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# BeechLog

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The Magazine of Burnham Beeches Radio Club

December 1999 Issue

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## E – QSL ?

Now there's a new word, E-QSL. Have I been the first to write it? Probably not, although I have not seen it written elsewhere.

Anyone who has held a ham licence for a couple of years or more is bound to have received a QSL card or two. Some of us have our own printed cards, or produce them on a computer as required. Many of us collect them, either for decorating our 'shack', or for claiming awards. Now the latter is where the problems begin, how do you get the cards you need, or if you are the DX, how do you afford to send cards to all those who ask for them?

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## Membership Subscriptions for 2000.

Your committee have decided that in light of the extra income from the McMichael rally this year, that we pass this on to the members of the club. The new subscriptions for 2000 will be as follows:-

**Single membership £5**  
**Family membership £7**

**If you pay by the end of January  
then a 50% discount will apply.**

These figures apply to all, including lapsed and new members so pass the word around and take advantage of this offer.

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As usual payments can be made directly to the treasurer at meetings or by post in the form of a cheque made payable to: **Burnham Beeches Radio Club**. Should you have any queries about this contact either Dave G4XDU or myself.

On behalf of the committee, Paul G6TSF, Treasurer - B.B.R.C.

### News about Dr. Alan Gray, G3XQU

You may like to know that he had his operation a little while ago and has now returned home. A lot of people on the ZFC newsgroup produced little greetings which they emailed to one of the participants. She printed them all out, stuck them on a card and sent it to him at the hospital.

To give you an idea of his spirit, he posted the following to ZFC:

I certainly produced a considerable dramatic effect on a pair of rather staid night sisters by trying one of those party thingys which unroll themselves out on a spring with a feather in the end and a screech when you blow 'em.

Worked a treat through the tracheotomy!

Martyn G3SID

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If you need a card from a particular QSO, there are two main ways of going about it. You can send a card via a QSL bureau, although the recipient may not use a bureau, or you can send a card by post with IRC, dollar bill, or whatever, for return postage. There are a few problems to both these methods. Firstly, it can take a very long time. Secondly, the recipient may never receive your card. Thirdly, the recipient may get your card, but he doesn't QSL, or won't QSL because you didn't send enough money! You would think that anyone mounting a DXpedition would SQL, but many don't. I read in Octobers RadCom about a GM3 who activated Scottish Islands, but had a backlog of 20,000 cards to deal with. These were received via the bureau, and costs, time and effort, to get cards printed and send then off was just too much for him! Just imagine it yourself, checking through your logs for 20,000 QSO's.

The problem increases for real DXpeditions, which may get 100,000 cards to deal with. So there needs to be a solution to this problem, since it affects the QSL traffic at either end.

Currently several national societies are examining the issues concerning electronic generation and issue of card, i.e. some sort of E-QSL. The general idea is something like this: the DXpedition sends an electronic log to the societies who issue awards. Each incoming SQL card is checked against this log, and a card printed if the QSO has been confirmed.

However, with the growth of the internet, the whole procedure can be automated with a little thought and some suitable software on a web server. It could work like this:

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Each ham has his own web site. This may have an obvious address, like mine actually is [www.gohzk.co.uk](http://www.gohzk.co.uk). Alternately, each ham could use a society site, or maybe join forces with other hams specifically for this purpose. A central directory would also be needed, so that anyone could easily find the web site that holds the appropriate logs.

Now each ham or DXpedition can periodically upload their logs to the web site. Current logging software could be updated to provide a suitable standard format, or the actual program running on the web server could be designed to accommodate popular computer log formats. This sort of thing already happens with many DXpeditions - you can make your QSO, and check it's in the online log the next day! This actually reduces pile-ups because no-one has to make duplicate contacts when they are uncertain whether the DX got all the details.

Of course this is all pretty technical stuff, but then hams are technical people. I am sure that some organisations will be willing to provide this facility free, with a nice, simple, web upload process for your logs. Of course, you will see a few banner ads for equipment manufacturers and retailers, and you may have to receive an advertisers newsletter, but the service will be free.

