



# RAY~Link

Issue Fifteen  
June 1994

The Regular Newsletter of The Radio Amateurs' Emergency Network

*RAY-Link is published for the benefit of all members of the Network. It is posted to all controllers who are requested to assist in ensuring a wide membership circulation.*

## In This Issue:

The last issue of *RAY-Link* was filled with news from yourselves. We focus this time on what our national teams have been doing to help you, to help the Network.

- **Traing Team Report** - including details of a weekend at Easingwold.
- **Chairman's Jolting** - the latest from Geoff
- **Publicity materials** - what is available
- **80m Net** - our 'corps' of net controllers.
- **Emergency Planning Team Report** - their first report.
- **Frequency Planning**

### Team News:

#### Training Team Report

Cathy, G1GQJ, Team Leader.

I am very pleased to report that at the Committee of Management meeting held recently, the Training Scheme document was given final approval for publication. This means that, as soon as the covers have been printed, we will be able to offer the document to RAYNET members. Company groups will be able to purchase copies at a discount price of £10.00 (including p&p); each copy will have a registration number, which will entitle the group to free updates etc.

## Exciting Training Opportunity.

However, the main reason for writing is to give notice of an exciting offer! The Training team are holding a training weekend for Group, County and Regional Training Co-ordinators at the Emergency Planning College, The Hawkhill, Easingwold, N. Yorks. from Friday 11th. to Sunday 13th. November 1994. It will be an opportunity for you to become familiar with the workings of the scheme, take part in practical exercises which you will then be able to take back to your groups to try out, and get together with other co-ordinators from all over the country to talk about training.

The cost is £25.00, which includes two nights' accommodation and all meals from arrival on Friday evening to Sunday lunch. Places are limited to 25, so they will be allocated on a "first come, first served" basis although when selecting representatives, consideration will be given to ensure that as many geographical areas as possible can be accommodated.

If you are interested, please complete the enclosed reservation form. Once you have been accepted on the course, you will be expected to pay a £10 non-returnable deposit. The balance of £15.00 will be payable by the end of July.

**All correspondence and membership registrations should be sent to:**

'Hunters Moon', Newton-le-Willows, BEDALE, North Yorks, DL8 1SX

#### CHAIRMAN:

Geoff Griffiths, G3STG

#### ZONES

Z1: Alan Wallis, G4YMU  
Tel: 0207-520477

Z2: Ray Webb, G3EKL  
Tel: 0748-832809

Z3: Dave Hocking, G4FSS  
Tel: 0533-393803

Z4: Dave Seabrook, G6HPY  
Tel: 0638-750571

Z5: Ian Jackson, G8RWH  
Tel: 081-397 8017

Z6: Cathy Clark, G1GQJ  
Tel: 0844-351461

Z7: (Caretaker appointment)  
Chris Hampson, G8RXA  
Tel: 0425-72002

Z9: Madeley Smith, G8KVU  
Tel: 0203-597411

Z10: Paul Gaskell, G4MWO  
Tel: 051-430 0974

Z12N: Iain Strachan, GM4FLP  
Tel: 0382-580356

Z12S: Ronald Cowan, GM4SRL  
Tel: 041-620 1000

#### TEAM LEADERS

##### Emergency Planning:

John Witts, G6BBW  
Tel: 0256-469338

##### Publicity:

Ronald Cowan, GM4SRL  
Tel: 041-620 1000

##### Registrations:

David Whiteman, G1ADW

##### Sales:

Barbara Slater, G6XYX  
Tel: 0842-860475

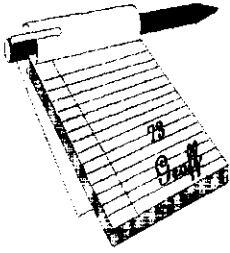
##### Training:

Cathy Clark, G1GQJ  
Tel: 0844-351461

##### Talk-through applications :

Ian Jackson, G8RWH,  
5 Vivien Cl., Chessington,  
Surrey, KT9 2DE

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# Chairman's Jottings

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## ARE YOU BUSY?

