

THE BRISTOL 70cms REPEATER GROUP

GB3BS & GB7BS

NEWSLETTER₂₀₁₇

*RU68 - 430.850MHz - TONE J: 118.8Hz.
DVUI3 - 439.6126MHz - Colour Code 3.*



*H*i everyone.

It's that time of year again that the Repeater Group sends out the newsletter. For me this is the time I spend whole weekends trying to compose this introduction bit and final assembly of the newsletter.



This year like previous years, the "welcome section" has been re-written a large number of times, but I think its there.

So what have we been up to this last year? This is a good starting point of a newsletter.

Well to be truthful, not a lot really. Both main repeaters, GB3BS and GB7BS have been online almost continually.

GB3BS only had a small number of lockups this year, in fact I think I am right in saying its only been three this year (The last one was this week!).

GB7BS other than a major network outage when I had an issue with my ISP's equipment (more on that bit later) it too, has had an availability well into the 97%

Both APRS nodes are also working well. There was the normal hiccup with the renewal process for MB7VV and the ETCC at the end of 2016 and again this year as well. Other than that both MB7VV and MB7UVV have been available 97% of the time.

There was a little bit of site activity modifying our "Repeater" systems to integrate full remote control of all active equipment. This work has reduced the amount of actual time spent on site dramatically.

So, there we are, this is basically our year in a few paragraphs. Of course we will expand on event further in this newsletter.



The topics covered are:

- Technical report for GB3BS.
- Brief reminder of how and what's of the repeater
- Maintenance of GB3BS and the site.
- Technical report for GB7BS.
- Maintenance of GB7BS.
- Technical report for MB7VV and MB7UVV (The evil twins).
- The Southwest Cluster, its makeup and other repeater groups.
- Technical report of the major Network outage.
- Rally activities.
- Membership round up.

We hope you will enjoy the Newsletter. Some feedback would be welcome, as we want to get the Newsletter right for you, our members. So please feel free to make a comment, good or bad. This can be via email to the main email address:-

info@gb3bs.com

Or by one of our social network platforms (facebook or twitter using the #gb3bs).

For now 73'

Mat - G7FBD/KG7FBD

GB3BS

Well here we are with another year gone! So what's been happening? Well GB3BS has been working away without any real issues or faults, which is also good news.

One reoccurring problem has been the odd RC210 Repeater Controller crashing and needing attention. This manifests itself in the "Repeater Timeout, Repeater Timeout Cancelled" loop.

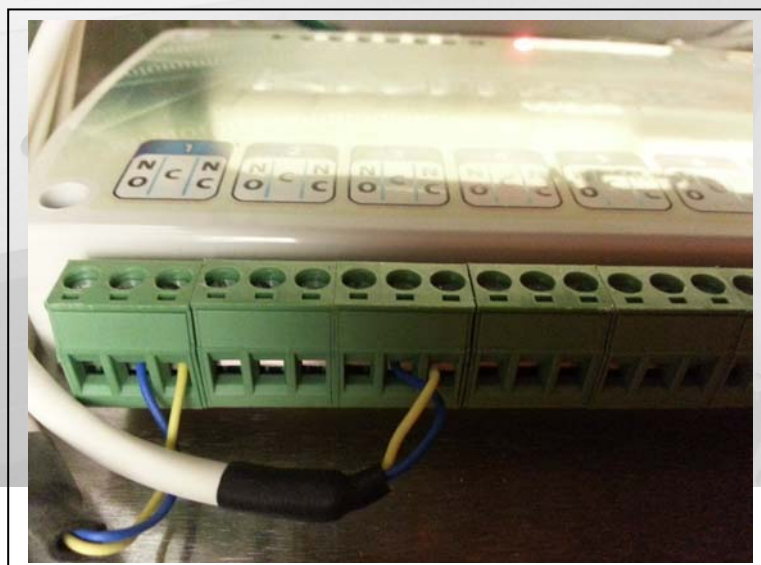
This problem is something we have investigated long and hard. We believe this is a problem with the RC210 Controller not waking up when GPS Time information is sent to the controller. This in turn caused parts of the RC210's programming to become corrupted with invalid data, and so the controller crashes!

The manufacturer of the RC210 Controller, Arcom, has released a processor upgrade; this is because the original processor has become obsolete and so our plan is to upgrade the controller and our spare to the new updated processor.