So, I make a QSO with ZX2000DX, then sometime later check the ZX2000DX log from a web site. I see my QSO is in the log! So what next?

Here there are several possibilities. It would be simple to click a "Print QSL Card" button. The web site would send the data directly to your printer, so a minute later you get your QSL card!

You could request a proper printed card via the bureau. You could download a card image to print later. These procedures could be implemented in such a way to prevent tampering and falsifying contacts.

There will always be hams who will forge QSL cards, as there are now, but there are some simple methods to detect this. For example, the web program could encrypt all the contact data, using, say, triple-DES, and also print this encrypted data on the QSL card. The award issuer could simply check that this matches the code on the web site - this could be done automatically.

Of course none of this will help the ham who does not have any internet access, although I am sure that colleagues and clubs would be willing to help out. It may take the current burden off the small-time DXpedition, or the lucky/unlucky ham who just happens to live on Easter Island or even Alderney.

For many people all this might seem like cheating - a DX card from your printer is not as good as a real card from New Guinea. However for awards, one of the major causes of QSL traffic, it could be a great benefit, cutting out years of waiting for elusive cards.

## **BeechLog on the Web**

This issue of BeechLog contains articles taken from the Web issue of the magazine. While previous web issues have been based on the paper version, I have swapped over this month! To see the original:

[Http://www.beechlog.co.uk](http://www.beechlog.co.uk)

## Millennium Predictions

Now that we are only a few weeks away from the new year, the media will be indulging in a frenzy of reviews of the past, and predictions of life to come in the new millennium. I can't resist joining in, but in my usual way I probably will be laughing at the material produced for us to ingest and believe. I don't know whether professional journalists have a good laugh too, or whether they too are taken in by the pseudo-nonsense that they give the public.

I always mean to keep such articles, and record the programs so I can look back in the future, but of course I never remember! I was reminded this week of how things can change, when I noticed in the Sunday Times a letter which quoted from the literature circulated to all electors by Tony Blair during the 1982 Beaconsfield by-election. This election was called after the death of the Conservative MP Ronald Bell, who was a right wing anti-European. It would surprise many today that our current PM held much the same views as Ronnie regarding the EC, and he advocated that the UK should negotiate withdrawal from the Common Market on economic grounds, in fact exactly the same arguments as expressed by the Euro-sceptics of today!

Anyway back to the future. Instead of inventing my own predictions, I shall look at some of those published by the well-known journal called Elle. OK, perhaps an unusual choice, and not my usual reading matter, but the predictions were made by a chosen panel of experts, so they must be correct.

Elle being, I guess, some sort of fashion/lifestyle publication,

concentrates on how our lifestyles are going to change in the next few years. This is not really the stuff for BeechLog, for it talks about new freedoms in relationships. Here I am a bit of an old fogey, and as such these freedoms will not apply to me! However the people depicted in Elle are all perfect in form and behaviour, and don't have to be responsible for anything they do, and don't have to repair the damage afterwards.

But Elle does make some interesting predictions.

Prediction 9 tells us that "working from home will become the norm", "we will become a 24 hour society in line with much of Europe", "there will be an increasingly blurred division between home life, social life, and work life". This prediction comes to you via Professor Cary Cooper of UMIST.

This is a scream, I wonder how many people would put up with this? I suppose there is an element that exists today - I do know people who are on 24 hour callout, but not all the time. I suppose it is better than the 60's predictions that we would have a much greater leisure time! But there are a few snags. Working from home - did you know that if a home is legally considered to be a workplace, it is subject to much the same regulations as conventional workplaces. Thus industrial house wiring, fire exits, flooring, furnishings, etc., need to be established in accordance with workplace law, rather than personal tastes and budgets. Elle predicts "smaller, central" offices, but have you noticed that Slough Estates are building bigger ones? There is a reason for this. Journalists talk of working from home, because the only sort of work they know about can easily be

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accomplished this way. I wonder whether most readers of BeechLog feel they could work from home?

