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Please note our new Editorial Email address:
editor@qsp73.demon.co.uk

One of the Journal logbook program windows. See the review by Chris Lorek, G4HCL.
Now Emma's a TV Star

The Young Amateur of the Year, Emma Constantine, 2E1BVJ, featured live on BBC TV's Blue Peter programme on 8 December. Emma, 16, was interviewed by presenter Richard Bacon, then made a couple of contacts as GBOBP (standing for 'Blue Peter') with Novice stations on 70cm FM. The special event callsign had been arranged in order to allow the presenter to pass greetings messages to the stations contacted. The station was supervised (just off camera) by David Wilkins, G5HY, of Kenwood (UK), who also loaned the equipment used by the station.

Emma pointed out that amateur radio equipment needn't be expensive, and demonstrated a £5 crystal set and a £25 transceiver kit for the TV cameras.

It's not Emma's first time as a TV star. When she was just 11, she took part in another children's BBC programme called Why Don't You .. ? in which she also demonstrated amateur radio in action.

‘A Modern and Exciting Hobby’

Two days before her appearance on Blue Peter (see separate story), Emma Constantine, 2E1BVJ, who is the current Young Amateur of the Year, made an impassioned speech to the RSGB’s AGM in London. She had been invited to the AGM to present the trophies and awards on behalf of the RSGB’s President.

She said, ‘It is good that we mark the achievement of those who succeed in the hobby, but it is also vital that we encourage those who wish to join it. As the first YL Young Amateur of the Year, I see it as my responsibility to encourage people of all ages and abilities – but particularly young people – to find out more about amateur radio and to dispel the myth that amateur radio is very esoteric.

‘In the same way that I have been supported and encouraged by my school and those around me, I would urge all amateurs to support the Novice programme, the work of the RSGB and STELAR.

‘Amateur radio is a modern and exciting hobby and just as relevant to our world as it was when Marconi was a boy... Without the will and enthusiasm of those that know, to pass on their experience to those who wish to learn and who may become the engineers of the future, the survival of the hobby will not be guaranteed...

‘Therefore, may I on behalf of the young people of this country and the wider world, take this opportunity to make a plea: to ask you all to come out of your shacks and actively pass on your knowledge to the next generation of amateurs who will hopefully become the professionals of tomorrow. I can assure you that your efforts will bring you much reward and personal satisfaction and that the hobby will, by your efforts, survive well into the next millennium.’

Emma’s speech was received with warm applause by the audience of over 100, the majority of whom were old enough to be her grandfather.
Britannia’s Last Radio Message
The Royal Yacht Britannia’s final radio transmission before it was decommissioned was on the amateur bands. The contact was with special event station GB10010W, which had been set up to celebrate the 100th anniversary of the world’s first permanent radio station at Alum Bay.

At 1500UTC on 6 December, Jim Barlow, G3VOU, the QE2’s Chief Radio Officer, re-transmitted from GB10010W the first message sent by Marconi from the same site exactly 100 years earlier. The CW message, ‘V V V Orange Orange Orange’, was picked up by Britannia on 80m. The Royal Yacht responded on SSB using its own callsign, Golf Quebec X-Ray Charlie. Britannia’s Commodore sent a greetings message to GB10010W, stating that after 43 years of operational service, the Royal Yacht was about to be decommissioned and that this was the final radio transmission to be made from the Royal Yacht.

GB10010W also made contacts with HMS Brave, Nottingham and Illustrious. Special permission had been obtained from the RA for GB10010W to contact stations other than those in the Amateur Service.

The Isle of Wight Marconi centenary celebrations received a lot of media attention, including articles in The Times and The Guardian. The organiser of the event, Ben Clegg, G7RER, was interviewed on several national BBC radio news broadcasts, and viewers of the national BBC1 Late Evening News saw John Francis MBE, G3LWI, transmitting on CW, and Dennis Goodwin, G4SOT, on SSB from GB10010W. Dennis was representing Icom (UK), who loaned a number of HF and VHF / UHF transceivers for the event.

Ham Radio 100 Years Old
In 1898, Lieutenant M J C Dennis, having heard about Marconi’s wireless experiments, set up his own station at Woolwich in London. Dennis claimed that his was ‘the first non-professional wireless experimental station in the world’. This claim has never been challenged, and so it can safely be said that Dennis was the world’s first true radio amateur. He was licensed as DNX and later moved to Ireland, where he became EI2B.

To celebrate the 100th anniversary, two new awards for HF and VHF or UHF activity have been launched by the RSGB. Both require applicants to score 100 points by making contacts between 1 January and 31 December 1998. On HF, points are obtained by working different IOTA references, Commonwealth Century Club call districts, ITU Zones, Postal ‘District Codes’, and IARU Region 1 Countries. A special plaque will be awarded to the first successful applicant.

On VHF / UHF, a contact with each different station on 50, 144 and 432MHz scores one point and on 70 and 1296MHz each contact scores two points.

Long Distance LF Reception
On 14 December, DAOLF near Frankfurt was readable in the UK on the 137kHz band. Sending extremely slow Morse with an ERP of just 50mW, DAOLF was received at distances of up to 750km by using DSP techniques to receive in bandwidths of less than one hertz.

The 137kHz band will eventually become a European-wide amateur allocation and it is hoped that all class A amateurs in the UK will gain access to the new band soon. The distances so far achieved by German and Finnish stations, who already have access to 137kHz, have greatly exceeded those attained by stations operating in the UK-only 73kHz band.

Good News for SWL DXers
The CO World Wide 160m Contest has an SWL section this year for the first time. The organisers have agreed that leading British SWL Bob Treacher, BRS32525, should adjudicate the listener section.

The CW section of the CO WW 160 contest is from 2200UTC on Friday 23 January until 1600UTC on Sunday 25 January, whilst the SSB section is between the same times from 27 February to 1 March.

The full rules can be obtained by sending an SASE to Bob Treacher, 93 Elibank Road, Eltham, London SE9 1QJ.

Editorial Team
This edition of Ham Radio Today has been put together by a temporary editorial team prior to the appointment of a new editor. The next issue, Vol 16 No 3, will be edited by the new team.
National VHF Convention
The RSGB tells us that their National VHF Convention will take place at the usual venue, Sandown Exhibition Centre, Esher, in Surrey, on Sunday 22 February. The event features three lecture streams, a trade exhibition, book stand, and specialist groups and RSGB committees.

The lectures include talks on VHF direction finding in the UK and Europe, portable contesting, VHF DXpeditions, and ‘Europe from Down Under’ by VK3OT. During the convention, trophies will be presented to the winners of VHF / UHF contests. Morse code tests will also be available on demand. The National VHF Convention is open between 10.30am and 5.00pm and entry costs £3.00.

Big-Hearted Club
The Cockenzie and Port Seton Amateur Radio Club recently presented a cheque worth £1190 to their adopted charity, the British Heart Foundation. The sum was raised by a series of fund-raising events during the course of the year.

5000 QSOs
On 6 December, Denis Bosworth, G8BAV, in Derby and John Tye, G4BYV, in Swanton Morley, Norfolk, had their 5000th contact on 70cm. Denis and John first made contact 30 years ago on AM, though they now use SSB. The distance between the two stations is in excess of 100 miles, which disproves the fallacy that 70cm is only suitable for very local contacts.

Trade Topics
The following information is based upon submissions by suppliers, and is not necessarily endorsed by Ham Radio Today. We cannot be responsible for false or misleading claims by suppliers.

New Icom Multi-Band Rig
Icom have launched a new state-of-the-art HF / VHF transceiver - the IC-746 [featured on our cover this month - Ed]. Following hot on the heels of the highly-successful IC-706 and IC-706 Mk II, this new transceiver takes radio technology a step further. The IC-746 operates from 1.8 to 144MHz on all modes including RTTY.

The IC-746 combines high-tech features with 100W output on all bands, making it the ideal base station transceiver for VHF as well as HF use. Icom have developed a twin PBT (passband tuning) system for the IC-746, which efficiently eliminates interfering signals. The twin PBT makes this transceiver unique in its class.

Fitted with a large, easy-
to-read function display, the IC-746 indicates standard details like operating frequency and memory channel number, as well as function settings and digital meter indications. However, in order to provide all essential information at a glance, the display also features a multi-function dot matrix screen which registers the ‘bandscope’ settings, twin PBT settings, split frequency operation modes and the contents of the memory keyer.

Other outstanding features include DSP for sound clarity, an automatic antenna tuner with preset memories for each 100kHz step allowing for quick tuning, a digital multi-function meter, tone squelch as standard and a channelled ‘quick squelch’. The Icom IC-746 became available from Icom retailers just after Christmas and costs £1695. We hope to feature an in-depth review of this rig in Ham Radio Today shortly.

Icom (UK) Ltd, Sea Street, Herne Bay, Kent CT6 8LD; tel: 01227 741741; fax: 01227 741742; Internet: http://www.icomuk.co.uk; e-mail icomsales@icomuk.co.uk

**Yaesu FT-847**

The Yaesu FT-847 is the first transceiver covering all the HF bands plus 6m, 2m and 70cm as standard. With 100W output on all bands ‘topband to six’ and 50W output on 2m and 70cm, the FT-847 is sure to be a winner with hams who are active on all bands ‘DC to daylight’.

Ideal for amateurs who operate via the satellites, the Yaesu FT-847 allows crossband duplex operation. It also has normal and reverse tracking for operating via satellite, and provides dedicated alphanumeric satellite memories. CTCSS and DCS (digital code squelch) encode and decode is fitted as standard, and for packet radio enthusiasts, the FT-847 is 9600 bps (and 1200 bps) ‘packet-ready’.

The FT-847 is due to be launched first at the London Amateur Radio and Computer Show at Picketts Lock on 7/8 March - look out for it there! Recommended retail price will be around £1695.

Yaesu UK Ltd, Unit 2, Maple Grove Business Centre, Lawrence Rd, Hounslow, Middx TW4 6DR; tel: 0181 814 2001; Internet: http://www.yaesu.co.uk

**Dual Output Power Supply**

Do you need a DC power supply unit with a bit more versatility than the usual 13.8V DC at 20A? If so, you’ll be interested in the Vann Draper Electronics ADPS305 dual output power supply.

The ADPS305 is a dual output 0 to 30V 0 to 10 amps regulated DC linear bench power supply, which is capable of operating in constant voltage and constant current modes, with front panel switching for isolated, serial or parallel operation. This has the advantage of allowing the user to select easily 0 to 60V at 0 to 5 amps, or 0 to 30V at 0 to 10 amps, or dual 0 to 30V at 0 to 5 amps.

The output voltages are set by both coarse and fine controls, with the output voltage and current monitored by four LCD display panels which provide clear and accurate readings.

Load regulation is better than 0.2% and ripple less than 5mV. Full overload and short circuit protection is provided. The ADPS305 measures 350 x 150mm and costs £289, making it one of the best value units in its class. It comes with a 12-month guarantee.

Vann Draper Electronics Ltd, Unit 5, Premier Works, Canal Street, South Wigston, Leicester LE18 2PL; tel: 0116 277 1400; Internet: http://www.vandraper.co.uk; e-mail sales@vandraper.co.uk

**Tandy Launches Biggest Ever Catalogue**

Britain’s largest high street electrical retailer, Tandy, has launched its biggest ever catalogue, with nearly 500 pages packed with thousands of products. Equipment which will be of interest to radio enthusiasts includes shortwave portable and communications receivers, handheld and base station scanners, scanner antennas, CB transceivers (handheld and base station units), CB antennas and other accessories, GPS ‘direction finder’, soldering irons and other tools, switches, cables and thousands of components.

In addition, the catalogue includes consumer electronics products such as televisions, video recorders, hi-fi equipment, cellular phones, PCs, computer accessories, and games and toys such as radio-controlled model boats and planes. To keep the youngsters entertained, radio enthusiast parents will be interested in the Star Wars and Barbie walkie talkie sets!

Tandy’s Managing Director, Andrew Fryatt, said: “A new feature of the catalogue is Tandy ‘Unlimited’. This offers customers a mail order facility to products featured exclusively in the new catalogue. By doing this we have supplemented the range of products available in our 340 high street stores.”

We understand that Tandy will shortly be launching a new 2m FM mode of operation.
handheld transceiver at a competitive price. Tandy say that this is already “America’s best selling FM transceiver.” Of course, we plan to review it in Ham Radio Today when it becomes available.

The new catalogue is available for $1 from all Tandy stores and it includes £25-worth of redeemable vouchers.

New Drake Communications Receiver

Any new piece of equipment from the R L Drake Company is awaited with interest by Drake’s many fans. Their new R8B ‘base station’ communications receiver is an updated version of the Drake R8, but with further improved receive performance, no fewer than 1000 programmable memories, and selectable sideband synchronous detection for the best-possible audio quality reception of shortwave AM broadcast stations.

The R8B retains all the features of the earlier R8, including alphanumeric LCD display of station name and frequency, direct keypad entry of mode and bandwidth, multiple scan functions, multiple antenna inputs, attenuator, passband offset tuning, etc. It has fitted as standard a noise blanker, selectable pre-amp, multivoltage power supply, RS-232 serial interface, and a built-in loudspeaker.

The R8B measures 134 x 334 x 330mm, weighs 5.9kg, and costs £995. Further details are on the R L Drake web site at http://www.rldrake.com or can be obtained from the UK distributor, Nevada. Nevada, 189 London Road, North End, Portsmouth PO2 9AE; tel: 01705 662145; fax: 01705 690626; Internet: http://www.nevada.co.uk; e-mail: info@nevada.co.uk

Lake Electronics

The 1998 Lake Electronics catalogue is now available. It contains details of the DTR series of HF CW transceivers, including the new 10MHz version, together with a range of receiver ancillaries, such as filters, ATUs and Lake’s ever-popular Antenna Coupling Transformers.

Included for the first time is a section devoted to vintage radio, particularly out-of-print books and obsolete components. The catalogue is free, but please send an A5 SASE or a self-addressed envelope and two IRCs to cover return postage.

Lake Electronics, 7 Middleton Close, Nuthall, Nottingham NG16 1BX; tel / fax: 0115 938 2509; e-mail: 100775.730@compuserve.com

Mscan v3.0 SSTV Program

The Dutch firm CombiTech, run by Mike Versteeg, PA3GPY, released version 3.0 of their SSTV program, Mscan, just before Christmas. Mscan v3.0 is a completely new program to receive and transmit slow scan television pictures by amateur radio.

The program uses all the latest features that were introduced in Windows 95 and can really be called multitasking, eg you can run multiple programs whilst monitoring your favourite SSTV channel. Scale the Incoming Video window to any size you want, from a small thumbnail in the corner of your screen, right up to full screen size.

Mscan v3.0 even supports both receiving and transmitting at the same time. Of course, whilst transmitting you can also enter text and load or save pictures. These pictures can be retrieved from any source, including JPEG and Kodak Photo-CD.

Mscan v3.0 will run on any Windows 95 PC with a P100 processor and Multiscan interface. Drivers for EasyDSP, HariFax IV and PTC-II are under development (for technical reasons interfaces such as Miniscan, Hamcomm, Viewport or EasyFax cannot be supported.)

For further details on Mscan v3.0 or their other products, and information on the price and how to pay, please contact CombiTech at the address below. A list of local agents is available on their web site.

CombiTech, PO Box 507, 3235 ZG Rockanje, Netherlands; tel / fax: +31 181 404252; e-mail: combitech@mscan.com

Universal Radio Catalogue

Universal Radio Inc of Reynoldsburg, Ohio, USA, recently launched a 100-page amateur radio and SWL catalogue. They say: “Universal is pleased to process overseas orders. We can prepare quotes or proforma invoices on request.” [However, beware that shipping costs, UK duty and VAT must be added to USA prices, and that it is illegal to install and use non-CE approved equipment in the EU - Ed.]

Universal Radio, 6830 Americana Pkwy, Reynoldsburg, OH 43068-4113, USA; 24hr fax: +1 614 866 2339; e-mail dx@universal-radio.com

Run Your Computer From Your Car

Merlin Equipment’s new NOTEpower 75i inverter allows you to run and recharge notebook computers, camcorders, mobile telephones and even video games in your car. Although not specified, it would presumably also be fine for QRP amateur radio equipment.

The inverter converts the car’s 12V DC battery voltage to 230V AC which means you won’t need to buy expensive battery packs or keep recharging the nicads. Just the size of a matchbox, the NOTEpower 75i inverter is supplied with a cigar lighter plug for easy connection. The ‘mains’ output is available from a standard socket on the side of the unit.

A useful feature is a battery alarm which will warn that the vehicle’s battery is low. The inverter is fully overload and heat protected and is CE approved. The NOTEpower 75i costs £86 (plus VAT and P&P) and is the smallest such unit made by Merlin Equipment. Other units are capable of providing up to 2500 watts of power, and UPS systems at up to 20kW.

Merlin Equipment, Unit 1, Hithercroft Court, Lupton Road, Hithercroft Industrial Estate, Wallingford, Oxfordshire OX10 9BT; tel: 01491 824333; fax: 01491 824466
JOURNAL PC-Based Logbook Review

Chris Lorek, G4HCL, reviews a superb UK-written Windows logbook program

This review is about something a little different than a commercial product. Instead it’s about the free-to-use amateur radio logbook which many hams are already asking about on the air. It’s been spoken about on the packet network, there are links to it from several ham radio Internet sites, it’s even been announced on the RSGB’s national GB2RS news service. The program in question is JOURNAL, written by Derek Hughes, G7LFC. It’s a Windows-based amateur radio logbook, and it’s great value for money because it’s free! Derek says he chose the name JOURNAL because, in his dictionary, it means "a book recording daily events", which he thought rather apt.