Upgrading the processor will also allow us to keep up to date with future firmware updates and programming features as they are released. We also are hoping that the time & date update routines will eliminate the overwriting of the config and prevent the controller from crashing. Changing over to the new processors is due to take place in the early part of 2018.

During 2017 we have installed hardware that now allows us to fully program the controller remotely. Before, if or when the repeater crashed then it would normally require a site visit. Now we can do all of these remotely which saves us a lot of time.

This hardware also allows the control of GB3BS, GB7BS and MB7VV and satisfies the Ofcom requirements for Closedown of the equipment in an emergency or if we are asked to do so.



CTCSS, Pip's & Timeout Timer.

A brief reminder that GB3BS requires a CTCSS Tone of 118.8 Hz (Tone J) in order to access the repeater.

There have been a few on-air comments relating to the Pip's on the repeater. After a number of year's people still seem to misunderstand the correct use of them, even some of the more regular users seem to get confused, at times.

The correct use is to wait for the second pip following someone's "over" finishing. Waiting for the second pip is important as it resets the 4 minute Time Out timer.

Anyone who breaks in following the end of a stations over and before the second pip and continues to talk will run the risk of timing out the repeater.

If the period up to the second pip is used for new or existing stations to "break in" then users should wait for two consecutive pips again, then this will ensure you do not time out.

Currently the Timeout Timer is set for 4 minutes. Once this time has been reached the repeater will shut down with the announcement "Repeater Timeout". As soon as the station causing the timeout clears the input, the repeater will announce it is out of timeout with the announcement "Repeater Timeout Cancelled".

I hope this will clarify the situation!

Maintenance

Both a full maintenance and a systems check over have been carried out during 2017 on GB3BS and I can report that apart from a few very minor tweaks, everything has been performing fine. The repeater is remarkably reliable and stable and requires very little maintenance,....but we always like to check it, now and again!

The backup battery for GB3BS was also checked and during maintenance the repeater was run on battery for some hours to make sure that the battery could support the repeater and that its capacity was still good. The battery will keep the repeater on air for around 4-6 hours dependant on actual repeater use.

However, it should be remembered that this battery is usually only there to support the supply between a mains fail and the site generator starting up and taking load. So usually this is only needed for about 15 seconds. Only if the generator fails will this battery support the repeater until it is exhausted.

GB7BS

The repeater has been fully operational during 2017 without any downtime apart from brief spells to allow for reprogramming.

Activity through the repeater is still on the low side although several local stations now do seem to regularly use the local slot on Talk Group 9 and this may encourage more people to use it, even some of the die hard analogue stations have expressed an interest. Activity seems to breed activity, as it were. But it's generally seen that repeaters both analogue and digital are currently going through a quiet period, probably due to the diversity of Digital facilities & Modes now on the market.

Maintenance

As with GB3BS, the DMR repeater GB7BS was also given a check over and found to be in good health. A quick clean of the air filters to both the fans were carried out, so a very maintenance free repeater.

Again, the backup battery was tested and found to be well with limits. This battery is only to provide backup while the generator, if needed, is run up to speed and takes load. Should the generator fail to start then this battery would provide around 5 hours of use, depending on repeater activity at the time.

MB7VV Technical Report

Both MB7VV and MB7UVV have again had a non-eventful year, other than the new remote shutdown that was added to MB7VV at the same time as GB3BS and GB7BS, no other maintenance work has been preformed.

There was a major network outage that impacted GB7BS and MB7VV, more on that lower down. Other than that both boxes have been working without interruption.

We had the usual fun and games with the ETCC at the start of December 17 when the annual NOV verification takes place and a new NOV is issued.

This time it was not about coax types and lengths. No this was about the shutdown procedure. In the update I changed the shutdown system and procedure to reflect the new IPSec equipment on site.

...Cont:

