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PROJECT

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PC FILTER TO

REDUCE RF NOISE

HAM INTERNET

BRIDGING THE

FORMER IRON

CURTAIN



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FOR ENTHUSIASTS
BY ENTHUSIASTS

NEXUS

Ham Radio

T O D A Y

HAM RADIO VOLUME 16 NO. 1

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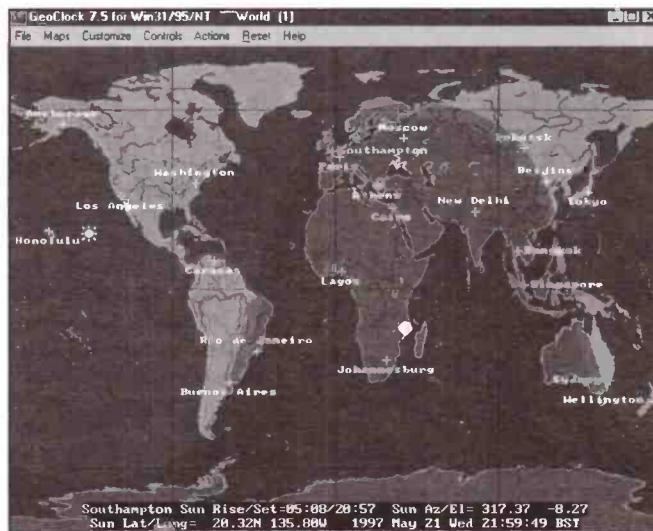


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RADIO

WACRAL Conference '97

The 1997 WACRAL Conference took place over a gloriously sunny Autumn weekend at the Forest Lodge Conference Centre in the beautiful countryside of South Shropshire. Members enjoyed a weekend of Christian fellowship, amateur radio, and leisure activities.

A full programme of lectures and demonstrations included an introduction to data comms by G4WQL, the basics of GPS by G0JFM, Using the Internet for telephoning the world by G0PPQ, and a special mission lecture on Operation Agri by Mr. Stan Crees of BMS.

The Conference Construction Competition featuring the 'Sudden' 80m receiver kit was well supported and the silver trophy was won, for the second year running, by Mike G3LRQ who achieved the required 'elegance' factor by mounting his rig inside a fashionable Ascot hat!

At the AGM, new appointments to the Executive Committee were G0TJA and G3WWH. G0JFM undertook to edit the new Callbook, Shirley CSWL 1199G was 'volunteered' to act as QSL Manager and G4YJW will now handle the WACRAL Awards programme.

"Radio at Nyakasura School, Uganda" was the title of a special presentation by Keith G3WWH. Following discussions with the African school authorities, Keith has launched a special WACRAL based educational project to support Nyakasura with amateur radio learning materials and kits. A stock of receiver kits are ready for despatch and G3WWH is checking out the levels of expertise among the staff in Uganda. He hopes to organise experienced WACRAL members to act as 'buddies' to the project's students and to work towards a development of the programme to a level that will enable an amateur licence to be granted to the school.

Morning Service and Holy Communion was celebrated and conducted by Rev. Phyl Fanning G6UFI and the ladies Choir excelled themselves.

The traditional Sunday morning net controlled by G4YRH attracted over 30 callsigns from the conference and members nationwide with WACRAL's G3NJB putting out a good signal.

Independently G3JNB (!) worked one watt QRP CW with contacts as far as Gretna Green and Spurn Head. Archery and orienteering activities also enjoyed good support and the junk

sale lived up to its name! WACRAL reports that the catering was good, the beds comfortable, and the company outstanding!

This year, their Conference will take place at Brunel Manor, Torquay, over the weekend of 2nd, 3rd and 4th October. More information is available from their Membership Secretary, 51 Alma Road, Brixham, South Devon TQ5 8QR, Tel. 01803 854504



WACRAL members work their conference station GX3NJB

TODAY

New date for Yeovil QRP Convention

Yeovil Amateur Radio Club's 14th QRP Convention will be at the earlier date of 19th April 1998, at the Digby Hall, Hound Street, Sherbourne, start time 0900 (the same venue as last year, now that everyone knows how to find it!).

The Convention VIP will be The Reverend George Dobbs, who will also present the afternoon lecture. More details on the lecture line-up nearer the time. The event will also feature trade stands, bring-and-buy, interesting displays ranging from vintage radio to modern techniques, prize draws, Morse tests on demand, plus the ubiquitous "Constructors Challenge", which will be to produce the most efficient 20m QRP transmitter. The challenge for the 14th QRP Convention is to construct a very efficient CW transmitter for the 20m band, with output power in the range of 2- 5W into a 50ohm load. Any number of components may be used. The complete transmitter will be powered from a nominal 12V supply, and the power consumption measured. Yeovil ARC will provide the power supply, the dummy load and the 20m RF and DC measuring equipment. The transmitter with the highest efficiency (RF power output vs DC power in) will be the winner. Remember too, that the historic Abbey town of Sherbourne can offer a wide range of interest for partners. For further details, contact Peter G3CQR, Tel. 01935 813054

New RAE and NRAE Exam centre of the West Midlands

The Sandwell Amateur radio Club have registered a local primary school with the City and Guilds as an approved Centre for the 1998 Novice Radio Amateur and Radio Amateurs examinations.

The Club, which meets at their own premises in The Broadway, Oldbury, west Midlands, has been conducting RAE and NRAE classes for a number of years and entering candidates as External candidates at a local college.

"We felt that the time had come for the Club to have its own exam centre" the Club Chair, Martin Prestidge G2BXP, said, "So we decided to go down the road of registering a nearby school as an exam centre".

The school chosen, Causeway Green Primary, in Penncricke lane, Oldbury, has good public transport links with Birmingham, West Bromwich and Dudley, and is about one mile from Junction 2 on the M5 motorway. Further details from Martin G2BXP, 48 Parkfield Road, Oldbury, west Midlands B68 8PT, Tel. 0121 552 4902.

