

Q5

North Bristol Amateur Radio Club

G4GCT, M0NBC, G6PNB

February 2023

The first Q5 of 2023 and your committee has already been working hard on the events and the future of your club. With spring not far away, we are looking forwards to some outdoor events. Last year, even though the weather was amazing for a few months, it was a bit of a washout with events not taking place. This year we will try to have something in reserve. Even if it means having a bit of fun in a park or hill top.

As Captain Mainwaring commands, we must all support the platoon (Members). This look alike was at the Avon Valley Railway 1940's event that was way back in 2019. This year the 1940's event is once again taking place.

We have been asked to participate once again, and this is of course in September. More details of special events are covered latter in this copy of Q5.

Dennis, M0IYQ early on the calendar is giving one of his great talks. This time on the VNA. This relatively cheap computerised test gear can be rather daunting to use. Hopefully after this talk we will be able to test our antennas and Baluns with ease.

The Meeting after this is where we test the antennas we have been constructing over the last couple of weeks.

Quiz Night makes it's return. Questions will be mainly Radio Related, although there will be some general knowledge. This is a free to enter quiz (not like your pub quiz)

By The Way, there will be prizes that I am sure the winners will appreciate.

Some of you all may wonder why I have put the King's Coronation in the events. Well, this is just in case we can all use either a special prefix in our call sign or there is a special event happening somewhere in the Commonwealth.

Please Support The Club Events, It Does help our club stay ahead.



A New Year For The Club. Here is Your Committee.

Your committee remains the same as last year with the only exception being Pete, 2E0PGS has taken on the roll of shack manager. For those that don't know, Pete was co-opted and also works hard for the club keeping the Web pages up to date. Thanks Pete.

Club Management

Chairman:- Paul, G8YMM

Secretary:- Dave. G7BYN

Treasurer:- Shaun, G8VPG

Vice Chair:-Alan, G7DRU

Mat, G7FBD has also been Co-opted again as Special events Manager.

Other Committee Members

Membership Secretary:- Geoff M6GFM

Shack Manager:- Pete 2E0PGS

Training Manager Ian G4TAH

Training Asst' Manager Dennis M0IYQ

Time To pay your subs Sorry to bring this up. Last year we were able to collect subs by Credit / Debit card machine. This made the collecting of fees really easy, alas the card machine company thought that this amounted to money laundering or something like that so we were stopped from collecting these fees and had to return the machine.

Membership fees are kept the same as last year with no increase.

£30 per year with a door fee of £2. Gold membership is £120 per year with no door fee For Family membership this is 1.5 times the type of membership chosen for details see the Chairman / Secretary / Treasurer or Membership secretary for full details.

The way to pay is either by **cash** at the door or by bank transfer. If you pay by bank transfer please use the details below.

North Bristol Amateur Radio Club

Sort Code 51 70 08 Account 77178491

Please use your call sign as reference so the treasurer knows who has paid. Shaun, our treasurer will then pass the information to the membership secretary who will then issue you with your membership card.

We are sorry that due to Banking issues at our end **cheques cannot be accepted.**

Ham Licence Reminder

There has been a lot of Bunkum heard on the air saying that there is now no need to update your details at least every 5 years. I rang OFCOM. **Yes you still have to update at least every 5 years.** So if you hear rumours to the contrary, please correct them and protect your licence.

My Trip To Bletchley Park

Yes Folks, I finally made It to the war time top secret code decrypt base. I must say it was larger than I thought although some of the huts had been lost to time with just the concrete base showing where there they once stood.

My thoughts went to let me look for “Hut33”. For those youngsters out there who don’t listen to Radio 4, this is a comedy programme with lots of gags relating to modern day situations. An example was:- The decrypt machine failed to work so they contacted “IT” That is “Ian Trent”. So when they spoke to this Ian Trent he said, “Have you tried turning it off and on again”. Well I find it funny, enough said.

Here is a mock up of Alan Turing’s Office. It is his actual Office in the Hut he worked in. I could imagine all of the young typists nipping between the various offices along the narrow corridors, then sitting at their desks showing a glimpse of stocking tops as they cross and uncross their legs.....Oops sorry day dreaming again.

Back to the story. When you think back to the very crude conditions they worked in and the crude machines, they had done an exceptional job shortening the war.



This is quite a long corridor with various offices to the left and right. All made of wood with un-carpeted floors. It must have been quite noisy, bear in mind shoes in those days had leather soles.

