

GLOUCESTERSHIRE REPEATER GROUP NEWSLETTERGB3GH GB3CG GB3CCX GB7FD GB7GC GB7GH GB7RR
GB7GLO GB7LGS

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CHAIRMAN'S REMARKS

It is with much pleasure that I welcome members to the first Newsletter of 1998. Much has happened since the last issue both on the voice repeater and packet front. Most people will by now be aware that GB3CG, the 2m voice repeater became active on 1 January. Its output frequency is 145.7125MHz; the input being on 145.1125MHz. Access is by CTCSS tone >J= (118.8Hz), or the usual 1750Hz tone. Further information on the repeater can be found in the appropriate section later on. Reports so far have been excellent, with the furthest North coming from Stafford, South from just beyond Bristol/Swindon, West from Hereford, and East from Morton-in-Marsh. I extend thanks to all those involved in the project, not least the site owners who have granted us a twelve-year licence. This notwithstanding, I must declare that the performance of the Repeater Management Committee of the RSGB has not been as professional as might have been hoped. Consequently, a representation has been made to the Radiocommunications Agency expressing our concerns.

Changes to the packet network that were planned have gone a little of course due to a short notice message that G6BIW is going off-air at the end of January. At GRG=s request, an urgent meeting was held with other operators in the Bristol area to resolve this >hole= in the system. A number of possible solutions were discussed and urgent moves are underway to secure suitable sites for relay/node points. As part of the re-organisation of this link to the South-West, contact has been made with the Minehead node operator who is enthusiastic to become involved with the developments.

There will be some periods of off-air of the packet network during the fitting of new links, but we will try to keep these to a minimum, and post bulletins on the local BBS=s.

Elsewhere in this Newsletter you will find details of the Annual General Meeting; can I urge as many members as possible to attend as there will be some significant changes to the operation of the group that will need the approval or otherwise of the membership.

Nicholas Negus G6AWT
Chairman

AGM

The 1997/98 Annual General Meeting will commence at 19.30 on Tuesday 28th April 1998 at the Civil Service Club, Tewkesbury Road, Cheltenham.

The full agenda for the AGM will be sent to all members at the beginning of April. The constitution states that Items for inclusion in the "Other Business" section of the AGM should be made to the Secretary in writing not less than one month before the date of the meeting. It is suggested any such notification is sent to either Nick (G6AWT), Stewart (G0LGS) or Ken (G3LVP) marked 'FAO GRG Secretary'.

GB3GH 70cm VOICE REPEATER

The antenna feeder for GB3GH has been replaced with a length of low loss heliax cable, this has significantly improved performance, however the performance of the Stacked Dipole Antenna system is still suspect, so further work on the antenna system may be necessary. Work is currently in progress on a RF Power Amplifier which it is hoped will increase the ERP to the maximum permitted under the licence.

Ken Eastty
G3LVP

GB3CG 2M VOICE REPEATER

The new 2m voice repeater GB3CG came on air at approx. 1630 on 1st January 1998. Frequency of operation is 145.7125 MHz Transmit and 145.1125 MHz Receive, it is accessible using either 1750Hz tone-burst or CTCSS sub-audible tones at 118.8 Hz. GB3CG is believed to be the first repeater in the UK to use a 12.5 kHz based channel.

Our thanks go to the Cheltenham DXCluster support group, which kindly funded the purchase of an unpopulated PCB for the G8CUL Repeater Logic control system, however the construction of this board was not completed in time for the initial installation of GB3CG. This board has now been completed and is available for future use should the existing logic system fail.

Equipment used includes:

Marconi RC742 Transmitter and Receiver units.

Control logic system designed and constructed by Steve Perkins (G4FPV). This was developed while the possible purchase of the G8CUL logic system was being investigated.

Cavities based on a design from the ARRL handbook, which was adapted to suit our requirements by Nick Negus (G6AWT).

Gloucestershire Repeater Group recommends that where possible users should reduce their transmitter deviation levels from the normal levels used for 25 kHz based channels (a maximum of 2.2 kHz peak deviation is required for 12.5 kHz channels). If you are not able to adjust the deviation setting then speaking further away from your microphone or in a quieter than normal voice should help. Users with higher deviation levels may get reports that their audio is distorted and may also find that they are unable to open up the repeater using 1750 Hz tone-burst.