Morse Code Course at Newbury College

We're told that there's still time to register for the Morse Code (12WPM test preparation) course to be run at Newbury Technical College, starting on Tuesday 6th January 1998. It's course No. 99208B and you can get further details either from the college directly to enrol, or from the course tutor Ray Oliver G3NDS on 01672 870892.

1998 NRAE and RAE Dates

This year, the RAE (Radio Amateur's Examination) takes the form of a new single-part paper, with a section on licensing conditions in which candidates must achieve an acceptable standard as well as getting a pass in the exam as a whole. The December RAE was the last exam with two parts, so if you find you've passed just one part in the December or earlier papers you'll need to retake the whole exam in it's new form.

This year's dates for the NRAE (Novice RAE);

<i>Exam date</i>	<i>Closing date for entries</i>
March 9th	Feb 1st
June 1st	April 15th
Sep 14th	Aug 1st
Dec 14th (prov.)	Nov 1st

and for the RAE;

<i>Exam date</i>	<i>Closing date for entries</i>
May 11th	April 1st
Dec 7th	Nov 1st

The fee charged by the City and Guilds for the NRAE is £12.10, and £26.05 for the RAE, plus any additional fee charged by your local centre to cover the costs of overheads and invigilation. Remember that successful completion of the RSGB's Novice Training Course is a mandatory prerequisite before you can sit the NRAE. A recent case occurred where a student somehow managed to sit the NRAE without a course completion certificate, and found they had to not only take the course but then had to successfully pass a further NRAE after the completion of the course.

Our thanks go to Phil Mayer G0KKL, the RSGB's Novice Instructor Co-ordinator, for the above information. You can get details on your local Novice training course from the RSGB, whose details are in the National section of 'Club News' in each issue of Ham Radio Today.

New ISWL Honorary Officers

Mike Parker, G-8264/G4IUF/N6SVL, from Harrogate in Yorkshire has been elected to the position of ISWL Honorary President.

John Raynes, G-16436/G0BWG, has been elected to the position of ISWL Honorary Secretary. The election of John to Honorary Secretary also means that the ISWL HQ address has now changed to; 267 Pelham Road, Immingham, NE Lincolnshire DN40 1JU, England.

Finally, in recognition of her hard work and dedication to the ISWL, Evelyn May G-17197/G0OZI is now installed as Honorary Vice President.



Evelyn May G-17197/G0OZI (2nd from right) is now the ISWL Honorary Vice President in recognition of her hard work and dedication to the league

HF Committee changes

The RSGB's HF Committee has a new Chairman. He is Neville Cheadle G3NUG, who can be contacted via Email to g3nug@btinternet.com. The former HF Committee Chairman, Colin Thomas G3PSM, has now been appointed the RSGB HF Manager. Colin can also be contacted by Email; g3psm@compuserve.com.

Amateur changes pushed back to 2001

A report from the recent World Radio Conference, 'WRC97', states that discussion of Article S25 of the ITU Radio Regulations has been moved from the preliminary WRC99 agenda to WRC2001. Article S25 is the international regulation which defines amateur radio. The amateur service proposal for consideration of alignment of the 7MHz band, which was supported by HF broadcasting interests, was placed on the same preliminary agenda, that is WRC2001. This proposal is for a world-wide 300kHz allocation at 7MHz.

Several radio amateurs were present at WRC97 as delegates on their own countries' administrations. These included VE3IQ, JA1KAB, W4RI and VK3ADW. Also present on a part-time basis were two representatives from KARL, the South Korean amateur radio society, and one from RCV, the Radio Club of Venezuela. The IARU delegation at the Conference consisted of VK3KI, SP5FM and W4RA, assisted on a part-time basis by HC2EE and 6W1KI. Our thanks go to the RSGB for this info.

New LF Band soon, use of 73kHz extended

There will soon be another new frequency band for UK radio amateurs. The RA hopes to release the 136kHz band to all UK class A licence holders early in 1998. The frequency limits of the new band are very likely to be as in a CEPT recommendation, i.e. 135.7-137.8kHz. Unlike the UK-only 73kHz band, no Notice of Variation (NoV) will be required. Instead, the 136kHz band will be added to the UK Table of Allocations and so will be available to all Full Class A licensees.

The 73kHz band will continue in parallel with the new allocation for a while. It was originally suggested that no new 73kHz NoVs would be issued after 1st January 1998, however we're told by the RSGB that following representations by them, the RA has agreed that 73kHz NoVs will be issued until 30th June 1998. The band will be withdrawn from amateur use two years after that date, i.e. on 30th June 2000. Despite early pessimistic forecasts, UK amateurs have achieved ranges of up to 400km on the 73kHz band. It is likely that this distance will be greatly exceeded on 136kHz, as aerials will be more efficient. Our thanks go to the RSGB for this info.

Mir repeater frequency change

On the 1st December, the Mir spacecraft's amateur radio operating frequencies changed to crossband. The uplink is now on 437.850MHz and the downlink on 145.800MHz. This change is likely to last until the end of February 1998. The 'SAFEX' repeater on Mir comes and goes according to various on-board problems. It was heard recently, but word has come in that it will be turned off again. A 'suck it and see' approach is recommended. The frequencies are; Uplink on 435.750MHz and downlink on 437.950MHz. A CTCSS tone of 141.3Hz is required to bring the repeater up 'from cold', but it is said to then remain active until signals cease. Our thanks go to the RSGB for this info.

Morsum Magnificat, Flying the Flag for Morse

The October issue of the bi-monthly *Morsum Magnificat* contains it's usual enthusiastic collection of Morse related articles and information, including Morse news from around the world, and interesting features on CW sending priorities, learning methods, 'One Highly Successful Teacher', Telegraphy in Action, Farnsworth Preparation for the amateur Morse test, and helpful advice for your first CW QSO. As well as readers ads, information on keys and letters, this month there's also an interesting feature on Clandestine Stations in Labrador by John Hann, who detailed how a German U-boat secretly set up an automatic weather station on Allied territory, transmitting weather information in Morse to assist the U-boat packs in their campaigns. Now, 54 years later, he wonders "Does this ring any bells with anyone?"

