

GLOUCESTERSHIRE REPEATER GROUP NEWSLETTERGB3GH GB7GH GB7FD GB7GC
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EQUIPMENT DONATIONS

Nick Negus (G6AWT) has recently secured the donation of a number of items for the groups use, these include:

2 x CHLORIDE Expert 500 Un-interruptible Power Supplies complete with DOS and Windows based Control Software and appropriate Interconnection leads, these were donated by CHLORIDE POWER ELECTRONICS (DOUGLAS GREEN).

The control software allows the unit to be programmed for a number of different operating modes, program power on/off times/dates, as well provide display of status information including supply voltages, battery status, charge/discharge rates, power consumption etc. Logic signals which can, with the addition suitable hardware/software, be used to control an orderly shutdown of the computer system are also provided by a 'special signals connector'.

One unit has already been installed at our GB7GH site, whilst the other is currently being tested before being installed at GB7FD.

A 4 port RS232 Serial communications card (Type IC102C), has been donated by BLACK BOX Catalogue LTD (VICTORIA HAWES).

The card has 4 High Speed 16550 UART's, and can be configured for use at a selection of different I/O addresses, it uses a single IRQ line (any of **2-7,10-12,15**) for all 4 ports, and incorporates facilities to permit interrupt sharing so that multiple IC102C cards can share the same IRQ, these features make the card ideal for use in many applications where a large number of serial communications ports are required.

This card will be used to provide some of the additional ports required for the planned expansion at our GB7GH site.

A number of PYE 414 70 cm Transmitters and Receivers have also been acquired at minimal cost , these will be used to upgrade existing links as well as for the planned links to South Wales and Manchester.

CHAIRMAN'S REMARKS

So much has happened since the last Newsletter that it is difficult to know where to start! I think that a 'thank you' to those involved would be a good place, so 'thank you'.

In the Newsletter you will find reports on most of the activities, so I will only present the high-lights here. We had a display and a 'for sale' table at the Three Counties Rally on 13 July at Worcester. This raised in excess of ,150 for funds. Thanks to Mark and Stewart. As they raked the money in, I spent it on a second (new) UHF radio for the Cleeve Common site; don't ask how, but we only paid £30 for it! We also acquired a high current 24 to 12 volt regulator for GB7FD - for £2!

Much interest was generated by the display stand which was dedicated to the proposed 2m voice repeater. Some professionally generated coverage maps and other information produced many favourable comments for the project, which is currently with the Radio-Communications Agency.

Following requests from micro-wave enthusiasts, we have made an application to put a 10 GHz beacon on Cleeve Common. This is effectively costing us nothing as the equipment is being supplied.

Steve G4FPV and I have just acquired a quantity of Pye 414 radios which should see the completion of the planned links and leave a couple as spares. We also had donated some duplexer units and earlier in the month some 23 cm equipment arrived from the South-East.

Other donations for which we extend sincere thanks were two UPS units from Chloride and a 4 port card from Black Box Ltd. We would recommend both of these companies if you are looking to purchase equipment of this kind as it is extremely well constructed and presented.

Elsewhere you will find a report concerning Sysop 21 which we jointly hosted with Fourpak and Lanpak in Gloucester. This was very successful and has helped to push forward the changes to the 2m band plan.

On the engineering side, the link to Wenvoe is planned to become operational over the August Bank holiday, and the link to Manchester is waiting BT site sharing approval. The regenerative repeater application is with the National Frequency Allocation Panel, and this will be linked to Stokenchurch subject to path tests, providing a much needed link to the East. The links to GB7GC will be upgraded during August to half duplex at 9k6 which will speed up all facilities.

There is plenty of engineering to do, so please contact either Steve G4FPV or myself if you can help.

Nicholas Negus
G6AWT.

GB3GH VOICE REPEATER

GB3GH was recently moved into an equipment rack of its own, this gives more physical separation of its equipment from that of the GB7GH packet system, and means more rack space is now available for both GB3GH and GB7GH.