Installation

To use JOURNAL you’ll need a PC running Windows 3.1, 3.11, Win 95 or Win NT4. The program reviewed here is the v1.0 Windows version, although two DOS versions are currently also in the development stage. The program isn’t small: with over 3Mb needed for all the installation files, it requires three 1.4Mb disks to fit them all on. The subsequent installation to your PC’s hard disk, in order to run the program, is a very simple affair, the program automatically creating the required subdirectories, program icons etc. On my 150MHz Pentium, installing from hard disk stored files, it took me less than a minute to do all this.

Running the program

The logbook is shown on your PC screen always in a single window, which you can move around the screen as you wish if you’re also running other Windows tasks. In the JOURNAL window, besides the usual 'menu' bar along the top, at the bottom there are eight 'tabs' visible, each tab giving you access to a different page of information. The available pages are the QSO screen, Location screen, Equipment screen, Station screen, QSL screen, Notes screen, Browser screen and the Filters screen. To move between these, you simply click on the relevant tab with your mouse.

User defaults

When you’re operating on-air and having contacts, especially during contests, entering the same details such as the power and modulation used together odd bockchart... Welcom... Hello and thank you for taking the time to look at JOURNAL. My name’s Derek Hughes [G7LFC] and I’m the author of JOURNAL. I chose the name JOURNAL because, in my dictionary, it means "a book recording daily events". I thought that this was rather apt.

You’re trying to make JOURNAL as easy as possible, which includes adding a fair degree of detail and features. You’ll need to find out when you need more help with the software, being free.

Please read this help file thoroughly to ensure you get the most from your software. You’ll also find that it offers some benefits. Most of the time, it’s best to use the software on your own. As this software is free, you may find yourself using it on a regular basis. In the majority of cases, this will improve the time you spend on the air and reduce your blood pressure. If you have a genuine problem, please email me. Derek Hughes, G7LFC. Please include your name and location.

On-line help is readily available with a press of the F1 key

The main screen for QSO details entry

Three sets of user defaults are available

with your location and equipment (eg for QSL purposes) is of course rather repetitive. You naturally want to be operating, not entering information, so the program can insert these for you as a matter of course. Three sets of user defaults can be recorded by JOURNAL, which you can set up for, say, different locations, or maybe for a dual-operator station set-up. Before you
Location entry is very simple

start logging QSOs, you select a set of user defaults and the details recorded are automatically entered for you every time you create a new QSO record.

Filters

A very useful facility of the program is the fact that you can filter your data based on the contents of the following fields: date, frequency, callsign, your status, modulation, mode, station's town, station's county, station's WAB square, station's IARU square, your town, your county, your WAB square, and your IARU square.

I quickly found that this very usefully extends to report generation, including QSL cards and address labels. So, for example, if I entered a weekend contest either from home or an alternative location, or if I went on a mini-DXpedition, I could generate QSLs or a logsheet for just that location, or date range, or WAB square etc.

Being able to print all the QSL cards and / or address labels for a specific day is very useful if you took part in a contest. If you apply a filter for the required date, QSL cards and / or address labels will only be printed for those QSO records that passed through the filter. This of course can also help by showing me all the past QSOs I've had with, say, a given station, or say all stations in a given location - useful for 'square hunting'!

Reports

JOURNAL can provide the following useful 'reports' from within the program:

1) Standard log book
2) WAB Award application forms
3) WAB exception reports
4) QSL status report
5) QSL address labels
6) QSL cards

You can run the standard logbook report in date order, or in callsign order. The report itself is a landscape report, similar in layout to the pages in paper-based logbooks. If you don't want to print out all of the QSO records stored by JOURNAL, you can set a filter to hide those you don't want to appear on the report.

There are three Worked All Britain (WAB) Award application forms included in the version I tested. These include the Small Squares, Large Squares and Counties awards, and I'm told that each of these application forms have been submitted to the WAB Awards Manager and been approved as acceptable replacements to those supplied in the WAB Awards membership pack. More are also planned for future versions.

Other reports are planned for a future release of JOURNAL include the Royal Signals Award application forms, DARlington and District ARS Award application form, and the Postcode Challenge application form, together with the new RSGB 100 Years of Amateur Radio awards. The latter is currently with the RSGB's VHF / UHF Award Manager for approval, and is planned for the very next version available.

In Use

Overall I encountered very few problems in using the program, finding it intuitively very easy to use especially with the selectable user defaults. The report generation facility was excellent, although I felt I'd have liked the facility for serial number generation and 'dupe checking' for some contests - maybe a future version will have these, though, as it's still early days. I only found one or two minor bugs, eg when I clicked on the Help icon it resulted in an invalid command. However, a press of the F1 help key instantly brought up the full Windows help file, complete with hyperlinks. I must say this contained excellent instruction on running the program, generating output, answers to commonly asked questions etc.

Obtaining the program

If you've received a copy of the QSP73 CD-ROM, as detailed in last month's issue and which contains over 600Mb of the very latest ham radio software (tel: 01703 263429 for info), you'll already have the latest copy of JOURNAL on there at the time of issue. Derek has kindly given permission to include his latest version of JOURNAL on this CD-ROM software collection for the benefit of amateurs.

You can also download the latest version of the program via Internet from http://ourworld.compuserve.com/homepages/derek_hughes_g7ffe:

It took me around a half hour with a 33.6k modem this way. It's also available via landline BBS download.

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from various sites such as the Crock's Corner BBS (tel: 01253 305040) if you don't have Internet facilities. Alternatively (and possibly rather cheaper than a long landline modem download), for a copy on disk you can send three blank formatted 1.4Mb disks in a returnable padded envelope together with return postage in stamps to Derek Hughes, G7LFC, 86 Colmannder Gardens, Ormskirk, Lancashire L39 4TF.

The licence agreement for the program specifically prohibits anyone from charging, or requesting donations, for supplying copies of the software without written permission.

program, he asks for no personal registration payment if you find it useful, you're free to use it for as long as you wish. Derek says that, having obtained your copy of JOURNAL, there is no more for you to pay in order to continue using it. Unregistered copies of JOURNAL are not crippled, time limited and will not time-bomb on you. If you don't want to register JOURNAL you will not be snubbed, or shunned. You are an official user of JOURNAL, providing you use the software within the terms and conditions of the license agreement.

However, voluntary registration with a donation cheque of £10.00 made payable directly to a very worthy cause, this being the RNLI (Royal National Lifeboat Institution), is encouraged. Sending this to the program author

Registration

Even though the program author has spent much of his time in putting together this superb...
HRT 1998 CONTEST CALENDAR

Love 'em or hate 'em, amateur radio contests are here to stay. At best they provide an excellent means of testing your station performance - and your operating skills. Here's a list of the most popular UK and international events.

If you live in the UK, you must be an RSGB member to put in a scoring entry to an RSGB contest, although non-members can of course participate without entering. Exceptions are made for VHF Field Day, and the RSGB Affiliated Societies contests on HF and VHF / UHF, where you must be a member of the Affiliated Society, although not necessarily of the RSGB itself. There are many more RSGB contests; those listed here are just the most popular ones (full details of RSGB contests were published in the September 1997 edition of RadCom).

The WAB contest rules can be found on the Internet at www.users.zetnet.co.uk/g1ntw/contest8.htm whilst the BARTG contest rules are at www.bartg.demon.co.uk/Contests/98rules.htm

**HF Contests**

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<thead>
<tr>
<th>Date and Time (UTC)</th>
<th>Event</th>
<th>Bands(s)</th>
<th>Mode(s)</th>
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<tr>
<td>11 Jan, 1400 - 1800</td>
<td>RSGB Affiliated Societies Contest</td>
<td>80</td>
<td>CW</td>
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<tr>
<td>17 Jan, 1400 - 1800</td>
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<td>27 Feb - 1 Mar, 2200 - 1600</td>
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<td>CW</td>
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<td>RTTY</td>
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<td>28 - 29 Mar, 0000 - 2400</td>
<td>CQ WPX SSB Contest</td>
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<td>SSB</td>
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<tr>
<td>18 Apr, 1500 - 1900</td>
<td>European Sprint Contest</td>
<td>?</td>
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<td>European Sprint Contest</td>
<td>?</td>
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</tr>
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<td>6 - 7 Jun, 1500 - 1500</td>
<td>RSGB National Field Day</td>
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<tr>
<td>11 - 12 Jul, 1200 - 1200</td>
<td>IARU HF World Championship</td>
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<tr>
<td>25 - 26 Jul, 1200 - 1200</td>
<td>RSGB IOTA Contest</td>
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<td>10 - 80?</td>
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<td>Worked All Europe DX Contest</td>
<td>10 - 80?</td>
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<tr>
<td>3 Oct, 1500 - 1900</td>
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<td>4 Oct, 0700 - 1900</td>
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<td>SSB</td>
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<td>24 - 25 Oct, 0000 - 2400</td>
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<td>WAB LF CW Contest</td>
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<td>160</td>
<td>SSB / CW</td>
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<td>28 - 29 Nov, 0000 - 2400</td>
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<td>CW</td>
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<td>CW</td>
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<td>5 - 6 Dec, 1200 - 1200</td>
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<td>Phone</td>
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<td>SSB / CW</td>
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### VHF / UHF Contests

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<th>Bands(s)</th>
<th>Mode(s)</th>
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<td>1 Feb, 0900 - 1500</td>
<td>RSGB 432MHz Fixed / Affiliated Societies</td>
<td>70</td>
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<td>7 - 8 Mar, 1400 - 1400</td>
<td>RSGB March 144 / 432MHz Contest</td>
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<tr>
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<td>19 Apr, 0900 - 1300</td>
<td>RSGB 50MHz Fixed Station Contest</td>
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<tr>
<td>2 May, 1400 - 2200</td>
<td>RSGB 432MHz Trophy</td>
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<td>2 - 3 May, 1400 - 1400</td>
<td>IARU UHF / SHF Contest</td>
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<td>16 - 17 May, 1400 - 1400</td>
<td>RSGB March 144 / 432MHz Contest</td>
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<td>6 - 7 Jun, 1400 - 1400</td>
<td>IARU 6m and RSGB 50MHz Trophy</td>
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<td>21 Jun, 0900 - 1600</td>
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<td>21 Jun, 0900 - 1500</td>
<td>WAB 70MHz Phone Contest</td>
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<td>Any</td>
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<tr>
<td>28 Jun, 0900 - 1500</td>
<td>WAB 144MHz QRP Contest</td>
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<td>4 - 5 Jul, 1400 - 1400</td>
<td>VHF Field Day</td>
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<td>IARU 2m and RSGB 144MHz Trophy</td>
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<td>13 Sep, 0900 - 1700</td>
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<tr>
<td>3 - 4 Oct, 1400 - 1400</td>
<td>IARU UHF / SHF Contest</td>
<td>70 and up</td>
<td>Any</td>
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<td>18 Oct, 0900 - 1300</td>
<td>RSGB 50MHz Fixed Station Contest</td>
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<td>Any</td>
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<tr>
<td>6 Dec, 0900 - 1700</td>
<td>RSGB 144MHz Fixed / Affiliated Societies</td>
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<td>Any</td>
</tr>
</tbody>
</table>

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You don't need a big antenna system to take part in amateur radio contests (but it sure does no harm).
RUSSIAN AROUND ON THE BANDS

Former Eastern Bloc military equipment is now finding its way on to the surplus amateur radio market. Ben Nock, G4BXD, guides us through some of the sets available.

Since the fall of the Berlin Wall there has been a steady trickle of interesting sets - receivers, transmitters and transceivers - from Eastern Bloc countries coming on to the surplus market. Many of the former communist countries used sets manufactured by the Russian State Collective, simply re-artworked into their own language, be it German, Czech, etc. Some are very good, others not so, but all are interesting. A sample of those sets are described below. More and more seem to be finding their way into the hands of short wave listeners and radio amateurs alike here in the UK.

The R-326 HF Receiver

As an example of the Russian output, this set is a good one to start with. This set is a five-band HF receiver covering 1 to 20MHz. The set is capable of receiving AM, CW or SSB signals, has a self-contained battery pack, provides high impedance phones output and is very robust in construction.

Strangely though, the set can operate off an external supply of only 2.5 volts! An AC adaptor comes with the set, running from 220V AC, providing the stabilised 2.5 volts the set needs. An inverter can be heard faintly whistling inside, generating the HT supplies.

The R-326 is a valve set, containing 19 miniature valves in all. There is also an R-326M version, which is transistorised and has digital frequency readout. The valve set uses valves numbered such as I 4 1 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19.

The R-326 receiver. The window top centre lights up to display the frequency scale.

The R-326 AC PSU which provides 2.5V for the receiver.
There is a funny thing with the IF stages. Trying to decipher exactly what is happening from the Russian handbook, even assisted by a German language translation, is quite hard, but it seems that the set is double conversion with the first IF changing between bands. It seems that when the set tunes 1 to 4.3MHz, the first IF is 460kHz, with the second IF at 215kHz. When tuning 4.3 to 20MHz, the first IF changes to 2.2MHz, with the second IF again being at 215kHz.

A crystal filter in the second IF line allows for a variable bandwidth response, capable of being sharpened up for CW reception. The BFO stage even has two oscillators, one variable over a considerable range, the other one being crystal controlled. Either is selected from a front panel switch.

Front panel adjustments allow for correct alignment of the set on all bands. A small plastic window allows a frequency scale and calibration marks to be read and the set adjusted as required. Fast and slow motion tuning are provided for by the large central tuning knob.

As stated, the set can be powered from batteries, carried in a compartment at the rear of the set. Two 1.25V, 14Ah batteries are required, or an external 2.5 volt stabilised supply, or the WS-2.5M, the correct PSU capable of 127 or 220 volt operation.

Tuning around the bands is very easy with the R-326. The tuning knob is very positive, there being no backlash or slip. The absence of a separate RF gain epoti does mean that on strong SSB signals the AF gain, which may be joined with an RF pot, needs backing off quite a bit.

The variable filter allows the reception of CW signals to be greatly improved. Adjusted to its sharpest setting, I would guess less than 1kHz, it does cut out a lot of the background mush, making copy of weak CW quite easy. In all, the R-326 is quite a nice receiver to play with. The R-326 is 225W x 270H x 370D mm and weighs just 14.7kg with batteries.

The R-5P receiver, this one intended for the Czechoslovakian military. The tuning knob (Ladeni) pulls out for slow-motion tuning.
in other words, the Demokratischen Republik, of Der Deutschen Nationale Volksarmee transceiver was used by engineering in all respects. A feat of Eastern European double conversion receiver, controlled transmitter, with than a pack of cigarettes, it VHF transceiver, no bigger manufacture. A miniature holder.

sliding into some mobile housing no doubt. The R-5P is 370W x 153H x 320D mm and weighs 13.8kg.

The R-147 VHF Transceiver

And now for something completely different. QRP is something of a peculiar arm of the amateur radio hobby. There are those who connect an antenna to an oscillator and call it a transmitter, then there are those who use the nine valves in an old war time 62 set (like me) to generate 1 watt of RF, whilst using 6 watts in heater power in the process!

At last the Russians have us beat. I refer to the R-147, used in East Germany, but of Russian manufacture. A miniature VHF transceiver, no bigger than a pack of cigarettes, it is a four-channel crystal-controlled transmitter, with double conversion receiver, a feat of Eastern European engineering in all respects.

This miniature transceiver was used by the Nationale Volksarmee of Der Deutschen Demokratischen Republik, in other words, the People's Army of the German Democratic Republic, with the manual I have been dated 1979. The Funkgerat R-147, radio set R-147, runs F3 frequency modulation, and is available with 26 various frequency allocations. Its frequency range is any 300kHz segment from 44 to 51.8MHz, making it ideal as a QRP rig on the 6m amateur band.

As supplied to the military, it came with four channels fitted, each 100kHz apart. It seemed the standard frequencies fitted were 45.5, 45.6, 45.7 and 45.8MHz. Of the two examples I have, one is stamped with the serial number of 000045, the other with a number in the 275,000s (it is debatable whether over a quarter of a million were made, more likely an out of sequence numbering system was used).

The dimensions of the transceiver, out of its canvas carry case, are 77 x 120 x 45 mm, with a weight of 0.68kg. The set is powered from a single seven volt battery, fitted into the transceiver, or via an external supply of two 4.5 volt batteries, held in a separate container and connected via a cable and battery adapter link.

The ‘Empfanger’ (Receiver)

The receiver section of this little wonder consists of a double conversion superhet, with a first IF of 14MHz, and with a second IF of 650kHz. The sensitivity of the receiver is quoted as being in the order of 1.5uW, very good for gear of this age and design. The current consumption using the internal seven volt battery is stated as less than 25mA.

The construction of the set resembles that used in the Burndept B470 pocketphones: small self-contained units, with soldered covers, grouped together around a motherboard. As can be seen from the photographs, the construction is extremely tight, which means that repairs or modifications would be extremely difficult.

The ‘Sender’ (Transmitter)

It appears from the limited information I have on the set that the FM modulation is performed on an oscillator at the frequency of the second IF, eg 14MHz, because this signal is then mixed with the output of the first oscillator in the receiver chain. The output of this mix is then filtered and amplified before passing to the antenna at around 130mW. For those with decent German, the block diagram stages of the transmitter are labelled: 1) Steuerst u Modulations verst; 2) Mischast Send; 3) Filter; 4) Vorverstarker; 5) Treiberstufe; and 6) Leistung Verstark.