MM is published bi-monthly and is available only by post, from GC Arnold Partners, 9 Wetherby Close, Broadstone, Dorset BH18 8JB, phone/fax 01202 658474, or on the MM home page <http://www.morsum.demon.co.uk>. You can obtain a sample copy for £2.50 or a US\$5.00 bill, or a year's subscription for £13.00 UK, £14.00 Europe or £17.00 rest of the world by airmail.

BARTG Spring RTTY Contest 1998

This takes place between 0200 GMT Saturday March 21st and 0200 GMT Monday March 23rd 1998. Single operator and SWL stations are permitted a maximum 30 hours operation. Rest periods may not be less than 3 hours per period. Multi-operator stations may work the full 48 hour contest period.

Categories: 1. Single operator all band, 2. Single operator single band, 3. Multi-operator all band, 4. Multi-operator Multi-transmitter, 5. Short Wave Listener. Categories 1, 2 and 3 are single transmitter only, and no station may enter more than one category. The bands are the 3.5, 7.0, 14, 21 and 28MHz amateur bands.

Messages: Messages should consist of: (A) RST/Message number. The number must be a three figure group and start with 001 for the first contact made. (B) Time in GMT. A full four figure GMT time must be sent as part of each message.

QSO points: Each completed QSO scores one point. Stations may be contacted again on other bands. Duplicate contacts on the same band must be clearly marked.

Multipliers: All DXCC countries (including JA, W, VE and VK) and all JA, W, VE and VK areas count as multipliers on each band. Any country or JA, W, VE or VK area may be counted again if worked on a different band, but continents are counted once only. Proof of contact may be required in cases where the station worked does not appear in any other contest log received and does not submit a check log.

Scoring: QSO points x multipliers x continents (max 6).

Log Sheets: Use separate log sheets for each band.

Logs must show Band, date and time, callsign, message sent and received, countries and points claimed. SWL logs must contain Date and time of logging, callsign of station heard, report sent by that station and callsign of the station being worked.

Summary Sheet: Full scoring, times of operation and

postal address for correspondence must be shown, and in the case of multi-operator stations the names and callsigns of all operators involved with the station operation during the contest. Any incomplete entries will be classified as check logs. All logs must be received by May 31st 1998 in order to qualify.

Suitable log and summary sheets are available from the contest manager. UK entrants send large (A4) SAE Outside UK please send 6 IRC's to cover postage. Computer generated logs containing all specified information are welcomed, on disk or printed with summary sheet as above.

Please send your contest or check log to: John Barber G4SKA, PO Box 611, Cardiff, CF2 4UN, Wales.

The judge's decision will be final and no correspondence can be entered into in respect of incorrect or late entries. All logs submitted shall remain the property of the British Amateur Radio Teledata Group. Trophies will be awarded to category winners. Certificates will be awarded to the top three stations in each category, the top five Category 1 entrants in each continent and to the top Category 1 entrant in each JA, W, VE, and VK area.

Additional Notes: If a contestant manages to contact 25 or more different countries on two-way RTTY during the contest, a claim may be made for the Quarter Century Award (QCA) issued by BARTG and for which a charge of

6 dollars U.S. or 30 IRC's is made. Holders of existing QCA awards may add new countries to their existing records. A separate sheet showing bands, callsigns and countries claimed must be included with the contest log. The BARTG welcome comments on the contest. You can get further information from, or send your comments to, Peter G0DEH, either via packet G0DEH@GB7DEO.#32.GBR.EU or Email; Peter_Finbow@compuserve.com

Horndean and District Amateur Radio Club Award

This is a new award which we've just received details of. The rules and information are;

1. Award is available to licensed amateurs and to SWL's.
2. Confirmed contacts with Horndean & District ARC members only are valid. Stations cannot be counted twice in the same class.
3. Do not submit QSL cards (except for data contacts). A list showing details of the contacts should be verified by the club committee.
4. Any bands and modes may be used. Digital repeaters may be used for data modes, and these should be shown in the contact list. No mailbox-type contacts count here.
5. There are two classes of the award: (1) HF, 30MHz and below, and (2) VHF, 50MHz and above.
6. The fee for the award is £1.00, but free to club members.
7. Contacts since 1st January 1981 are valid.
8. All applications for the award should be sent to: Mr R Evans, G0RPX, 426 Hawthorn Crescent, Cosham, Portsmouth PO6 2TX

Requirements

1. **HF Award;** 10 points required. Each member contact counts one point. Working/hearing the club callsign

(G4FBS) counts two points.

2. **VHF Award;** 15 points required. Each member contact counts one point. Working/hearing the club callsign (G6RST) counts two points.

A certificate will be awarded on the first application.

Endorsements can be subsequently applied for without further cost. The club hold regular nets: HF Sunday 0900-0930 local time CW 1.955MHz, 0930-1000 local time SSB 1.955MHz, 1500-1600 local time SSB 18.142 or 21.315MHz, Monday 1930-2000 local time SSB 1.955MHz, VHF Wednesday 1930-2000 local FM 145.350MHz (S14), UHF Sunday 2000 local time FM 433.450MHz.

The club members who are licensed (as at October 1997) are;

G0's: ASZ, ATG, BAG, BEM, DHZ, FYX, JEZ, JRN, JWJ, KAH, MBQ, PSF, RHD, RPV, RPX, UHM, VEP, VJT, VOJ, WAQ, WEJ, WHB, WQK.

M0's: AFG, AHM, ASE.

G1's: GXB, TDQ.

G3's: AAT, KOJ, LIK.

G4's: AYW, BEQ, CHO, PRG, RGO, XQZ, YJF.

G7's: KZI, UXY, WDQ.