A 3 Port circulator has been obtained and fitted, this means GB3GH is now using the Antenna Array (a set of stacked dipoles) that was previously used on just the receiver. Reports received since the change over have varied from 'Its not as good as before' to 'I can now hear it in'.

Further work including replacement of the Antenna Feeder with low loss heliax cable, and other changes to improve the receiver sensitivity are planned.

Reports on GB3GH should be sent to Ken Eastty (G3LVP).

2M VOICE REPEATER

The GRG committee are still awaiting news from the Repeater Management Committee and the Radio Communications Agency regarding our application to run a 2m voice repeater in the area.

Information on display at the 3 Counties Radio Rally indicated that a new 'Malvern Hills Repeater Group' has also submitted application(s) to operate replacements for the former GB3MH and GB3MS repeaters from a new location in the Worcester area. However as the RMC's original requirement was to find a number of groups over the area to operate several replacement repeaters each with a smaller coverage area than the original GB3MH installation this application is not likely to affect our own application.

PACKET 2M BAND-PLAN

Now that the RSGB's DCC have finalised the band plan for Data Communications allocation at 144.800 to 144.9875, Steve (G4FPV) has drawn up the following local usage plan:

144.825	25 kHz	High Speed Only	GB7LGS, Gloucester TCP/IP port
144.850	12.5 kHz	BBS user access	GB7PZT, GB7TCM, GB7MAD
144.8625	12.5 kHz	un-allocated	GB7FD, G1MCX
144.875	12.5 kHz	TCP/IP user access	G8WPF
144.8875	12.5 kHz	Secondary DX Cluster	G8MGK, GB7HD
144.900	12.5 kHz	DX Cluster user access	GB7DXC
144.9125	12.5 kHz	1 to 1	
144.925	12.5 kHz	TCP/IP user access	GB7LGS, Gloucester TCP/IP port
144.9375	12.5 kHz	un-allocated	GB7GC, G8RDT
144.950	12.5 kHz	BBS user access	GB7GLO, GB7ST
144.975	25 kHz	High Speed Only	GB7PZT

Note:

This plan has been agreed with the Sysops of all affected systems.

It is however not yet clear if G8MGK will continue to provide a 2m 1200 Baud user access port.

Some systems listed above are not currently operational and the appearance of a callsign does not necessarily mean that such a port will become available.

We are aware that the allocation of 12.5 kHz based channels at some sites (i.e. GB7FD and GB7GC) may mean that some users are unable to access the network via these nodes, however with the number of ports available in the area there should be sufficient 25 kHz based stations within range for most (perhaps all) users.

The RSGB (DCC) schedule for the change over comprises 4 stages:

- Stage 1 In line with the IARU Region 1 meeting in Tel Aviv last November all beacons should have changed frequency or ceased operation by 1st July 1997.
- Stage 2 From July to September 1997 all existing mailboxes and nodes currently operating in the sub-band of 144.625 to 144.675 will move to the new allocation above and including 144.900. This stage MUST be completed by 30th September 1997.
- Stage 3 October to December 1997 all Raynet operations move to the new Raynet allocation in the band 144.625 to 144.675. Use of the current Raynet allocations on 144.825, 144.850 and 144.875 must cease by 31st December 1997.

Stage 4 January to March 1998 all remaining packet activity in the 144.525 to 144.575 sub-band will move to the new band above 144.800. This move must be completed by 31st March 1997.

Information and timings for the move of GB7FD, GB7GC, GB7GLO (MLVN) and GB7LGS 2m ports are given in the section of this newsletter relating to each site.

There are some systems currently operational in the 144.625 to 144.675 sub-band (which must be vacated by 30th September) that will eventually be moving into the 144.800 - 144.900 section of the band (which is not available for use until 1st January 1998). In order to accomplish the move to the final frequency it may be necessary (unless alternative arrangements can be agreed with the RSGB's DCC, RAYNET and the RA) for systems affected by this to move twice (initially to the 144.900 - 144.975 section and then later to the 144.800 - 144.900 section). Users of the ports affected (G8WPF, GB7PZT, GB7TCM, GB7MAD, GB7HD) should contact the appropriate sysop to ascertain what arrangements are being made during this transitional period.