A combination headset and mic are connected to the set with a large ‘pod’, for want of a better word, joining the headset to the transceiver. This pod contains the PTT switch and a control which allows selection between full or muted receive audio. There is also a call button which, when pressed at the same time as the PTT, will emit a beep in the other set’s headphones.

The set’s antenna can be either a metal tape measure type aerial which clips to the headset, or a wire aerial which is attached to the carry strap of the case.

And Finally

As stated, more and more of these types of sets are appearing on the surplus market. Like many military sets, some are not much use for short wave listening or operating, because the tuning is too difficult, or because of the lack of facilities (RF gain pots), lack of accessories etc. However, some are usable and are interesting to ‘play’ with.

As well as several Russian sets, I have a few Czech sets that may well have been made in former Czechoslovakia as they differ quite a bit from the normal Russian style. I am presently trying to track down the origin of these and hope to bring them to you later.

So, if you see one of these babies around, you might care to try it out. Good hunting, and “Do svedanya, tavarish.”
ALL IN A DAY’S WORK

Harry Leeming, G3LLL, says equipment from the Canaries doesn’t always go ‘cheap’ and revisits the important area of electrical safety.

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...
the holder, and so when the construction of the holder allowed it, we found it much easier to repair holders than to replace them. The dodge is to squeeze the indentation which is on the underside of an unused pin, and push it out of the holder with a pair of long nosed pliers. This pin can then be used as a replacement for the pin with the faulty contact, and everything is as good as new.

I passed this tip on to Albert, and he was able to do a repair at no cost. He later told me that it had taken him about five minutes, whereas to replace the whole holder he reckoned would have needed a couple of hours work.

**Too Bassy a Sound (1)**

Jack had rather a deep voice. He had no problems with local stations, or with inter-G working on 80 metres, in fact he got excellent audio reports from his FT-101. When trying to work DX, however, he got many reports of 'strength 4 or 5, but difficult to copy'. A few stations did also comment that his audio was short of 'top', and at last he came in to ask what he could do.

It seems that much early Japanese equipment was optimised for the Japanese voice, which on average tends to be higher pitched than European voices. The cheapest way to 'brighten up' the audio on transmit is to role off the bass by fitting a series capacitor in the microphone lead. As a rough guide the reactance of the capacitor at 1kHz should be about the same as the input impedance of the microphone socket. This is only a starting point, and in practice I have found that 2000pF for 50k ohm inputs, and 0.1µF for 1k ohm inputs works well with my voice.

Better still, use a microphone that is brighter in itself, such as the Shure 444, or incorporate a really good speech processor. When trying to work DX I have always achieved the best results from using RF speech processing, and in recent years have had excellent reports from the Datong ASP. Besides giving RF processing, this unit also boosts the treble and cuts the base, and probably this tailoring of the response does as much for the readability of the signal, as does the RF clipping.

Jack decided on the 'low cost, low tech' approach for a start and went away with a 10p 2000pF capacitor. A week later he was back telling me that it was the best 10p he had spent in his life.

**Too Bassy a Sound (2) - or G3LLL Adds Brightness!**

Fred complained that on FM with his FT-290 Mk1 he found it difficult to copy some stations, especially when he was mobile. If he turned the volume up to try to hear them better, the speaker rattled, and in general the sound was rather muffled. Fred had tried an extension speaker, and this did improve things, but he still felt that in comparison with his other FM rig the sound was 'muddy'.

This is typical of the FT-290, and when I started to use one myself, I just had to do something. It seems that once again it is tailored for best results with a higher pitched voice, and has too much de-emphasis. I initially tried reducing the value of the capacitors in the de-emphasis network in my unit, but soon found out that the simplest move was to remove one altogether. Fred was given a copy of the drawing shown in Fig 1, and told to crush C110 with a pair of long nosed pliers, and shake out the bits. Judging by the FT-290s that come in for repair, hundreds of other people have also carried out this mod, as it really does make the FM receive audio very much easier to copy. However, before crashing any capacitors do be sure that a previous owner has not already carried out this mod!

The problem of muffled receive audio is by no means confined to the FT-290, and many FM rigs benefit considerably if the audio is brightened up ever a little. Sometimes it is difficult to get at the de-emphasis components, and in these cases it will be found easier to partially bypass the network. Fig 2 shows this part of the circuit of an FT-230. There are two circuit pins, one at the input, and one at the output of the de-emphasis circuit. I have found that if the circuit shown is added to these pins, the receive audio is much brighter and clearer.

**FT-757 on 10m**

Bert came in with his FT-757 with the complaint that the output had started to fall off on 10 metres, and then had disappeared altogether. I asked him how much power he normally used and on what mode he operated. "Oh I'm a 10metre FM enthusiast, and I usually run the full 100watts."

I have had quite a few FT-757s in over the years owned by 10metre FM GRO enthusiasts, all with the same fault. The instructions and specification that come with the FT-757 are rather ambiguous. These seem to imply that the unit is rated at a full 100 watts in the FM mode, but then tell you to turn down the power once one has made contact. In reality, if one runs much more than about 30 watts on FM for more than very short transmissions, the coils in the low pass filter unit get very hot.

Bert was lucky in that one of the coils had just unsoldered itself, but he was told that if he didn't "turn the wick down" he would soon be back again.

**A Not So Faulty FT-990**

Terry came in with a long face and an FT-990 reporting that the receiver had gone dead. Having had a few in with the same complaint, I decided to check it while he waited and, sure enough, there was nothing wrong with it.

On the top left hand corner of the front panel of the FT-990 is a small push on and off switch, which is used only if one is using separate transmit and receive antennas. It is in just the position where one can inadvertently press it when moving the rig. The result of this is that the receiver antenna is then switched to the auxiliary receive antenna socket - hence no reception is obtained. I wonder how many FT-990s have been shipped the length of the country, just because this button has been pressed?
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Reader's views published here are not necessarily those of the magazine.

Letter of the month

Dear HRT,

Having re-visited the UK packet radio scene after a break of several years, I am very disappointed to find that most of the user access is still at 1200 baud and on the 2m band. The mailboxes look pretty much like they did ten years ago and we are still restricted to short text messages. Also, there is very little evidence of a high speed backbone network of the sort found in many other countries.

At a time when the greatest threat to amateur radio is the ease and convenience of the Internet, radio amateurs are failing to provide any real competition. The packet user interface is relatively 'techy', mailboxes require a 'driving lesson' before use and the speed of packet makes the Internet look like the superhighway that it is often (wrongly) dubbed.

Where is the inventiveness that radio hams are renowned for? Why can't I simply connect my favourite user-friendly e-mail program and browser, and receive news, correspondence and pretty pages like I can on my telephone line?

OK, it is a matter of bandwidth, but haven't we got many megahertz lying relatively idle in the UHF and microwave spectrum? Where are the megabit point to point links? Where are the 34kb user access channels? The Internet is getting more efficient all the time with higher speed modems, ISDN, coax to the house, fibre optic trunking etc. If we don't address this important issue - and very soon - we will lose the datacomms people to the landline.

Are we all content to relegate amateur radio to being the poor relation to the mobile phone?

Yours, John Mallard

Editorial comment:
What about it, packet SysOps? Where are the point to point links and 34kb user access channels? If these are being planned, let us know. We'd be delighted to report it in Ham Radio Today.

Dear HRT,

Or on this occasion, rather I presume to write Dear Sheila!

I am very sorry that you are leaving the Editorship. I always looked forward to Ham Radio Today, in which I usually looked for the editorial first - even when I was hoping to have a letter in.

Some other magazines have their points, but in HRT I could depend on a depth and independence of editorial analysis - not that I always agreed! - that I cannot always detect in other organs. And a broad cross-section of readers' opinions was selected.

I understand why you have to leave us and I wish you all the best for your family and hobbies, and tender many thanks for what you have done. I trust Chris Lorek, G4HCL, will still favour us with intelligible reviews. See you on HF in a couple of years?

Only, before you go, have that new team on the carpet and tell it some things must not be changed!

Yours, Alex 'Sandy' Dick, GM0IRZ.

Editorial comment:
Thanks for your nice comments, Sandy, which we have passed on to Sheila. We are aware that you have been one of the most loyal readers of Ham Radio Today for some time and wish to reassure you - and all the other 'Sandys' out there - that whilst HRT may change to some extent, the good things will remain. We are delighted to confirm that Chris Lorek will continue to provide reviews for HRT and indeed there is a plan to 'beef up' that side of the magazine. You may well not always agree with the editorial content in the future either, but suffice to say that HRT will still be editorially independent.
Dear HRT,

There’s a lot of comment in Ham Radio Today and the other amateur radio magazines about the necessity or otherwise of having a Morse test before you’re allowed on the HF bands. But what about the RAE itself? Why is it still necessary to pass the RAE, at least in the format in which it currently exists?

I think the RAE is now almost completely outdated. OK, once upon a time it was necessary to show that you understood circuit diagrams and such like, because you had to make your own transmitters, so it was important to prove that you were (a) not likely to electrocute yourself and (b) not likely to cause interference all over the band when your homemade transmitter eventually went on the air.

These days, all the amateurs I know just go out and buy a ‘black box’ and operate it, and unless you’re really stupid, it is very difficult indeed to put out a bad signal with a black box transceiver!

The Novice RAE is a bit better, because at least it includes some practical elements, but even that has quite a few totally irrelevant technical questions. I think that both the RAEs should just contain questions about licensing conditions and how to cure EMC problems - and nothing else. What use is it to know how to calculate the value of a capacitor in a circuit or how to measure the voltage of the collector of a transistor? If you are going to service equipment, then you may need to know these things, but nearly all amateurs today send their rig back to the dealer in the very rare cases when they become faulty (in my case, I have owned two transceivers for over ten years and neither of them has had a single fault, so I’ve never even needed to open up their cases!)

[Name and address supplied]

Editorial comment:
We feel that our correspondent has a point, but feel that the RAE and Novice RAE ought to at least include some questions about operating practices as well as licensing conditions and EMC problems. After all, if you listen on the HF or VHF / UHF bands, you do hear people operating who have apparently never even switched on a receiver before obtaining their licences. Let’s strive for better operating practices on all bands, and whatever the mode of operation!

Dear HRT,

Although we all complain about the price of commercial amateur radio equipment, there is no doubt that these days you have to work a lot less hours to buy a new transceiver than you did 20 or 30 years ago. It is also a fact of life that the facilities of modern equipment makes home construction an increasingly unattractive proposition. I wonder when we are going to see the first disposable handheld or HF transceiver which requires no antenna whatsoever?

The purpose of my letter is to ask why we keep seeing complex constructional projects in amateur radio magazines? Surely no-one builds them. As I see it, the sole purpose of such material is so that the author can see his (or her) name in print and show his friends how clever he is.

The sooner we see an end to home constructional features in HRT, the more space we will be able to devote to getting youngsters involved in our hobby. Young people these days expect a lot from life, and they expect it fast, so you can bet a pound to a penny there are hardly any of them spending endless hours building equipment.

The elimination of constructional projects would also free up more space for equipment reviews, and reports of on-air activities.

Yours, Graham Rogers

Dear HRT,

As a keen HF DXer and contester, and some-time DXpeditioner, I tend to get inundated with QSL cards, mainly through the bureau. Some of them include the text “the QSL is the final courtesy of a QSO”, which presumably is designed to make the recipient feel guilty until he replies.

I don’t want all these QSL cards, and they just clog up the QSL bureau system. If I operate during one of the major contests, I might make 1500 or more QSOs, and undoubtedly I will receive hundreds of QSL cards, from Italian, Russian, Czech and German stations. Why? Surely I - an ordinary G0 station - cannot be a new country for these stations? So why do they bother to send me a QSL card? Surely they want yet another G QSL card as much as I want another Russian card - ie, not a lot!

If I go on a DXpedition to somewhere considered to be ‘rare’, I can expect to receive even more QSL cards. I don’t mind replying to QSLs that I receive after a DXpedition, because the whole point of going is to activate a place which many people will want to contact. But why should I reply to the hundreds of cards that will come through the bureau? I think if you really want a QSL card you should send the operator concerned an SAE with sufficient return postage, so that he is not out of pocket. If you don’t want a QSL card, that’s fine - don’t send one!

The worst thing is those operators who QSL every single contact they make, whether or not they want a card back and whether or not the station they contact wants a card. There must be millions of unwanted QSLs circulating the world, clogging up the QSL bureaux. What a waste! Save the trees - only QSL if you really want a card from the station you work - and then send yours direct with an SASE!

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*CAN BE EX-DEMO OR USED*
An Introduction to Japanese Awards

Amateur radio award hunting is very popular in Japan. Kouji Hoshi, JQ1 HBT, tells us about two which can most easily be obtained from the UK.

Do you know how many amateur radio stations there are in the world? The answer is approximately 2,500,000. There are about 1,320,000 stations in Japan. You may realise how large this number is if you compare it with the approximately 63,000 amateurs in the United Kingdom.

Membership of the JARL (Japan Amateur Radio League) comprises 150,000 members. This shows you the high density of the radio amateur population in Japan, compared with the UK.

There are many award programmes in Japan run by JARL, various clubs and individuals, but I would like to introduce here the ADXA and WASA awards, which are issued by JARL headquarters. These are probably the easiest JARL awards to achieve from the UK.

Applications are accepted from outside Japan for all awards issued by JARL HQ. But not many applications have been received from Europe and America because of their distance from Japan. It is not easy to set up a big HF beam antenna in the high-density populated cities in Japan. There are far more amateurs on UHF and VHF than on HF, due to the lack of antenna space. Therefore the domestic awards, which credit domestic QSOs, are more popular in Japan itself.

There are four kinds of JARL award which have been issued since the 1950s. Those issued in high quantities are AJD (All Japan Districts), WAJA (Worked All Japan Award) and JCC (Japan Century Cities), all of which require contact with stations in Japan.

You may obtain more information about these JARL awards on http://www.jarl.or.jp or by post from JARL Award Desk (Operation Section), 1-14-2 Sugamo, Toshima, Tokyo 170-73, Japan.

ADXA (Asian DX Award)

ADXA is the first JARL HQ award given for contact with overseas stations issued since 1970. It is issued to stations who obtain QSL cards from 30 or more countries in Asia. The countries are defined by the DXCC Country List issued by ARRL. There are about 50 countries in Asia according to this list.

ADXA was a difficult award to achieve for a long time, due to low activity in most of Asia, except for a few countries such as Japan and Asiatic Russia. Also, Japan consists of islands located at the far eastern end of Asia, which means it is quite difficult to contact other Asian countries from Japan. Therefore in 1987 the JARL established the 'ADXA-Half' award, which requires contact with just 15 Asian countries. In recent years, Japanese amateurs have often operated from other Asian countries, so it is now getting easier to achieve these awards. Also, there are many countries in the Middle East and western Asia which are easy to contact from the UK, and this makes it relatively easy to achieve ADXA particularly from the UK and
having contacted (heard) Asian DX Award (ADXA), Award Rules
The Official JARL in the near future. This will become a more popular award programme, as many people have joined 'square hunting' 1992. So not many people are familiar with this award, introduced in DX stations. Limited chances to contact award, due to the relatively limited frequency bands compared with the HF bands. However, it is not so easy to attempt single band operation too. It is better to work multi-band. Of course, you can often give you unique squares. The basic WASA-HF awards requires 100 points (different squares) in the bands up to 28MHz, all worked from the same Grid Locator Square (first four digits).

Achieving 100 points is relatively easy if you work multi-band. Of course, you can attempt single band operation too. It is better to contact as many Maritime Mobile stations or rare island operations as possible, because they often give you unique squares.

The WASA-V-U-SHF award is for 50MHz and up, but it is not so easy compared with the HF award, due to the relatively limited chances to contact DX stations. The WASA award is a young award, introduced in 1992. So not many people have joined 'square hunting' yet, but it's expected that this will become a more popular award programme in the near future.

The Official JARL Award Rules
Asian DX Award (ADXA), SWL-Asian DX Award (SWL-ADXA) May be claimed for having contacted (heard) and received a QSL card from an amateur station located in each of at least 30 Asian countries including Japan. DXCC countries are standard, the Asian ones grouped in the Asian Countries List. A list of QSL cards should be arranged in order of the listing of the Asian Countries List.

Asian DX Award Half (ADXA-HALF), SWL-Asian DX Award Half (SWL-ADXA-HALF) May be claimed for having contacted (heard) and received a QSL card from an amateur station located in each of at least 15 Asian countries including Japan. DXCC countries are standard, the Asian ones grouped in the Asian Countries List. A list of QSL cards should be arranged in order of the listing of the Asian Countries List.

Asian Country List for ADXA
1S, 9M0 Spratly Islands
3W, XV Vietnam
4J, 4K Azerbaijan
4L Georgia
4S Sri Lanka
4X, 4Z Israel
5B Cyprus
70 Yemen
8Q Maldives
9K Kuwait
9M2 West Malaysia

The ADXA-Half Award is issued by JARL for confirmed contacts with 15 Asian countries.

9N Nepal
9V Singapore
A4 Oman
A5 Bhutan
A6 United Arab Emirates
A7 Qatar
A9 Bahrain
AP Pakistan
BY, BT China
EK Armenia
EP Iran
EX Kyrgyzstan
EY Tajikistan
EZ Turkmenistan
Hl South Korea
HS Thailand
HZ Saudi Arabia
JA - JS Japan
JD1 Ogasawara
Islands JT - JV Mongolia
JY Jordan
OD Lebanon
S2 Bangladesh
TA Turkey
UA8, 9, 0, RA - RZ Asiatic Russia
UJ - UM Uzbekistan
UN - UQ
Kazakhstan VR2
Hong Kong VU
India VU
Andaman and Nicobar Islands VU
Laccadive Islands XU Cambodia

WASA (Worked All Squares Award)
The Worked All Squares Award is for confirmed contacts with different QTH Locator Squares, regardless of political borderlines or countries. Whilst only Asian stations count for the ADXA award, all stations in the world count for the WASA award. These include /JM (Maritime Mobile) stations in the oceans of the world, which give you more chance to get points.