Silly question really, since May always seems to be the busiest month of the year for RAYNET Groups all over the UK. This year is no exception, and a quick check on the national Diary files shows no less than 45 events notified by Groups so far, and doubtless there will be many more to come.

June and July look a little quieter so far with 25 and 12 events notified to date, but again that seems to follow the usual pattern for this time of year. If by any chance, your events don't yet appear on the Diary tiles held at GB7NRC, then please don't forget to advise us of what you are up to. A note to me will produce the entry for you, and these files are used for the preparation of the G4NRC nets (Sundays 0830BST 3.663Mhz), as well as being available to all at GB7NRC through the "REQFIL" system.

I always look forward to getting out and working with local Groups at this time of the year, and this year hope to be helping out a bike ride in the beautiful Vale of Belvoir, and also at the Mildenhall weekend, which is always a great opportunity to work with members from many Groups.

It is always a real treat to see volunteers from a wide area come together and work co-operatively as though they had always been members of the same team. And responding well under the pressure of a large event too!

I do hope that you enjoy all the events you work on this year too!

When you are planning your events for the next few months, it would be a good idea to check out for activity within "lift" range on 2 or 70, and a quick reference to the Diary will give you a clue as to which Groups you should arrange some co-operative frequency planning with. Once again, contact points with other Groups are always available from Bedale, or from the 'NRC Files.

Which reminds me, I must make sure that my membership renewal goes off, together with photograph in the next couple of days. Mike and Yvonne tell me that registrations are running smoothly with a turnaround time of about three weeks. Having said that of course, there will be hiccups from time to time, in the event of problems, do please let us know after a reasonable period via the Bedale contact address.

## OH DEAR, POLITICS AGAIN!

Why is it that RAYNET affairs always seem to get wrapped up with politics? All that the vast majority of members really want to do is to enjoy using radio with

other members of their team, and giving some community service at the same time. The last thing that most members want to see is lots of hassle and argument getting in the way of their service.

Unfortunately there do always seem to be those who delight in taking every opportunity to complain and criticise, and others who seem to be waging a campaign against your company and its service to members. We try very hard to do what you have told us to do, but sometimes, it just seems that we can't do anything for doing right!

The RAYNET entries in the Call-book seem to be an instance in point. We all regret seeing the former practice of listing Groups and their Controller's call-signs in the RSGB call-book being dropped, and we have been trying to get them reinstated. Sadly some seem to have turned this into a major political battle, insisting on direct contact with individuals, ignoring their wishes in some cases, and ignoring data submitted to them. I do hope that this nonsense will have been resolved by the time you read this, and that the Call-book will once more contain the basic information for aspiring members' use. If it isn't, then at least your officers have tried very hard in good faith.

Unfortunately, the omission of any contact address for the Company in the recent Civil Protection article didn't help things either!

## SO WHAT'S BEEN GOING ON?

I hope that you will have the news about the training weekend elsewhere in this issue, and will have been as pleased as the rest of us to see this major initiative going forward. Russ, and now Cathy, and the training team have worked extremely hard over the last year to produce a scheme to support those Groups trying to understand training needs within their Groups, and I believe that the outcome is first class.

For many years, I have been most concerned that new recruits don't always get the support that they deserve in their early days, and that new Controllers are largely thrown in at the deep end. Now all this can change, if you decide to take advantage of the support being made available to all affiliated Groups.

Good news too that *RAY-Link* is now to be made available to individual members in return for a self-addressed envelope. It has always seemed a great imposition on Group Controllers to ask them to photocopy *RAY-Link* to their members, and I have been aware for a long time that some Groups just can't cope with that.

However, *RAY-Link* is the only official publication dedicated to new for RAYNET members in the UK, and it often contains important items of news which all members need. So if your copy seems to come late or not at all, perhaps an SAE might help your Controller too!