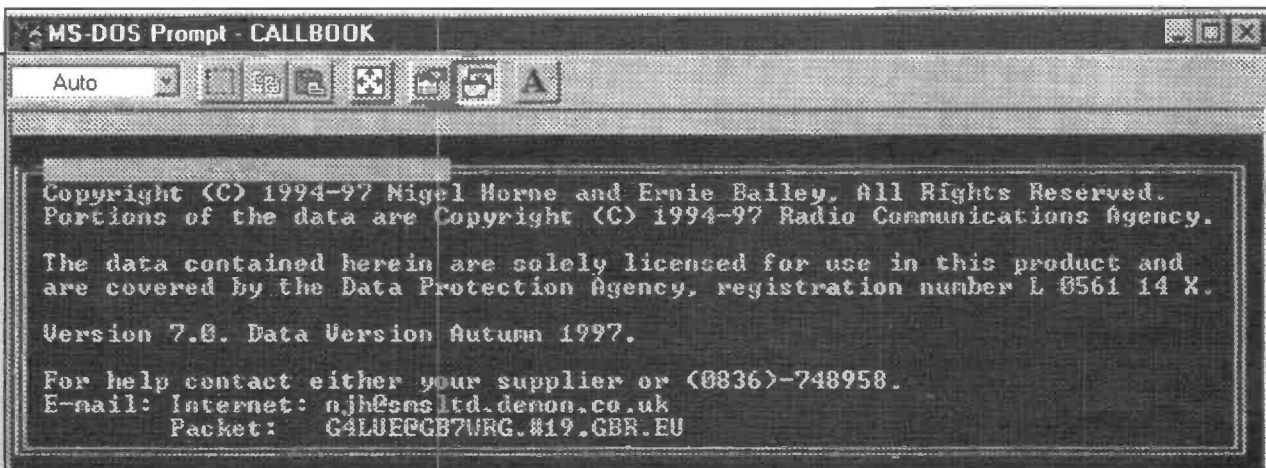
G8's: KYT, PIQ, VIU.

2E1's: COC, EHJ.

Overseas: KB2MFV, N9FFA.

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



1998 G0LOV & G4LUE Callbook on Disk

Current as of 17th October 1997, with callsign database information supplied by SSL on behalf of the Radiocommunications Agency, is the 1998 G0LOV & G4LUE Callbook. It comes supplied on three 1.44MHz PC disks, and installs to your PC's hard drive, requiring less than 6.5Mb for the basic data or a total of 10.6Mb if you require the full address and surname searches. Besides offering a callsign and surname/address lookup, including WAB details if the amateur is a WAB (Worked All Britain) member, the callbook also offers information on many UK repeaters, beacons, packet nodes and mailboxes. It's DOS based so you don't need Windows to install or run it. The suppliers say that it doesn't support Windows 95 at the moment, although on the Editorial PC it ran fine in a DOS 'Window' under WIN95.

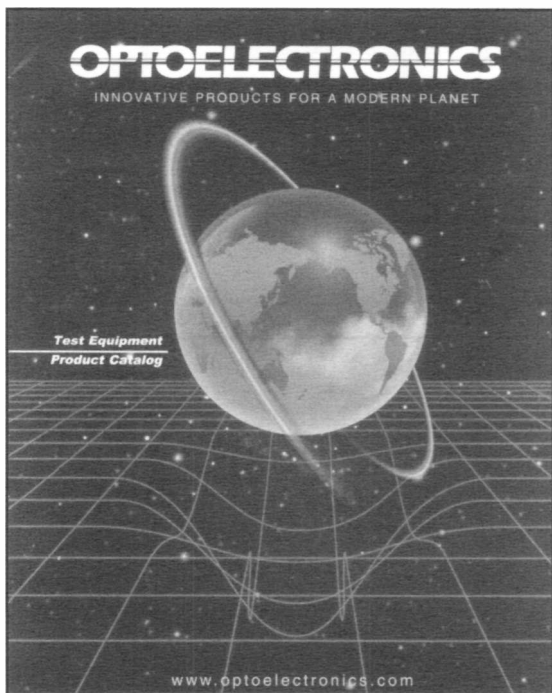
For pricing and availability, contact Ernie G4LUE between 6.00pm and 8.00pm on 01226 716339 or 0836 748958, or via post to E. Bailey, 8 Hild Ave, Cudworth, Barnsley, S72 8RN



Up to date QTH information from the G4LOV & G4LUE 1998 Amateur Radio Callbook on Disk

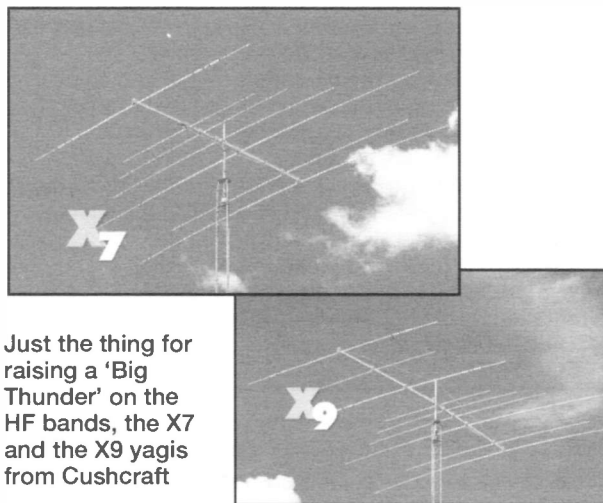
Optoelectronics Catalogue

Optoelectronics of Florida, USA, have just produced a new full colour catalogue which we're told includes at least five new products including the Micro Frequency Counter, Micro DTMF unit and R11 FM near-field test receiver. The catalogue is available free of charge from Waters and Stanton Electronics PLC, 22 Main Road, Hockley, Essex SS5 4QS



Big Thunder' Tribanders from Cushcraft

The Cushcraft Antenna Corporation of New Hampshire, USA, have announced a new line of HF yagis which they say are able to withstand all weathers. Under the name 'Big Thunder', the range starts with two aerials, the X7 and the X9, each having been designed using the latest computer modelling technology to achieve good electrical and mechanical features and performance. Each yagi provides coverage of the 10m, 15m and 20m amateur bands, with a power rating of 2kW and a VSWR of 1.1:1, each with a maximum wind survival rating of 161km per hour. Priced at £499.95, the X7 has a turning radius of 6.1m and weighs 60g, the larger and higher gain X9 being priced at £749.95 with a turning radius of 6.6m and weighing 85kg. You can get further details from W&S Electronics, Tel. 01702 206835