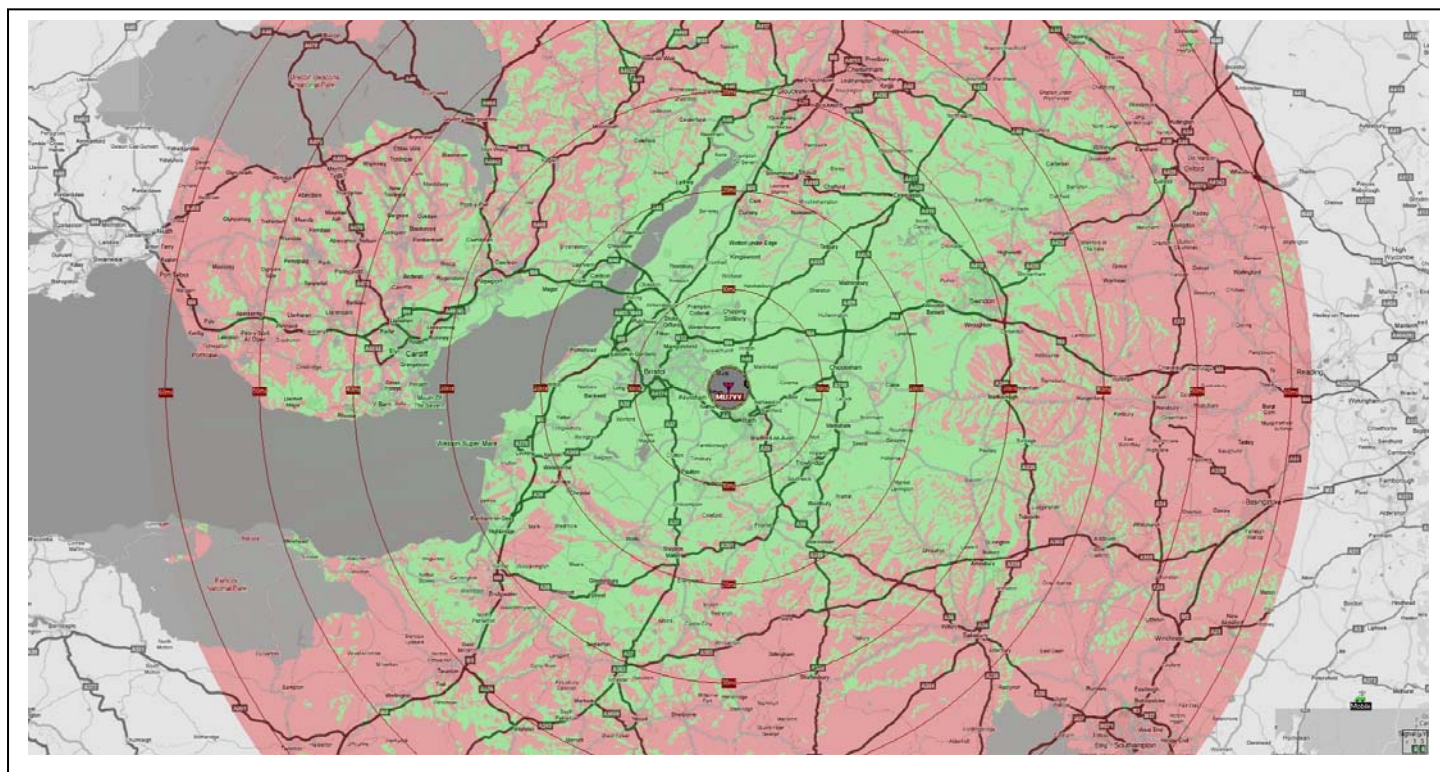
I am guessing this must have made someone go 'tilt' at the ETCC as they contacted me and said "We will just record your shutdown operation as via GSM". I am now looking for the phone apparently I have connected!

One comment I was made aware of is of a station or stations complaining that MB7VV is not receiving them when that station or stations is below the RF horizon, or in a shadow of a Hill or in the RF Shadow of Lansdown itself.

I think the problem here is simple physics.

Like the BS sisters, MB7VV uses an omni-directional antenna and as the plots on the website show, the coverage is good, but has Hill shadowing in places. It is also important to realise that to get a "Spot" via MB7VV, the APRS box has to hear the remote station. So the emphasis is on the remote station to transmit sufficient power/signal level that an APRS repeater will receive a non-corrupted data stream. Not the other way around. There is a large amount of information and Wiki's that explain how APRS works, along with recommended transmission parameters.

Not Missing out MB7UVV (VV's evil twin). This is actually at my QTH and not at Lansdown. This is the Internet to RF only gateway (VV then Digipeates any new packets out into the larger world. UVV other than random Network reboots of my router that plagued me for a number of years, it too has preformed very well.





The Southwest Cluster.

Over the past 12 months we have seen some repeaters join the Cluster. These have been GB7YS in Yeovil & GB7KT in Andover.

GB7YS has only fairly recently been on air and connected to the SWC. It is proving to be a very useful repeater and due to its large foot print and population, it is bringing new stations onto the repeater and indeed the SWC which is good news. We hope that this will continue.