But these are not the only areas where work has continued since the last issue! The publicity team now have the new slide pack available and for an opportunity to borrow this useful presentation for you to build upon for talks to potential members or User Services, contact Ron Cowan GM4SRL. The supplies of the new NETWORK information leaflets are also now available and should be obtained via your ZC.

The new Emergency Planning team is beginning to produce some very useful results, and a good programme of work for them is emerging, whilst a new Technical team is being formed by David Seabrook G6HPY, ZC4. We hope that this will reinstate a useful service to Groups and members enabling sharing of information of common interest which has been lacking for some time. I'm sure that David would appreciate items of information, offers of help, and suggestions for useful work to be undertaken.

The feedback on the requests for members views on subscription levels last time produced an interesting if confusing response, and we are now debating how to proceed further. We do seem to have made some positive progress in the areas of health and safety statements and policies, and in negotiations with the Charity Commissioners however, and I have been delighted to be able to attend a number of Zone Meetings which have been opened up to non-affiliated Groups for at least party of their proceedings.

Thanks to all Groups who regularly supply information their activities plans and training new newsletter and lists. They are always much appreciated and provide a real insight into what is going on in the important part of RAYNET where all the real hard work is done - in your Groups.

#### GRAPHICS DISCS

Apologies to those who have been having problems with the RAYNET Graphics floppy discs. These seem to have been related to the degree of compression used for the TIFF files of the letter-headings, and I hope that I have now improved matters on the latest version.

The new discs also contain files which are designed to COPY direct to your 9pin, 24pin or Deskjet printer either under DOS or Windows. If you return the original discs to

me, then I will replace them with the latest version. It would be helpful if you could let me know which printer or printer emulation you are using, so that I can be sure to provide suitable files for you to use, and these can be personalised to contain your Group Name and number too!

And that's it for this issue. Good operating and 73

*Geoff, G3S04*



**T**he range of display material available for loan now includes the following :-

- Display photographs, showing RAYNET in action.
- Presentation 35mm slides, suitable for talks to User Services, Radio Clubs, etc.

These should be booked, giving as much notice as possible, from Ron, GM4SRL RAYNET supplies are able to provide sample items for Zone meetings, etc. Details from Barbara, G6XYX.

In addition to the above, handout cards, suitable for giving to User Services, the Public, Radio Exhibitions etc. are now available. Please contact Madeley, G8KVU. ●

### A Copy of Your Own

*If you would like a copy of RAY-Link posted direct to your door, just send a few 9" x 12" self addressed envelopes, stamped at 19p to the company secretary at Hunters Moon*

*There will be no charge for your copy, but they will only be mailed to currently registered members, and only one copy will be sent in each envelope. Group controllers are still, however, asked to ensure as large a circulation of their copy as possible, and to make additional copies for members if they have the facilities.*

## Background:

### THE EIGHTY-METRE NET

By Eric Walton G4FSN, Controller, Bolton RAYNET Group, and Net Organiser.

**W**hen I joined RAEN (as it then was) in August 1976, the Sunday net on eighty metres was already an established feature. From this, I guess that the net must have been going for some twenty years or more by now, but perhaps someone with a longer memory than mine could give more detail on that point. In those days, a formal net was held only on the first Sunday of the month; on the other Sundays, if it happened at all, the net was just a general natter, with no particularly formal structure. Frequencies have changed also; I recall that for a long time 3790kHz was used, and continued to be used on the basis of long prior usage, even after the top end of the band had been reserved exclusively for DX working.