Just the thing for raising a 'Big Thunder' on the HF bands, the X7 and the X9 yagis from Cushcraft

AYP Scanap goes live on-line

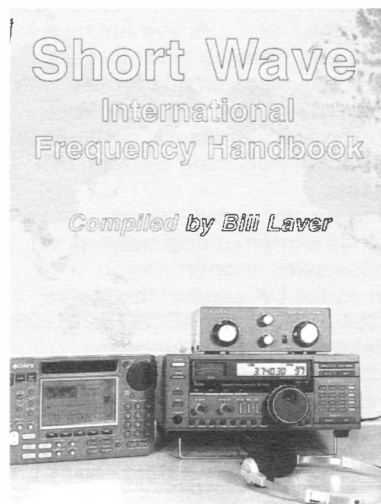
Birmingham-based developers of the groundbreaking Scanap AP 1000 VHF/UHF airband receiver has gone live on-line with its own comprehensive Internet site. AYP Electronics developed the unique Scanap AP 1000 unit to cater for new channel spacing which will be phased in throughout Europe from January 1999. The receiver will, at the push of a button, pick up either VHF or UHF bands catering for 12.5kHz and the soon to be introduced 8.33kHz spacing on the VHF band.

We're told that AYP's newly created web site is part of the company's push for the new product. The interactive site is designed to satisfy a growing market of radio enthusiasts and to be an entertaining and imaginative source of information.

Ahmed Parekh, AYP Managing Director explained "The beauty of a web site is that it enables us not only to get our specific messages across, but also to give something back to the enthusiasts by way of information, competitions and other incentives. AYP say that the site will be updated and added to on a regular basis, with the ability to take part in competitions and to communicate with fellow enthusiasts. The site can be found at <http://www.aypelectronics.com>

New Short Wave International Frequency Handbook

Spa Publishing Ltd. have just released the completely revised and updated 3rd Edition of their popular Short Wave Frequency Handbook. Now running to 176 pages, the price of the guide remains unaltered at £12.99.



We're told that, unlike other short wave guides, the information in this book is updated and only included if verified to be heard by UK listening stations. It's available either from specialist radio dealers and bookshops, or by post with an additional £1.00 p/p direct from the publishers, Tel. 01702 204965.

Low cost club stands at London Show

RadioSport tell us they're calling all Radio Clubs and Secretaries. They say that tables at the London Amateur Radio and Computer Show are available at vastly reduced rates to Specialist Interest Groups. To qualify as a Specialist Interest Group, commercial trading is not permitted and your club must promote its services and membership. If you would like further details of this offer, contact RadioSport on 01923 893929.

New Handheld Spectrum Analyser

Datalines Communications have introduced a new handheld and battery powered spectrum analyser. The unit covers the spectrum from 100kHz to 2GHz, and can be powered by internal alkaline batteries or rechargeable nicads. The clear liquid crystal display and simple menu structure allows users to check radio signals in a wide variety of applications, even, for example whilst on a radio tower.

Supplied complete with a soft carry case, aerial, and a mains adapter, the unit features an RS232 interface for storing plots on a PC. We're told the unit is competitively priced, and you can get further information from Peter Lagesse at Datalines Communications Ltd., Tel/Fax 01908 370011 or Email; 101546.3567@compuserve.com

Oncore GPS Receiver and add-on GPS Aerial from Motorola

Motorola has launched a new high-performance, high precision GPS receiver with differential capability which has been designed specifically for the positioning and automotive markets. The 'GT Plus Oncore' receiver uses Motorola's high speed application specific ICs and is capable of tracking eight satellites simultaneously. It's claimed to track satellites more reliably and smoothly, even in city environments or under dense foliage where GPS signals are often lost or where accuracy is poor.

Also from Motorola comes an active GPS aerial which they have developed for use with GPS receivers. Affordable and compact, the Oncore Active Antenna is designed to optimise the performance of Motorola's Oncore GPS receivers, and is also suitable for use with many GPS receivers from other manufacturers. With the growing use of GPS by radio amateurs, particularly running the Automatic Packet Reporting System, this could be of certain interest.

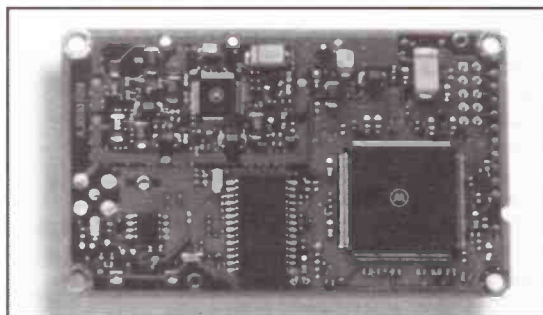
The Oncore aerial and receiver products are available through Motorola's international network of distributors which provide sales support and application information, in the UK contact the Macro Group, Tel. 01628 606284 or Motorola AECS Tel. 01628 763260. You can get details of further European distributors from Tina Connelly at Motorola's Automotive, Energy and Components Sector, 27 Market Street, Maidenhead, Berkshire, Tel. 01628 763260, or visit the web site at <http://www.oncore.motorola.com>

Video capture from Eurotech

Eurotech Media Services are importing a rather unique device from Canada, which although not specifically designed for ham radio use, can be used for high definition transmission since it can produce much higher quality pictures than those currently available using slow-scan systems. It simply plugs into the printer port of your desktop or notebook computer, and will connect with up to four video cameras. Primarily designed for intruder video monitoring, it also has four optional alarm inputs which can be used several purposes including file storage initiation. You can even save selected video frames onto a 3.5in floppy disk, with built-in video compression allowing an average of 280 full colour video frames per diskette. For further information, contact Eurotech at 15 Douglas Crescent, Houghton Regis, Dunstable, Beds. LU5 5AS, Tel. 01582 607880.