GB7KT has been on air for a while but has been plagued with internet issues which are out of the repeater group's hands. Fortunately this has now been resolved and is back on the SWC and working well. Again, activity from that repeater is growing so let's hope things will continue to improve.

Similar internet problems were affecting GB7DR in Poole. Again the internet feed was out of the repeater groups remit and had to seek the co-operation from the provider. Thanks to the great work by Jon G7ICH and the internet's IT provider things got sorted and the repeater is now extremely reliable.

It is so unfortunate that during the last 12 months the SWC has been plagued with Internet feed issues, most of which are outside of the various groups control. No sooner do we get things up and running, we get another one go down. The old 1 step forward followed by 2 steps back!

At some sites, such as GB7KT, GB7DR and soon to be GB7MJ, all exist on commercially owned offices that have a large IT presence. Consequently getting them to provide a "free" broad band feed is one thing but getting the repeaters connection through their firewall is another, especially with companies now very nervous with regard Internet security etc, which is of course understandable. So, I am sure you can appreciate the difficulties some of the repeater groups have to put up with.

Currently there is interest growing for other repeaters to join the SWC and provide even more coverage in the South West. Dave G3ZXX seems to have his ear to the ground on this and I know he is very keen and active in talking to people with similar interests.

However, during the latter part of 2017 we did have one repeater group who asked to join the SWC, and that was GB7IT of the Weston-Super-Mare Group. This was facilitated very quickly and remained so for around one month of Sep/Oct.

During this time GB7BS had to revamp its IT network and infrastructure. As a result of this outage, for around two weeks, the SWC became fragmentised. Following the new network being tested all repeaters rejoined the SWC following new technical information being made to all repeater keepers.

Sadly all email attempts to contact the GB7IT group in November with this new information went un-answered. Suffice to say, and to this date, we have not had any response back from them and must assume that they no longer want any contact with us.

As was posted on our Facebook Group page at the time *"The SWC group of repeaters have always agreed that repeaters are free to leave the network at any time, it is always their decision. However, the common courtesy of communicating to others their decision to leave sadly seems to have gone amiss"*.

As I have said before, I do try to keep people informed as to what is going on and this is usually done through our groups Facebook page, www.facebook.com/groups/gb3bs.

Please feel free to join the group as it is a quick and easy way to keep informed or comment on things. We are trying to provide a better and more up-to-date service through our own web site but at this time we have not found a simple and easy to manage interface that can be used on our web site, but we are working on this.

However, it should be remembered that the Bristol 70cms Repeater Group is only directly involved with the repeaters GB3BS & GB7BS along with MB7VV. If anyone has a question or a report about any of the other repeaters on the SWC then do please contact the relevant repeater keeper, as a last resort we will do our best to answer your questions or put you in contact with the respective group.

If you need information on all the repeaters and how to get started on DMR, especially configuring your radio, then you will find this on our web site along with a Q&A sheet plus some basic configuration files. And if you do have questions, feel free to ask us via our Contact Us page.

Repeaters and Networks (the dark art).

If you're not already aware, for GB7BS and MB7VV to operate they rely on being connected to the internet. The site provision is via a 5GHz Point to Point microwave link between the site and my home QTH here at FBD Towers (Please see 2015/16 newsletters for information on the link or our web site).

Possibly mentioned in previous newsletters was the problem I have been having with my Internet Service Provider (ISP), or rather the network and network equipment.

Since around 2011/2012 I have been suffering from sporadic loss of service and random router reboots. The ISP Engineers to be fair that have visited have tried their best to locate and repair the fault, unfortunately without success.

Several Engineers have pointed out that I was using extremely old routing equipment (Owned by the ISP). The router has been replaced at least six times over time. But unfortunately every replacement has been the same type as the one being replaced.

So the problems continued.

This year (January time) the WiFi part of the router stopped working, although it was still showing it was there, connecting to the House WiFi it would not pass traffic two and from the internet.

The Loss of the WiFi was not that much of a loss as I switched to using my own WiFi network equipment (and am STILL using it).

It was around June when I had an email from the ISP reporting that my equipment was due for an upgrade as they could see the Route I had was causing problems on their network, what the problems were not stated.

So following the instructions two days later a new Router arrived with instructions how to fit it.