The net had to move eventually, however, and after some discussion with the RSGB HF Committee it settled on 3663kHz, which has been its "home" now for around ten years or so. This frequency change also coincided roughly with a policy change which made the net a formal activity every Sunday, rather than just on the first Sunday. There was also, for a short period, a forty-metre net held later on in the morning specifically for Scotland, but this was abandoned after a few months, mainly, I think, as a result of the very heavy QRM on this band on Sunday mornings. Up to about the end of 1991, control of the net was taken every week by the NRC Chairman, or perhaps by his deputy or other leading member. Such a system places continual demands on a very few people, and as RAYNET activity becomes more intensive, and members generally find they have increasing operational commitments, a point will eventually be reached when no-one is available to take the net. There will then be a danger that the net will lapse for want of members committed to running it on a regular basis. At the same time, our increasing level of activity makes it all the more important that the net should happen every Sunday without fail.

This situation was looming in early 1992, when I was approached by the then NRC Chairman and asked if I would organise a team of members who would take the net on a duty roster so that RAYNET would have a regular and predictable presence on eighty metres every Sunday at the traditional time of 0830 local. I accepted this task, greatly helped by the knowledge that there was already a small group of regulars who could form the nucleus of what has become known as the corps of Volunteer Net Controllers. Our first formal duty roster began on the first Sunday of May 1992 and since then the net has been taken every Sunday by one of the team of VNCs working to a planned duty cycle, and to a format incorporating standard wording and procedures intended to ensure consistency irrespective of which VNC is in control on any particular day.

All the VNC's are of course authorised to use the callsign G4NRC as they represent the National Committee on their duty day. There are at present nine VNC's: Ray G0BDA (Milnthorpe), Eddie G0EWO (Basingstoke), Ron G0MRH (Stratford-upon-Avon), Geoff G3STG (Melton Mowbray), John G4AAL (Stourbridge), Eric G4FSN (Bolton), Brian G4HVA (Bedale), Trevor G4KUJ (Watford), and Cecil G4YXO (West Kirby). Most, but not all, hold other RAEN appointments, being Controllers or Deputies at County or Group level. The holding of such an appointment is not necessary for a VNC. All that is required is a Class "A" licence, the ability to keep net discipline, and to be fairly well-versed in voice procedure. New members to the corps of VNC's are always welcome, to share the workload and to make roster planning, especially in the busy summer months, somewhat easier. The ability to put out a "big signal", whilst being a useful attribute, is not as important as the other qualities noted above; many RAEN stations run only modest powers to whatever aeriels can be put up in small suburban back gardens - after all, that is what emergency communications is largely about.

The VNCs do not regard the net as simply, or even primarily, a "news net". Although indeed the net is the principal means of disseminating news, information, and diary items to members at large, it has several other important functions: as a meeting place for members on the air (members holding Class "B" licences should endeavour to come on as guests of Class "A" stations); as a training exercise for VNCs in controlling a large HF net and for members in general in net discipline; as an exercise for members in copying accurately what might be complex information under difficult conditions; and as a "shop window" on RAEN activities for the rest of the amateur and SWL population.

One could also add that members on holiday or otherwise away from home sometimes use the net as an exercise for working /M or /P and so getting useful experience in operating on HF under these conditions. Finally, the net will be one of the designated means of communication at times when the Emergency Listening Watch Scheme is put into operation. An average Sunday will see perhaps fifteen to eighteen stations joining the net - quite a task for the VNC, and an exercise in patience and discipline for the rest.

Regrettably, at present there is an almost complete lack of GD, GI, GM, and GW stations wishing to join the net, although many must be listening. To all these, I say: please give us a call and join in! The NRC have also made it a policy that any RAYNET station will be welcome on the

net, whether RAEN, RSGB, or independent Our customers, the User Services, need and expect gap-free coverage of the UK, so please tune up, pick up the microphone, and speak!

Now a word about the content of the news and diary items. The VNCs are not news gatherers: they rely on the weekly posting of information from the NRC, of which it is at present the Chairman who has undertaken to act as a focus for news and diary items and to prepare the weekly bulletin. Therefore the VNC's have no control over the content of the bulletin sent to them for reading at the appointed times.