Some of the offices had a hatch built into the wall to drop off the encrypts to be picked up.

Another fitting in some of the huts were vacuum chutes. You know, the ones that are fitted in Tesco stores for blowing the cash filled container to the cash office. This spider’s web of pipes around the site must have been the first internet or world wide spider. Sorry that was another joke from Hut 33 sitcom.

My Trip To Bletchley Park Continued

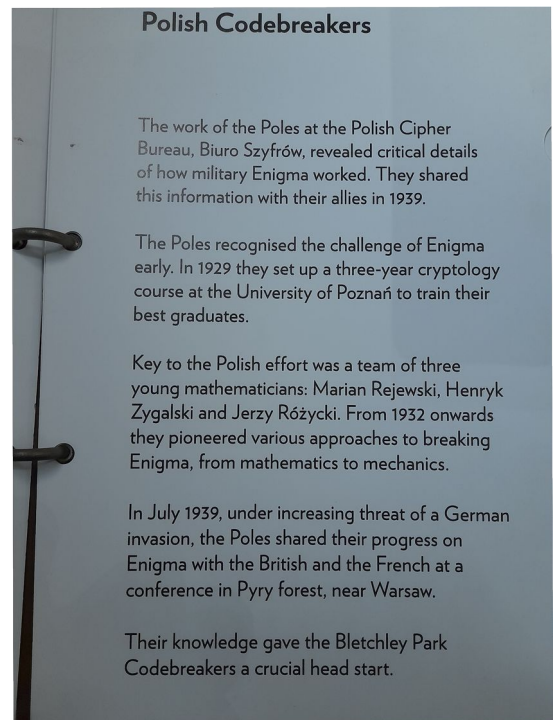
Code breaking was not only done by us Brits, there were French, American and Polish.

Thanks go to the Polish as they were the first to use a cipher and passed all their information learned to Bletchley giving us a head start.

I must say, visiting Bletchley was an eye opener. Not knowing what I was actually going to see and learn about.

Spies, SOE and MI5 & MI6, well, basically James Bond has always fascinated me. Back last year I also visited Beaulieu Motor Museum, just on the edge of the new forest. Beaulieu was for those who don't know was a training school for SOE and spies of all sorts.

They also had a small museum to tell the story, with B2 spy radios and James Bond things like



Maps hidden in hair brushes and soap. And opposite is an SOE standard issue pressed steel pistol.

I Guess these country homes worked together in one way or another. Beaulieu training the operatives and the "Y" stations listening to them and the enemy with Bletchley decoding the whole story. With all of these government agencies working together, I wonder if it would work like that today, I bet it wouldn't.

If you have a liking for all things 007, hidden radios and other gadgets this may be a trip for you. This obviously is just a little taster but if you would like a visit, RSGB members can apply for a free ticket. To see all around and have a bite to eat in the canteen, you will need most of the day. I wish that I stayed over night to make the best of it.

I have been told that the computer museum also attached to Bletchley is also worth a visit. Alas, time was at a premium so for me, I had to miss this out.

It's a shame the trip I was organising to Bletchley way back in 2019 didn't come to fruition. Covid-19 had just come to the fore and our trip was just at the lock down stage. It was a lot of work but, who knows, a trip may be organised in the future or if not, there may be to another equally interesting place.

Dave G7BYN

The Continuing Saga Of The Toroids

This was from an email sent to Q5 by Tony, G4CJZ. It was to help me and others in the continuing quest for the best match possible. If you would like to find out more information, Speak to Tony, our Toroid Guru.

I noted that you had, or were intending to make a matching unit using an FT240-43 device. A good choice for HF work. I thought that your Q5 readers may find some of the hints and tips below of interest. Why do we use Bal-uns and un-uns?

Well in most cases to improve the match between the TX, or RX to the antenna. when the built in ATU or other matching device struggles or indeed fails to provide the desirable low SWR at the rig end.

There are loads of articles and construction details on-line, so I won't go too deeply into that. Out of their spec range toroids "Drop off" quite rapidly, mainly due to saturation and heating. By the way, those Grey toroids that seem to be in abundance at rallies (When we had them...) are only good if you are into the very lowest Amateur bands, such as 136khz Don't even think that they will work at HF, even on QRP rigs, unless, of course, you want a quite efficient dummy load !