"We will become a 24 hour society like the rest of Europe..." I do wonder whether they have ever been there? The major part of Europe is subject to quite different employment law than the UK. This is financed out of heavy taxation. Over here people work long hours because they fear for their jobs, not because they want to. In France, it is quite difficult to make redundant, sack, or even change an employees terms and conditions. The French and German offices of my employer become depopulated after 5 pm, unless of course there is a UK employee working there!

As for a blurred division between all aspects of life - ha! I don't believe it. Of course this does happen, but only where people have lost control of their lives. No-one wants this. Can you imagine this applying to a train driver, shop assistant, call centre operative, engineer, etc.?

So let's move on to the next prediction.

"With more of us working from home..." our home will change to fit two models - "Raw comfort" and "technological".

Raw comfort is described as "big soft sofas to curl up on. And, instead of wooden floors and sea-grass matting we'll be having deep-pile carpets fitted around wood-burning fires.... great views, fresh air, and beautiful gardens". I don't think the woman who wrote this lives in the same world as the rest of us. Where are they going to build these houses? It sounds nice, after a day on Tesco's checkout, you curl up in front of a log fire looking at the Monarch of the Glen through your window. There is a spare bit of land

where Slough Engine Sheds used to be. My living room carpet is pretty threadbare, so I must pop down the high street and get a deep-pile carpet. The technological description is a bit vague, but she does mention bar-coded waste bins and the internet.

Prediction 11 is "Career - the Y2K buzzword is feminisation". Basically because us men are not flexible workers, women will take over because they can "adapt to a variety of tasks". When she's driven the 6.08 to Paddington, she can do the accounts, then repair the escalator. OK, I jest.

"Short-term contracts will become the norm". This is an interesting point. At my last interview, I was told that the company was looking for someone who would not be off to the next job after the summer holidays. There is a lot of contract work around, which is quite popular with company accountants, but not so popular with department heads. The former like to take on staff just to do identified tasks, but the latter like staff who know how to do the job that is vacant.

I must say this idea appeals to me. The womenfolk go out to work, change jobs every few weeks, pay the mortgage and the bills while I stay at home. I suppose they buy the deep-pile carpets, and have their free time merged with the company time too.

Elle have enlisted Peter Aldhous of New Scientist to make their Scientific and Technological predictions. Aldhous talks about reprogramming the body to grow new organs, and living in a heated sea beneath the surface of one of Jupiter's moons (I kid you not). He also talks about computers that roll up to fit inside a Fendi bag (?) and computer screen T-shirts.

The predictions go on about the multi-

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cultural organic food we are going to be eating, and how TV will become increasingly Americanised (not a difficult prediction). The educational aspects of TV would be replaced by the internet. And so on.

Elle carries on with unbelievable predictions concerning politics. Parliament is to become feminised, and of course MP's would work and vote from home. The Commons would be more representative, with single parents, ethnic minorities, and working class members. Politics will be international, as will be our outlook.

All very interesting. I don't really think these are serious predictions, at least for the majority of people. Looking at the type of people represented in Elle, I guess it is all aimed at wealthy women aged under 25. Elle also makes the mistake of confusing what might be possible with what is actually useful. In the sixties it was predicted that space travel would become commonplace by the year 2000. In fact, this has not happened because the cost cannot be justified by the benefits (if there are any). Elle also seems to predict greater affluence, or affluence for those that matter. There are no predictions about today's problems, like the homeless, ordinary health treatment, pollution, global warming, public transport, housing (apart from the beautiful gardens). Elle doesn't mention where the wealth is coming from.

Being such a cynic I don't believe much of this. Although I am sitting at home, having a day off from work, I just got a phone call and was "conferenced in" to a half-hour meeting in Andover, Massachusetts. Maybe the merging of work and home life is coming true!

I don't know what the future holds. Sure there are technological advances coming along. But whether they will meet our needs is another matter. Peoples needs are very simple. Personally, I would like to keep in work until I retire, earning enough to keep and feed my family, then retire on sufficient income to keep the wolf from the door. It's debatable whether I can achieve this. I don't need a computer screen T-shirt. Or a log fire (it brings on my asthma).