Sometimes Group Controllers and others put out requests via the net for information, advice, or assistance on large events. These requests often meet with a good response due to the wide coverage of the net, but any telephone numbers or addresses given for a response to the requests will also be given equally wide coverage. Consequently, Controllers and others who do not wish their telephone number or address to be put out on the air should advise an alternative means by which responses can be got back to them - perhaps by Packet, or PO Box number, or via another Group member who has no objection to having his/her particulars transmitted on the net.

The weekly rota for VNC duties is spread as fairly as possible, alternating control, if manpower availability permits, between the north and south of England. An exception is made on the Sundays immediately following the Saturday NRC meetings, when the Chairman NRC is accorded priority so that a summary of the day's business can be given, together with any items of immediate importance arising from the meeting; members can also use this opportunity to raise with the Chairman any matters of interest or concern to them.

Now to the question of frequencies. The 80m band is too low in frequency for the most reliable coverage of the United Kingdom. The best compromise would be in the band 5.0 - 6.0 MHz, if there were any Amateur allocations (which there are not) in this band. Eighty metres, therefore, is often asked to give more than it is capable of offering in terms of UK-wide coverage, especially in the early mornings, and the band sometimes suffers from continental QRM, fading, noise, and other unwanted effects that cannot be avoided, and which cause our communications to be degraded very badly.

In bad conditions all that the VNC can do is to persevere, and to ask other stations on the net to do the same. Often there is a standby VNC on the net at the same time as the duty Controller, and the former may be able to assist in getting the traffic through. Sometimes the VNC will, at his discretion, QSY the net a few kHz up or down the band to avoid the worst of the QRM, so stations looking for the net may have to "tune boldly" to find it. Probably a later transmission, say at 1030 local, if the VNC were still available, would be more successful as the band settles into its daytime mode. But, as I noted earlier, the net is as much an exercise as anything else, and sometimes it has to be an exercise in message-handling under difficult conditions. All participants and listeners would do well to bear these qualifications in mind.

The NRC have asked me to state how I see the net developing, so that the service to members, and, more importantly, to our User Services, can be improved. Undoubtedly, in my opinion, the most significant advance would be for G4NRC in its capacity as the RAEN headquarters station to be granted a Notice of Variation to its licence permitting all-stations transmissions. This would give an immediate benefit since VNCs could then select the best times of the day in the light of prevailing band conditions, and re-read the bulletins at those times - hourly if need be, without the requirement for any other station to be on the air with which to set up communication first. This would increase the probability of all hearing the bulletin, and would not tie up scarce manpower at times when it might be unavailable or needed for tasks elsewhere. And the transmissions need not be only in SSB: there is still very much a place in RAEN activities for CW and RTTY, as well as for the newer data modes such as Packet, AMTOR, PACTOR, Clover, and so on.

My next wish as net organiser would be the granting of the long-awaited VLF facility. This has been much discussed over the years, and at times it has seemed that the Amateur Service has been close to achieving at least a spot frequency for narrow-band modes at VLF. The ability to use these low frequencies has some attractions for emergency working: admittedly we have little direct experience of VLF operation, but the benefits are known to be related to reliable, if narrow-bandwidth, (and hence low-information-rate) working largely independent of diurnal and ionospheric conditions. There is obviously considerable scope for much interesting development of Amateur Radio emergency services at VLF.

A final item on my list would be the reinstatement of the ability to use SSB for emergency working on the Thirty-metre band. Observant members will recall that, from the time of the first release of this band to the Amateur Service, and up to the printing of the 1994 Band Plan, there was always a footnote which allowed the use of SSB "during emergencies involving the immediate safety of life and property, and only by stations actually involved in the handling of emergency traffic". This footnote has now been deleted, apparently without any explanation. In my opinion, it should be reinstated as soon as possible, since any emergency on the near Continent, or requiring links along the length of the UK, might be greatly assisted, when conditions permit, by the clear voice communications often available on this band. Incidents such as Zeebrugge come to mind in this context.

