

Q5

North Bristol Amateur Radio Club

The Proactive Radio Club

Page Community Association
Page Road, Staple Hill
Bristol BS16 4NE

November 2025

Yes folks another Free Christmas, Buffet
and Free Bar for it's Members.
(What other club does this).

Yes, I know it is only November. This is the last Q5
before the big day so unfortunately, we have to talk about
it now. See page 8 in this Q5 for details.

Railways On The Air

This was The First ROTA since the new Manager is in control at Bitton Railway. The 200 event was to celebrate 200 years of the world's first passenger service that ran from Stockton to Darlington. This, as a normal run of events has been celebrated for many years as ROTA, the last weekend in September.



Photo courtesy of Carl M9PAB

Power this year was supplied by the railway, thanks to the new power cable. (Last year we were battery powered) The Gazebo was on the green as usual, but nearer the entrance to the area. The antenna, a 20m / 40m trap dipole was strung up as usual from the pole strapped from a sign post to pole on the fence by the corner of the station building. That is all of the mundane information, now for the amazing operation.

For all of you oldies out there, we had a number of new hams actually showing us how to operate. I say this in the kindest way possible. We not only had our new foundation licence holders but recently obtained intermediate licence holders, all showing exceptional handling and operating skills.

Although this is not a contest there is a certain amount of rivalry between them.

Did I tell you their age? No! The youngest, yet to get his licence, so was under supervision 9 years old and the oldest 14 years old.



ROTA Continued

With over 340 contacts over the weekend, this was one of the best special events over the last couple of years.

We were visited by members of the public, with families sending greeting messages, well, the youngsters did, mum and dad declined the offer. It is funny how the parents hold back.

There were a number of the public saying they used to be a ham, but gave it up. Another gent actually took the City & Guilds exam, he, however, didn't apply for his "Ticket". He is now thinking of applying thanks to our ROTA station.

To the right is Mat, G7FBD (with the cans), Carl, Now 2E0YPB on the log and supervised by Robin, G3VZL at the side.



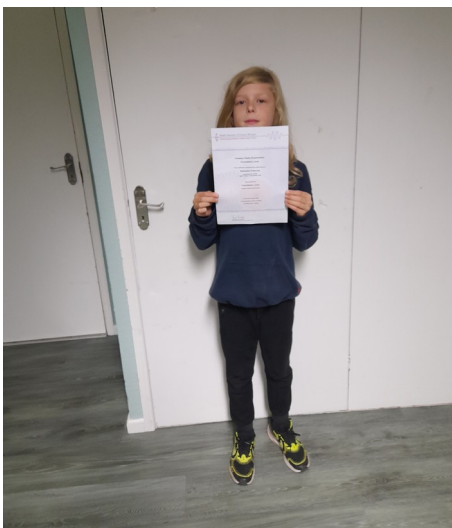
The next time we have a special event, don't be left out, come and join us. We all had a great time.

Our thanks was sent to the manager of the Bitton railway, for their hospitality. Long may it continue.

Thanks also go out to all members who gave a hand set up the station over the two days. A special thanks goes out to Ansen's Dad, who, although is not a member gave us a hand take the station down and clear the area on the final day.

Our youngest success yet.

Sebastian, now M7YNW passed the foundation exam aged only 9 years old. His proud father, Tim, M7KHO only joined the club a few months ago.



Seb and his Dad, Tim, had a great time at Railways On The Air. This being their first special event, showed them what fun can be had setting up and operating a portable station.

During the coming new year we have some more events like this. Keep an eye out in Q5 for more information.

It just goes to show that this wonderful hobby of ours has so much to offer.

Seb, Have a great time in the hobby.

Make A Dummy Load

We have all been told that a dummy load is an essential bit of kit, but why?

Well, It enables you to conduct tests or repairs without going on the air. In other words, it is possible to programme your channels, power levels, offsets, all without harming your radio's output stage. Ok, buy one, but where is the fun in that. Let us build one, it is quick, easy and will not fail to work.

Commercial ones are about £65 while we can make a good home made one for about £10.

It is often said with a home made devices are not good as your signals can be received on a nearby receiver. This, however, is not necessarily due to a badly made dummy load, but can also leak from your transceiver and or feeder. Remember, with the lid off the transceiver, the circuit board will be radiating a bit of RF. This, however, can be an advantage, it enables you to monitor your output signal, so don't be put off by fellow hams who say that you can't make a good well constructed dummy load, you can, and we will.