Technology causes much disappointment. I heard today on the radio of the difficulties people were having with their home PC's, apparently the complaints are set to hit record levels. Computers have advanced tremendously in the last 20 years, but they are not more reliable, and not easier to use. We have Windows 2000 about to hit the shops, but ordinary people will not be able to fix it when it goes wrong. They won't be able to answer the questions they are faced with when trying to install it. Why can't we have a system that doesn't break so easily?

Oh well, I am on old cynic!



Guess who!

## A Crusty's Windom on the World.

Sometimes I find that life can get a bit too complicated and being a Crusty old G3 it is great to adopt the KISS approach to Amateur Radio. KISS in this instance, is nothing to do with Packet TCPIP but all about keeping it simple!! With the slow increase in solar activity I thought it was about time I did something about getting on 15 metres. I wanted something effective, something with low angle or radiation, something easy to make, something easy to match as I find nothing more frustrating than to have to spend many hours out in the garden trying to get a bit of wire to load as it always prompts silly questions from either neighbours or the XYL. Having seen quite a few articles recently in RadCom etc. about Windom antennas and matching them with baluns and then having to feed the balun with coax, I thought that I would be good to go back to basics, blow the dust off some old ARRL Handbooks and look to see how it was done 'in the good old days'!!!.

Allegedly, just after the WW2 Coax was not readily available, so wire feeders were the order of the day with balanced 600 ohm ladder feeders etc. The Windom antenna was designed with a single wire feeder. The feed point being connected .36 of the total length from one end of a half wave length piece of wire. Providing the feed wire came away from the half wavelength at 90 degrees the feed should resistive in the order of 100 ohms . Normally the feed wire would come away at 90 degrees as the half wavelength would be mounted in the horizontal plane. Surely if I could mount the half wave vertically I could satisfy some of my basic criteria!! This

I did by using my Long Wire Antenna as a 'skyhook.' Making use of very good insulators at top and bottom of the 22 ft 1.8 inch piece of wire I was able to hitch my new antenna well clear of trees fences etc. The bottom insulator is approximately 6 ft off the ground and secured such that it doesn't blow around in the wind. The feed point is tapped 7 ft 11.7 inches from the bottom insulator. The feed wire (single wire) comes away from the vertical section horizontally for approx. 8 ft before entering the shed at the bottom of the garden.

Construction - I made the vertical section of the antenna from multi-stranded copper wire. The length of the antenna is calculated as 468 the required frequency in MHz. The answer is in feet (just for us Crusties that don't understand metrics!!) This answer does **NOT** take into account the extra length of wire required to tie around the insulators!!! remember this could add up to another 6 or 8 inches to the above answer. TIP - Carry out a trial with the insulators and the wire you are proposing to use. Tie the wire through one of the insulators you propose using when you make up the antenna. Mark the tip of the bend of wire at where the actual tip/end of the end of the antenna will be (a drop of Tipex is useful for this). Undo your knot and carefully measure the length from your mark to the end of the wire. This will give you the amount of wire that you require to tie off each insulator. Double this measurement and add it to your calculated length to obtain the actual length that you will need to cut in order to have the antenna resonating at the required frequency. I have found that it is only necessary to be so accurate with antenna lengths for the higher HF

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frequencies. Even being that careful will not guarantee that the bit of wire you put up will fire up exactly on the frequency you want, this is generally due to conditions in your garden.

I suggest making a solder joint to connect the feed wire to the main part of the antenna. Firstly measure from one end AFTER you have put the insulators on. This way you are more sure of getting the correct tapping point. Make sure that point is where the feed wire makes first contact with the antenna is the measured distance and not the end of the solder joint which could be say an inch or so off set. TIP - I suggest coating the solder joint and first couple of inches of the feed wire with Alordite (? - Ed) or similar in order to give it some mechanical strength.