It is apparent that a number of users do not have 12.5KHz tuning steps available, however most users seem to be able to access the repeater by transmitting on either 145.110 MHz or 145.115 MHz. This does however mean that the re-transmitted audio is a little distorted and may also mean that the range available from the repeater is reduced. Users with 5 kHz tuning steps may also have difficulty getting the repeater to open as the 1750 Hz tone-burst will be distorted in GB3CG's receiver and so may not be detected by the logic control system.

WHAT IS CTCSS ?

CTCSS (Continuous Tone Controlled Squelch System) is the superimposing of a low level sub-audible tone (**67-250.3 Hz**) onto a transmission so that it opens the 'squelch' of a suitably equipped and configured receiver system.

CTCSS is quite widely used in commercial systems, especially where a number of different users share the same radio channel within an area. For example several different Taxi companies within a large city might use the same radio channel(s) each using a different CTCSS, this would ensure that a Taxi driver only hear signals from his base controller and not those from any other.

On amateur radio repeaters CTCSS is generally used as alternative (except on 6m) to the more traditional 1750 Hz tone-burst to activate the transmitter of a voice repeater. After initial access most repeaters will transmit their own CTCSS which will open the squelch of a suitably equipped receiving radio only when the repeater that you intending to listen to is active, and not when another more distant system using a different CTCSS tone is activated. Using CTCSS also ensures that only the desired repeater (or any other using the same CTCSS tone) will be activated.

As GB3GH and GB3CG are both within Gloucestershire they both use CTCSS tone 'J' at 118.8Hz, however the way in which this is used is currently different between the 2 repeaters:

GB3GH detects any valid CTCSS tone on its input and activates its transmitter, it does NOT transmit its own CTCSS, but simply re-transmits any which it receives from the user.

GB3CG detects any valid CTCSS tone on its input and activates its transmitter, any CTCSS tone from the user is filtered out before the audio is fed to the transmitter. The logic system then inserts its own CTCSS (at the same 118.8Hz), so that ALL transmissions (with the exception of the repeaters own CW ID during idle periods) have the CTCSS superimposed on them.

GB3CCX 10GHz BEACON

No changes have been made at the GB3CCX site. Apart from an unexplained loss of output from the DC power supply system at approx. 1300 on 28th January (which was restored on 29th January), the beacon has functioned well since its installation. A number of good reports have been received and GB3CCX has had a number of mentions in recent microwave newsletters.

All reports for GB3CCX should be sent to Nick G6AWT (QTHR).

GB7GH NODE

The Committee had expected the link from GB7GH to GB7WO in Wenvoe to come on line before the end of 1997, however due to a number of problems the link is now not likely to become operational as originally planned. Alternative arrangements of providing a link to Wenvoe and Swansea are currently being investigated. Some of the equipment, which was installed at GB7GH for this link back in November, may be used to upgrade the link to GB7GC (or GB7LGS).

Some progress has been made with regard to upgrading the 23cm links to G7AXC and GB7DXC, agreement on the basic principle of our proposals has been reached with all affected parties. DANPAK have informed us that they are currently planning the move of all their equipment within the GB7RP site, which they hope to have completed by April, after this they should be ready to make the changes required on the 23cm links.

Clearance for the link from GB7GH to GB7RR is expected shortly.

GB7FD NODE

The 70cm link from GB7FD to GB7ST has been installed and is working well, this link replaced the previous link from GB7GH on 4m. (Note: GB7ST is no longer operational on 4m).

A fault with the 12V DC power supply used for the 70cm User/Backup link port (433.6375 MHz) resulted in some damage to the Tiny 2 TNC used on this port and the outage of the port for a few hours. An alternative temporary TNC and power supply were installed for a period of approx. 6 weeks while repairs were made to the TNC and a new 12V power supply was obtained and installed.

The link from G7BTI (GB7MAD) to GB7FD suffered some problems with increased retry rates recently, the problem was traced to the transmitter at G7BTI which had drifted off frequency.

The YATE (G6BIW) NODE was due to close at the end of January. It is hoped that a temporary alternative link will be in place by the time you receive this newsletter, and that a permanent alternative site will be found soon afterwards. It is likely that the temporary replacement will not include TCP/IP access or routing, however it is hoped that TCP/IP connectivity will be restored when a permanent site is found.