If you look in the old RSGB and ARRL manuals, it tells you how to construct one from carbon resistors. Why carbon resistors and not the high powered wire wound ones that are easily obtained?

Wire wound resistors are exactly what they say, a wound piece of wire, a coil. As we know from our training, coils have an inductance at a frequency, remember we are using AC and not DC, so a resistor of 50 ohms at DC would not be 50 ohms at RF, especially at the high frequencies we use.

A caution about some carbon resistors, some, especially old ones by Phillips, were made by cutting the carbon in a spiral, forming a carbon coil. Granted, they are rare, but it is something to look out for.



The resistors in some versions are cooled by air, immersion in sand or transformer oil. The classic one being one made in an old coffee or paint tin. I had obtained one in a table top sale some time ago, built into a Tate & Lyle syrup tin.

Why do we have to keep it cool? Well, besides being a fire risk, resistors keep their value and structure at lower and ambient temperatures.

The picture on the left shows a set of resistors built into the lid of a paint can for immersion into the transformer oil.

We are going to go a bit better than this. We will be using one of the new solid state resistor chips.



A 15w Commercial Dummy Load

Dummy Load Continued

Our Dummy Load will be very easy to construct, with only two solder joints. The hardest thing to do is drill the box to accept the chosen socket and the resistor.

Parts List

Metal box 590LB Mini Aluminium Project Box (Aliexpress) About £3.60

SO239 bulkhead socket or similar 2pk £6.99 (£3.50 each)

50 ohm 100w resistor 100-50 5pk (100w) or 250-50 2pk(250w) about £2 each

Heat Sink to suit power dissipation required. (The resistor is stable up to 155 deg C)

So for about £10 we can make a 100w, possibly a 250w dummy load.

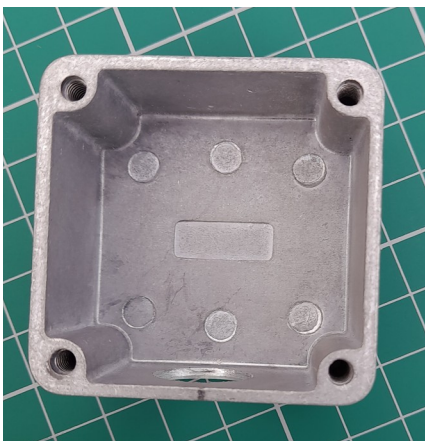
How To Make It

First of all, drill the hole for chosen socket in one of the sides. (Note the orientation with regard to the resistor, see below) I chose to mount this first as the resistor has a very fragile connection.

Next, mark and drill where you are to mount the resistor. Note, in my box, but not all boxes there was a rectangular recess in the middle of where I wanted to mount it. The resistor was therefore mounted off centre. This is so there was adequate heat transfer to the metal box. Also this keeps the connection from the socket to the resistor as short as possible.



Ethan, Paul (Ethan's Dad) and Carl in deep thought



In the picture on the left you can see this rectangular moulding in the centre, also it can be noted that, in this particular box there are three circular mouldings. Avoid mounting the resistor in this area. The reason? As stated previously, to have as much metal to metal contact as possible. Don't forget to use Heat Sink Compound between the resistor and the box.

The chosen socket is to be mounted as near to the tab of the resistor as possible. Here you can just make out the hole for the socket at the bottom of the box.

The easiest way to drill this large hole is to use a conical drill, These are quite cheap, I bought mine from Lidl.