In the shed I have an 'open plan' ATU that matches the antenna to the coax that connects back to the shack. The ATU is earthed with 1 metre rod next to the garden shed. Additionally I keep a set of radials cut for 20,15 and 10 metres connected to the ATU to aid antenna matching on those bands.

I tuned the ATU by taking the rig down the shed and connecting it to the ATU via a SWR meter. A car battery provides power to the Rig. Once the ATU is set I reconnect the main coax feed to the shack. and test the SWR at the shack end. On the odd occasion I have had to repeat the process to ensure standing waves do not exist on the main Coax feed as they tend to cause RFI if they do.

With this arrangement the RF is kept away from the shack, house, TV's etc. Being a halfwave, the maximum current in the antenna occurs in the middle of the vertical section (in my case approx. 17ft above ground). The

main advantage being vertically polarise, in theory a lot of low angle radiation should, and does, result. With this very simple arrangement cut for 15 metre band (the sizes given above). I have managed to work the following on SSB using FT747. These stations were worked during brief periods on the air over a couple of weekends.

RX3AKM Moscow  
XT2DP Upper Volta  
VE3JCH Pembroke, Canada  
IK2YFT Milan  
P49M Aruba  
9K2MU Kuwait  
Z32LM Macedonia  
PT2CC Brazil

During the period that I worked the above stations and since, I have not worked or heard any Stateside stations although I worked the VE3 very easily. This could be due to conditions or more likely some directional properties brought about by the other antennas in the garden.

This is a very easy antenna to make up it is also very effective and sizes for other bands can be calculated. For those CVRS members of you who have yet to venture on the 'NEW WARC BANDS' (!! ) here is an antenna that can get you started. Just choose your band choose a mid band frequency, do the simple arithmetic, follow the above instructions and you will be on the air in no time!!

Let me know how you get on!

73 Paul. E Mail: g3sxe@yahoo.com

*Many thanks to Bryan for this article - Ed.*

## Backup Hell.

Ever since I started rolling my own software, there has always been the fear that something will go wrong, and I lose all my source code. The same with BeechLog - once the DTP file became mangled, and I had to write it all again!

Looking through the computer mags, one thing is nearly always missing from the specification, and that's a means of backing up your data. I suppose that's not quite true, since most operating systems have some backup software, but it's usually pretty basic, and so gets neglected by most users.

The oldest stuff I can find here at my desk is the MSDOS 5.0 backup command. This is a command line utility, intended for use like;

```
Backup c:\data\*.* a: /s
```

which backs up your data to a floppy. I suppose this was OK if you didn't have much data, but was a bit of a pain if you had a hundred megs or more!

These days there are a few other affordable storage mediums, although capacity can be a problem.

I have an HP Colorado drive that takes Travan cartridges. These tapes hold 400 megs. The HP software compresses the files, so you can actually get almost 1 Gbyte of data on a tape. However this is still not ideal - it takes about an hour to fill the tape, and it cannot restore a system boot partition - you have to load the operating system onto the new hard drive first, and then restore over it.

Tapes got bigger, and it is now possible to backup a 20 gig hard drive onto one tape. This still takes ages, which is why few private users do this sort of thing. One of these drives, and the media, cost lots of money too.

Disk storage has become more practical now, with the advent of 250 meg Zip drives, Syquest drives, 2 gig Jaz drives and the new 2.2 gig Orb drive. But the

cost of the media is too much - a Zip disk is about £10, an Orb about £30, and a Jaz over £50. These disks are pretty fast (or at least the SCSI and IDE ones are), but the software provided is still lacking - it still is a pain to restore your data.

A year or so ago I wrote about CD writers. Here at last was a cheap media, about £1 for a 650 meg disk. CDs are not affected by magnetic fields, have no moving parts (i.e. no case mechanism), and are easy to store. However backing up 20 gigs requires lots of CDs. For the last year I have been copying my data directories to CDs, and recently when I needed to restore the data I found some problems.