In conclusion, I hope that this article will have helped members to understand more fully the work of the Volunteer Net Controllers, and the place that the net takes in the life and work of RAEN and other Groups. The VNCs look forward to continuing their efforts, perhaps assisted by any other members who may wish to join their ranks, and, it is hoped, by the enhancements to the service suggested above, and, of course, to working DEYOU DE on the net! ●

## Team News:

### EMERGENCY PLANNING GROUP REPORT

Martin, G4PMG on behalf of the Emergency Planning Team.

**T**he Emergency Planning Team have met twice and reported to the Committee of Management at their April meeting.

The first meeting of the Team was held in mid-February and proved to be an excellent start with much work completed. At this meeting the team was fortunate to have David Moses the Hertfordshire CEPO address them. David, a member of a number of national committees, indicated his full support for RAYNET. He painted the current National background and gave his professional view on aspects which RAYNET should be paying urgent attention to.

The decentralising of Emergency Planning required RAYNET to establish credibility and to sell itself both to Emergency Services, at a National level, and to Elected members of the various councils with whom we work. The voluntary sector needed to come together to present a common view forward. RAYNET needed to be aware of the current budget constraints but there were many non-financial benefits which RAYNET could be in receipt of.

The Team went on to consider its main Terms Of Reference and what it saw as its deliverables. These TORs deliverables were considered and the following activities were identified in priority order:

- Consolidate and develop dialogue with our users at national level.
- Consolidate and develop contacts with our International colleagues.
- Establish a single national contact point for users and members (tel/fax)
- Establish guidance on the management of an incident.
- Investigate the benefits of a resources database (Personnel/equipment)
- Investigate/specify wide area comms needs and frequency planning as part of the forward emergency planning process

Together with these activities the need to feed requirements at all stages to the Training and other teams was identified.

In early April a further meeting concentrated on progressing the thinking on these issues and preparing for the presentation to the Committee of management. The meetings have brought together considerable experience to progress activity on these various areas. Early thoughts indicated the possible need for a Technical Working Group and this has been recommended to the Committee of Management.

John, G6BBW, the Team leader said " I am very pleased with the outcome of these initial meetings. We have achieved much more than I had hoped for. There are a number of issues but I believe the Team will progress these quickly at subsequent meetings. A very good start has been made".

The Emergency Planning Team consists of John G6BBW, Trevor G4KUJ, John G4BCY, Bernard G4LGK, Eddie G0EWO, Bob G4VWP and Martin G4PMG.

For further information on, or input to, the Team's activity then please contact John G6BBW or TrevorG4KUJ, Deputy Team Leader. ●

## Result:

### Poster Competition

**C**ongratulations to Mike McCreery, GM0ETC, a member of the East Renfrewshire RAYNET Group for providing the winning entry in our poster competition. Mike won a voucher for £25.00 from RAYNET Supplies, narrowly beating Roy Brown, G7KPU, a member of the Cambridge RAYNET Group by one point, who took our second prize of a £10.00 RAYNET Supplies voucher.

Both entries will now go to our printers and be made into A3 and A4 posters which will be available from the publicity team. Thanks are due to all others who entered. Your entries will be kept on file, and may be called upon in the future. ●

*We regret that one packet message was lost at GB7SRL when the system crashed. If you sent the message (I think that it might have been from Zone 10), then please accept my apologies and, if relevant, please send it again. It was mentioned to all the ZCs at the last Committee of Management meeting, but so far there have been no approaches from anyone who has not received a reply.*

# RAY~Link

Your Network's Newsletter

## Band Planning:

## FREQUENCY PLANS TO BE TRIED AND TESTED

Following consultation in *RAY-Link*, it was agreed at the April Committee of Management meeting that the UHF (7.6MHz split) UK Repeater Frequency Plan (*RAY-Link 12*) and the HF UK-Wide Frequency Plan (*RAY-Link 14*) should be tested for a twelve month period with immediate effect.