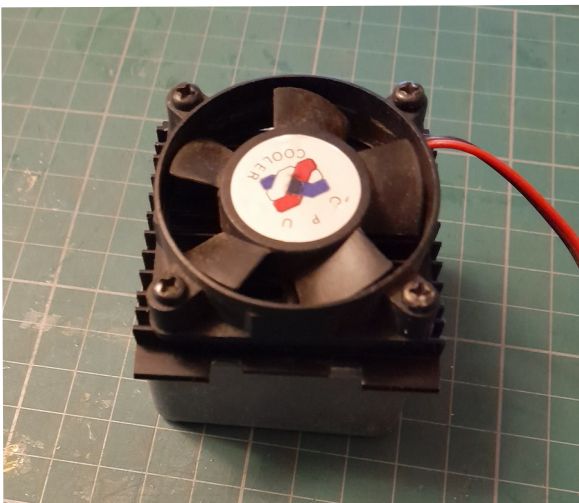
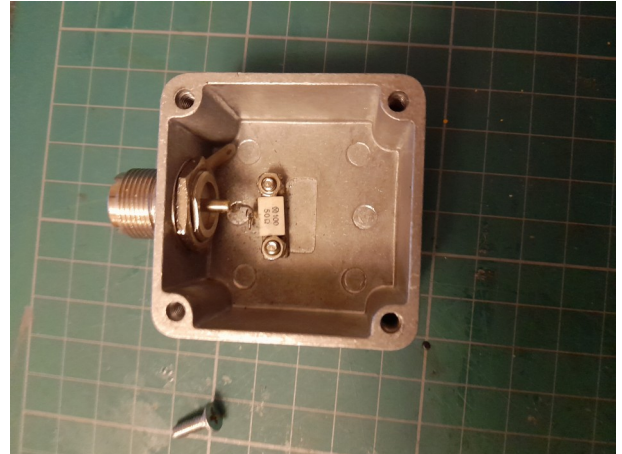
Dummy Load Continued

It is best to counter sink the holes on the outside and use counter sunk screws to make a flush finish for further heat transfer to any additional heat sink you may require.

I found an old mini fan with heat sink from a computer video card. It just fits on to the box with power for fan from a 12v supply or, maybe a 9v PP3 battery.

Here on the right you can see that the resistor is mounted just off of the rectangular moulding. It makes it so the tab of the resistor is as near to the connector as possible.

In the construction you would add the connector first. This is so that you don't damage the little tab on the resistor. Bolt the resistor down using Heat Sink paste. Then solder a wire link from the connector to the resistor. Solder the resistor last to protect the little tab. It is fragile, you have been warned.



On the left you can see that I have added a heat sink with a fan. This assembly was obtained from an old computer. These are often seen on video cards or even on old CPUs.

The two wires on the fan are to go to your 12v power supply or if this is not practical, to a 9v battery. This will give enough blow to cool the box down.

It is suggested that you measure the temperature with a infra red thermometer to work out how long and what power you can apply.

I know that the couple of members who made the project, found them useful. From testing a faulty coax feeder, to radio programming.

I must say that I am not the designer of this project, bits of it came from various YouTube videos. If there are any other projects worthy of a club build, give me a call.

A Note to remember, we are using a 100w resistor so that we are not over powering it. It will only work at 100w if there is sufficient cooling by way of heat sink.

Dave, G7BYN

Happenings At The Club

Over the last Quarter, we have had a few visits from what we may term outsiders. That is from other clubs and even other countries.

We are adding this to Q5 because I know that there are a number of you out there that for what ever reason, cannot make the club meetings all year around.

Visitor from across the pond

We had a surprise visitor back at the beginning of August. Rob, KE7BRF joined us for a general chit chat evening. His home QTH is Kentucky and is a very active operator. After showing him around the club premises, I showed him one of our projects, the dummy load mentioned elsewhere in this Q5. He is in the UK for a two week holiday, visiting Luton, Bletchley Park and then going over to Dublin. I suggested that he visits the Guinness factory and the Leprechaun museum, yes, they really do have a Leprechaun museum.

RSGB Regional Manager's Visit

Once again Andy, G7KNA visited our club with an excellent talk on what the RSGB does and are doing for not only members, but non members.

OK, so this may have been a bit of a sales pitch, but it is so important to support your national body. It is the body that despite what some may say, they are the only section of our wonderful hobby that the government will converse with. The RSGB also represent us at the ITU. "The International Telecommunications Union" is the international organisation that regulates the Spectrum. Your support is vital to the efforts made to prolong our hobby.

Not forgetting Radcom,. a world renowned technical magazine delivered monthly.

Another service offered is help with planning, when the local authority are not playing ball, and asking you to take down your antennas.



Courtesy of Namal M7NMI

Recommended YouTube Video

VE9CF I have worked this station a few times. The last time was from Page Park, when he also worked Ethan. <https://www.youtube.com/@outnaboot/videos>

Dennis's Talk on Coax Cables

Back in October Dennis gave one of his mammoth talks on Coax cables. That parameters of most types were discussed with questions and answers at the end.