The basic WASA-HF awards requires 100 points (different squares) in the bands up to 28MHz, all worked from the same Grid Locator Square (first four digits).

Achieving 100 points is relatively easy if you work multi-band. Of course, you can attempt single band operation too. It is better to contact as many Maritime Mobile stations or rare island operations as possible, because they often give you unique squares.

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On the Air from Mykonos

It's never been easier to combine a holiday with amateur radio operation, although Phil Whitchurch, G3SWH, did have one or two gremlins with him . . .
The departure area, whereupon a further incomprehensible conversation took place with another official, who instructed me to go out to the aircraft with a Greek baggage handler.

There was another passenger who had lost all his luggage who came with us. At the aircraft, the baggage handler calmly opened the cargo hold door and invited us to climb inside to identify our missing bags. I found the radio almost immediately, still bearing the original Santorini label and retired to the terminal building. The other chap was not so lucky, as he had only found his rucksack before the captain of the aircraft arrived and ordered him out of the hold as he was “a security risk”. I believe he then went and sat on the aircraft and refused to move until they found his luggage who came with another official, who instructed me to go out to the aircraft with a Greek baggage handler.

At Last - On the Air

It was a short taxi ride to the Geranium Apartments, where another old friend, Paris Panayoyopoulos, made us most welcome. After bringing each other up to date with events since last year, we got unpacked and I started to erect the inverted-V wire antennas which I have used on my previous expeditions, and which have proved to be very successful.

We originally started staying at the Geranium Apartments as they suited our holiday requirements - clean, well-appointed and with a much higher degree of comfort than the average Greek standard. They also turned out to be the most superb radio location, being located at the top of the hill overlooking the town, at about 200m above sea level, with a slight upward slope to the north and an otherwise clear take-off in all other directions.

Whilst Jan finished unpacking, I took the opportunity of a vodka and tonic and to set up the radio on the balcony and make a few QSOs on 18.1 MHz CW. The first CQ at 1606 UTC produced a nice run of 38 mainly European stations in just less than 30 minutes before we went to the beach for some food before our first night on the town.

The following morning Jan was feeling tired, possibly as a result of the previous evening’s revelling, but most likely because of the travelling. I was up at about 0600 UTC and made a few QSOs on 18.1 and 10.1 MHz before settling down to a three-hour run on 14 and 21 MHz, again mostly with Europe. When Jan surfaced, we spent a few hours on the beach, but I was on the air again by 1530 UTC for an hour or so, before dinner and another evening of revelry.

The pattern was thus set: an hour or so of activity in the mornings whilst Jan was sleeping, and an hour or so in the late afternoon over a vodka and tonic whilst Jan was getting ready for us to go out for dinner and to enjoy the evening. Such a formula had worked very successfully in previous years and once again caused no problems between us. The only thing I had to promise was to QRT when Jan was ready to go out (and to be ready myself by then).

Activity over the weekend 14/15 June was good, and accounted for almost 64% of the total of 1164 QSOs which I made this year, including 135 on 24.9 MHz. The QSO rate was unusually low during the beginning of the week, but improved on Thursday, the 19th, when I made 177 QSOs.

By far the most numerous were the Germans, who made a total of 217 QSOs, followed by the Italians at 115. UK was in third place with 66. I worked a total of 55 DXCC countries, bringing the total for three years to 97. Maybe next year I’ll top the 100 and get a DXCC from Mykonos!

Special QSLs have been printed and are available either direct with reply paid postage from my home address (my address is correct in any callbook since 1970) or via the RSGB Bureau. For those without a callbook, the address is: Phil Whitchurch, G3SWH, 21 Dickensons Grove, Congresbury, Bristol BS19 5HQ.

Note

[1] The RSGB IOTA Committee’s Yaesu FT-900AT, complete with mains power supply, key and microphone, supplied in a sturdy metal case, is available for loan to any bona fide amateur radio operation activating an IOTA island. However, please note that the rig is often booked well in advance during the popular summer months. To book, or for further details, please contact Neville Cheadle, G3NUG, Further Fielden, Longcroft Lane, Felden, Hemel Hempstead HP3 0BN.
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HAM RADIO TODAY Vol.16 No.2
Geoff Brown, GJ4ICD, reports on an excellent month for 50MHz and meteor scatter contacts

Last year's November Leonids meteor shower produced some spectacular results and Dave Butler, G4ASR (IO6I), posted this report. All stations were worked on SSB!

17 November 1997: 50MHz 0633 DL4MDQ, OE2UKL. And on 144MHz, Dave worked the following: HA7UL, IV3HTW, 9A1CAL, S52EA, YU7EW, D68UFR, DL5IAE, LA0BY/P, F6DRO, IV3BL, OE3MSW, 9A4EW, YU1WP, DJ90V, IK1EGC, HASCW, HA50V, S51MQ, HB9FAP, EA3T, I8MPO, EA7GTF, IK2EAE, IK4WIL, 9A2ID, DL4MEA, I8TKW.

Dave also heard DJ9YE, 9A2ID, DL4MEA, I8TWK, EA7GTF, IK2EAE, IK4WIL, HB9FAP, EA3T1, 18MPO, HA5CW, HA50V, S51MQ, YU1WP, DJ9QV, IK1EGC, OE3MWS, 9A4EW, F6DRO, IV3BL, OE3MSW, 9A4EW, YU1WP, DJ90V, IK1EGC, HASCW, HA50V, S51MQ, HB9FAP, EA3T, I8MPO, EA7GTF, IK2EAE, IK4WIL, 9A2ID, DL4MEA, I8TKW.

Dave also heard DJ9YE, 9A2ID, DL4MEA, I8TWK.

He reported a good response to his calls, with patience and fingers crossed. It needs a lot of patience and fingers crossed.

Many stations started coming in, and call many times. A nice clear frequency was maintained, and it just opened from 2258UTC on 3 October, returning! This was at 1400UTC into the UK. The band continued to be open for three hours. The band continued to be open for three hours. Also the YV4AB/B beacon was heard at S7. Ken, AC4TO, also reported the opening on 50MHz. He writes, "I was doing some preparation for some visitors to my QTH while listening to 50.110MHz, when I heard a voice suddenly come through speaking Spanish. I quickly got to the mic and called in Spanish, with my call, and imagine my shock when it was CX1DDO who returned! This was at 2258UTC on 3 October, and it just opened from there, several CX and LU stations started coming in very nicely. My best DX was LU1DVT in GF11 at a distance of 5073 miles from my grid of EM70. I worked: CX1DDO, HH7PV (Es), CX4AAP, LU1DVT, U9EHEF, LW6EUQ, LW5EWD, LW5EUJ, LU9EMK, LU6DEO. These signals were strong even for my minimal antenna. The opening lasted two hours.

There were many more openings in October, including TR6CA, A22BW and ZS6XJ, who were all working into Europe, but the best of all was the opening between PY and JA.

JR6HI made a 50MHz contact with PY5CC on 14 October, at 0102UTC. Reports were an astonishing 59 - 59. For 30 minutes PY5CC was strong at JR6HI's location. Congratulations to Kenji and Peter. Peter, PY5CC, again made the grade when he worked into Europe on 19 October on 50MHz. He started to hear the Portuguese beacon C51ACP on 50.031 at 2143UTC and the signal went up to 579. He worked EH7CD at 2218, C54QP at 2228 and EH7KW at 2244.

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The graph of the solar flux and sunspot number plotted with the geomagnetic A index for the months of October and November last year. The solar flux is showing an encouraging upward trend.

you never know, it may arrive in time”.

Sid, ET3SID, in KJ99 is now QRV on 6m. His home call is G4CTQ and he is equipped with an FT-736. He started his 50MHz operation on 8 October 1997. His first QSO was with Carmelo, IW9EQS, followed by Maureen, 9H1JN, at 1240UTC and Alan, 9H1AW, at 1241.

Dale, W4QM, has informed Ted, G4UPS, that he will return to Chagos as VQ9QM in January 1998. Dale will be active on 6m as soon as he arrives there.

Tony, A45ZN, in Oman has been given verbal authority for operations on 6m and is waiting for the written permit. He intends to put up two 5-ele Yagis. QSL via G4UPS, who is QTHR.

**News from Germany**

DL8HDCZ reports that last November it was decided that the new amateur radio law (AFuG 97), valid since July 1997, will be replaced by another law called 'AFuV' that regulates everything in detail. This AFuV will start on 1 January 1998. And with this new law, changes to the 6m band in Germany will be possible for the first time since 1991. All Class 1 (some 30,000 or so) licences will have access to 6m. A little more power is expected too.

Ezzat, SU1ER, reports that he is still trying to get full 50MHz permission for all amateurs in Egypt. Sadly the 100W amplifier he has is now 'QRT'.

Finally, some really interesting news about Chad, TT8. Eric, F5JKK, hopes to activate TT8 between January and May 1998. He will be QRV around 15 January, depending on the geographical situation and also QRM. Eric hopes to use the call that he used the last time he was there: TT8AQ. QSL via F6FNU or direct with IRC / SAE.

**Sporadic E Openings**

There were several openings in October, one of the best was on the 13th, when EH9, I, IT9, S5, SP and YU were all worked on 50MHz from the UK. Also, the 5B4CY beacon was copied at 1230UTC via multi-hop Es. November also produced a few openings within Europe, albeit only on 50MHz. On the 23rd at 1800 to 2000UTC there was an extensive opening between G / GJ and SP, S5, OK, I and YU.

**USA to Italy!**

On 7 October, Mario, I5MXX, had an unusual opening to the USA on 50MHz. Mario states that at 1800UTC, K3RRE replied to his CQ call. “His signal was S7, but only for a few seconds. About five minutes later K1DT was calling CQ himself on 50.105MHz, at S3 - 4 and a lot of fading but he arrived for over two minutes. Unfortunately, he was not able to copy my call. Both signals were on SSB. The very strange thing is that I was beaming towards South America, around 240 degrees with my 4 x 9-ele Yagi and when I switched to my other antenna system (4 x 4-ele) directed to the USA all the signals disappeared.”

**Beacon News**

There is a new beacon on the air from FN03 in Canada. The callsign is VA3BCN/B and it is on 50.046MHz. I believe this beacon was off air for about the past three years, but is active again. Location is just west of Toronto, Ontario.

Another new beacon is WB9STR/B on 50.071MHz, with 5W output to a vertical ground plane antenna at 45ft. The location is EN61. The ZS6TWB/B beacon on 50.044 is QRV again. It runs 15W into a 3-element Yagi beaming at 330 degrees. The beacon transmits the following: ‘V V V de ZS6TWB/B KG46RD’ and about 30 seconds of carrier, and then repeats the sequence.

**News and views can be sent by ‘snail mail’ to:**

Geoff Brown, TV Shop, Belmont Rd, St Helier, Jersey, CI or via e-mail to equinox@itl.net
Our HF columnist Don Field, G3XTT, is in reflective mood

Maybe it's because I've been licensed so long (30 years later this year), or maybe it's because the year is just turning, but I've found myself reminiscing about how things have changed on the HF bands since I was first licensed. I covered some of this in my September 1993 column, but perhaps a little nostalgia once every five years might be forgiven.

When I started my amateur radio career, although the Class B licence existed, it was largely the preserve of experimenters, as it covered only 70cm and upwards, bands for which there was no commercial equipment. So the starting point for most amateurs was a Class A licence and a 10 watt AM and CW rig for 160 and 80 metres. That was certainly the case with me, starting out with a Codar AT-5 transmitter (British-made, I must add!), and a Lafayette nine-valve superhet receiver which I had assembled from a kit. Most of my activity was by way of local nets on 'topband' (160 metres), chatting to friends around town and just occasionally venturing down to the low end of the band to work some more distant UK stations and the occasional continentals on CW.

Of course, there were HF DXers and contesters, with large aerial arrays and linear amplifiers (mostly homemade), and this was the era of the first real 'DXpeditions', put on by names that have since gone down in history. Gus Browning, W4BD, and Don Miller, W9WNN, were two of the best known, though Don Miller was later discredited when it turned out that at least some of his operations had taken place from locations other than where he claimed to be. Maybe, therefore, it was also the end of an age of innocence in amateur radio.

There was plenty of activity from other places that would be considered rare nowadays, particularly from those parts of the map that were still coloured red. British ex-pats on government or commercial assignments in those days before satellite telephony and reliable international dialling often found amateur radio a good way of keeping in touch with home. And there was regular activity from places like Afghanistan, the Lebanon and Ethiopia, countries which were then stable and reasonably prosperous. These stations didn't attract the pile-ups that would jump on any appearance by them nowadays. Roger Brown, G3LQP, for example, ran the so-called Commonwealth Net for many years, and although there were regular appearances by amateurs from out of the way places, the net was always well disciplined and relaxed, with time to chat and share gossip, rather than just a hurried signal report.

**These Days**

Nowadays, much has changed, and not always for the better. There are many more licensed amateurs around the world, for which we should be grateful insofar as we can use our numbers to justify retaining radio spectrum over which other potential users frequently cast an avaricious eye. And DXing has, in any case, caught on more as a specialism within the hobby. In the US, even when I was first licensed, the main HF interest was still traffic handling (the RSGB's sister organisation is not called the American Radio Relay League for nothing - its main purpose was to cater to a membership which enjoyed handling third party traffic, a role which grew out of the ability of amateurs to pass traffic long-distances within the US when long-distance telephony was still in its infancy). Nowadays, there are probably more HF DXers in the USA than anywhere else.

And, of course, it is a lot easier nowadays for HF operators to be aware when a new one appears, mainly due to the almost universal use of PacketCluster (it's hard to believe that the first PacketCluster in the UK started operation only about seven years ago - I well remember chairing the inaugural PacketCluster Working Group meeting at G3LNS's house, with the assembled company starting to consider how we could roll out a UK-wide network of Cluster nodes, and also because there is lots of up-to-the-minute information available on the Internet.

Fortunately, there is also more DX activity on the HF bands, to cater for the increased level of interest in DX chasing. The advent of smaller HF radios just take a look at the Icom IC-706 MkII, for example, the size of a car radio but with all HF bands, 6m and 2m), and of cheap air travel (plus frequent flyer schemes!), has made it possible for almost any of us to be DX. Compare this with tales of early DX operations, with amateurs hauling literally tons of heavyweight valve equipment round the world by sea, by rail, and even by pack horse. A modern shack (see photo) will almost always include a PC nowadays, to monitor PacketCluster, maintain the log, send CW, and even turn the aerial rotator.

But, despite all these changes, the basics remain the same. We continue to chase the DXCC awards which were introduced in their present form soon after amateurs returned to the air following World War II (albeit, several variants such as the five-band and single-band awards have been introduced since), and even SSBB, our most 'modern' mode of operation was pioneered in the 50s and has been in almost universal use since the late-60s. Digital Signal Processing (DSP) techniques are finding their way into modern ham gear, but there is no sign yet that we will follow the
professionals into digital modulation techniques, a far cry from days gone by when amateurs generally led the way.

What of the future? It's hard to say, though maybe we will see a much closer integration of radio and Internet technologies and, eventually, the adoption of new modulation techniques such that the present debates about whether or not to retain the CW requirement will seem a bit like those old ones about how many angels can dance on the head of a pin. However, I have a feeling these changes will come more slowly than we might expect, and that the major change in HF amateur radio over the next 10 to 20 years will be a fall-off in interest in the so-called developed world, where amateur radio is increasingly considered passé, but an explosion in interest in countries like Indonesia, Thailand and China where newly-prosperous young people look to amateur radio to develop their technical skills and to reach out to other nations.

**CQWW CW Contest**

Looking back at recent band activity, the CQWW CW Contest at the end of November must rank as one of the highlights. Although 160-metre conditions were down on 1996, 80 metres was excellent and Ron Stone, GW3YDX, was able to work 120 countries in the course of the weekend; 40 metres was also in very good shape. My own efforts were on 20 metres, for which I put up a 4-element monoband Yagi which had been sitting gathering dust for some years. Its performance was noticeably better than that of my usual trapped tribander, but activity was relatively low, with 20 metre band openings coinciding closely with those on the higher bands which is where most stations seemed to have migrated. Certainly 15 metres was excellent, and 10 metres produced a couple of exceptional, albeit short, openings to the USA. A friend of mine in Jersey worked as far across as Nebraska, and was still hearing East Coast and Canadian stations on 10 metres well into the evening. As always, many of the expeditions which had gone out for the contest were active both before and afterwards, and the bands were buzzing with interesting callsigns. To give you some idea of how good high band conditions were at times, let me tell you about a contact I made on 12 metres. Having just put up my 20m beam, KH8/NEOLS in American Samoa was 'spotted' on the PacketCluster as being on 12m CW. Without a 12m aerial I thought I would be wasting my time with a rare one like that, but used the aerial tuner in my Yaesu FT-1000D to allow me to transmit into the 20m aerial despite the mismatch, and ended up working the KH8 first call!

**Latest DX News**

Dov, 4Z4DX, and others have announced their intention to activate St Brandon Island, a dependency of Mauritius, in May. They will use the callsign 3B7AZ. Let's hope this one comes off, as it is some years since there has been a substantial operation from this DXCC 'country'.