Updates to this information will be published as they become available on the packet network and in future newsletters.

PREPARING FOR 12.5 kHz OPERATION

Why do I need to adjust anything?

Transmitter

1. High deviation will splatter onto adjacent channels, giving problems to other users.
2. High deviation will cause distortion in a narrow receiver preventing reception of your packets.
3. Effects of not adjusting your deviation;
 - You won't get into your local node or BBS.
 - You will make life difficult for other stations.

Receiver

1. You may get splatter from properly adjusted stations operating on adjacent channels.
2. Effects of using a wide filter;
 - Slow reception of mail etc. in busy areas.
 - Possibly none in quiet areas.

What do I need to do for 12.5 kHz operation?

Transmitter

Turn down your deviation to 2 kHz peak.

Do this by adjusting the drive from the TNC, not by adjusting the radio.

Receiver

Users may not need to replace receiver filters immediately depending upon local activity.

If you run a Node or a BBS, you should replace your receiver filters if at all possible.

This gives your users:

- A known reference with which to compare their radios.
- Motivation to set up their radios correctly!

Make these changes as soon as possible, don't wait until you change frequency.

How can I adjust my transmitter?

There are several ways to do this. The method that most suits you will depend upon the equipment you have available.

- Use a deviation meter.
- Use a monitor receiver, or ask a friend to compare your transmitted audio with a system known to have been set up correctly. This can be done either by ear or with an oscilloscope. Using the monitor receiver, turn your deviation down to approximately half of its present level.

If you require assistance, contact your local packet radio support group.

73, Steve G4FPV
Sysop GB7GLO

RALLY NEWS

As was reported in our last newsletter the group once again attended the 3 Counties Radio and Computer Rally (on Sunday 13th July at the Purdiswell Leisure Centre, Bilford Road, Worcester).

Nick (G6AWT), Mark (G0USL), Simon (a friend of Mark's) and myself manned the stand throughout the day. Sales during the morning were quite brisk, but tailed off around lunch time, however Sales, Subscriptions and Donations received on the day totalled £162.42.

GRG has been informed that this years STROUD Rally / Car boot sale will be on 24th August.

NEW BEACON

GRG has recently made an application to install and operate a narrow band beacon on 10.368940 GHz. The beacon will be located on Cleeve Common above Cheltenham at NGR SO993249 (IO81XW81) at a height in excess of 300m. The ERP will be 250 mW with omni-directional coverage, but will however be shadowed to the north by the mast.

The equipment has already been constructed by **Phil GW3PPF** who will also be responsible for its maintenance. The Callsign will be GB3CCX (Cleeve Common X-Band), it will send the following CWID:

'... DE GB3CCX SO993249 IO81XW81 DE GB3CCX'

GB7GH NODE

As mentioned elsewhere in this newsletter, GB7GH now has a new UPS installed in place of the one damaged by power surges back in November. This should permit continued operation during short power interruptions which we see at this site from time to time.

The Site clearance process for the additional 70cm linking frequencies to be used at GB7GH has now been completed, it is hoped that all necessary equipment will be ready for installation of the link to South Wales (GB7WO) and first stage of upgrading of the existing links to GB7GC, GB7LGS and GB7PZT for the August Bank Holiday weekend (23rd - 25th). Some interruption of service will occur during this changeover.

GB7FD NODE

The 70cm user / backup link port (to G8RDT) is now operational on 433.6375 MHz, this port is Horizontally Polarised using a 9 Element Tonna and ex PMR radio. (This port is currently being operated under the terms of the G1SHM Licence)

After consultation with the Sysops of GB7ST arrangements are now being made to share GB7FD's Transmitter for the link to GB7NW to provide a link to GB7ST, it is hoped that this link will be operational at 1200 Baud by mid September and will in time be upgraded to 9K6.