The 2m user port at GB7FD will (subject to RSGB DCC approval) move to its new frequency of 144.8625 MHz on Sunday 1st March 1998.

GB7GC NODE

Upgrade of the 70cm link from GB7GC to GB7GH (to 9600 baud) is still pending, this link may be now be upgraded using some of the equipment that was originally installed at GB7GH for the link to GB7WO.

GB7RR REGENERATIVE PACKET REPEATER

Work is still in progress preparing the equipment for GB7RR (this work having taken a back seat during the work to get GB3CG on air), It is hoped that testing of the equipment for GB7RR will be completed and that installation and on-air testing can begin before the AGM. During a recent visit to the site it was noticed the equipment room we have been allocated is still occupied by the another users equipment, it is not yet known when this equipment will be removed, but this should not prevent us from installing the equipment for GB7RR.

GB7LGS TCP/IP MAILBOX

The antenna for the 2m-user port and my 10m vertical were stolen from my garden at the end of November. Alternative arrangements for the 2m port were put into action the following day with the manufacture of a slim-jim from various bits of tubing that I found in the back of my shed.

My alternative 2m crystal controlled radio has been installed for the user port. This means I can now use my 2m multi-mode radio for modes other than packet for the first time in over 3 years (when I can hear anything at all amongst the noises I get from my TNC's, Computer etc).

Information about GB7LGS (and GB7GLO) will shortly be available on my Internet web site at <http://members.aol.com/G0lgs/> (that is G0LGS with only initial capital letter).

Stewart Wilkinson.
G0LGS

GB7GLO MAILBOX

Operation of the BBS has continued much the same as before. In our part of the network, traffic levels have settled down to an average of around 500 messages per day. Bulletins are approximately 40% of the total.

GB7GLO currently forwards mail to 27 users who run auto-forwarding PMS's. If you run a PMS and occasionally find it difficult to get in to collect your mail, I can set up GB7GLO to deliver your messages to your PMS. You don't need to run a complex system for this. GB7GLO can deliver mail to simple TNC based PMS's. This can be done in the small hours when the network is less busy if you are prepared to leave your rig and your TNC running over night. If you run more complex software, then GB7GLO can forward selected bulletins to you (for your personal use only, license regulations prevent other stations reading bulletins from your PMS) as well as collecting your outgoing mail.

Please contact me @GB7GLO or QTHR if you want auto forwarding. I would also appreciate a note from you if you discontinue the use of a PMS. I can then remove your details from the forwarding files to prevent any possible delivery delays or even loss of your mail.

GB7GLO forwards mail to 9 other BBSs and at least 2 other BBSs occasionally log on to deliver mail to GB7GLO. This generally works well, backlogs of mail waiting for delivery are relatively rare. Any backlog that does develop usually clears quickly. The most difficult path is the 100 mile route to GB7BNM in Verwood, just north of Bournemouth. All mail for the South Coast and the far South West goes that way.

There have been one or two problems that have affected the operation of GB7GLO recently. Network problems around the YATE node near Bristol prevented forwarding of mail to and from Bristol, Somerset and North Devon over the Christmas period. These problems were temporarily resolved, but the YATE node is closing at the end of January, so there could be more difficulties while alternative arrangements are being made. More information on this subject is given else where in this newsletter.

GB7GLO continues to suffer from software crashes. While most of them merely cause GB7GLO to go "AWOL" for a few hours, on very rare occasions something far more dramatic happens. This was the case in the week between Christmas and the New Year. Something corrupted a file (I still don't know exactly what happened!), and GB7GLO refused to run. I eventually reloaded most of the files from backup copies and all was well. On that occasion no mail was lost, but GB7GLO was out of action for a couple of days.

I'm still getting applications for passwords. We do still have problems in this area, so the use of a password is a wise precaution. I've recently acquired a laser jet printer, so the print quality of the password lists should now be a great deal better than it was with the old dot matrix job. If you want a new, easy to read printout, just pop an envelope in the post QTHR, and I'll send you a copy of your current password list.

Steve Perkins
G4FPV

TREASURERS REPORT

Thank you to those members that sent me additional donations since the last newsletter and to all those that have renewed their subscriptions during the last few months.

I am also pleased to announce that thanks to Roger Dobbs (G7FGK) we recently received a donation of £100 from LEWIS VENTILATION LTD.