Also in May (well, 30 April until 7 May), Hide, JL1LJS, will be active as 3D2LJ from Fiji. His operation will include 30, 17 and 12 metres.

Karl, K4YT, veteran of many operations from Africa and elsewhere during the course of his work, will be reassigned to the US embassy in Tel Aviv for three years from March and expects to be active from there.

Peter, PB0ALB, has announced that he will operate for six weeks during April and May as 9M8CC from Sarawak, with a low band vertical and a beam for the high bands. QSL to his home call.

John, CE0ZAM, a resident of Juan Fernandez Island (featured last year in Michael Palin's circular tour of the Pacific), expects to be active for about 20 days in April and May as QX0X from San Felix, another of Chile's possessions in the Pacific Ocean. Again, it is some years since San Felix was activated, so John will no doubt be in great demand.

To commemorate Expo '98 in Portugal, Portuguese amateurs can use a series of special prefixes until the end of September. CT1 and CT2 stations can use CT98, CT4 stations CS98, CT3 stations (Madeira) CQ98, and CU stations (Azores) CU98. I wouldn't be surprised if there is some sort of award for working these special prefixes, so start chasing them now.

Joe, VE3BW, was expecting to be active as VE3BWH/6 from Roatan Island off Honduras from 1 to 22 February. After very little operation from Honduras in recent years, it is nice to see a number of expeditions from there in recent months.

Ruby, K4UPS, and Bill, K4LTA, will be active from Granada (J3) from 10 February until 3 March. Bill always does a great job on the low bands (especially 160 and 80 metres), so I would recommend taking a look for them. They will be joined by two more operators for part of the time, including the ARRL CW Contest.

Andy, K2LE, will be active from 2 to 15 February as P4/K2LE from Aruba and John, W1BIH, will be back in Bonaire until the end of March, signing PJ9JT. The various Netherland Antilles have always been popular for radio expeditions, being easy to get to, counting as South America and hence extra points in several of the major contests, and with excellent propagation into the USA. At different times there have been several permanent expeditions established on the various islands, and I know, for example, that Carl, AI6V, rents out his cottage on Aruba (complete with radio and aerials) to visiting hams.

Oliver, OH2NSM, was due to be active from Guatemala as TG0OH until 25 February, all bands, and on both CW and SSB.

A German group should be active from Chatham Island, a New Zealand possession in a big way between 23 February and 9 March. This is the same group that has done a super job from the Cocos (Keeling) Islands, Christmas Island, Bangladesh and Papua New Guinea in recent years, so expect to run across them on all bands and modes. There should be good greyscale propagation (ie along the line of the day / night boundary) to Europe at that time of the year, so signals could be excellent, even on 160 metres.

And finally, don't forget that the CDXC DXpedition to Layang Layang in the Spratly Islands will be on the air between 13 and 23 February, with a major all-band effort from 160 to 6 metres. The callsign will be 9M0C and the group, of which I am a member, will be on all modes CW, SSB and RTTY. We're taking some big antennas, so we should be easy to work even if you only have a modest station yourself.

**Thanks**

As always, I am grateful to the RSGB's DX News Sheet, in addition to Internet resources such as 425 DX News and the OPDX Bulletin for much of the above information. Please send your HF related news, views and photos to Don Field, G3XTT, 105 Shiplake Bottom, Peppard Common, Henley on Thames, Oxon RG9 5HJ, or by e-mail to g3xtt@lineone.net.
Scar 10 is still operational in Mode-B and available when viewed but please do not attempt to use it if you hear the beacon or the transponder signals FMing. Generally, once AO-10 hits darkness, it shuts down. The sun was estimated to be directly shining on the antenna end of AO-10 (illumination = 0) at the end of November and so the satellite should be in the middle of its 'sleep'. However, by mid-January conditions should be quite good again and the solar angle will hit 0 degrees (100% illumination) between 21 and 28 February. All this, of course, is based on 'guestimation' centered on the last 'sleep' phase. So far, however, the estimates seem relatively close to reality.

**Russian Satellites**

As part of ongoing frequency experiments to improve amateur radio operations on board Mir, and to better understand how these frequencies will be effective on the International Space Station, Mir is running a two-phase frequency experiment which began on 1 December and which will end on 31 May 1998. For phase 1, a 70cm / 2m crosslink experiment is operating during a three-month period from 1 December to 1 March 1998. The Mir operating frequencies changed to:

- **Uplink**: 437.850MHz
- **Downlink**: 145.800MHz

Phase 2 of this experiment will use a 2 metre-only set of uplink and downlink frequencies. This phase of the experiment will begin on 1 March 1998 and will also be of three month's duration.

This experiment was developed at the recent Toronto AMSAT-NA Space Symposium. It has been endorsed by the representatives present at the conference which included SAFEX, SAREX, AMSAT-UK, the IARU Region 2 President, the IARU Satellite Advisor (ZS5AKV), ARI (Italy) and RAC (Canada).

The SAFEX-II project on Mir came back for a while but, because of the new computer problems the crew is having, it is expected to be shutdown again.

On the simplex frequency, the crew believes the antenna coax for the PMS station may have been damaged during the space walk on 6 November. It has been suggested to the crew not to use the PMS station until the cable is repaired. The crew may attempt to fix the coax cable during a scheduled December space walk.

The Sputnik model displayed at the AMSAT-UK Colloquium is now in orbit. The official name is Sputnik-40 but folk s are generally calling it 'RS-17'. The beacon is on 145.820MHz FM. Two flight units were said to have been sent up to Mir. However, the second unit consisted of just spare electronics modules and there is no way this can be orbited separately.

The satellite was hand deployed during a space walk on 3 November. The small satellite is battery powered, and is currently transmitting audio 'beeps' using 250 milliwatts of power. Reception reports have been received from around the world by people using even modest receiving equipment such as a handheld receiver in a car with a 'rubber duck' antenna. The frequency of the audio tone transmitted by the satellite is related to the internal temperature in the spacecraft. The batteries on the satellite were expected to allow operation for about one month.

The satellite commemorates the 40th anniversary of the original Sputnik 1 satellite. Sputnik 1, launched by the Soviet Union in 1957, was the first artificial Earth satellite. The original Sputnik 1 transmitted a similar beacon on approximately 20MHz.

Reception reports can now be sent directly to the Radio Club of Jules Reydellet school on Reunion Island. Those whose reports are confirmed will receive a 15 x 21cm, four-colour certificate on high quality paper with number identification and the radio club stamp. Requests for these certificates should be made only by letter with a 15 x 21cm SAE and 2 IRCs. The certificates will be sent after the end of the satellite's life. The mailing address for FR5KF is: FR5KF Radio Club, 103 Rue de la Republique, 97 489 Saint Denis Cedex, Reunion Island.

A more complete technical description of the satellite, dealing with its electronic, mechanical and thermal designs, as well as its antenna patterns, is available from AMSAT-France for a nominal donation (it is written in French). Contact them at: AMSAT-F@AMSAT.org for more details.

Those interested in more information can also visit AMSAT-F's web pages at: http://www.ourworld.compuserve.com/homepages/AMSA T_F_

You can also visit the Reunion Island web site about Sputnik-40 at: http://www.oceanes.fr/~fr5fc/ spoutnik.html

**Digital Satellites**

WDOE reports that the DOVE's command operators are attempting to keep the DOVE S-band transmitter activated for those who wish to test receive equipment on that band. One of the command team will make an announcement via the Internet if the transmitter temporarily goes off.

The S-band transmitter puts out about 0.8 watts to a biller helix mounted about 1.5 inches in from one edge. The antenna is generally pointed away from the Earth in the northern hemisphere and toward the Earth in the southern hemisphere. If users are listening from north of the equator they should hear deep fades about every 30 seconds or so as the satellite rotates about its Z axis and the S-Band antenna is blocked by the body of the satellite.

GSL cards for DOVE are once again available. Those special cards depict a dove carrying an olive branch in its mouth and will be provided to anyone who sends a report.
indicating they’ve heard the satellite. Send an SASE to: Dianne White, NOIZO, 4577 Rampart Road, Parker, Colorado 80138-4316, USA.

Phase-3D
Ariane 5 successfully lifted-off on 30 October from Kourou, French Guiana. The fairing that shrouds the payload during ascent phase was jettisoned three minutes after lift-off and final injection was performed by the storable propellant stage, which ignited ten minutes after lift-off.

Twenty-seven minutes into the flight, Maqsat H and Maqsat B (platforms carrying instruments to analyse launcher flight behaviour) and the technology satellite TeAMSAT were ejected into orbit.

This was the second test flight of Ariane 5 after the failure of the maiden flight on 4 June 1996. The third qualification flight is scheduled for spring 1998. Commercial Ariane 5 flights, managed by Arianespace, will then begin with the fourth launch in the second half of 1998.

Data collected during this flight indicates that the liquid-fueled core vehicle of the Ariane 5 rocket rolled in flight causing its Vulcan main engine to shut down 10 to 20 seconds earlier than planned so the upper stage booster and attached payloads did not attain the prescribed velocity and hence went into a lower orbit than expected. The roll caused fuel movement (by centrifugal force) so apparently the fuel gauge showed ‘empty’ before it really was.

ESA officials are reported to have said that, had commercial satellites been aboard, their onboard propulsion systems would have enabled them to attain geostationary orbits, despite the lower than planned insertion. However, it has been conceded that such a correction might have resulted in a reduction in the satellites’ overall life, possibly up to 10%.

Apparently the apogee of the orbit is only 27,000km, not the scheduled 38,000km, but the perigee is 524km - not far from that expected.

An interesting rumour surfaced on a recent AMSAT-UK 80m net - that the extra strengthening added so much mass to P3D that the fuel capacity on-board is no longer sufficient to achieve the intended final orbit. AMSAT-DL say that the ‘intended final orbit’ is the so-called 16-hour orbit and the mass of P3D is currently about 630kg. Their information is that with this mass we will just make it into the 18 hour orbit.

The exact situation will be known when the parameters for the new launch are exactly known; it could be that some overweighted parts have to be offloaded. The team in Orlando is currently investigating the possibility to replace the AUX-battery by a NiMH battery.

Those interesting in tracking events may want to watch: http://www.newspace.com/feature/newsline/rocket.html which seems to be the best ‘unofficial’ source of this kind of information that has been found so far.

Short Bursts
Followers of Oscar-11 will notice that the news bulletin doesn’t get changed often. I received very little feedback from the regular bulletin service, and at a recent AMSAT-UK committee meeting it was decided to discontinue the weekly postings, and replace them by a static bulletin. This may be changed at monthly intervals and will contain items such as Keplerian elements and satellite frequencies.

Next year’s AMSAT-NA meeting will be in Vicksburg, Mississippi. The following year it is likely to be in Detroit.

At the IARU International Satellite Forum held in conjunction with the AMSAT NA Space Symposium in Toronto from 17 -19 October 1997, ZSSAKV reviewed the decisions taken by the IARU Region 1 Conference to introduce monitoring activity and they agreed that Ron Roden, the IARU Region 1 IARUMS Co-ordinator would, on a trial basis, act as co-ordinator.

The role of the IARU AMSAT Frequency Co-ordinator was discussed. It was agreed that the terms of reference continue to apply.

The meeting recommended that Wednesdays as ‘experiments day’ be continued and that the IARU Satellite Adviser and Frequency Co-ordinator should promote more experimentation.

There was unanimous agreement that higher frequencies above 70cm, new modulation techniques and operating modes, should be considered for future manned space missions.

The 1997 World Radio Conference concluded on 21 November in Geneva. Amateur radio survived WRC-97 largely unscathed, but the stage has been set for renewed spectrum battles at WRC-99.

The ‘Little LEOs’ (non-voice, non-geostationary mobile satellite interests: LEO = Low Earth Orbiting) - which put a huge scare into the amateur radio community in 1996 with their proposals to share amateur VHF and UHF bands - were unable to muster much support for new allocations at WRC-97. However, they came away with up to 3MHz of additional spectrum on a regional basis, in the bands between 454 and 460MHz. The Little LEOs also obtained a resolution calling for urgent studies in preparation for WRC-99 - what some at the conference called “a hunting licence” for additional VHF / UHF spectrum. A second issue that will recur at WRC-99 is finding a place in the 420 - 470MHz frequency range for the Earth Exploration Satellite Service (EESS). Synthetic aperture radars (SARs) using frequencies in this range are said to be capable of penetrating the rain forest for mapping purposes.

WRC-97 delegates did agree to upgrade the Earth Exploration Satellite Service from secondary to primary at 1215 to 1300MHz, which should have only minimal impact on amateur use of 1240 - 1300MHz. The presence of EESS there also reduces the possibility that other, less compatible, services might later be introduced into this band.

In other allocations decisions, amateur satellite segments were not included among allocations for wind profiler radars. Except for a worldwide primary allocation at 1270 to 1295MHz, the only specific allocations for wind profiler radars are in Region 1, and those are on a secondary basis.

For anyone with Internet access, there is an interesting ‘Virtual Space Museum’ with lots of pictures and graphics about many Russian space projects, including the moon rocket, lander, Sputnik and Mir space station. You can also take a virtual tour inside the Mir station. It is at: http://www.ccas.ru/~chemov/van/

AMSAT-UK News
Ron Broadbent, G3AAJ, has retired as AMSAT-UK Secretary after many years of sterling service. He is still connected with amateur radio satellites owe Ron a huge debt of gratitude. The new contact details for AMSAT-UK, from 1 January 1998, is as follows: AMSAT-UK, 40 Downview, Small Dole, West Sussex BN5 9YB; tel: 01273 495733; fax: 01273 492927. A copy of the latest Keplers is available on request by mail or packet; my mailbox is G87HSN but please note that AMSAT-UK Keplers are put out on packet fortnightly anyway and sent to KEPLER@GBR. When asking me for Keplers please say which satellites. All means about 250 satellites (all amateur sats’ is adequate if that’s what you really really want).
Jeremy Boot, G4NJH, suggests we all think more positively about our hobby this year. At this time of year - and, yes, I know it's now the end of January - it is traditional to talk of New Year Resolutions. My suggestion is: stop the moaning and the negativity in our hobby. Let's celebrate not only a past to be proud of, but an exciting time to come.

Accessible technology is gaining momentum all the time and with a little creativity, good will, and a clear sight to the future, all of us, amateurs and radio societies, can look forward to 1998 with some real enthusiasm. As I have said before: you get out what you put in.

The Moaners

It is a fact that there are many people in the hobby who naturally bond, and spend much of their free time helping their fellow amateurs in a thousand ways. There are, alas, also the moaners. They can do much harm. This train of thought was occasioned by a gloomy posting to one of the amateur newsgroups this week in which a newly-licensed amateur replied to one of those "packet has killed amateur radio" themes which attract the usual resident groupies who have to see their name attached to every comment. In this case, the responses were polarised between: "I only live for packet" and the complete opposite.

The original writer opined that radio was already dead as far as he was concerned, and anyway it now consisted largely of old fogies going on about their lumbago and the gardening, and that anyone who didn't fit the mould was doomed from day one. He didn't seem to consider that he might have a part to play himself in improving matters, even if that were true. But it makes you wonder how someone new to the hobby had obviously not been at all prepared for what he found. Other contributions to this sad debate included the odd insult, and a few in comments understood only by the writers. Heaven knows what non-amateurs make of such threads in newsgroups. No-one did actually determine what packet radio had destroyed or achieved.

First and Last an Amateur

In reality, like other 'new' modes, packet has not harmed amateur radio. Of all the comments I get from my WWW page feedback, packet is by far the most popular part of the hobby for my correspondents. I am not entirely sure why. It was probably the first major departure from real-time QSOs. The Internet was a natural sequitur to the computer's presence in the shack and the rest is history.

It is now almost a year since I started to consider seriously the relationship between amateur radio and the Internet, in this series of articles and elsewhere. Once the message gets across that the key is being an amateur and that all else is subservient to that, the fear of innovation recedes. So it should. No-one has to...
abandon his favourite aspects of the hobby, or go out and buy a computer, for example. But there are those who can and will use the new medium to reach and attract the many, who have still never heard of amateur radio, and there will be others who use it to keep on top of latest developments and adding to their communication abilities. That is entirely in the spirit of the hobby.

The Coming Year
So this year, what might we hope for? Well, I do look forward to that new breed of radio which interfaces with computers. When I bought my FT-767GX some years ago, it advertised a CAT interface, which seemed to me advertised a CAT interface, 767GX some years ago, it

When I bought my FT-101 (I used to have one) still going strong. It seemed almost light-years away in its design and technology. Things do and will move on. That is good for all of us. It doesn't wipe out the good that preceded it, however. As what they call 'convergence technology' gets a grip, various clever devices which are now separate items (radios, TVs, computers) will merge.

The HF cycle is at last heaving itself into gear, and not before time. The bands have restored to us some of our old favourites: long-path VKs and ZLs in the morning, 21MHz and even 28MHz is now more useable and MUFs more healthy. I suspect that the Internet might not have taken off so quickly for amateurs these last two years, had HF not been so generally poor at the bottom of the last cycle. So we can look forward now to not abandoning HF for the Internet in 1998. No more excuses! We can of course use them both. Why not? The information for hams has never been greater on the net and is likely to continue. I see no reason therefore for us not to consider some of the push technology which commercially is now available. This is the means whereby information is delivered to your desktop (often news and headlines) when you are connected.

That is it comes to you: you don't have to go and look for it. Would any of the radio societies like to kick this off? Let's not be slow to embrace this new trend. The business end of the market is falling over itself to get in on the act. So should we.