I always wrap my toroids in Plumbers PTFE tape first, before apply the windings. Why? Well some of the toroids can have some rough and quite sharp edges and can easily scratch or damage the enamel on most enamel copper wires. Ferrites and Iron dust cores are conductive and can cause all manner of obscure problems with your newly constructed Bal-un or Un-un. PTFE or PVC coated wires are fine if you are not looking for every last drop of efficiency.

Bi-filer or Tri-filer windings are best for coupling. It's not compulsory to use these more complex wiring methods. You can use "Conventional" windings, such as a separate primary and secondary that are found in mains transformers.

For higher power use I use 1.5mm mains wire or even 2.5mm for KW devices. When winding the primary and secondary be aware that the more wire you use, the more the losses. For secondary windings at HF I find that a maximum of 8-13 turns are best. For the primary windings 2-8 turns. If you want say, a 4:1 device, then 12 turns on the secondary with 6 on the primary will give you the desired ratio. Again, with 12 turns secondary, a 4 turn primary will produce a 9:1 ratio device. Never use metal boxes for you matching device. Metal in close proximity to the toroid will alter the flux density locally and cause "Hot spot" heating, which could lead to damage never put a nut and bolt through the centre of the toroid for fixing purposes, unless its Nylon, when that's fine, but steel copper or brass bolts just act as a shorted turn and wrecks the transformer action and possibly your rig dangling on the other end of the device!

If you want KW power matching, its fine to stack two, or more devices, but cover them as one device, not individually as this will detract from the coupling between cores. Finally, use sturdy plastic, waterproof boxes if your device will be used outdoors.

Toroids Cont'd

Electrical junction boxes, from places such as B&Q are just fine Use stainless hardware. Never mix hardware types such as brass, copper, steel or aluminium. In an outdoor environment electrolytic action will be vigorously active and will damage the integrity of the connection to your device. Always solder (tin) the wires before crimping and use forked connectors for ease of use. Well, I hope that the above will help Q5 readers when they construct their devices.

Regards,

Tony, G4CJZ

Special Events For 2023

The first event will be the Mills On The Air, **May 13th and 14th**. This will be the usual Beautiful mill of Ashton on the Somerset Levels. With this event it requires support with transporting kit with at least two cars.

Special, Special Event (Top Secret)

Behind the scenes, your committee is hard at work on a new one off event. Mat and I have had a particular event on hold for well over a year. It is gradually coming together with the media yet to get on board.

I am sorry that no more can be said at the moment as we can't afford to let this to go to any other club, although other clubs will be invited as guests this however will remain a NBARC hosted and licenced event. The only thing we can say is that the event will be over 5 days at the end of may / beginning of June and that we will need 100% commitment. That means if you say you will be available for a certain time slot, you will be there. No more "Sorry I can't come now as my wife said we are taking Aunt Flo' to the vets." (**Note The Stop Press**, editor)

Lighthouses On the Air (Avonmouth)

August 19th and 20th This event may go ahead although we have a large one off five day event planned for May/June. However if someone wishes to take this on please submit your details to Mat By the way, some club members are unaware that we do give a donation to event sites for hosting us. Last year I paid the mill keepers on behalf of the club and we paid for indoor access at Avonmouth.

Railways On The Air

There is a small problem to overcome with Railways On The Air. The Avon Valley Railway has invited us down to put on a radio station at their 1940's event. They are calling it this year "Bitton At War". This, unfortunately is on the 16th and 17th of September being the weekend before ROTA. It has been decided to support the 40's event with a view to set up a station the following week-end for ROTA.

ROTA Continued

We will have a word with AVR to see if this is possible and hopefully, their gazebo will still be in place for us to use. If not then we would have to have volunteers to transport our club gazebo to site each day (As there would be no overnight security) Alas we were let down with this last year.

Mat and I visited the AVR last year and had a working Breakfast. Planning a change of antenna on previous years to give us 80m and to eliminate the need for an ATU. If we use it for ROTA it will have to be removed each day as stated previously there is no overnight security.

Welcome to a New Member

A warm welcome to Mike, M1ARI. Mike is a keen antenna constructor and is always busy trying to find the optimum antenna to use in a flat. I particularly like the antenna mounted on a pole poked out of a window. I'm sure we can learn a lot from Mike.

SHE7 News

For those who don't know, our club has been going through a bit of an upheaval recently. It all started with the dreaded Covid 19.

SHE7 had a grant and started a bit of a renovation. New carpet, new disabled loo and a kitchen re-vamp.

