previous weekend. However we have a record to maintain as 2018 would be our 28th consecutive TDOTA and not to go on air was not an option.

We had considered taking the Campervan to some high spot such as Boars Hill but in the end we decided to try out the portable station we plan to take away in the summer from our own drive. It did have the big advantage of electricity and creature comforts. We opted to use G0RJX as applying for a notice of variation seemed a step too far.

Saturday morning saw Richard setting his nice new aerial mount under the front wheel. The fibreglass mast we have used before was raised to 12 metres and everything connected and we listened around on 40m. I do like it when all that theory about skip is so well demonstrated as we could hear stations fringing the other side of the North Sea but nothing in England. What did come in loud and clear were Guide stations north of the border, again proving the skip theory. Over the two days we worked two different Thinking Day stations in Scotland and a maritime mobile off the Orkneys. Other stations worked were in Denmark, Germany and Italy. This is better than we have managed from some Scout huts which always seem poorly sited for radio communications. We also worked Malcolm G8NRP on 40m in Abingdon. He had been hunting for us as we had not publicised the event in advance.

We closed down on Sunday evening happy that our equipment had been tested and our record maintained.

Liz, G0RJX

A Visit to a Military Radio Collection in Normandy

Last summer, Dominique, F5PAX (President of the Caen Radio Club) told me about a private collection of military radio equipment that had been put together over many years by a local amateur and would Ann and I like to visit it? I of course said yes and we finally got to see it last week. I think we chose the coldest day here in Normandy and the collection is housed in a large shed which has a concrete floor but little or no heating! The collection primarily consists of radio equipment made between 1940 and 1945 from America, Canada, the UK, France and a little from Germany. **All** the equipment is in original equipment and most of it still functions. **None** of it has been restored!

The list of equipment includes at least 4 '19 sets' complete with their variometers, (just like the one I lent to Ray a few years ago, but now sadly gone missing), R1155/T1154 combination, R107 and its associated '12 set', Canadian '52' and '62 sets', PCR receiver, '38 sets', '46 sets', HRO receivers complete with coil packs, command receivers. The list is almost endless!

Among the non-radio items were a muzzle from a German MG42, a **huge** bolt from the floating roadway at the Mulberry harbour in Arromanche, wooden boxes of British rations which were discovered stacked by the sea wall at Sword beach and a folded piece of original barrage balloon!

We were only there for a couple of hours (before Ann's feet got too cold!) so there are many things that we didn't get to see and many more that I have already forgotten about. I am not revealing the location as the owner is quite concerned about security, but here are some of the photos that we took.





Seeing all this equipment was truly amazing, especially as so much of it was working in original condition. When I first got interested in radio I had quite a number of these items both before and after I was licensed. Sadly, all now consigned to the rubbish tip. Seeing all this has made me realise what I threw away!

Harwell Amateur Radio and Electronics Rally – 2018

2018's Harwell Amateur Radio and Electronics Rally was blessed with reasonable weather (if one considers what we have just been through) and a good attendance. Some 420 visitors joined 30 club members and over 50 traders who occupied some 130 tables to fill the Didcot Leisure Centre.

The day went smoothly and visitors and traders seem to have gone away happy. The success of the day itself belied the many problems that were encountered along the way this year.

We discovered, in mid-October, that the Deli that supplied the refreshments in previous years had ceased trading during the summer and would consequently not be able to supply refreshments for this year. Several routes forward were identified, but eventually we entrusted the task to Dave G8DVK, Ann G6SRX and Lisa Aram, along with several very capable members of their family. Lisa is experienced in feeding hungry footballers and brought that experience to the Rally. The refreshments were delicious and I'm only sorry that they were left with so many sandwiches – possibly partly caused by the huge popularity of the bacon baps! The experience was a learning curve and I have heard rumours that they have plans for next year – which is great news. Thank you to all the Aram Family for their huge efforts.

Contacting the Didcot Air Cadets has never been easy as they are very busy young people, and it was not until early January that I received the sad news that they would not be able to help us this year. Having made some inquiries about other Cadet Forces in the area I was put in contact with Scott Baillie and the Didcot Army Cadets who, in a very short time, organised a group to assist us. The late arrangements meant that many of the Army Cadets were already committed elsewhere but those that helped made me think that we had about double their number! They were superb and worked very hard carrying the tables and chairs, fitting carpets (and cleaning them), helping traders with their stock and helping in the Car Park. They enjoyed themselves immensely and Scott has plans to bring a much larger number next year so that they can help us even more.