As to the Internet itself, by the time this is printed, the Norweb area should be close to starting their experimental feeds via the main supply (and a suitable modem, of course). The rates are supposed to be cheaper than ISDN and the bandwidth available would be considerably greater, they say. Add to this the prospect of satellite feeds and even some sort of TV feed and / or cable links, and 1998 is likely at the least to see another large expansion of the Internet: more accessibility in general. Public reference libraries are also likely to be connecting if they haven't already. Gone are the days of looking up school projects on Saturday morning in a 1930 edition of Encyclopaedia Britannica, it seems.

Bill Clinton seems to think that there is money out there on the Internet untapped. He may be right, but I hope we don't see what is a unique global network become just an enormous shopping mall. I get far too many 'spams' (unwanted advertisements, usually for money-making scams) already.

Tailpiece
A number of articles ago [HRT Vol 15 No 8 - Ed], I wrote about SWLs and space did not allow a table I had prepared for useful SWL / broadcasting links. If readers would like a copy of these links, please write to me at the e-mail address below, or via my pages, and I will send you a copy.

A page to look at this month, I suggest, is from my good friend Renato Bellucci, ZP5XF, in Paraguay, at http://www.qsl.net/zp5xf/english.htm. There are pages in Spanish as well as English, and there's a wealth of topics to keep you amused these cold winter evenings.

Meanwhile, may I wish everyone who reads these articles a happy, prosperous and successful 1998. Please send all e-mails about the Internet and amateur radio to Jeremy Boot, G4NJH atasperges@innotts.co.uk and take a look at the G4NJH WWW pages: http://www.innotts.co.uk/~asperges/
Chris Lorek, G4HCL, shows how you can sample APRS activity on-line, and gives a hint on how to overcome a unique 70cm packet frequency problem

Thank you for all the kind packet messages I've received over the festive period, all have (hopefully!) been replied to. Since I no longer need to act as a Consultant Tech Ed for the magazine, I should now have a bit more time to write articles and of course the time to send longer replies rather than just a quick 'two-liner'.

GB7SIG closes

The GB7SIG VHF BBS, run by the Royal Signals Amateur Radio Society, has been operating now for ten years from its site at the Royal School of Signals in Blandford, Dorset, and must now have been one of the longest-running BBSs in the country. If you've ever visited the Royal Signals communications museum at the site (it's a fascinating visit, I'd certainly recommend a trip there) you'll have undoubtedly seen the tower carrying the BBS's VHF antenna system. The SysOp, Sandy, G7MZR, has recently had a job change and because of this, from 27 December 1997, the VHF BBS will have closed. However the node SIG:G3VXX-3 will remain and provide user access to the network, and news is currently awaited on the future of the HF GB7SIG system. Sandy says that he'd like to thank all the users for making running the BBS a rewarding and enjoyable task.

439.850MHz, you might find that you're getting problems with a weak, but constant, off-frequency signal that's internally-generated from your transceiver. This came to light when a local node SysOp asked me if I could help him with his ex-PMR transceiver that's experiencing this problem. Many PMR radios, as well as some commercial amateur radio equipments, use a first IF of 21.4MHz, with a 20.945MHz crystal oscillator to then convert this to the 2nd IF of 455kHz. Now the 21st harmonic of 20.945MHz is 439.845MHz, ie 5kHz below 439.850MHz, and if this potential internal harmonic is of a high enough level it can of course find its way into the receiver's front end. It can sometimes even be received by other receivers on this frequency at the same location, so check other equipment as well! A common cure for this, in PMR circles, is to change the 2nd local oscillator crystal to one at 21.855MHz, to give subtractive rather than additive mixing. But an 'amateur' (ie lower-cost) approach to this, if you're having a problem with this on 70cm, is to try shifting the 20.945MHz crystal slightly lower in frequency, eg by around 250Hz. This would move it 5kHz lower at 70cm, and can be done by adding a small capacitor in parallel with the crystal. A typical capacitor value to try would be around 15pF or so, but you'll need to experiment a little as this will depend upon the actual oscillator circuitry used. This would move the harmonic out of the receiver's IF passband, but would only cause a receive carrier frequency offset at the 2nd IF (455kHz) of 250Hz, which usually shouldn't cause any problems unless you're already 'right on the edge' of the available 2nd IF bandwidth in some very critical data applications.

You can sample real-time APRS activity in California, here's what's happening on a December morning in 1997.

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APRS for DOS gives you the locations of amateur packet stations running APRS beacons
APRS on the Internet

In last month's column I mentioned the use of the Automatic Position Reporting System (APRS) over packet. Well, even if you don't have APRS facilities yourself with a GPS receiver linked to your TNC, you can still get in on the action on the Internet with amateur radio APRS. Of course, you might even just take a look to find out a little more about the system. If you point your browser at http://sboyle.slip.netcom/LI DSAPRS you'll find a page running a Live Internet Data Service for APRS, which collects, filters, stores and then serves the APRS packets from a TNC to the Internet. At this site you'll be able to see a real-time APRS map with constantly-updated information from packets received using a KPC-3 TNC connected to an Icom IC-228A on 145.010MHz, all located just outside Mountain View in San Francisco's South Bay in California. You can zoom the map in or out, scroll around, and list packet messages received by the system. Also on this site you'll find links to a number of other real-time APRS sites located in Miami, Atlanta, New York and Washington in the US, and Southern Ontario in Canada. The latest APRS programs as of late December 97 are version 8.05 for DOS (just over 1Mb compressed), and 2.08 for Windows (just over 3Mb compressed). The current QSP73 amateur radio software CD-ROM (£15.00 inc UK p/p, tel: 01703 263429 for info) has these included, together with additional Windows APRS wave sound files and a collection of UK maps.

A packet message from Ciemon, G10TRT, says that he 'took the plunge' and used WinAPRS208 to connect to the Internet and APRS server. The incredible result was over 800 stations logged on, with over 300 messages and people wanting to chat!

Maxpak network improvements

BLOX is a proposed new node designed to give access to users in North Walsall, Bloxwich, Great Wyrley, Brownhills and surrounding areas. There will be a direct link from the node to the WV node which in turn is directly linked to the Maxpak BBS, GB7MAX, both of these links run 9600 baud. The SysOp of the BLOX node will be Chris, G0CN, and he's applied for GB7BL as the callsign of the new node, with requested frequencies of 144.9375MHz and 432.675MHz.

With the ongoing improvements to the Midlands network, due to low demand the BNOR nodes in Bridgnorth have closed, although the MAXPAK chairman Brian, G3TIN@GB7MAX would be pleased to receive any comments or suggestions regarding this.

MAXPAK produce a very informative bi-monthly newsletter, Digicom, with the Dec 97 / Jan 98 issue including news, an offer of help with your rig and 12.5KHz channel spacing, details of how to use WinPack with a BayCom modem, and the first section of the excellent 9600 Baud Handbook by Mike Curtis, WD6EHR. This is being reproduced in print in 'serial form' in the newsletter's final pages, to eventually make up a complete reference volume for your packet station.

The active group also have regular meetings, they offer a packet software and hardware service including TNC and modern kits, and attend a number of rallies in the Midlands area. You can get further details on the group from Richard, G1NZZ, via packet with a message to G1NZZ@GB7MAX or by phone on 0973 262287 (1900 - 2200 Mon - Fri and 1000 - 2200 weekends).

Oakmoor BBS

If you're using landline-based amateur radio software download and have, like myself, tried out the Oakmoor BBS, you may have been having a few problems with line noise. When I downloaded the Windows-based Journal logbook from there, I often experienced 'bad packet' messages on my terminal screen. The SysOp, Ron, G1MET, says that he's aware that there are quite a number of users of this system and that unfortunately major errors have been occurring when people have been using it for downloading. Ron says that all equipment has been checked and found to be OK, and that complaints have been made to BT but without too much success so far.

So, if you use the Oakmoor BBS and you encounter problems, Ron asks that you leave him a message to that effect with the nature of the problem including the time, date etc, but to please also complain to BT about it! I suffered for several months with intermittent line noise on one of my phone lines, and it was only when I managed to get the BT engineering department to actually hear the noise when I made a speech call to them, and for them to then formally log it as a definite and known fault, that they traced the noise to the local exchange and rectified the problem. But I wonder if some of the newer competitive landline providers would also be able to sort out line noise problems?

CTRL-Z, End of Message

That's my lot for this month. You can contact me via packet with a message to G4HCL@GB7SOU.#48.GB R.EU or e-mail to g4hcl@amsat.org or by fax or a phone message (auto-switching) to 01703 263429. See you next month.
COMPUTER CONTACTS

Paul Simpson, G0RUR, responds to some readers' questions

I hope you all had a very good Christmas and have recovered from the effects of bringing in the New Year. In my articles this year I plan to place a little more emphasis on the 'Millennium Bug', now that there are plenty of programs to support finding out if you are affected, and repair programs available. For those with Internet facilities I will provide software Web sites to visit.

Win 95

First, though, I wish to clarify some of the points made in Jeremy Boot's, G4NJH, Net Connection article in the November 1997 Ham Radio Today. There is no reason why a DOS-based 386 PC with 4Mb of memory and Windows v3.11 running in Enhanced Mode cannot operate on the Internet quite comfortably. There is little importance attached to hard disk space for Internet browsing. There is also 32-bit software available to install into Windows v3.11 which allows automatic 16 - 32 bit operation. It should be remembered that there are lots of different systems being used, some only text-based, and patched from packet to the Internet. There has never been a better time to pick up a cheap PC to check things out.

The types of Windows of main concern are v3.1, v3.11 and Windows 95. The Winsock that allows transparent connection of other programs for TCP/IP is a Data Link Library (DLL) file. Jeremy referred to it as built in to Windows 95, although in fact Windows 95 has both 16 and 32-bit Winsocks for compatibility between applications (see pages 150 - 151 of Introducing Microsoft Windows 95, ISBN 1-55615-860-2).

I have been asked why I make no apology for excluding Windows 95. I see no benefit from an operating system which requires 16Mb of RAM, and over 50Mb of hard drive space as a base requirement, when most amateur programs are still DOS-based. I recently asked a number of Windows 95 operators to tell me what I would gain by upgrading above what I already have. 32-bit operation was the main reply, but my Windows 3.11 is 32 bit. After this there was only the meek response of a multitude of external applications that only operate on a Win 95 system. Well I'm afraid that's the restriction you put yourselves under. I can operate off an old 5.25in drive and 360k floppy disk and still run almost any facility including fax, e-mail, Web browsing, packet, SSTV etc. I think I have made my point!

Planned future reviews for 1998 include the RadioRaft v2.12 Multi-Mode Radio Decoder, and an update on the Rapid Results College RAE course.

HamComm v3.1

I had been asked by a number of HamComm v3.1 users to explain why the program display is full screen, but the writing is very small (see Fig 1). This is because the program does not default to the usual 25-line mode for VGA, and starts in 50-line mode.

There is no alteration to be made in the program configuration file (HC.CFG) to set the screen size, but there is a choice of two switches which we can use when starting the program to get the display to change to the setting we want. @BT2:Typing HC -L25 would run the program and it automatically sets up the screen. Typing HC -L25 would...
run the program in 25-line mode (see Fig 2).

You could write the following batch file. Make sure you are in the HamComm directory, then type the following at the DOS prompt:

```
C:\HC>EDIT HC31.BAT
```

This will start the DOS EDIT program. Now copy the following lines:

```
ECHO OFF
HC -L25
```

Save the file. Now when you want to run the program just type HC31 to start it in 25-line mode, or type HC to run in 50-line mode.

The other problem most enquired about was not getting any receive signal, and this was due to the External Converter in the KEY MENU being switched on as the default. The External Converter is a device for decoding RTTY that runs in parallel with the HamComm or alternative demodulator, and which would decode the signal if fitted, so you need to use EDIT again to alter the HC.CFG file to turn it off. You can do it by selecting it from the menu, and I have shown this in both graphic examples. If toggle the External Converter on the drop down menu it will not be saved when exiting the program so would have to be done every time the program is run. To alter the Configuration file and make a permanent change type the following:

```
C:\HC>EDIT HC.CFG
```

Scroll down to the line that reads the following:

```
set extconv on
```

Now alter it to read:

```
set extconv off
```

You could also enter your own details in the relevant areas if you intend to use the program to transmit. The file documents each section in clear detail. Now save the file. Job Done. I hope this helps. If you require the program, it is available from my Internet site HamWare FTP section, with the changes I have pointed out already done for you.

**DL4SAW's SSTV**

This program has a colour restriction so requires a 1 meg graphics card and a minimum of 32,000 colours to operate.

**WAB4WIN Update v1.07**

As you may remember from my review of WAB4WIN by Alan Carpenter, GW3RQT, I agreed to become a beta tester for the program. Alan has just released v1.06 of the program instigating the proposed changes mentioned in the article. The installation now consists of a four disk set, and is offered at £17.50, part of which is donated to WAB funds.

Here are some of the changes which have been made:

- Added Windows Help System.
- Added new screen to enable browsing of all database records.
- Added buttons to main screen scrolling. Now smooth scrolls per 1000 records in log file. Tidied up various routines. New Installer System.

WAB4WIN is available from Alan Carpenter, G4BXU, 18 Hobart Road, Ramsgate, Kent CT12 6NW.

You can get a program list from me direct if you send an SAE and disk, or from the GORUR Web site: [http://www.innotts.co.uk/~rur/](http://www.innotts.co.uk/~rur/)

Please send any correspondence for this column to: Paul Simpson, GORUR, 231 Caxton Street, Sunnyhil, Derby DE23 7RB; tel: 01332 737850; e-mail: rur@innotts.co.uk or rur@usa.net

**Lucid RAE Tutorial**

I need to mention George Butler's, G4BXU, excellent RAE Tutorial program which is being updated as we speak. My apologies to George for the mistake in the price that was earlier printed in error. At £17.50 it makes a very good investment, or you can send two 1.44Mb disks and an SAE for a demo of the program, to George Butler, G4BXU, 18 Hobart Road, Ramsgate, Kent CT12 6NW.

You can get a program list from me direct if you send an SAE and disk, or from the GORUR Web site: [http://www.innotts.co.uk/~rur/](http://www.innotts.co.uk/~rur/)

**HamComm v3.1 program display screen when reconfigured to 25-line mode.**

Fig 2: The HamComm v3.1a by DL5
Dick Pascoe, G0BPS, puts the fun back into homebrewing with some suggestions for simple projects

At my local radio club in Folkestone last week I was reminded that not all amateur radio 'homebrewing' of equipment is wrapped around making your own transmitter, receiver or piece of test equipment. Many amateurs make their own antennas and would never consider that they were into 'homebrew', as most of us would consider it.

I was reminded of this because another amateur had recently moved into the area and couldn't get any antenna to work from his small flat. The obvious answers were offered, each being discarded for some good reason. Finally, I offered the suggestion of a mobile whip attached to the metal window frame. Not only was this accepted with alacrity, but also our trusty club host (the local dentist, Denis Pepper, GOSLJ) immediately brought out a suitable version made by another club member who no longer had use for it (see Fig 1).

The whole was made up of plumber's materials and was a joy to behold. The only non-plumbers bits were the whip and the plastic for the coil. I would not suggest using this at speed when attached to a car, as the pipe would bend easily. It should be usable at the flat and is easily dismantled when not required if compression joints are used instead of soldered joints.

A Winter's Project

Whilst we are talking homebrew, it might well be the time to consider some building during the winter months. There are many circuits of projects that can be built during the long evenings. Just take a look around the shack and see if any items could be improved upon. Or is there just a 'black box' transceiver coupled to the station ATU and tribander? It should be remembered, as mentioned above, that when reference is made to 'homebrew', we are not specifically referring to the building of receivers or transmitters, although many would think this the case. Any item made at home could fall into this category, be it for the kitchen or the shack. Even the humble G5RV antenna made at home to Louis' original design falls into this category.

So, what to build? How about starting with a simple receiver. There are many circuits available, some are quite complex but many are so easy to put together. The easiest, perhaps, is the direct conversion receiver. This usually equates to a low component count and it can be built 'ugly style' in an hour or so. I well remember my own first receiver when it first hissed at me. What a feeling - something I had built worked!

Having built the receiver, and ensured it worked on the band(s) required, perhaps the time has come to add a simple transmitter. The most famous throughout the world must be the ONER from the G-QRP club. Just a handful of components and a fundamental crystal make this a joy to play with. "Only one watt?", I might hear you cry. Well, how about the UK to New Zealand on 30m using a ONER transmitter? It's been done!

Of course, using any...
simple transmitter can be fun but there are problems in using even one with such a low output without a low pass filter. We discussed these in a recent column, so I shan’t reiterate that. But remember a fundamental crystal will radiate on not only its resonant frequency but on its harmonics too.

Changing from the ‘black box’ to a much smaller box (perhaps also coloured black) may liven up one of those dull winter evenings.

Whilst browsing through the varied circuits it will soon become apparent that there are very few new ideas about. Most of the small circuits that appear in the QRP journals are updates of older circuits, often with just a change of component to more modern versions. For example, in some cases changing an old valve design and replacing the valve with a transistor.

Having built the small receiver and the transmitter it is very easy to switch between the two using a simple two-pole, two-way switch. A much better way is to use RF sensing and do it automatically. The circuit shown in Fig 2 is easy to build and should only take half an hour or so to put together. It originates from the G-QRP Club, of course.

In use, a sample of the transmitted signal is picked up via L1 and passed to the gate of VN10, which switches the relay over to transmit. During this momentary phase the pair of 100 ohm resistors dissipates the power. Hang time is dependent on the value of C1. With a value of 47µF it should be about one second. It may be reduced for those who may want full break-in.