Our shack had been moved to the other side of the hall to accommodate the disabled loo. All was beginning to come together. There however has been some issues still to overcome, your committee have had meetings with SHE7 to address our concerns.

We will not air them in Q5 but if you have been attending our meetings over the last three months or so you would have been fully informed what has been going on, and your Chairman has been using all his powers to fight the proposed rent increase.

Chocolate Tubs

A bit of fun has been had with this one. Tony, G4CJZ has, over the past 4 or 5 weeks donated a tub of chocolates each week as a free raffle prize. He wrote a number on the bottom of the tub then asked members to call out a number between 1 and 50. The nearest to the number on the tub wins it.

This has been a popular bit of fun. Thanks to Tony for donating the Tubs.

RSGB News

It was brought up at the AGM by Alan, G7DRU that we should advertise events on the RSGB news. I will undertake this within the next 3 to 4 weeks.

A quick history of Samuel Morse

Some years ago I stirred up a hornets nest with the qualification of CW. Old Hams who had to take their Morse test would call Morse CW which it is not. CW stands for **Carrier Wave not Constant Wave** depending on what books you read. The wave would be detected in the receiver. Send a Carrier, the signal is on. Turn off the carrier then no signal is detected. In other words there is no contact at all between the transmitter and receiver in the off state.

Early control of model aircraft was this way. "On Off On" for left "On" for Right "Off" was strait on. It was CW but definitely not Morse.

When modulation came in the signal was a **constant** wave ie connected to the receiver all of the time This, by modulating it in amplitude (AM) speech or tones could be superimposed on the wave. The wave was no longer just On and Off. Now I will follow on or upset some with this by going through the shortened history of THE MORSE CODE.

Looking through my old encyclopedia for an answer to a question posed by a TV quiz show, "Pointless" I looked up "Morse." They said in the answer he had invented the code, I'm sure he didn't, although I wasn't there, contrary to some who think I'm that old.

Samuel Morse's full name was Samuel Finley Breese Morse, and was born on April 27th 1791 in Charlestown Massachusetts. He had shown a deep interest in chemistry and physics, especially in electro-magnetism but art was of prime importance and became a portrait painter. He is reported to have studied in London.

In 1832 he was returning home from Europe on the steam ship Sully when, he was involved in a discussion with several men who were also interested in electricity, Morse suggested, "If the presence of electricity can be made visible in any part of the circuit, I see no reason why intelligence may not be transmitted by electricity." As he traveled he worked out a plan in a series of drawings, and explained them to his fellow passengers. With a few minor changes, the instruments he devised that day became the models for the ones which he latter patented. In 1837 he applied for a patent on "The American Electro-Magnetic Telegraph," but this was thought to be impracticable by the patent office.



Samuel Finley Breese Morse

He went to Europe seeking aid for his invention, but in vain. He eventually persuaded the Unites States Congress in 1843 to vote sufficient capital to build a line from Washington to Bultimore. On 24th of May 1844 the first message was dispatched. From that time the growth of the Telegraph was rapid.

Morse was not alone in making the code of dots and dashes, he had the help of a little known person **Alfred Vail**, but the code was still called The Morse Code.

Morse Continued

This is where it upsets the Key Bashers. The code was definitely not designed to be "Hand Sent" as all good radio operators would like to think, but sent by machine, and then decoded at the other end by reading it off a "Ticker Tape". This was a strip of paper with the dots and dashes printed or embossed on it by the receiving apparatus. The Code was originally not designed to be sent by radio only by wire.

The first machine for sending was rather like a John Bull printing outfit (remember those), the letters forming words were added to a frame, each letter had its corresponding dots or dashes below it on a raised contact area for example, E . F ..- and so on

A lever was drawn over the completed word thus lifting up and down making contacts as a dot or a dash. Latter machines were designed to send at up to 80 words per minute. So you see no one can read Morse that fast and was never intended to be read by ear. It was patented to be sent by machine and read off a paper tape by eye.

Replies on a post card to.....