I think some of our newly qualified may have found it overwhelming with the selection available. One of them even £500 a metre. Obviously, we are not going to use this for our 2m / 70cm co-liner on the back of our house, however, it was concluded that it is wise to Purchase the best cable you can afford. When you have your cable, look after it by not standing on it or bending it with too tight a radius.



Dennis alas commands a good audience. I must admit, some of the information went over my head and way out of my pocket, but when we went on to the subject of RG58u, it began to make more sense.

If you would like to know more when selecting cable for your new project, I know Dennis will help you select the best cable for your needs.

Saturday Morning At The Cafe

It was about the last of the good weather. This was well attended with 8 or 9 turning up for a coffee. We met at about 11am, it was a bit of a shame as the breakfasts ended at 11am. Never mind though, we had a chat and put the world to right.

I will arrange more of these in the new year, let us get ROTA over and done with, then of course Christmas. Who knows, we may make it not just coffee, but Breakfast.

Field days

It has been one of those events that is not high on my agenda. What did come out of our Saturday morning at the cafe was, this would be supported. Again, if this is to be held in a field we would need power, shelter and antennas. If you lads want to participate, we would want a few of you to step forwards to transport all of the kit. The gazebo, and radio, an IC7300, is available to sign out from the club, all that would be required is the battery or generator and antenna of choice. All of this is open to discussion and there is plenty of time to sort this out, before any event is on the calendar.

Christmas Party

I know that it is early, but we have only a month or so to organised. As last year we will collect refundable deposits of £5. They will only be refunded if you turn up on the night and will be forfeit for a no show. We will start collecting deposits about mid November.

The meal (Sorry Members Only) takes place on Friday 12th of December. The time will be the normal club times so remember, to arrive in plenty of time for the beginning of the festivities.

The bar will also be open to have a drink on the club.

As last, year, we require a £5 Deposit, refundable when you arrive at the Christmas meal. It is Not refundable if you change your mind. The reason for this is to stop no shows.

A no show is an unnecessary cost to the club, as the food would have been ordered and paid for on a per head basis.

How To Book?

The simple Rule You will have to turn up to a meeting up to and including the 5th December to pay your £5 deposit per head, in cash. Sorry No Bank transfer can be accepted. The cash will be sealed in an envelope with your call sign on it. This will be returned to you at the party. If for any reason you fail to turn up, the deposit will be forfeit and will go to club funds.

We look forwards to meeting you all.

The Committee

The AGM

The AGM will be held 23rd January and will be posted by email to you all with due notice. Please make sure that if you have changed your email address, please let Geoff, your membership secretary know. I am also sorry to say that your Membership fees are generally payable from the AGM The method of payment will be in an email posted to you all around 1st of January.

If you would like to stand for any of the positions on the committee see your secretary, Oh, that's me Dave, G7BYN.



Chairman's Chatter

After a long hot summer which a fair portion of it I spent recovering indoors from heart surgery. I finally returned to work 4 weeks ago to be welcomed by the daunting prospect of ensuring all the Underground Control Systems, Passenger signs and data feed sets are ready for the winter clock change.

To the normal layman, the prospect of such a change should be seeming less. However, there is always a risk that some system could throw a wobbly and cause service impacts. Not good to the customers or indeed myself who is accountable.

For us radio hams however, we get an extra hour in bed plus a swift GMT calibration of our time pieces and radios manually or automatic will seem effortless and short lived. The only complaint could be the alarm never went off.

It would take many words to list the complexity why we plan and check our systems in advance given we have GPS and Network time clocks you may ask. But this I may leave for a talk one day about Operational Maintenance. So I hope that the shorter days will still encourage you to continue your Radio activities and come along to the club even on the dark winter nights.

I can report that the club has significantly increased its membership over the last year compared to many other clubs in the UK which have seen a decline. Having a bigger membership allows us to support the activities and improve the equipment you all share.

It is hoped that further work improving our aerials / repeater will resume again and the planned sorting of our storage space under the stage hall gets underway soon. This can only be achieved with the help from your good selves.

I note, there has been an influx of changing the 2e0 call signs to the new simpler M9 etc. This has caused some confusion to overseas operators who struggle to understand reasoning and indeed if they worked you before. It would be good practice to include the old call sign details on QRZ and to realise that not all data bases will be captured straight away such as DMR / awards etc. Having said that, if you have changed or indeed progressed your licence please let the club know and congratulations.