Biggest ever catalogue from Tandy

That well-known high street dealer, Tandy Electronics, have just launched their largest ever electronics catalogue. With 467 pages, it offers a very wide range of products, including new additions to their range with their latest HTX- 202 2m handheld transceiver, as well as new telephones, radio controlled boats, night vision binoculars, mobile phone accessories, and of course plenty of electronic components for those home projects. The catalogue also offers £25 worth of money-off vouchers, including £15 off any communications scanner of value over £100. The catalogue costs £1.00 and is available from your local Tandy store



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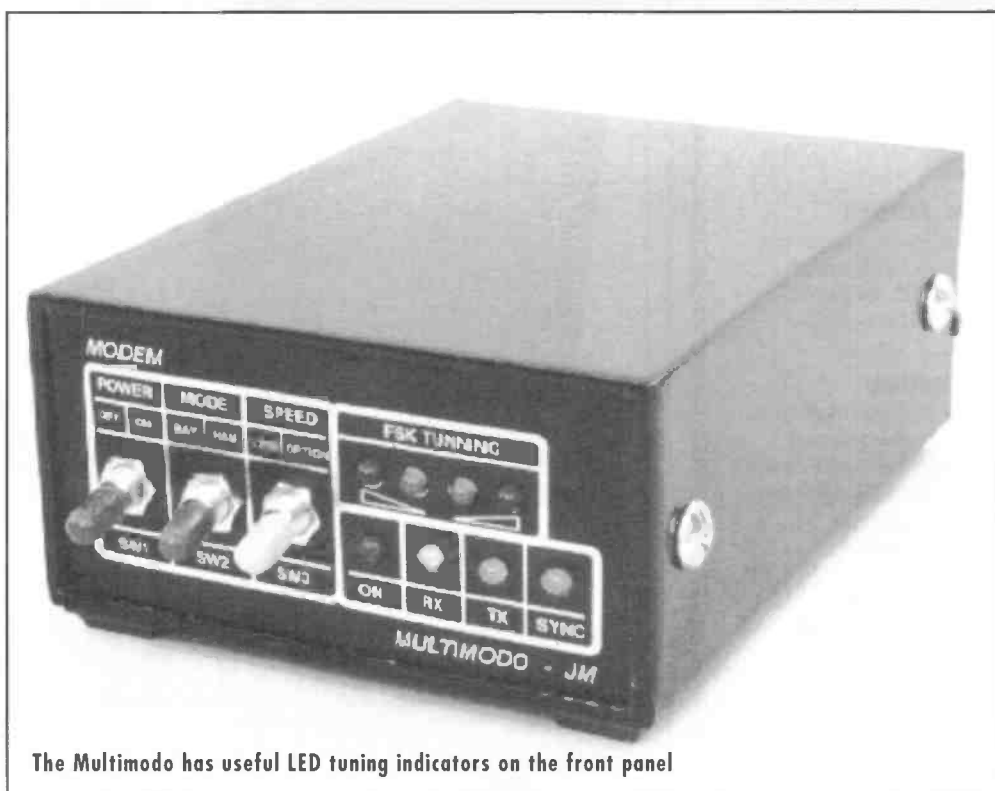
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On Test - SMC 'Multimodo' Modem

Chris Lorek G4HCL reviews a low-cost entry route to multi-mode HF, VHF and UHF radio communications



The Multimodo has useful LED tuning indicators on the front panel

Many amateurs already use a PC in conjunction with their hobby, maybe also running a terminal program on this with an external TNC (Terminal Node Controller) together with logging programs and the like. The advent over the last few years of PC-based programs for data communication designed for use with a relatively simple external modem have brought many more amateurs into the world of what were once defined as 'specialist' modes, i.e., communication modes besides speech and manually-sent CW. Whereas in the past, a

stand-alone multimode data controller costing several hundreds of pounds, complete with its built-in microprocessor was virtually essential, you can now do the job by using the processing power of your PC and with a simple, 'dumb' external modem.

The SMC *Multimodo* modem is a comprehensive version of one of these modem systems. Using this in conjunction with suitable software on your PC, it allows you transceive capability of; Slow Scan Television in colour, AMTOR, FAX, RTTY, CW, Packet Radio (on either 1200 or 2400 baud, as well

as 300 baud receive) as well as PACTOR and NAVTEX receive.

Controls

Three coloured toggle switches on the front of the unit control power on/off, packet 'Bay' (for packet transceive) or multimode 'Ham' operation (for RTTY, CW, AMTOR, FAX, SSTV transceive etc), and finally the packet baud rate. The 1200 baud speed is controlled by an internal crystal, and supplied with the unit (on the review sample it was affixed to the unit with a piece of sticky tape) is a further plug-in crystal to give 2400 baud operation if you wish.

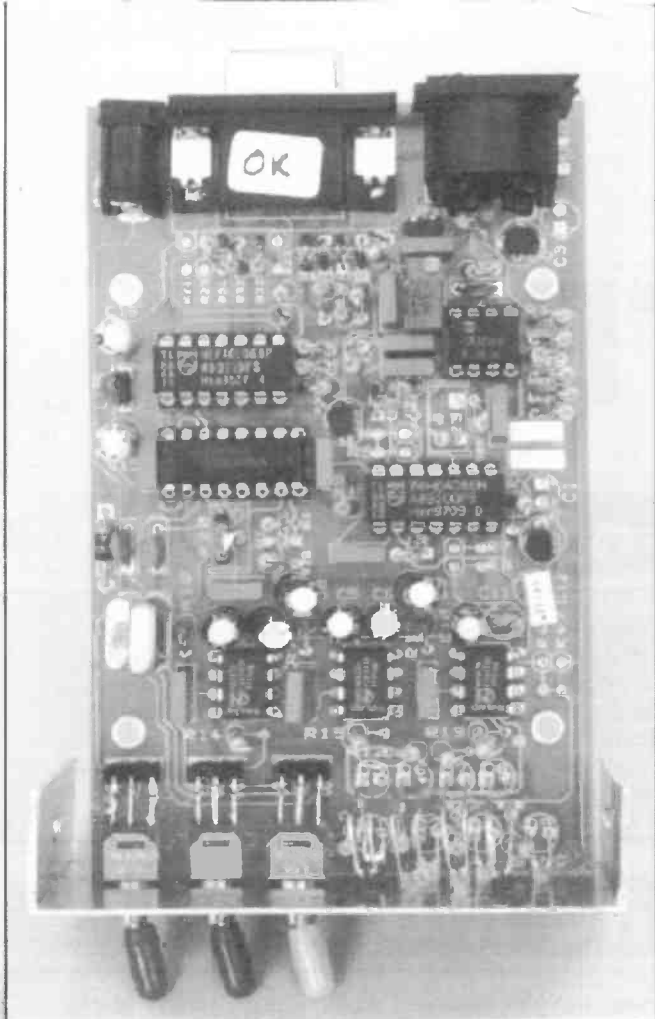
The modem comes in a black coated metal case, measuring 110mm x 80mm x 40mm, and is powered from 12V DC, a 2.1mm socket being fitted on the rear panel for this with a suitable DC lead being supplied.