Who invented the telegraph code From another source

The earliest code used commercially on an electrical telegraph was the Cooke and Wheatstone telegraph five needle code (C&W5). This was first used on the Great Western Railway in **1838** (Note The Date)

After his wife's death, Morse once again traveled to Europe, and on the return trip had a chance encounter with Charles Thomas Jackson, an American scientist who showed Morse his latest work on electromagnetism, inspiring Morse's idea of using electricity to transmit messages over long distances. And Morse was not alone in his work on such an invention. Unbeknownst to him, (Old English), two English scientists, Charles Wheatstone and William Cooke, were conducting their own experiments in electrical telegraphy. Though they had begun their work later than Morse, they had some success sooner, developing—and receiving a British patent for—a machine that utilized multiple telegraph wires to transmit a single message. Morse, whose research was focused on a single wire system, eventually gave the first public demonstration of his telegraph machine on January 6, 1838, in Morristown, New Jersey.

4. A teenage girl selected the words for the first official telegraph message.

In 1835, Henry Ellsworth, a Yale classmate of Samuel Morse's was appointed the first Commissioner of the U.S. Patent Office, (**Mmm, do I detect a bit of you scratch my back....**) where he quickly became a champion of American inventions, supporting the development of Samuel Colt's revolver among other projects. Morse had received a U.S. patent after the 1838 demonstration of the telegraph, but desperately needed additional funds and government support to make it a viable technology. He sought assistance from Congress for nearly six years, to no avail. So you see from this investigation the multi wire telegraph system in the UK used in the GWR was way ahead of its time beating Morse's system into general use and we use multi core systems now. Just take a look at CAT5 or 6 ethernet cable. Did Cooke and Wheatstone know something all those years ago.

If you want to find out more and do an in depth investigation I will be all to pleased to publish it in Q5.

Celebrating the Great Inventions

When Alexander Graham Bell died in 1922, telephone lines in both the U.S. and Canada went silent for a full minute to coincide with the start of his funeral. Nine years later, a similar tribute was offered up for Thomas Edison, when President Herbert Hoover (Not The Vacuum Cleaner Guy) asked all Americans to dim their lights in honour of the recently departed “Wizard of Menlo Park.” Few inventors, however, are able to receive the adulation of their adoring public—and bid them adieu—while still alive. Samuel Morse did both: In 1871, a group of Western Union employees began working on a fitting tribute to the man who made their careers possible, selecting June 10 as a semi-official “Samuel Morse Day.”



Picture on the left is President James Munroe 1817-25 The 5th President of the United States as Painted By Samuel Morse in circa 1819.

The day long celebration included a parade, a cruise around New York Harbor and the unveiling and dedication of a statue of Morse in New York’s Central Park, a ceremony that drew 10,000 onlookers. Congratulatory messages poured in from around the world—by telegraph, naturally. I have been to Central Park but didn’t see his statue, however the park is rather large and I wasn’t looking for him.

At 80 years old, Morse himself was unable to attend many of the daytime events, but he did show up for the grand finale, a reception at the NY Academy of Music held that night. While speeches heralding his accomplishments continued for more than an hour.

There we have it. A sort of history of the man himself. It’s easy to think of it now seems simple but, as with all things, someone has to think of it and persuade the masses to go with it.

If you see anything wrong here, reply to me in Q5 and I will be glad to print it.

73 Dave G7BYN

GB3BS REPEATER GROUP NEWS

For those of you out there who may not know, the GB3BS repeater group has a news letter. This can be found on their web site gb3bs.com

As a footnote, The repeater on Lansdown has a fully racked system of GB3BS, GB7BS, GB7VV and lightning detection.

All of this takes money please join the repeater group. Details on their web site.

Talks you may have missed

Firstly the Christmas meal was for this year, made into a chip supper Free to members that turned up on the night. It was felt by Ben, 2E0RBK, who was prepared to cook the meal, that costing would be very difficult as food was rising on a daily basis. How businesses survive god only knows.

The talk on WSPR the easy way was by our very own Paul, G8YMM was an excellent event. For me having an Yaesu FT991A it helped me sort things out on my own radio. Again, although the talk was well attended, some of the members who could have benefited from this excellent talk were missing from the evening.

Paul started off by showing the various ways to connect radios of all makes to your computer and the various commercial interfaces available.

He went on to demonstrate how, with a modern rig you can connect with no interface (That can cost up to £80) by using the USB connector from rig to computer.

Paul chose to swap the room around for this talk. Because he used the antenna cables from the shack it was thought, rather than have the cables going over the floor, they would go down the side of the room. (Health & Safety is always on his mind) also rather than have the projector and screen Paul chose to bring his large screen TV as a monitor. By the way the empty chair was used by Paul to set up the computer and radio.