73 for now G8YMM

Training Team Report October 2025

Our mission to run the RSGB exams at the club moved a step closer when our Regional RSGB Rep (Andy Jenner) attended the Club to present a talk about the RSGB, he was able to confirm that we did not need multiple cameras in the room as we could use local invigilators during the exam.

He did say that he would send us a link to the examination software as we need a copy to monitor the students during the exam process and it will help Dennis and myself better understand what standard laptops need to be. As yet we have not received the link so I will need to remind him.

We have several members attending the Intermediate training sessions, one was confident enough to take the exam in July and M7LZG became 2E0YJS, another member took the exam in September and M6CJN became 2E0YPB. Then following Ofcom's October announcement that they were implementing Phases 2 & 3 of the Amateur Radio Licence Review, 2E0YJS became M9PMA and 2E0YPB became M9PAB. Congratulations to Paul and Carl on gaining their new Intermediate Licences.

Ian / Dennis

Chatter From The Deputy Chair

As the deputy chair, I thought I would write a note in this Q5 issue to personally thank all members that came to, lent a hand and even operated the station at Bitton as part of the ROTA 2025. I am sure Dave has included a more in-depth commentary of the event, but I just wanted to add my voice to the congratulations needing to be placed on the team. Job well done!

It is fantastic that we have recently been joined by, dare I say it, a more “Youthful” membership. For me it’s an indication that the interest in the hobby and more importantly the club is growing and “things” will hopefully continue to flourish way past me sending my last QRT. Although, I will add, the club as a whole is a VERY welcoming and friendly place. Boosted by its location and the staff who work for Page Association. So, for me personally Thank you to every member for just giving me a place I can chat openly about things we try to hide away with others who have experienced similar stories of woe. Be it mental or general health issues, antennas, terminations, operating practices, small projects, failures the list goes on. Everyone in the club has a place in my heart (Yes I actually have one, be it cold, but its there) and my deepest respect, yes even you Dave G7BYN.

I am also blown away by the interest in Parks (POTA) within our club. I know its not for everyone, but for those who are not willing, not interested or like me, find it a bit of a challenge to get to some of the parks out there. There is actually something you can help with!

Join our pota WhatsApp group and follow some of the guys who are heading to parks. They will generally post a spot frequency, say 7.123MHz or the more challenging higher frequencies like 20m, 17m, 10m or even VHF/UHF.

Once you read the frequency, I would appreciate that you call to them. All you need to do is make contact and just give and receive a signal report. THAT’S IT!

For you it’s just another one in the log, for them it’s a station contact, helping them towards a goal of making 10 contacts in the park they are located in.

Bonus, if you register on the POTA.APP website when us “Parkies” upload our logs to the ‘system’. The system automatically sees you both a member of the Parks on the air scheme and that you are in the “parkies” log, at this point you get a hunter credit (point) and the station uploading the log gets an activation point.

As you work stations more and more your credits build up and at various point you get certificate of achievement which you can copy to your QRZ Page, print and even boast about, yes boasting is actually part of the fun! But remember you’ve actually played a part in helping activate a park, be it in the UK or indeed anywhere in the world.

Note from the Deputy chair Cont'd

All this from the warmth of your own home as you tune around the dial. Remember if you hear anyone calling "CQ POTA" go back to them and exchange reports, it will certainly make someone's day. And after all we do boast we are radio amateurs, let's get on air! I am sorry to BANG on about POTA, I know it's not for everyone, but it set up in such a way, you can help someone reach their goal for an activation, while you enjoy a steaming hot cup of tea (or your fav drink – other drinks are available) at home in your shack. Oh, and it's not just SSB, there is FM, AM, CW, Packet, RTTY, FT4, PSK32 and a whole host of other modes available.

it is perfectly acceptable for you to make an SSB contact on 7.123MHz, then offer to change modes to AM or FM or indeed any other mode (remember it's called a multi-mode section for a reason), you get to press the mode button on your radio, AND the station in the park gets to record multiple QSO's one for each mode operated, boosting their QSO count towards the goal of 10 QSO's

If you dare to want to learn more of ways to blow the dust of your PA then just ask myself, Dave (BYN), Anson, Carl, Rob, Paul or Ethan we can all try an answer the question.