The 2m user port at GB7FD will move to a new frequency of 144.8625 MHz sometime between 1st January 1998 and 31st March 1998, the exact timing of this move has yet to be determined, but will be published in a future newsletter and on the packet network.

GB7GC NODE

Additional filtering has been added to the 2m receiver to reduce the problems experienced from the nearby paging system. (the filter used was provided by the pager operator).

It is hoped that the first stage of upgrading the link from GB7GC to GB7GH will occur over the August Bank Holiday weekend (23rd - 25th). Some interruption of service will occur during this changeover.

Subject to approval by the DCC and the arrival of suitable crystals and 12.5 kHz filters, the 2m user port at GB7GC will be moving to the new 12.5 kHz channel at 144.9375 MHz on *Saturday 13th September 1997*.

GB7GLO MAILBOX AND G4FPV NODE

Subject to approval by the DCC and the arrival of suitable crystals, the 2m port at the G4FPV:MLVN node will be moving to 144.950 MHz on *Saturday 16th August 1997*.

73, Steve G4FPV
Sysop GB7GLO

REGENERATIVE PACKET REPEATER

GRG's application to run GB7RR from Cleeve Hill has now been processed by the DCC and is going through the usual site clearance process.

UK SYSOP MEETING

The UK National Sysop meeting (SYSOP 21) which was jointly organised by Gloucestershire Repeater Group, Fourpak and Lanpak took place at the Gloucestershire Farmers Club in Gloucester on 6th July.

The meeting was attend by around 25 BBS and NODE Sysops and other group representatives, including some from Kent, Hampshire, Cornwall, Mid Wales, and Leicestershire as well as representatives from the DCC and the Radio-Communications Agency. Nick G6AWT was elected as Chairman, whilst Graham G8ADH (Sysop of GB7TCM) agreed to act as Secretary.

Topics discussed at the meeting included:

Implementation of the 2m Packet Radio band-plan.

Selection of Node Aliases for 2m.

Proposed new 70 cm Packet Radio band-plan.

BBS and NODE NOV's.

Full Minutes of the meeting should be available on the Packet Network shortly. If you are unable to locate them in the message area of your local BBS, you may find them in the files areas at GB7GLO, GB7TCM or GB7LGS.

GB7LGS TCP/IP MAILBOX

GB7LGS has had a number of World Wide Web Pages which have been accessible to TCP/IP users for many months, a recent increase in interest from a few local users has prompted me to update some of the information available and to add further pages. Several TCP/IP users are now also starting to create their own pages (some of which are duplicated at GB7LGS). John (G4XJC) should be able to provide copies of the software and information on its configuration to enable other TCP/IP users to view these pages. (The URL for the pages on GB7LGS is <http://www.gb7lgs.ampr.org/index.html>).

A message scanning server similar to that which has been operational at GB7GLO for sometime has recently been added to GB7LGS. For further information on using this new facility please contact me.

In preparation for the change to 12.5KHz channel spacing the 2m port at GB7LGS will be adjusted for 12.5 kHz operation (i.e.: 2 kHz Peak Transmit deviation and replacement of receiver filters) sometime during the week commencing 21st July 1997. Users may also need to adjust their transmitter deviation as described elsewhere in this newsletter.

Subject to approval by the DCC the 2m TCP/IP user access port at GB7LGS is expected to move to its new 12.5 kHz channel (144.925 MHz) on **Saturday 16th August 1997**.

I have recently been asked about the possible provision of a 2m 9K6 user port at GB7LGS, as can be seen in the section of this newsletter covering the 2m band-plan a frequency of 144.825 MHz has been allocated for this purpose, however as I (and GRG) currently have no suitable radio equipment for 2m 9K6 operation (or filters suitable for operation of 2 ports just 100 kHz apart) I am currently unable to undertake to provide such a port.

It is hoped that the first stage of upgrading the link between GB7LGS and GB7GH will occur over the August Bank Holiday weekend (23rd - 25th). Some interruption of service will occur during this changeover.

Stewart Wilkinson. G0LGS@GB7LGS