Independently of all the network problems I was having, I had been casually picking the brains of my workmates. All of which had been made redundant from the IPS around the same time as I was made redundant from the railway. They all agreed that the likely cause of the router reboots I had been suffering was primarily the software version that the router was running, all agreed that replacing the router with the latest version would help immensely, however the new router had its own issues. But these were easy to work around by changing the routers mode of operation to being a modem only.

However, just simply changing the router was a source of problems. Because the Southwest Cluster repeaters all point to GB7BS for network registration.

The problem was that the moment I change the router (as I found every time the old router was replaced), my own IP address (The thing that identifies me for those who are not familiar with the term) Changes. So when Cluster member repeaters try to connect to GB7BS to update their operational state they can no longer find it.

Repeaters by their nature are usually at remote locations, so repeater groups could not simply pop up and change the address, and because of the secure nature of the repeater network (Its all commercial grade equipment). It's not possible to do all the work remotely.

The only solution to this problem was to set a date at some stage in the future, inform the member repeater groups of the change date so they get time to arrange access.

For me personally moving the router to being a simple 'dumb' modem caused problems for me. Being a simple modem is great if you are only using a single PC at home. However in our modern times, the family have various devices, the Bristol 70cms Repeater Group have now a number of devices, and I have a few devices I Tinker with. Okay I could connect a simple switch or dare I say it "a hub" to the modem to share connections. This would work, but the router also had a protective mechanism called a firewall that helps protect the network from nastiest on the internet.

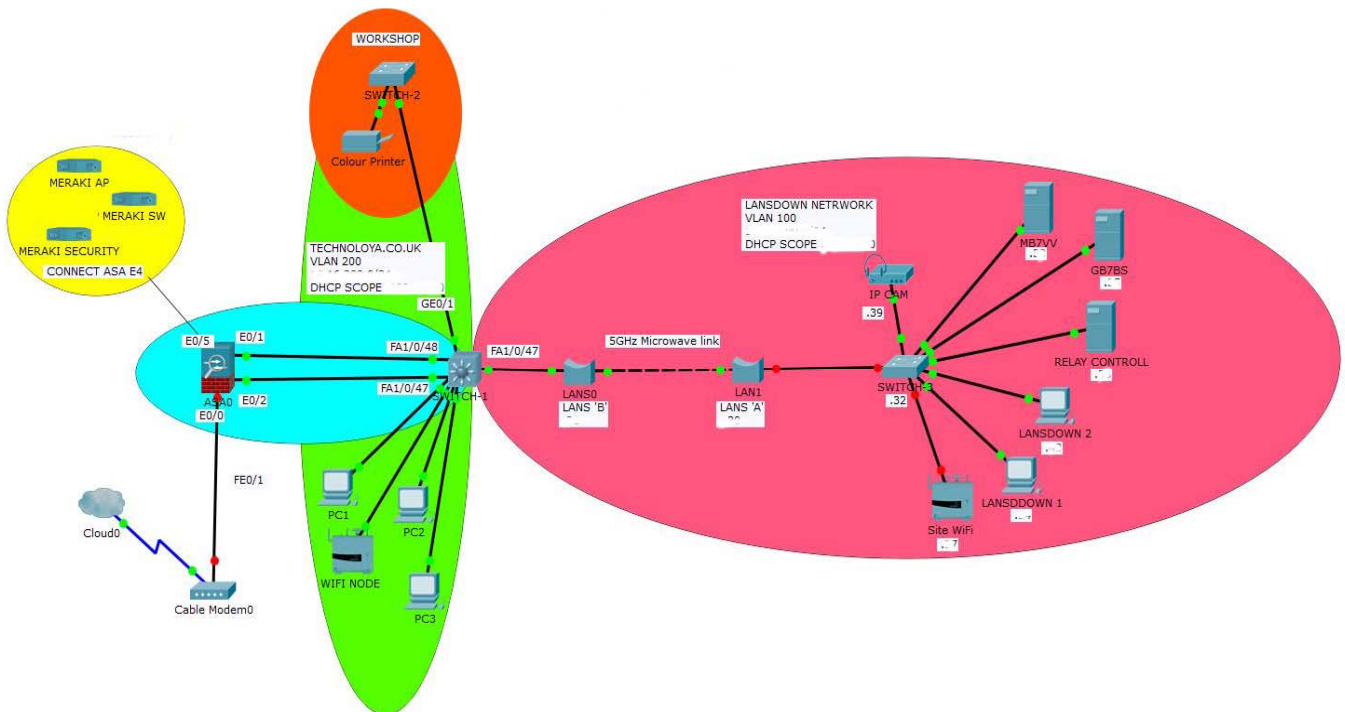
Solution? buy a separate firewall and connect that between the modem and the switch. Thankfully due to the type of work I do, I have exposure to a verity of network equipment and was able to buy the equipment I needed to do the job I needed to do.