Paul and Eric apologise if they sound as if they are "teaching Grandmother to suck eggs!"

### UHF (7.6MHz. SPLIT) UK RAYNET REPEATER PLAN

| Channel   | Input/Mobile Tx | Output/Base Tx |
|---|-----------------|----------------|
| UA  | 431.850         | 439.450        |
| UB  | 431.875         | 439.475        |
| UC  | 431.900         | 439.500        |
| UD  | 431.925         | 439.525        |
| UE  | 431.950         | 439.550        |
| UF  | 431.975         | 439.575        |
| <i>and for the "within 100 km. radius of Charing Cross, London" exclusion zone,</i> |                 |                |
| UG  | 430.400         | 438.000        |

#### Notes

1. Single aerial working is possible provided filtering is used on both RX and TX.
2. In respect of Channel UG, it is regretted that only a single channel is possible due to Packet and Continental Repeater frequencies in this area of the band.

*The next edition of RAY-Link is due for publication at the beginning of July.*

*RAY-Link is produced by the Publicity Team on behalf of the Radio Amateurs' Emergency Network. The views expressed by individual contributors are not necessarily those of either the Committee of Management or the Publicity Team. Items for inclusion in RAY-Link should be sent to Ron Cowan, GM4SRL, (QTHR) preferably on disk, stating the word-processing program used, or by packet to him, (GM4SRL @ GB7SRL).*

*Items in RAY-Link may be reproduced providing acknowledgement is given to the Radio Amateurs' Emergency Network and RAY-Link.*

*Ron Cowan, GM4SRL  
Editor*

### UK-WIDE RAYNET HF FREQUENCY PLAN.

#### DAY

|              |               |
|--------------|---------------|
| 10.118 MHz.± | CW/SSB#       |
| 10.145 MHz.± | DATA          |
| 7.045 MHz.±  | SSB(Isb)/DATA |
| 7.005 MHz.±  | CW            |
| 3.663 MHz.±  | SSB(Isb) \$   |
| 3.580 MHz.±  | CW/DATA       |

#SSB (usb) on this frequency in *live emergency only*.

#### NIGHT

|             |               |
|-------------|---------------|
| 7.045 MHz.± | SSB(Isb)/DATA |
| 7.005 MHz.± | CW            |
| 3.663 MHz.± | SSB(Isb) \$   |
| 3.580 MHz.± | CW/DATA       |
| 1.890 MHz.± | SSB(Isb)/DATA |
| 1.820 MHz.± | CW            |

\$This at the moment remains the prime frequency for the G4NRC Sunday morning (08:30 hrs. local) net, with possibly improved reception on the 09:00 hrs. re-read on default to 7 MHz. (40m)

#### Notes

1. As with most non-channelised Amateur traffic, operators should be prepared to tune around the general area of these frequencies as conditions and band occupancy may prevent operations using the exact frequency detailed in the plan.
2. When using data transmission, the frequency mentioned relates to the mark frequency.
3. In order to maximise the possibility of UK-Wide coverage on the chosen band, high angle propagation (as opposed to low angle as used in DXing) should be employed. The signal travels upwards at a near-vertical angle and is almost reflected back on itself on reaching the ionosphere, thus covering an area of several hundred miles (the technique is used commercially in Tropical Band Broadcasting.) This can be implemented in a mobile situation by bending back (if possible) the HF whip, thus altering the whip's normally low angle of radiation to a more vertical angle (notice the 'tied back' military whips on the TV news!) In a temporary or base station situation, a low slung dipole will have a similar effect, obviously best in a permanent situation if you can get a good earth mat down to cut earth losses and increase upward reflection of the signal.
4. DAY and NIGHT sets of frequencies are given to encompass the diurnal changes in the ionosphere. This is common professional practice, as used by UK SAR services, for instance. However, do not forget also the influence of seasonal and sunspot changes in choosing the optimum frequency.