Now we all know how to hook our radios up to our computers for a host of radio related software. As well as the normal Windows software, there is a load available for Linux. WSPR software is available for both. Put out a search for your favourite programmes.

Over the last quarter we also had a tabletop sale and lately of course antenna manufacturing.

I am sorry, but, I have failed to photograph the antennas under construction. I will however, try my best for future Q5s.

If you want anything to appear in the calendar of events or indeed Q5 please let me know. See me at the club or email me.

g7byn@blueyonder.co.uk

STOP PRESS

This is literally a Stop Press. I had to stop Paul, G8YMM from sending this copy of Q5 to the masses.

The Secret event is now publishable. Mat had received an email from Bristol County Council just after this copy was sent for publication.

What is the event

The event is to commemorate the shooting down over the Bay of Biscay on 1st June 1943 of BOAC 777a from Portela airport Lisbon in Portugal to Whitchurch airport in Bristol in the UK The aircraft was a DC3 owned by Dutch airline KLM, leased to BOAC.

On board was Film Star Leslie Howard, his helper and 15 other passengers and crew. It is not known why the Germans shot down this Civilian flight as all Civilian flights were protected.

It is known however that spies often used these flights and there was a Churchill sort of look alike on board. A religious man left the aircraft just before take off allegedly to take a phone call, so was saved.

There are lots of stories like this surrounding this flight but the main one being the details of this flight are still under the **Official Secrets Act**. This year it will be 80years since the event and yet we are prohibited from finding out any further information. Please take a look on the web for yourself

A you tube link is here <https://www.youtube.com/watch?v=gA3NfTpbx3k>

If you are viewing this PDF on your computer just click the link or cut and paste to your browser.

Our Event

This will be a high profile event, for about 4 or 5 days situated on the airfield situated adjacent to the Cafe. They are allowing us to draw power from there and the antenna will be fixed to the fence posts. Our Gazebo will be on the grassed area. We are waiting confirmation from the BBC to see if they will cover the event. There are a lot of details still to sort. And it will require dedication from the membership.

This is a NBARC event, but if this is not well supported Mat and I will offer it to other clubs, however, still spearheaded by the NBARC.

Calendar of events

- Feb 3rd How to use a VNA By Dennis M0IYQ
- Feb 10th Testing The Antennas We Made With a VNA
- Feb 17th General Meeting
- Feb 24th General Meeting (G4TAH Taxi is not available)
- Mar 3rd Film night Understanding Antennas Made Easy
- Mar 10th Talk and Demonstration “ Robot Wars” By Geoff, M6GFM
- Mar 17th General Meeting
- Mar 24rd Tabletop Sale
- Mar 31st General Meeting (G4TAH Taxi is not available)
- Apr 7th Good Friday No Meeting
- Apr 14th General Meeting (G4TAH Taxi is not available)
- Apr 21st Special Event Planing
- Apr 28th Quiz Night **With Prizes**
- May 5th General Meeting
- May 6th (Saturday)King Charles 3rd to be Crowned Today
- May 13th and 14th Mills on the Air (Saturday and Sunday)

There are other Special events that the club will be involved with. See Mat, G7FBD for more information.

We do our very best to put on the events listed but, due to unforeseen circumstances, things can change. If the event is important to you, you can always phone the secretary just to check if it is still on or not.

Secretary's Phone Number 07533933831

Club Nets & Contact Details

To spice up our nets, the Wed net will be a Technical net (If we can). If members have a problem, or just want to know how something works, ask your question here.

This came about because some participants of our nets didn't want to spend the night talking about the weather and general chit chat. They said it was boring, so wouldn't come on any net. The Chit Chat evenings will be the Sunday net. We hope this will cater for all.

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

As GB3AC is working, we may QSY there after ½ hr Always check both repeaters

Saturday Mat's DMR Net GB7BS 20:00 to 21:00 South west cluster TS2 (950) This cluster now consists of 10 repeaters in the SW.

Note the change of time from the beginning of February

TS1(9) has now had some modifications check the GB7BS web site for the latest news. Details will be in the next Q5.

www.gb3bs.com

Club Contacts

Secretary and Q5 Editor

Dave G7BYN

Phone 07533933831

Email g7byn@blueyonder.co.uk

Chairman

Paul Stevenson G8YMM

Phone 07921942922

Email g8ymm@nbarc.co.uk

Next Q5 May 1st

Q5 Publication

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It is hoped 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 new web site.

www.nbarc.org.uk