Sensitivity is fairly good. It will switch with a signal of just 500mW on topband and only 100mW on 30MHz. In this configuration it will handle full QRP power levels easily.

Circuits as simple as this prove the old QRP adage ‘KISS’ (Keep It Simple, Stupid).

Many of these simple circuits go the rounds again and again. The recent inclination to go smaller and smaller is one way of perpetuating these small circuits. When at the Dayton Hamvention one of my jobs is to help judge the QRP construction contest. Often we have small simple ideas put into small sweet tins. Often these tins for Altoids, a British-made peppermint sweet made for the US market (they call them Extra Strong, but I usually take over a couple of packets of the real strong ones we have - Fisherman’s Friends and Victory Vs go down a treat!)

In this vein I often visit boot fares, not only looking for the traditional bargain, but also looking for small containers. The best I found was a children’s tiny toy tool box. It measured just 50 x 25 x 30mm. I put a ONER transmitter inside it. With a couple of crystals in the top tool tray it really catches the eye when on the QRP stand at either Dayton or Friedrichshafen.

Small boxed units can be a delight, but finding them on a ‘busy’ bench can be fun at the best of times. That’s it for this month. Please send news and views to me, Dick Pascoe, G0BPS, via packet to GB7RMS, e-mail to dick@kanga.demon.co.uk or ‘snail mail’ to Seaview House, Crete Road East, Folkestone CT18 7EG.
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Club News

To include your club, or rally, in this section, make sure you send us your events details in time. We only list active clubs, ie those who send us their diary of planned talks / events. Send your club event and rally details to: The Editor, Ham Radio Today (Club News), Nexus Special Interests Ltd, Nexus House, Boundary Way, Hemel Hempstead, Herts HP2 7ST; fax: 01442 266998.

Appleford and District ARC meets on the third Monday of each month at 7.30pm at the Appleford Football Club room. Club nets: Tue 2000 on 145.475MHz, Wed on 28350kHz: slow CW 2000 - 2030 then SSB 2030 - 2100. All welcome to join. Planned club events / talks; Feb 16th - TBA Mar 16th - AGM Contact Den Williams, G0UMT, on tel: 01237 471802 for further information.

Banger and District ARS meet on the first Wednesday of each month (September to June), 8.00pm, at the Clandeboye Lodge Hotel. Everyone welcome especially newcomers interested in the hobby. Planned club diary; Feb 4th - Cellular telephones Mar 4th - Packet radio, by Hugh GISTLT with live demos. Constructors’ contest. Apr 1st - Talk by RSGB President Ian Kyle, G1BAYZ / G1DYZ May 6th - Barbecue and QRP talk and demo Jun 3rd - Rally preparations, CW night and display of Morse keys. Further details from Terry Barnes, GI3USS, tel: 01247 473948.

Bristol (RSGB) Group holds meetings on the last Tuesday in every month at 7.00pm for 7.30pm at Avon Combined Services Club, St Pauls Rd, Clifton, Bristol (please note this is a new venue). Planned events / talks; Feb 24th - HF equipment design by Steve Price, G4BWE Mar 31st - The Norman Lockyer Observatory, by Jack Wikins Apr 28th - Burglar alarms and EME, Hugh Pearson, G7KET May 26th - Introduction to Flatbed Scanners Further details from Robin Thompson, G3TKF, tel: 01225 420442.

Bristol (South) ARC meets at 7.30pm every Wednesday at the Cheltenham AR Association, Bridge Farm House, East Dundry Road, Whitchurch, Bristol. The club hold regular ‘activity nights’. Planned events / talks; Feb 4th - 10m activity evening Feb 11th - Amateur radio software demo Feb 18th - Morse keys display Mar 4th - 15m activity evening Mar 11th - Portable radio demo Mar 18th - Quiz night Mar 25th - SWL evening - bring your own receiver Apr 1st - 10GHz activity evening Apr 8th - Amateur radio software demo For more information contact Jean Fletcher, G1AWX, on tel: 01275 634282 (24hr answerphone).

Bromley and District ARC meet on the third Tuesday of each month, 7.30pm for 8.00pm at the Victory Social Club, Kechill Gardens, Hayes, Kent. Planned events / talks; Feb 17th - Clandestine radio, Pat Hawker, G3VA Mar 17th - Equipment test evening, Ian Daniels, G4VTD Apr 21st - Railway signalling, Andy Brooker, G4WGZ May 19th - Packet radio, Alan Messenger, G0TLK Jun 16th - Direction finding hunt, Graham, G4NPD and Alan, G0TLK Jul 21st - Practical demonstration of electricity fundamentals, Ian Daniels, G4VTD Aug 18th - Barbecue Sep 15th - Construction competition Oct 20th - Surplus equipment sale Nov 17th - The Internet, Graham, G4NPD, and Alan, G0TLK Further details from Alan Messenger, G0TLK, tel: 0181 777 0420; e-mail: alangm@clara.net

Cheltenham AR Association meets on the first Friday of the month at the Prestbury Library, The Burgage, Prestbury, Cheltenham, at 7.45pm for 8.00pm. Visitors and prospective members welcome. Club nets: Wed 2m, Mon and Thu 1960kHz, Fri 70cm all at 9.00pm; Sun 148kHz at 10.00am. Planned club events / talks; Feb 6th - Magnox, power generation Mar 6th - Constructor’s contest Details can be obtained from the Secretary, Mrs Patricia Thom, G1NKS, tel: 01242 241099.

Cockenzie & Port Seton ARC has ‘normal club nights’ on the first Friday of every month at the Thorntree Inn, High Street, Cockenzie, from 1900 ‘till late’. The club participates in many weekend contests. Other planned events; Feb 20th - Radio check night, John, GM7OLQ Mar 20th - Talk on IOTA / IOSA, Tom Wylie, GM4FDM Apr 17th - Quiz night, Susan, GM1EPK, and Colin, GM0CLN May 15th - 144MHz DF hunt night Aug 14th - 5th annual junk night Nov 28th - Christmas dinner Cornish RAC meet on the first Thursday each month, 7.30pm, at Perranwell Village Hall, near Truro. Planned club events / talks; Jan 8th - The Electronic War by Bert Feb 5th - Underground Photography by Roy Mar 5th - Fund Raising and Radio by Dennis Apr 2nd - Annual General Meeting Apr 26th - International Marconi Day, run by the Cornish RAC from Penair School, Truro May 7th - Ted and Tracey on Flatbed Scanners Jun 4th - Photography, by Les Jul 2nd - Pre-rally general meeting For further details contact Robin, G0MYR, tel: 01209 821007.

Coulston ATS meet on the second Monday each month, 7.45pm, at St. Swithun’s Church Hall, Grovelands Road, Purley, Club 2m net: Sunday 11.00am on V40 (145.500MHz) initially, then to a working frequency. Planned club events / talks; Feb 9th - Practical computing in amateur radio - bring own PCs and amateur radio programs Mar 9th - The history of aircraft simulators, G6MFM For further details contact Club Secretary, Alan Bartle, G6HC, tel: 0181 864 0610.

Dover Radio Club meets every Wednesday during term periods at the Duke of York’s Royal Military School, Guston, near Dover, from 8.00pm with Novice and Morse training classes between 7.00pm and 8.00pm. All visitors welcomed. Planned club events / talks; Feb 11th - Visit to Maidstone fire brigade Feb 18th - Half-term Mar 4th - Talk by Dr Ken Smith Mar 18th - Video history of Dover Radio Club by GBZY2 Apr 29th - AGM Further details may be obtained from the Secretary, Brian Hancock, G4NPM, tel: 01304 821007.

Dragon ARC meet on the first and third Mondays of each month at the Ebenezer Hall, Foel Graig Lane, Higher Village, Llanfairpwll, at 7.30pm. Visitors and new members are welcome. The club run several special event stations throughout the year. Club diary of events / talks; Feb 2nd - Mr Bryan Hope, a talk on ‘Shipbuilders of Amlwch’ Feb 16th - Amateur Radio videos Mar 2nd - To be arranged Mar 16th - Rob Mannion, G4XK, a Practical Wireless club talk Further details from the Secretary Tony Rees, GW0FMQ, tel: 01248 600963.

Exeter ARS meet on the second Monday each month, at The Moose International Centre, Blackboy Road, Exeter, starting
at 7.45pm. Planned club events / talks;
Feb 9th - Surplus sale
Mar 9th - Construction competition
Apr 13th - Inter-club quiz
May 11th - Visit (TBA)
Jun 8th - Fox Hunt (Provisional)
Jul 13th - Barbecue
Aug 14th - Visit to Stockland Hill transmitter
Sep 14th - Lifeboat visit
Oct 12th - Annual General Meeting
For further details contact Theo, G3EGM, tel: 01392 875498.

Hallifax and District ARS meet at 7.30pm on the first Tuesday of each month at the Tap and Spile Pub (formally Royal Oak), Clare Road, Halifax, for committee and Morse tuition. On the second and fourth Tuesdays they meet, 7.00pm, at Queens Road (note Queens Road is closed for some periods at school holidays). Planned club events / talks; Feb 17th - Bill G4KOV, Crawnel and a strange meeting Mar 17th - Fibre optics, by Steve, G4RCH
Further details can be obtained from Mr D Moss, G0DLM, Beechwood Lodge, Lightcliffe, Halifax HX3 8NU, tel: 01422 202306.

Hambledon ARS meet 7.30pm, at Allertonshire School, Northallerton. Planned club events / talks; Feb 6th - Talk on 6m transceivers and mobile aerials, Mike Grierson, G3TSO Mar 3rd - Informal evening Mar 25th - Homebrew Beams’
Further details from Gordon Bryant, G0TZV, tel: 01384 395206.

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Halldford Radio Club meets at the Conservative Club, Rye Road, Haldeddon, Herts, from 8.00pm. Planned club events / talks; Feb 5th - Inter-club left foot Morse competition Feb 19th - Visit by Badger Boards from Birmingham, Further details from Don, G3NJU, tel: 0181 292 3678.

Horndean and District ARC meet on the first and fourth Tuesday of each month, 7.30pm, at Lovedale Village Hall, 160 Lovedale Lane, Lovedale, Hants. The first Tuesday is usually a ‘Natter Night’. Visitors welcome. Club nets are Sundays 1955kHz 0900 CW, 0930 SSB, and Wednesdays 145.350MHz at 1930. Planned Club events / talks; Feb 3rd - Club social evening Feb 24th - Annual bring & buy sale Mar 3rd - Club social evening Mar 24th - Measurements, by Dr Dick Biddulph, G8DPS Apr 7th - Club social evening Apr 28th - 9M0C Spratly Island DXpedition by CDXC member Mike, G3SED Further details can be obtained from Stuart Swain, tel: 01705 472846.

Lincoln Short Wave Club meets at the Railway Sports and Social Club, Ropewalk, Lincoln, each Wednesday from 7.45pm. The club is holding an exhibition: ‘The World of Communication 1900 - 1998’ at the Central Library, Lincoln, 31 March - 4 April. Planned club events / talks;
Feb 11th - Video: Basic Radio Measurements, G3NYK Feb 25th - Illustrated talk on bonsai, Bob Peach Mar 11th - Illustrated talk: Lincoln at War, Dave Willey, G1WVO Apr 15th - The Lincoln Aircraft Recovery Group. May 20th - BARTG, Ian Brothwell Jun 17th - Visit to Humber Radio

For further details, please contact Cliff Newby, G3EBH, on tel: 01522 750637.

Newbury and District ARS meet on the fourth Wednesday each month at the Memorial Hall, Upper Bucklebury, near Newbury from 7.30 - 10.00pm. Club nets: Sun 0830 3632kHz, Sun 1145 1920 to 1940kHz, Sun 1200 28305kHz. Planned club events / talks; Feb 25th - Analogue Devices, James Bryant, G4CLF Mar 25th - Homebrew transceivers and mobile aerials, Mike Grierson, G3TSO Apr 22nd - Annual General Meeting May 27th - 3rd Method SSB, Peter Rhodes, G3XJP

For further details contact the club secretary, tel: 01635 683310.

Norfolk ARC meets wach Wednesday at the Ugly Bug Public House, Colton. Planned club events / talks; Feb 4th - DXing for the Absolute Beginner, Victor Brand, G3JNB Feb 11th - Informal Feb 18th - Video, ‘Battle of the Beams’ Feb 25th - Informal Mar 4th - Foxhunt Forum Mar 11th - Informal Mar 18th - National Field Day briefing Mar 25th - Informal Apr 1st - AGM Apr 8th - Informal Apr 15th - Quiz, G3ASQ Apr 22nd - Informal Apr 29th - GB3NB repeater group AGM Informal evenings include night on air, construction QRP, and Morse practice. For further details please contact the Hon Sec, Sandra Simpson, 2E1 FOF.

Spalding and District ARS meet every Friday night at 7.30pm at the Old Fire Station, Spalding, Lincs. For details phone 01775 750382 or 0976 271796. Planned club events / talks; Feb 20th - Offshore radio, Mick, G1APV Mar 20th - RAOTA, Dennis Houl, G4OO Apr 18th - Talk on computers

Stourbridge and District ARS meet on the first and third Mondays each month (except Bank Holidays), at the Robin Woods Centre, Scots Road Entrance, off Enville Street, Stourbridge. Club Nets 2m Mon, Wed, Fri, 7.00pm 145.35MHz, 70cm 433.525MHz, 10m Mon (Tues on club weeks) and Fri 8.00pm, Wed 9.00pm, 28050 CW. The first Monday is usually an ‘on air and natter night’. Visitors always welcome. Planned club events / talks; Feb 3rd - Informal night Feb 17th - Main meeting Further details from Gordon Bryant, G0TZV, tel: 01384 395206.

Stratford upon Avon & District RS meet on the second and fourth Mondays, at the Home Guard Club, Main Road, Tiddington, Stratford upon Avon, at 7.30pm for 8.00pm. Further details from J Porter G4OHJ, tel: 01789 773286. The club also run RAE, NR4E and Morse courses, write to Mr J Harris, 57 Evesham Road, Stratford upon Avon CV31 2PB enclosing an SAE or tel: 01789 295257 for details. Club events / talks include; Feb 9th - Test equipment evening Feb 23rd - Member’s projects

Wirral ARS meet, 8.00pm, at The Club Room, Ivy Farm, Arrow Park Road, Birkenhead, opposite Llandyfan Cemetery. There are activity nights every first, second and fourth Wednesday evenings, lectures / talks every third Wednesday. ‘Natter nights’ are every Tuesday from 7.30pm and Morse tuition every Thursday evening. Visitors welcome. Planned club events / talks; Feb 18th - President’s Night Mar 18th - 1st Surplus equipment sale Apr 18th - George Robbins, G3LNG May 21st - Bob Blain, G3NTI, Thailand and its People Part 2 Jun 18th - Mike Tyler, G6GAK, Another Construction Project. The society puts on Special Event Stations usually at the request of a third party, in 1998 they will have a station at Ness Gardens, Wirral, also at the
National Guide Jamboree 24 - 31st July 1998, all club members take part in these events. For further details contact John Phillips, G3PXX, tel: 0151 336 4452, @GB7OAR, or e-mail: vectis@nordev.u-net.com

British Amateur Radio
Teledata Group (BARTG) have a quarterly magazine, Datascom, and hold a rally and HF RTTY contest each year. For more details about the group contact Membership Secretary Bill McGill, G0DXB, 14 Farquhar Road, Malby, Rotherham, S.Yorks S66 7PD, tel: 01709 814010 (Tues, Thurs & Fri, 7.00pm to 9.00pm. Sat/Sun before 9.00pm), or via GB7WRC. Internet: http://www.bartg.demon.co.uk

British Amateur Television
Club is particularly active with Amateur Television (ATV) - the transmission and reception of vision. They produce a quarterly magazine entitled CO-TV and have regular get-togethers at their rally stands, and hold their own rally each year. For details of BATC membership write to: Dave Lawton, Grenehurst, Pinewood Road, High Wycombe, Bucks HP12 4DD.

G-QRP Club publish a quarterly journal, SPRAT, devoted to low power communication, and hold regular get-togethers at their rally stands throughout the country. For membership details, contact their Secretary, Rev G Dobbs, St Aidens Vicarage, 498 Manchester Road, Rochdale, Lancs OL11 3HJ; tel: 01706 31812 or see their web site at http://ourworld.compuserve.com/homepages/g4wlf/gqrp.htm

International Short Wave
League who, as well as running an international OSL bureau for amateurs and SWLs, have a monthly magazine (Monitor) and regular get-togethers at their rally stands plus several on-air nets on HF and VHF. For more details send an A4 sized SAE to: ISWL, HQ, 287 Pelham Road, Immingham DN40 1JU. Internet: http://www.aber.ac.uk/~srj5/4swl.htm

The Irish Radio Transmitters Society (IRTS) publish regular newsletters giving details of local activities, and the yearly IRTS Callbook. They also have a video library. Their Annual General meeting this year takes place on March 22nd at the Limerick Rally. For further details on the IRTS contact Joe Ryan, E17GY, tel: (Eire) 01 2854250 or by e-mail: jryan@iol.ie and for Book Sales: Dave Moore, E4BZ, 12 Castle Ave, Carrigtwohill, Co Cork; tel: (Eire) 021 883555.