Following the successful installation of GB3CG we have received a number of donations / subscriptions from new members, I therefore take this opportunity to welcome them to the group.

Total expenditure for items purchased by the group for use on GB3CG is likely to be around £400. (I unable to give a final figure at this time as we are still waiting for the invoice's for some items).

Whilst on the subject of GB3CG we are awaiting a promised share of the funds remaining from the 'Mid-Severn Valley Repeater Group', this money is being shared amongst the various groups that are putting on new repeaters serving the area formerly covered by GB3MH.

Following on from a discussion at last years AGM Nick (G6AWT) arranged a joint insurance policy which covers all sites operated by GRG and FourPack. Documents forming the policy which provides both equipment and 3rd party liability cover have now been received (following a long delay due to problems with the insurers document printing system).

Stewart Wilkinson.
G0LGS

WANTED

Gloucestershire Repeater Group and Fourpack still require various duplexers and cavities for 2m, 70cm and 23cm, as well as 23cm Antenna's (especially any shrouded ones). Any offers to Steve Perkins (G4FPV) or Nick Negus (G6AWT).

The group has recently discovered that one of the IC's used in the High Speed modem boards that we currently employ, as well as a number of unpopulated boards that were intended to be used for link upgrades are officially obsolete. Anyone who knows of a supplier that has ZN429E8, ZN426E8 or SSI6220 (8-bit D to A converters) in stock are asked to contact Stewart (G0LGS) ASAP.

FOR SALE

Arnold Hogg (G7MWY) has a EPSON PC AX2 computer with a Hard Disk and 14 inch Colour Monitor (I seem to recall that it is an EGA system), this should suit someone starting out on packet radio and comes complete with some packet radio software already installed. If you are interested please contact Arnold on 01452 712720 and make him an offer.

RALLY NEWS

A Radio Amateur, Electronics & Computer Fair will take place in the Gold Cup Room at Cheltenham Racecourse on Sunday 5th April 1998, for further information contact Ian (G4FLN) of Austin Fairs on 01454 633524 or 0850 389505.

The 3 Counties Radio Rally will be held on Sunday 5th July 1998 at the Purdiswell Leisure Centre, Worcester. Further information contact W.E.Cotton (G4PQZ) on 01905 773181.

The group has once again booked tables at each of these rallies, which will include the usual assortment of items for sale, as well as a display showing information on the various repeaters run by the group, this will of course now include GB3CG. Donations of further items for sale are always welcome.

Anyone who is prepared to help out on the stand at either or both of these rallies should contact Nick (G6AWT) or Stewart (G0LGS).

CROSSWORD WINNERS

The October 1997 Newsletter included a prize crossword, a large number of correct entries were received. The prizes consisting of:

A 2m FM Monitor, a pair of Side Cutters, a Screwdriver, a pair of Long-nosed Pliers and a Phone Card

were awarded to the first 5 correct entries drawn at random. The winners were:

Mark Orchard (G0USL), John Colley (G4XJC), Mrs.P.Thom (G1NKS), Robert Fawke (G4YGY) and Jim Ward (G4KXX).

INTERNET WEB PAGES

The committee is pleased to announce that the group now has a presence on the Internet with our Web pages online at <http://www.tyndale.demon.co.uk/grg/>. The pages are edited by Stewart Wilkinson (G0LGS) and made available on the net by the Secretary Graham Nye (G8URP). In addition to information on the group and each of our repeater systems, the site also has links to other sites of interest.

WORDSEARCH PUZZLE

This month I have put together a word search puzzle (with help from a computer program). The difference here is that unlike most word search puzzles I'm not going to give you a list of words, so you'll have to find as many as you can and create a list of your own. I will say that there are well in excess of 50 words / acronyms and that all the answers have some connection with Amateur Radio, Electronics or Computers.

A prize will be awarded to the first correct entry drawn at random from those received by 30th March 1998. (Only entries from Gloucestershire Repeater Group Members, who's subscriptions are deemed up-to-date at the time of the draw will be accepted).

Name:

Callsign:

Membership No:

R	M	V	M	R	M	S	B	D	Q	M	A	E	B	R	J	F	S	A	D
E	E	O	I	O	R	E	I	F	I	L	P	M	A	E	Y	I	O	R	I
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(Photocopies of this page will be accepted)