Internals

Inside the modem is a neatly-assembled PCB, remarkably 'populated' for its size and function. For level adjustment etc., three 20-turn preset potentiometers are fitted on this PCB. The first two potentiometers set the TX audio level, for packet audio (R34, a 1k pot) and multimode audio (R45, a 10k pot). The third preset pot, R20, sets the bias level of 2.4V on pin 7 of the internal TCM3105 modem, this shouldn't usually need to be adjusted unless you're having problems in packet signal reception.

Software

A selection of appropriate PC-based software, on two 1.44Mb disks, comes supplied with the Multimodo. Disk 1 contains the latest JVFX, HamComm and MScan programs, these being DOS-based programs to provide multimode data communication. Disk 2 contains packet radio programs for DOS and Windows, these being MUTNC (DOS) and WINTNC (Windows) both written by Jon G7JJF. The supplied programs are provided under the 'shareware' concept, where



Three preset potentiometers are fitted on the neatly-assembled PCB inside the unit.

you are entitled to try the programs for a defined period of time, and if you wish to subsequently use them then you should send a registration payment to the software author. This registration sometimes 'opens up' extra facilities, for example in WINTNC it enables the built-in PMS (Personal Message System) capabilities of this superb program, or brings you the availability of technical support for the programs.

This review is of course concerned with the data modem, and not the software programs themselves (each of which could easily fill a separate review!), but it's the software that makes it work, don't forget that!

In use

A 9-way female D-type socket is fitted at the rear of the modem, which needs to connect to your PC's RS-232 COM port. The connector pins are in the normal configuration for pin-to-pin linking, so a standard cable is all that's needed. A small back-to-

back RS-232 'gender bender' adapter is also supplied with the modem, to convert the female connector to a male connector, similar to that fitted on most TNCs so that you can use your existing TNC lead if you already have one. Likewise, the 'radio' port connector on the modem is a 5-pin DIN socket which follows exactly the same pin configuration as the popular 'TAPR' standard (i.e. the same as TINY-2's etc.). In case you don't fancy wiring your own, I'm told that optional ready-made leads are available to match a variety of transceivers.

I've been used to using BayCom and JVFX modems before with the appropriate matching software, so the Multimodo didn't really bring too many surprises. Installation of the supplied multimode software was very easy. To extract and install the multimode programs to my PC's hard disk I only needed to first type 'GO' for information on the

programs, then 'INSTALLC' for all the programs, documentation files etc. to be extracted into appropriate sub-directories on my PC's hard disk drive (they've learned from the past HRT monthly software offers!). For the packet disk, a simple 'INSTALL' did the trick for the DOS software, and double-clicking on the 'WINTNC11.EXE' program icon under Windows installed the Windows program. The documentation on the programs themselves was contained within the various sub-directories in text file form, giving plenty of reading matter!

After this, and followed by a setup of the COM port on my PC in the 'configuration' sections of each software program, the modem worked fine, no problems at all. But unlike other 'featureless' modems I've used, I found that tuning around on HF data modes was made easier with the front-panel FSK LEDs. These often saved me the need to have to change between screens with function key depresses when using various programs. But even so, I often still found I used the superb 'spectrum analysis' screen in HamComm, which gives absolutely spot-on tuning! Another nice 'touch' was

the front panel 'Sync' LED on the modem, which blinked on received off-air SSTV and FAX synchronisation signals.

Needless to say, I spent many happy hours on the air with the system, as well as on the 'utility' bands with my Klingenfuss frequency guide by my side. These data modes are very 'catching', and beginners could very easily spend many interesting days and weeks just 'exploring' the numerous on-air signals - it makes a change from using the PC for other more mundane purposes!

Conclusions

The Multimodo can offer a superb low-cost entry to the world of multi-mode digital communications. As well as the very comprehensive collection of programs supplied with the modem, several more amateur-written shareware programs are available that use this type of hardware system. New ones are continually becoming available as well, continually adding modes and facilities to modem systems such as this.

The Multimodo is currently priced at £89.95, and my thanks go to South Midlands Communications (Tel. 01703 251549) for the loan of the modem for review.



The radio connector on the rear panel follows the TAPR standard, optional ready-wired leads are readily available

LETTERS

£10 for letter of the month

Do you have something constructive to say on the state of amateur radio today? Perhaps you'd like to put your viewpoint to the readers, get some discussion going, or give an answer to one of the issues raised? We'll pay £10 for the best letter we publish each month (paid approx. 6-8 weeks following the publication date). So write in with *your* views, to; *Letters Column*, Ham Radio Today, Nexus, Nexus House, Boundary Way, Hemel Hempstead, Herts HP2 7ST. Please keep your letters short, we reserve the right to shorten them if needed for publication. Letters must be original and not have been sent to any other magazines, and must include name and address plus callsign if held. *Reader's views published here are not necessarily those of the magazine.*

Letter of the Month

Regarding the Editorial in the November 1997 issue. Firstly, thanks for such an informative and interesting magazine, it always makes good reading.