On a separate note, following on from Andy (G7KNA) RSGB presentation I put forward my name to the online invigilation team, and for the last few weeks I have been learning the ropes, joining various online Zoom calls be it a pre-exam meeting of a candidate, or an actual live exam. It's interesting and there is a good support network in place for the invigilators. OK, it's slightly different from the processes of the old paper exams, but just as rewarding!

You get to meet new people from up and down the country, find out what drives them, their stories of becoming interested in the hobby and, hopefully re-assure them about the up-and-coming exam, what to expect with the online system etc. Thankfully, paperwork from the invigilators side is minimum, well, it's as easy as checking a spread sheet and typing your name into a field! Above all its rewarding knowing I am giving back to the hobby. If YOU fancy having a go at helping our future grow then give me a shout, I will put you in touch with the team.

Regards to all Members

Mat G7FBD

XIEGU RADIOS

These radios are becoming ever popular with many of our members owning a G90. This is a 20w HF rig, one of their higher power in the range available.

The current range has a G106 at the lower end of the scale costing a mere £199. Well what do you expect for £200 quid. This is a great little radio for a first time venture in HF, however, don't expect to break a pile-up, it won't. This little radio had very bad reviews when the preproduction version was released to You Tubers, one of them didn't even power it up. That was grossly unfair to Xiegu, who just wanted constructive criticism to test the market place.



The G106



The 6100

The next one in the range is the 6100. This one has its own internal battery and built in ATU. With an output of 5w on the internal battery or 10w if you elect to use an external power supply. This has a touch screen and it has 6m. The design of the case is what I call the lay back type of radio. When working portable, there is nothing worse than trying to tilt the radio up at an angle so as to operate and read the screen. The cost of this is currently about £490

The 6200 is an improvement on the 6100. With a larger removable battery lasting all day. The down side, however is they chose to have the high power of 8w instead of 10w. OK, the 2w difference is only about half an S point at the other end,, but it does play on the mind a bit. I think they missed a trick here, the older G90 is 20w. Wouldn't it have been good if it were 20w The 6200 is available with a current price of £665. Again this is a lay back radio very much like the IC 705, although this has an ATU and the IC 705 does not, however this is HF only. (Swings and Roundabouts).



The 6200



The Ubiquitous G90

That brings us on to the G90. An older style of rig, more difficult to use portable if sat down on a rock, just like the old FT817, but great if used on a table or, in the case of Mat, on top of his dash board in the car. An internal ATU is again included and It has a waterfall display,. Although by today's standards the display is very small. An excellent power output, is small and light. What's more? the price under £380.

In the end you pays your money and you takes your choice. Xiegu radios are very much part of our every day kit, they are getting to be a radio of choice, giving the big three a run for their money.

Calendar Of Events

November

- 7th Instruction on Soldering by John G4WOD
- 14th Antenna construction 2M Slim Jim
- 21st General Meeting with Constructional Workshop
- 28th Film Night **The Radio 4 Shipping Forecast (By Mat G7FBD)**

December

- 5th Rummage Box Sale. Bring your items for £1 an item or less
- 12th **Christmas Buffet** (Pre-booked Members Only)
- 19th General Meeting
- 26th Boxing Day No Meeting

January

- 2nd New Year Holiday No Meeting
- 9th General Meeting with Constructional Workshop
- 16th Show & Tell. Anything to boast about. Tell your story, Prize for best display
- 23^d **AGM It is Important That All Members Should Attend**
- 30st General Meeting With Constructional Workshop

Please Note, Training Takes Place At Most Club Meeting From 7:15 to 8 :45
Unless there is an instructional, talk or video when Training is 7:15 to 8pm

Club Nets And Contact Details

Wednesday net (This is the regular Net)

GB3BS 20:00 to 21:00

Sunday Evening Net

This is on GB3BS 20:00 to 21:00

Additional Nets By Dave G4FJH

Mondays 2m ssb (144.340Mhz) Vertically polarised @ 20:00

Thursdays 6m via the GB3ZY repeater @ 20:05

In The Next Q5 Build an APRS Tracker.

Club Contacts

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Please Note a reply may be from another email address as I use this as an inbox .

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Next Q5 February 1st

Q5 Publication

Last date for articles January 24th

Publication Date February 1st

I hope that I will get articles sent to me from time to time. I thank all of you that have submitted items over the past couple of years. All back issues are available on the club's web site.

www.nbarc.org.uk