Radio Amateurs' Emergency Network can be contacted at Hunters Moon, Newton le Willows, Bedale, N Yorks DL8 1SX. 24hr national emergency contact line: 0141 621 2121. Other contact points: Training Team, PO Box 2, Chinnor, Oxon OX9 4JY. Raynet Supplies, tel: 01842 860475. Packet @ GB7NRC. Internet Web Site: http://www.reality.cgi/csp/raynet/

The Radio Amateur Invalid and Blind Club (RAIBC) is a registered charity which raises money for radio / computer equipment, and audio cassette courses for home study, for blind, deaf and disabled amateurs. The club attends rallies throughout the year, and collects surplus equipment for resale. If you have equipment to donate, contact Ian, 2E1EGV, tel: 0966 362828. The Northern Ireland Club collect unwanted tokens or vouchers (eg petrol etc), these can be sent free of charge to: The Charities Appeal Officer, RAIBC NI, Freepost BE 1789, Belfast BT15 3BR.

Radio Amateur Relief
Expeditions (RARE) is a registered charity made up of radio amateurs and friends who take aid to Eastern Europe and organise summer camps for young people to learn about amateur radio, English language and life in the UK. New members are required to support this work both at home and by taking part in expeditions. Please contact: The Secretary, RARE, 1 Alfield Cottages, Condrover, Shrewsbury SY5 7AP; tel: 01743 873815; fax: 01743 874729; packet: G6HM_GB7PMF; e-mail: rare@donsun.demon.co.uk

Radiocommunications Agency (RA) is the licensing authority for all UK radio amateurs. They have a large number of free publications, including the booklet How to Become a Radio Amateur, and their Novice Licence Information sheet and can offer advice on many aspects of licensing. They're currently in temporary offices: New Kings Beam House, 22 Upper Ground, London SE1 9SA. Direct Amateur Radio line, tel: 0171 211 0160. General enquiries, tel: 0171 211 0211. Answerphone service, tel: 0171 211 0591.

Radio Society of Great Britain (RSGB) is the internationally-recognised national society, which has been representing UK radio amateurs and short wave listeners for 85 years. They are based at Lamba House, Cranborne Road, Potters Bar, Herts EN6 3JG, tel: 01707 659015. Internet: http://www.rsgb.org or e-mail: info@rsgb.org.uk

United Kingdom Radio Society (UKRS) is a new national society for UK radio amateurs. They can be contacted at Box 100, Meadow Street, Northwich, Cheshire, CW8 1FA. tel: 01606 783270, or 0115 925 8597. Via Packet UKRS@GB7OAR, e-mail: admin@ukrs.org; Internet: http://www.ukrs.org

Subscription Services Ltd (SSL) handle the issuing of amateur licences in the UK, on behalf of the Radiocommunications Agency. They can help regarding enquiries concerning individual licences (rather than general licensing matters which the RA handle, see above). Contact details: The Radio Licensing Centre, SSL, PO Box 884, Bristol BS99 5LF, tel: 0117 925 8333.

February 1st
The 13th South Essex Amateur Radio Rally, The Paddocks, Long Road, Canvey Island, Essex (The Paddocks is situated at the end of the A130). The organisers say this is one of the biggest and best rallies in Essex. Doors open 10.30am, featuring amateur radio, computer and electronic component exhibitors, bring and buy, RSGB Morse tests on demand (two passport photos required), home made refreshments, free parking with space outside the main door for disabled visitors. Admission £1.00. For further details contact David, G4UJV, tel: 01268 697978.

February 6th
Kidderminster Radio & Electronics Fair, Kidderminster College, Hoo Road, Kidderminster, Worcs. Featuring usual traders, Bring & Buy, Flea market, food and drinks. Doors open 10.00am to 3.00pm. Talk-in on 145.550MHz. For further details contact John, GB3QG, tel: 01297 545823, or Tony, G4ALT, tel: 01562 69652.

Spalding and District ARS 'junk sale', at Spalding Common Hall, signposted from Spalding bypass. Refreshments, free car parking, stalls and auction. Talk-in on 145.550MHz. For further details contact David Lindsey, O7VQH, tel: 0966 382628.

February 15th
Northern Cross Rally, Thorns Park Athletics Stadium, Wakefield - one large hall - just out of town on the Horbury Road. Easy access from M1 junctions 39 & 40, well sign posted and with talk-in on 2m & 70cm. Doors open 11.00am (10.30 for disabled visitors and bring and buy). For further details contact Peter, G0OQB, tel: 01924 379860, or 0976 834038 (mobile); e-mail: rally@wavag.demon.co.uk; Internet: http://www.wavag.demon.co.uk/rally/
February 22nd
RSGB National VHF Convention, Sandown Exhibition Centre, Esher, Surrey. Doors open 10.30am to 5.00pm. Three lecture streams, trade exhibition, awards presentations, specialist groups and RSGB committees, Morse code tests on demand, RSGB book stall and membership information stand. Entrance fee £3.00. For further details call RSGB HQ on tel: 01707 659015 or look at www.rsgb.org

April 4th
The Cambridgeshire Repeater Group annual rally, at the Bottisham Sports Centre (part of village college), Lode Road, Bottisham, near Cambridge (please note this is a new venue). Event features auction sale, trade stands, bring and buy stand, and car boot trading area. Further details from Paul Dyke, GDLUC, 41 High Street, Puckeridge, Ware, Herts SG11 1RX; tel: 01920 821536.

April 18th
SAMS '98 Computer & Electronics Show, Bingley Hall, Staffordshire Showground, Weston Rd, Stafford (A518 Stafford - Uttoxeter Rd). Featuring many trade stands covering radio, computing and electronics, plus large bring & buy. Doors open 10.00am to 4.00pm. For further details please contact Shaward Promotions, tel: 01473 741533.

May 17th
Dunstable Downs Radio Club will be holding its Annual Amateur Radio Car Boot Sale, at Stickwood Country Park, Luton, Bedfordshire. Site open 0900 - 1500. Leave M1 at junction 10A, turn left and follow signs for 'Mossman Collection'. Talk-in on V44 (145.550MHz). Please note new address for bookings, please do not use any other address or phone number: DDRC, PO Box 4053, Dunstable, Beds LU5 5J.

May 24th
The 1998 Plymouth Radio Club Rally will be held at the College of Further Education, Kings Road, Devonport, Plymouth. Doors open 10.30am to 4.00pm. Morse tests on demand, ample free car parking, easy access for disabled visitors, talk-in on S20 (venue will be signposted from the Manadon junction of the A38 Devon Expressway), refreshments and licensed bar available. For further details contact Stephen Ramsden, tel: 01752 662051 during office hours.

June 7th
Spalding & District ARS 30th annual rally, Springsfield Exhibition Centre, Spalding. Amateur radio, scanners, shortwave and CB, satellite TV, books and components. Licensed bar and catering. Huge car boot area, plenty of free parking. Starts 10.00am, talk-in 145.550MHz. For further details contact Mick Pell, G1APV, tel: 0976 271796, or Dennis Houlit, G400, tel: 01775 750382.

June 26th to 28th
Ham Radio '98 Friedrichshafen, Germany, Europe's largest gathering of over 20,000 ham radio enthusiasts, by the shores of the Bodensee (Lake Constance) at the Messe Friedrichshafen. Wide and varied selection of interests, immense trade presence with exhibitors from 40 countries, large flea market, on-site camping and caravan facilities. For further venue / rally details tel: +49 7541 7080; fax: +49 7541 75290; accommodation / tourist information tel: +49 7541 75290; contact Geoff Dover, G4AFJ, tel: 01455 823344.

October 9th - 11th
RSGB International HF and IOTA Convention, Old Windsor, Berks. For further details tel: 01707 659015.

November 14th
AMS '98 Computer & Electronics Show, Bingley Hall, Staffordshire Showground, Weston Rd, Stafford (A518 Stafford - Uttoxeter Rd). Featuring many trade stands covering radio, computing and electronics, plus large bring and buy. Doors open 10.00am to 4.00pm. For further details please contact Shaward Promotions, tel: 01473 741533.
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FOR SALE

**Trio 2600E** 2m handheld with spare battery, Trio speaker mic, battery charger, leather case, rubber duck antenna, and separate telescopic 0.25 wave whip, shoulder strap and handbook, £125 ono. Brian, GM0EGI (Central Scotland). Tel: 01766 850377.

**Microwave Modules** 144meg to HF transverter, topband to 28MHz. 10W ideal mobile / Novice, £180. Isolation transformers, large 40 amp o/p put 5 rcd and 1 on input. Cost over £100 offers or WHY. (Wincanton) Tel: 01963 34938.

**Yaesu FT-840** little use, boxed, £600 ovno. DX-250 PC multi-media 520 meg HD 12 meg RAM. 10 x CD, Internet blaster 288PNP modem. Astound sound card. Twin speakers, mouse, keyboard £450 ovno. IBM 386SX VGA monitor keyboard mouse £150. Tel. 01536 522007.

**Dell 20MHz 386**, drives, comms software, Win 3.11, DOS 6.2, h/drive £125. Spectrum 48k with Qark RTTY Morse transceiver £50. BBC-B D/D monitor, offers. Loads of software ZX81 + RAM pack, offers. Tel: 01963 34938.

**Icom IC-R8500** wideband receiver covers 100Hz to 2GHz. Top-notch professional quality, will swap for HF transceiver or high spec computer or WHY. Cash either way. SG-230 Smart Tuner HF £200. Mr Howlett (Herts), Tel: 01438 750450 evenings or 0831 660 944 days.

**Icom R-7000** in excellent condition with remote control and manual, £475. Timewave DSP 5992X, only months old, mint: £225. John (Tayside), Tel: 01356 624039 anytime.


**Kenwood TH79** 70cm 2m handheld. Faulty phase lock loop, hence price. Comes with two nicads and soft case £45. Tel: 01332 510073 (Derby).

**Yaesu FT-50R** 2m/70cm handheld, 1 month old, comes with soft case £200. Tel: 01332 510073 (Derby).


**Jaybeam** six-element quad Yagi for 2 metres £20. Dave, Tel: 041 632 5408.

**Auto ATU Daiwa 500W**, will work with any rig, £150. Kenwood mobile antenna, AT-130 ATU, big mag mount, unused: £100. G3PTN QTHR (Leeds), Tel: 0113 265 4644.

**Yaesu FT-290 Mk2** 2m all-mode transceiver, VGC with 2 sets nicads, £325. MML 144MHz linear 3W in 100W out, as new £150. RN-2-6 transverter, 25W, as new £150. 6m band pass filter, VGC, £20. Andy (Ayrshire) Tel: 01292 520459.

**Yaesu 2m FT-290** all-mode transceiver. In original boxed condition with instructions, carrying case and strap. Rechargeable batteries and charger. HK-709 Morse key. Price £200. (Ipswich) Tel: 01473 259317.

**FT-757GX FP-757HD** handbook all immac, boxed, £450. DR112E 2m mobile 35W mobile bracket, handbook, new lithium battery just fitted, £120. Datong Morse practice oscillator, £40. G4GBN (Yeovil, Somerset) £225. Jim, Tel: 083641, fax: 01223 834274.

**Comms Receiver** Icom R-70 100kHz to 30MHz all modes dual VFO excellent receiver £325. Kenwood DFC-230 frequency controller £45. Kenwood AT230 tuner unit £120. G4YHR (Stroud, Glos) Tel: 01453 764090.


**Yupiteru MVT-7100** multiband receiver, virtually never used, all original contents plus leather case and mains adapter, batteries, scanning directory, all boxing. £195 ono. (Cobham, Surrey) Tel: 01932 863519.

**Trio TR-751 144** all mode boxed, complete, £280. MM 100 watt 144MHz linear £70. (Macclesfield) Tel: 01260 252287.

**Yaesu FT-290R** Mutek front end, mobile slide mount. Little used. Original boxes. £250. (Cambridge) Tel: 01223 836941, fax: 01223 834274.

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PRP76 x 2 UHF c/w 5-way charger £375. Tel: 01908 365726.


Realistic PRO-25 handheld scanner, boxed with instruction manual and batteries, 16 months old, as new condition, perfect working order, reason for sale, upgrade. £100. Tel: 01926 814571 (Southam, Warks).

Ham-Master 2m home base all-mode Tx £125. Tokyo 2m all-mode linear 10W / 80W £85, Miniature G3TSO 80m Tx kit cost £70 for £30. Alan, GOHBC. Tel: 0121 745 1000 (Solihull).


Drake TR7 manual PS7 PSU fan NB7 300Hz filter mic £550. MN7 ATU boxed £160. Datong FL3 filter with mains adaptor instructions £70. All plus carriage. Bill, G3WIN (Devon), tel: 01823 680778.

Fairmate HP-2000 handheld 1000 channel wide-band scanner, 0.5MHz to 1300MHz coverage no gaps. Never used. Boxed £120. Peter (Grantham, Lincs), tel: 01476 565395.

MFJ-259 analyzer new £150. Hustler three element tri-band never built SS hardware still sealed, 100MPPH wind survival, 28F/B ratio, 8dB heavy duty antenna £175 + 50% help of postage, a real bargain for someone. Call for details. Tom, tel: 01872 572535.

AOR 2001 home base scanner 25 - 550MHz well respected in its day with good filtering £125. Andrew (Gwynedd), tel: 01766 780043.

Yaesu 2500M 2m tcvr, Mansson PSU, Nissei SWR / power meter 125MHz - 525MHz, Sirid dualband (2m / 70cm) vertical antenna (base) RF lead PL259 to PL259 £175 ono. G7ULS (Harlow) tel: 01279 641248.

Kenwood 770 UHF / VHF base TRX £350. TS-120 HF £250. Nova MM225 converted to two metres £90 ono. Wanted / swap SM-220 monitor scope, late FT-101E and display for 101E. Phone Dave on 01603 745512 weekends only.

Yaesu FT-480 2m all-mode mobile transceiver with original box and manuals. Adonis AM-503 base mic, all vgc £230. Contact Barrie, GM7CSY (Nairn), tel: 01667 452481 or barrie@smallshaw.softnet.co.uk

Yaesu FT-1000MP boxed with manuals in top excellent condition only 7 months old. Absolutely mint. Reason for sale is other commitments. Must sell, a bargain £1600. First come, first served. Tel: 01305 833307 ask for James, G0SEC (Weymouth).

Kenwood TS-711E 2m multimode £475. Kenwood TM-441E 70cm mobile £200. TM-79E d/band handy £250. All boxed with manuals. All ono. Tel: 01952 415207.

WANTED

Copy of manual and circuits for Yaesu FT-290R Mk1. Standard C150 VHF handie, standard C7800 UHF mobile, Tait T500 VHF mobile. Please phone Peter, G1SFS, Tel: 0117 963 3306.

Spy 'suitcase' radio sets from WW2I and since, wanted by private collector. B2. A MkII AP4 BPS Mk122, Mk123 RS6 AN/PRC64 SE109, R2, R3, NP3 tx or WHY? Send details and price wanted to W J MacDonald, 40 Latchett Road, London, E18 1DJ.

Matching loudspeaker for HRO rx + period microphone. WHY? Good price + p/p paid. Peter (North Yorks) 9 to 5 works QTH Tel: 01287 634397. Wanted WWII tx (few watts of AM), hope to get on the M Wars net. TCS-10 etc WHY? Tel: 01287 634397 works QTH, will 'ring back 9 - 4pm. Ask for Peter good price paid + p/p. Thanks.

Wanted Shure 444 base mic. Also, has anyone got any 'Popular Mechanics' (may have been called 'Practical Mechanists') magazines? Please send list or e-mail 106574.1725@compuserv e.com or snail mail to: 120 Loughton Way, Buckhurst Hill, Essex IG9 6AR.

RCA AR88 / AR88 LF must be in excellent working order - mechanical and electrical, be 100% complete and pre-1945, also suitable period matching AM / CW transmitter in similar condition. Telephone Chris, G0LZG on 01582 419385 (NW Herts) after 6pm or at weekends.

Trio TS-940. (Macclesfield) Tel: 01260 252287.

Wanted Yaesu FC-901 antenna coupler and SP-901. Reg, G4KZE (Cheshire), tel: 0161 980 4195.

Drake matching speaker for Drake R8E receiver wanted. S Clifton, tel: 01492 878107.

Wanted Yaesu FT-77 for spares scrap non-worker any condition OK. Tel: 0141 632 5408.

Morse keys military types, Type D in particular, Navy etc. Vibro'x wanted (not Kent). Also military radio sets any sort or age, in particular No11, 12, 21, R1082, T1083, T1115A. Call Ben on tel: 01562 743263 or e-mail 106312.1036@compuserv e.com

EXCHANGE

Yaesu FT-One fitted memory unit and FM board, with manual, for a good quality receiver. Derek, G7SYN (Ashington, Northumberland), tel: 01670 853778.

C560DBA (USA) 2 / 70, DTMF, CTSS options fitted, programmable tone burst board fitted set at 1750Hz, owner's manual, workshop manual, for full details call. Exchange for Kenwood 751E multimode or FT-290R II + amp. Others considered. Tel: Tom on 01872 572535 any time.

HELPLINES

Help required for Multi 2700 for Rx preamp BPF, or where can I get one? Will pay good money. Mr Drury, tel: 01767 677070.

Help wanted to repair Datong model D70 Morse tutor. Handbook for Scopex 456 oscilloscope. Contact C J Wedley, tel: 01273 591304, or write to 9 Ridgeway Close, Southwick, Sussex BN42 4Q.
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Are you having trouble getting a copy of your favourite *Ham Radio Today* Magazine every four weeks? Are you missing out on the great news, views and features we pack into these pages? Are you losing the race to grab the new issues? If the answer to any of those questions is yes, then keep these dates in your diary!

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Ham Radio Today is available from: Comag Magazine Marketing Tavistock Road, West Drayton, Middlesex UB7 7QE. Tel. 01895 444055 Fax.01895 433602 ISSN No. 0269-8269
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