Armed with the equipment, and posted the date I intended to do the net, member groups confirmed they were okay with the details and the date. We were good to go.

Except.

About 9-10 days prior to the planned date, my original router that was still in place failed. This moved plans forward a long way and a couple of late nights (For me that 21:00 – 22:00) writing the configuration for the network equipment and firewall. I chose to replace all the network equipment, except the Microwave link at both home and at Lansdown. This allowed me to update the operating systems of the network boxes to the latest (Stable) versions. I had spare equipment from my training lab I had built for taking some professional exams for work.

The new network effectively cuts my internet provision in two. Half is set up for my home, you know Wife + IPAD + Eastenders = Quiet life for G7FBD!
The other half is provisioned for the repeater group, so effectively Lansdown appears to be connected directly to the internet. Job done.



The network was left running for 10 days or so to make sure it was stable and not suffering from random reboots. Once I was happy the other Repeater Groups were informed of the new IP address to connect to. Slowly as repeater groups managed to arrange access and update their own Repeaters the cluster reformed.

Although some repeater groups have also had network problems themselves that slowed re-connection. One group we believe have decided to move else where, or so the users have mentioned to us in passing. We say we believe, because no one from that group has told us or the ETCC that they are changing network connections.

Rally Report

This year has been a real struggle for me to find spare time to do anything really, it has gone completely bonkers at work, details of which I will leave out from the newsletter other than to say 2018 will bring big changes.

I think Mark to has had what is called "Free time allocation" problems, anyway in short we were invited to two rallies this year, The West Rally in Frome and the Chippenham Club Rally, which has grown so well from a micro rally only two or three years back.

Unfortunately one of the dates conflicted with a previously arranged private appointment. The other did mean moving around some shifts at work much to the annoyance of one of the team leaders.

So halfway through my day and at the crack of sparrows for Mark we left heading to Frome.

We have supported the Frome Rally for a number of years, I think missing at most one event. This is NO reflection on the excellent work that the Chippenham club do.

This year we were positioned on the end of one of the Island of stalls, strangely right next to North Bristol Radio Club. We dispensed with a Video this year as I have not had time to produce one. We did have our usual collection of Back Dated newsletters and were there to answer questions. Oh and Mark and I had clubbed together to put some Sugar bate (sweets) out to try and lure people.

Ok the lure, well that did not work. We did witness a number of classic sneak and snatch raids on the sweet bowls. And of course the polite kids who actually asked if they could have a sweet! Actual visitors, well other than two renewals, there was no interest in the repeater group at all, other than the sweets of course.

I think this is a general reflection on Radio, interest in how things are put together and how things work is rapidly being replace by the "How quick can you program my radio and ship it to me?". We did our usual circle and noticed a few of the other repeater groups were not attending, and those who did reported the same little or no interest.

The above is not a reflection on the team that put the West Rally together, knowing one of the organisers I hear first hand of the efforts in arranging the rally, or in-fact any rally team! It's the current state of the hobby.

Will we be at rallies this year? Not sure yet. We hope so, but we will have to look at times and tasks closer to the event.

ONE FINAL & IMPORTANT!! note, that is next year (2018) the West Rally is moving one Sunday earlier. But please check with their rally web site for up-to-date details.

Membership

Group membership during 2017 has seen a steady increase and peaked at around 62 in the summer. During the latter part of this year the figures have dropped off to around 48. A large percentage of this loss seems to be people who decide to join for a year and then never renew or are heard of again.

Some of the losses are also down to people who were long term members and who now no longer appear to be active. However, mostly the membership figures reflect activity and at this current time that seems to be going through a very low period.

Obviously a drop of some 14 members has its ramifications and does mean over £100 less income. We are VERY fortunate that our day to day running costs are relatively low. However, as we have seen in past years there are times when we have to spend large sums on emergency repairs, without notice, such as our antenna issues last year.

In 2018 we will be faced with costs to attend to repairs to the building that are overdue and really need attention. One of these jobs is to replace the slowly rotting doors which have been there for many many years and are really beyond any kind of repair. Obviously it is important that the site is kept dry so these will need to be replaced before they start to let the rain in and of course will mean spending money.