I had been simply copying files to the CD, and had forgotten that all files on a CD are set to 'read-only'. This meant that when trying to alter source code and documents, I had to reset this attribute! And of course dear old Windows 95, while it can reset batches of selected files, cannot reset attributes through directories! I found a tool to do this, so all was not lost. Using CD-R media, I couldn't overwrite CDs, so I soon had a few 'historic' backups which became useful in the future.

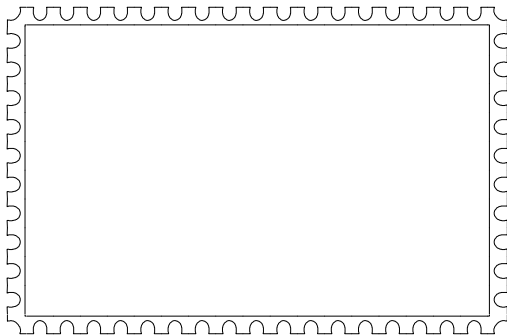
There still is the capacity problem. Maybe writeable DVDs will improve things. At present they can store over 5 gigs of data. I don't know whether they set the 'read-only' attribute, and I don't know what they cost.

However the target of a good backup method is the ability to restore quickly and reliably without fuss. My present technique involves disk and partition images. The general idea is to copy each disk partition as a single entity to somewhere safe. I first cottoned onto this when I had to completely restore two machines - my PC, whose new motherboard didn't agree with the current hard disk contents, and my wife's laptop, which became damaged by a 'cover disk'.

A reinstall of Windows took most of the time on my machine. It takes long enough anyway, and then there is always the

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messing with drivers, and the inevitable IRQ clashes. I reckon about four hours before you can start restoring your personal data. All you folk with RiscOS machine don't know what your missing! Well after I battled with this on my own machine, I started on my wife's. This had a 'recover CD'. You put the CD in its drive, and booted from a special floppy. Ten minutes later I had a working Windows installation, with all the right drivers! Magic.

So, how could I achieve this on my PC? Quite easily, as it turned out, using software I had overlooked. There are at least two companies who sell the solution, and shareware options too. Powerquest's Drive Image, and Symantec's Norton Ghost. These are essentially DOS programs, which means that they will run from a floppy disk. This is indeed essential, since the idea is to avoid having to do any manual installations on the hard disk.

The process is quite straight forward. But you need to start with a fully functional Windows installation, so it means spending half a day loading Windows onto a new hard drive. Provided you do not use overlay software on your hard drive, you can do this using a spare, smaller, hard drive. So you can remove your current 10 gig hard drive, and plug in your old 500 meg job for the purposes of making the image file.

There are a few considerations before starting this, the main one being that you will need target space to write the image

file. There are two easy ways to do this, and a few harder ways. The easy ways are to plug in two hard drives, or to partition the single hard drive. The second drive or partition needs enough space to hold the image file. A Windows 95 typical installation takes about 120 megs of hard drive, and Windows 98 about twice that. Windows NT4 with the latest patch fits inside this range.

This means that you can use removable drives to store the image. A 100 meg Zip or an LS120 will hold a compressed Windows 95 image (possibly including the install files), a 250 meg Zip will hold a '98 image file.

So with the target space available, and Windows installed on the hard drive, all that's left to do is make the image. This a very simple and very fast. You basically boot from a DOS disk, are run the imaging software from another floppy, or the hard disk.

I tried this on my current PC. I use a Windows 95 installation with various applications, like Word 97, DTP, Internet, and so on. The size on my C: partition is about 750 megs. It took just over 10 minutes to make a compressed image, the image size was 440 megs.

Now having got this image, the next job is to decide where to keep it. I wrote it to another partition on the same drive. It would be possible to keep it there, indeed the partition could be marked as 'hidden' to avoid accidental damage, but the original idea was to write it to a CD. This was a simple matter on my PC, since the image was written to a partition on the main hard drive. If you have used a spare hard drive to make your image, all you probably have to do is to install the CD writing software first.

Restoration is just as simple!

*Editors note: This article is printed in full on the BeechLog web site. Browse to:*

*[Http://www.beechlog.co.uk/](http://www.beechlog.co.uk/) to see it!*