Booking the Car Park at St Birinus was a challenge this year as the firm who deal with this were very slow in replying to emails and organising our hiring.

Just when all the paperwork and layouts had been finalised I had 14 tables cancel for various reasons and at the same time I had 6 late bookings come in – all on the day before the rally. This resulted in a grand reorganising of table layouts to avoid large empty spaces in obvious places. The revamp took about 2 hours to complete.

We also found ourselves short of help this year – particularly on the Sunday morning. This was partially caused by illness amongst volunteers, but also by the fact that some club members decided to have their own stalls!

We have booked the 2019 Rally for the weekend of the 9th-10th February – please put it in your diary now!

In the absence of any eager volunteers, it looks as if I will be continuing to run the rallies, at least in the short term, but I will be discussing with the Committee how we can streamline the bookings and layout system, and how we can encourage more of you to help, both with the preparation and on the day!

Ann, G8NVI



Contest News

Forthcoming VHF/UHF/SHF Contests

7th March—70MHz Cumulative

1st April—First 70MHz Contest

Forthcoming HF Contests

10th-11th March—Commonwealth Contest

14th March—80m CC CW

22nd March—80m CC SSB

1st-2nd April—RoLo SSB

11th April—80m CC SSB

Full details of all forthcoming contests can be found on <http://www.rsgbcc.org/>

Contest Results - 70cms AFS

The Harwell A Team (G3MEH, G8CUL, G00DQ and G0MJW) were placed 3rd and the Harwell B Team (M0KEP and M0PXM) were placed 25th. Congratulations to all who took part.

The 70cms AFS was the last contest in the AFS Super League for 2017-18 in which we were placed 12th overall. We would have finished a lot higher up the table if we had taken part in the 80m and 160m contests that are part of the Super League. However, congratulations to Angus (G0UGO) who put in an entry for the HF Datamodes during the season and came a creditable 28th thus improving our position.

VHF National Field Day—7th-8th July 2018

Planning is coming on well for VHF NFD which we will be taking part in from Hagbourne Hill Farm, as we did last year. VHF National Field Day is actually a weekend when clubs are encouraged to operate portable on 5 VHF/UHF bands (6m, 4m, 2m, 70cm and 23cm) over a 24-hour period. The organising of accommodation, equipment, masts and antennas is coming on well, and we now have a 'team leader' for each band.



If you would like to come and help in any way - with setting up and taking down, operating, logging, making tea or generally just helping out, please let me know. You will be guaranteed a fun weekend! We are planning to have a barbecue on the Saturday evening for those taking part over the weekend!



73 Ann G8NVI

UKACs JANUARY-FEBRUARY 2018 (overall position 2nd)			
	Callsign	Section	Position
50MHz (Jan)	G3MEH	AO	4 th
	F1BHL/P	AR	3 rd
	M0PXM	AL	23 rd
	G3MEH	AO	4 th
	F1BHL/P	AR	5 th
1.3GHz (Jan)	G0ODQ	AR	10 th
	G4BRK	AO	7 th
	G3MEH	AO	14 th
	G8CUL	AR	3 rd
	G0ODQ	AR	8 th
	G8DVK	AR	16 th
70MHz (Jan)	M0PXM	AL	27 th
	G3MEH	AO	6 th
	G4BRK	AO	8 th
	G0MJW	AO	10 th
	G0ODQ	AR	9 th
	G8CUL	AR	15 th
2.3GHz (Jan)	G4BRK	SAO	4 th
	G8CUL	SAR	1 st
	M0PXM	SAR	22 nd
3.4GHz (Jan)	G4BRK	SAO	3 rd
	G8CUL	SAR	4 th
2m (Feb)	G3MEH	AO	11 th
	G8CUL	AR	7 th
	G0ODQ	AR	13 th
	G4BRK	AR	22 nd
	G8DVK	AR	77 th
	M0KEP	AR	83 rd
	G0BNC	AR	114 th
	G7IVF	AR	126 th
	M0CIW	AR	137 th
	F1BHL/P	AR	146 th
	G8NRP	AR	161 st
	M0PXM	AL	36 th
	G6LNU	AL	53 rd
432MHz (Feb)	G3MEH	AO	10 th
	G8CUL	AR	3 nd
	G0ODQ	AR	5 th
	G8DVK	AR	37 th
	M0KEP	AR	49 th
	G0BNC	AL	42 nd
	M0PXM	AL	43 rd