So, our income from membership and donations are always important and we never loose sight of this.

Sadly, and I am repeating myself from last year here, there are people who continue to regularly use the repeaters but seem unwilling to support what they use and take it for granted, for whatever their reasons, be they political, just plain stubbornness, or like playing games! It seems some treat it as if it were a Tax!

Again, as was said last year, we do not expect every user to fund every repeater they use, but if you do make regular use of a repeater then help its survival by way of a subscription or donation.

As we have said before, if we don't have the money to run the repeater then it will cease to exist.

At this point we must mention and thank all our members, those who have helped us and given donations over the year.

Membership List

Below is the usual list of current members of the Repeater Group, as of 14th December 2017. If your callsign is not listed then your membership has probably already expired and you will no longer receive our Newsletter or any updates.

If you're in doubt regarding your membership status then do please check our web site for an up-to-date membership list. If you have any queries and think we have something wrong then do please get in touch with us.

Do please let us know if you change any of your details, especially your callsign and your email address. This is important so that we can contact you and send you our future Newsletters. To let us know of any changes please use our "Contact Us" page on our web site.

2E0GRB	2E0JUW	2E0JWJ	2E0PGS	2W0CGM
G0ECM	G0GZW	G0IUE	G0IWT	G0XAY
G1FUA	G3LZN	G3XED	G3XOB	G4EJH
G4GUG	G4KUQ	G4MCQ	G4OJI	G4OPQ
G4OTJ	G4SDR	G4SNU	G4TAH	G4WOD
G6YNL	G7FBD	G7KNA	G7NSY	G7OPB
G8CKK	G8NQO	G8YMM	M0HDJ	M0HTB
M0KEE	M0LHS	M0LJT	M0MGT	M0WYB
M0XMM	M3JDK	M6FUA	M6GFM	M6MGE
M6OJI		Report Run 23/12/17	Members	46

	New Group Member (Welcome)
	Existing member with 2 or more month left
	Existing member who expires next month.
	Exiting member who expires the end of This Month.

If you use PayPal then there is now an even quicker way to renew your membership by using PayPal.me and its free to use.

<https://www.paypal.me/GB3BS>

Please note, this must ONLY be used for membership renewals.

A close-up photograph of a robin perched on a green holly branch. The branch is adorned with several bright red holly berries and is dusted with white snow. The robin has a vibrant orange-red breast and a greyish-brown head. The background is a soft, out-of-focus white, suggesting a snowy environment.

**MERRY
CHRISTMAS**

From

**THE BRISTOL
70CM
REPEATER GROUP**

THE BRISTOL 70cms REPEATER GROUP.

GB3BS / GB7BS

Website: www.gb3bs.co.uk Email: info@gb3bs.co.uk

If you use the Repeaters, GB3BS or GB7BS and would like to support the group then all you need to do is fill out this form and part with £8.00p. Your details and membership fee will then be passed to our treasurer. You can also subscribe using Paypal™ (also supports Credit/Debit card payment). See “Membership” on our website for detail. 100% of your membership goes towards looking after both repeaters and the site in which they are located.

PLEASE REMEMBER

Repeaters do cost money to run.

Without members the repeaters GB3BS and GB7BS would cease to exist.

Please help support what you use.

Please make cheques payable to “Bristol 70cms Repeater Group”



Please tick appropriate boxes and print clearly – Thank you.

☐

£8.00 Membership

☐

Donation Amount £ _____

I am paying by **CHEQUE / CASH** Please delete the appropriate.

Callsign: _____

Email: _____

Name: _____

Address: _____

Postcode _____

Please send to: The

PLEASE NOTE: Membership is based on a yearly subscription (from the date processed). Although we can process advance early membership we would discourage this method. At present we DO NOT have a “Family” membership, or any other concessions. Please also note ALL membership fees and donations are NON refundable. We recommend you do not send cash through the postal system. The Bristol 70cms Repeater Group cannot be held responsible for lost or missing payments. Being listed on our website is confirmation of membership. No receipts are issued unless a stamped address envelope has been provided. Membership is used for the upkeep of BOTH Repeaters.

Any information/data provided will ONLY be used to mail or e-mail you our new sletter and send membership reminders. Data will be deleted 6 Months after the laps of any membership. Reminders of pending membership laps will be sent via email where possible one month before the expiration date. The membership section of our website also reflects this information.