The Harwell Amateur Radio Society



*At The
Annual Dinner at
The Cosener's House
ABINGDON
Saturday 12th May 2018*

Be There

RCE NEWS

The RCE team are planning on running another Foundation course and exam later this year and an Intermediate course and exam over the summer. The latter requires 2 weekends, probably the first one in July and the second in September.

73 de Ann, G8NVI.

The RSGB have just released another RSGB 2017 Convention presentation in their video portal for members to view: "VHF-UHF DX - the Game of Decibels" by Ian White, GM3SEK. In a talk aimed at all technical levels, Ian explains that decibels are the 'currency' in which we measure our station's performance. We can count our gains and losses, save our decibels or throw them away, and eventually find our own answers to the age-old question: "What is one decibel really worth?" Ian explains why we use decibels; why even 1dB can be worth more to VHF-UHF DXers than almost anyone else; and how 'counting the decibels' can point us to the next station improvement.

Take a look: <https://thersgb.org/members/resources/?id=5724> (Members only)

The latest TX Factor No 20 is now available at:
<http://www.txfilms.co.uk/txfactor/current-show.html>

60 Years Ago?

Reading the March 2018 RadCom, I was interested to see that a long-time member of HARS has also been a long-time member of the RSGB. Page 10 of the RadCom shows that Colin, G3NNG has been a member continuously for 60 years!

This makes me wonder what we as Amateurs will be doing in another 60 years? Sadly, I won't be around to see it, but it would be very interesting to find out.

In a way, the technology in the last 60 years has not fundamentally changed—we still use super-heterodyne receivers albeit in solid-state form and transmitters have really only changed in their method of generating the final frequency. These methods are changing rapidly now, with SDR and the equivalent transmitters (do we have the term SDT I wonder?). I really wonder what the typical Amateur station will look like in 2078? No doubt built in the far east, the size of a small match box and just about fully automated.

Anyway, congratulations to Colin (Des). Will I be writing about **70** years in 2029? Maybe someone else will be producing QAV then, so perhaps not!

73 de Mike, G8CUL.

HARS Annual Dinner

This will be held on the 12th May 2018 at the Cosener's House, Abingdon.

See more details in this edition of QAV, but please make sure the date is in your diary now!

CLASSIFIED ADS

FT221R 2m multimode transceiver, good condition with manual, with low power output for transverter drive. £100. Contact Neil, G4BRK, neil@g4brk.net.

Silent Key Sale

I have been sent a very comprehensive list of items for a silent key sale from Roger, G3MEH. This list is too big to fit into QAV but can be found at this link - [SK Sale Feb 2018.xls](#)

Please contact Roger (roger@g3meh.com or 01442 826651) for more details.

DIARY

Thursday 8th March
Dr Stuart Eves

Friday 16th March
CS at the Harvester, Milton Interchange

Thursday 12th April
Minos and ON4KST (with 6m)
G8CUL & G8NVI

Thursday 10th May
Show & Tell and natter evening

Sun 17th June
RAL microwave Roundtable

Sunday 24th June
Newbury Radio Rally
Please note change of date

OFFICERS

Chairman: Dave Aram, G8DVK
Vice-Chairman: Ann Stevens, G8NVI
Secretary: Elle Frost, M0NRK
Treasurer: Angus Wilson, G0UGO

ORDINARY MEMBERS

Alex Comerford, 2E0OXF
Roger Powell, G0AOZ
John Durban, G6LNU
John Morris, G6PEP
John Booth, G6ZHB
Tim Keep, M0KEP

CONTACT DETAILS

www.g3pia.net
hars@g3pia.net

Opinions expressed in QAV are the personal views of the contributor and cannot be taken as reflecting the views of the society, committee or editor.

The deadline for the April QAV is 4th April 2018. Articles submitted after this date cannot be guaranteed to be included.

Contributions from all members are greatly welcomed. They may be submitted to qav@g3pia.net. Please note the new email address!