I see by the Editorial that the Novice 'A' licence does not appear to have taken off. Well my 'two penneth' for what it's worth is that Novices both 'A' and 'B' should have been given limited access within the SSB section of the 2m band (maybe 144.200-144.250MHz). This would have given them access to a band where quite a few G0 licensees work, so maybe it would, through talking to these operators, have given them more of an incentive to go for a Novice/Full 'A' licence to work the HF bands.

This by the way is from a G7 who has no interest in CW, but would not knock anybody who has!

Also you may say that it is almost inevitable at the 1999 World Radio Conference that the need for CW to access the HF bands will no longer be a requirement. Then why do the RA not release the 10m band to Class 'B' licensees now, so that those with an interest can use this band and gain some sort of experience on HF. I don't believe this would cause any problems at all. I don't wish to stir up a hornet's

nest, but just thought I would put my thoughts into words.

As I said previously, I have no interest in CW but admire good operators who use this mode. I operate on 2m and 6m and I'm happy doing so, and yes if 10m became available I would use it. I tried 70cm once (even SSB) and found it very quiet here in the North East.

73 and good VHF DX
Eugene Purvis G7NQR

Editorial comment;

There are moves afoot in a discussion document for alternative bands for Novices, and for the 'entry route' to various licence classes, including HF. Even if CW isn't a topic for decision at the 1999 WRC (they've probably got more important things to talk about in the limited time available), a 'little bird' says that things could still change in the UK. The FASC (Future of Amateur Services Committee) would be interested in any such input, you can contact them c/o RSGB HQ.

Equipment trade-in value

Dear Ham Radio Today

I am writing to tell you of something which recently happened to me when I decided to part-exchange my 2m/70cm radio. In May this year, I took and am pleased to say I passed the RAE exam at the first attempt. Having waited patiently for the result and then the callsign, I endeavoured to search for a radio at a reasonable price to allow me to get on the air. Eventually the choice came down to the Alinco 605E at a price of £365..

Remember, this price was now only back in July. So I thought I must be able to get a reasonable trade-in price. Wrong! I was only offered an exchange price of £175 by

the dealer from whom I bought it from. Imagine my horror, I had lost over 50% of the purchase price in less than four months. If you had bought a new car and was told after four months you had lost 50% of its purchase price I'm sure you'd feel quite gutted.

I thought that amateur radio was an honourable profession but it seems that profit and greed rules, and dealers must think that everybody has very deep pockets. So I hope that other people will learn by not only my bad experience, but be prepared to lose an enormous amount of cash if purchasing new equipment.

Sincerely,
M. R. Broxton MW1BXX



Let the buyer beware

Dear HRT

I have held an amateur radio licence since August 1983, and during that time I have had the pleasure and the pain of advertising, selling, and on the odd occasion or two or three, purchasing items from other reader's adverts, from all of the current amateur radio magazines. I have not at any time sold derelict items nor have I purchased any such items. On the other hand, I have been on the receiving end of some right weird people, who were attempting to con me out of my equipment, for less than it was worth, and for far less than they intended to sell it on or would have sold the self same item.

Mind you, the funniest chaps that phone are the ones who first ask "What's the least you'll take for it?", then when you fail to respond to their pitiful pleas, come up with "I'll just have a chat with my friend, and call you back later". Some hope, as the friend's probably non-existent, and if he is real, he is no friend, as the caller never calls back. Then there's that really cheeky chappie, the one who's all jollity and says he's on his way to see you, oft time he never does arrive, the odd one or two who do arrive usually bring no money with them, but have a cheque book and no card. No sale!

Then there's the one who, after arriving, inspects your goods in a manner reminiscent of drug busters at channel ports and airports, though he's forgotten his sniffer dog, but oh boy he does come out with some pearls. One told me the equipment was so out of date that there was no chance to obtain spare parts (both Maplin and Cirket did and still do, stock the relevant parts). Or, as one person said to me, when I was attempting, unsuccessfully, to sell an ATU by KW "The price is far too high" then offered me less than half the current market sale price as advertised in HRT and other amateur magazines. Then, after I had told him 'no sale', he really topped the list with his comment "It's your loss mate, after all it's a buyer's market" to which I replied that I wouldn't then sell it to him for ten times the asking price.

Lately, however, I have heard not a few, but many, tales of cheats who have sold derelict goods, and

refused point blank to refund the price as well as refusing to repair the equipment. Many of those I have heard with this problem are in despair. Some friends have suggested that they write to HRT and other amateur magazines in an attempt to shame the cheat into rectifying the problem. You know that you cannot afford to do that for them, I tried it ten years ago, nobody would risk the possible libel action. My problem at the time was with an amateur radio equipment maker, and I had to pursue the matter, for over 18 months, through the courts. I won, but the maker is still there.

I know and have many times heard the words "let the buyer beware" or "a fool and his money are easily parted". Both sayings were no doubt formulated by some cheat, thief or blaggard, whose only intent in life was to obtain money by the use of fraudulent practices. If word of mouth were as effective as we would all wish, any attempt by someone advertising in any amateur radio magazine would probably make them think twice before they took the chance. Unfortunately, word of mouth on the amateur radio scene is about as effective as attempting to halt a forest fire single-handed. Not the least for the simple reason that most amateurs, even if they heard the complaint, would probably give the cheat the benefit of the doubt, surmising that the buyer had probably caused the fault by wrongful use and was attempting to get their money back under false pretences. Yes, this also happens, but not as often as the cheat who knowingly sells derelict gear.

Personally I know of no way that future, or even present cheaters can be stopped or made to pay for their misdeeds, except through a local court of law which, more often than not, puts the complainant off. I have done it three times in the past and always won, receiving every penny back including my costs.

As this is also unlikely to deter the cheat, there should be some method by which one can obtain justice, when deliberately cheated. Perhaps there's a person or two out there in amateur radio wonderland with a profound idea or two?

John Bolton G4XPP

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Note: All four conversions in Sept. 1987 appear in the same article entitled "70MHz - The Band that Time Forgot", therefore only one photocopy for that issue is needed.

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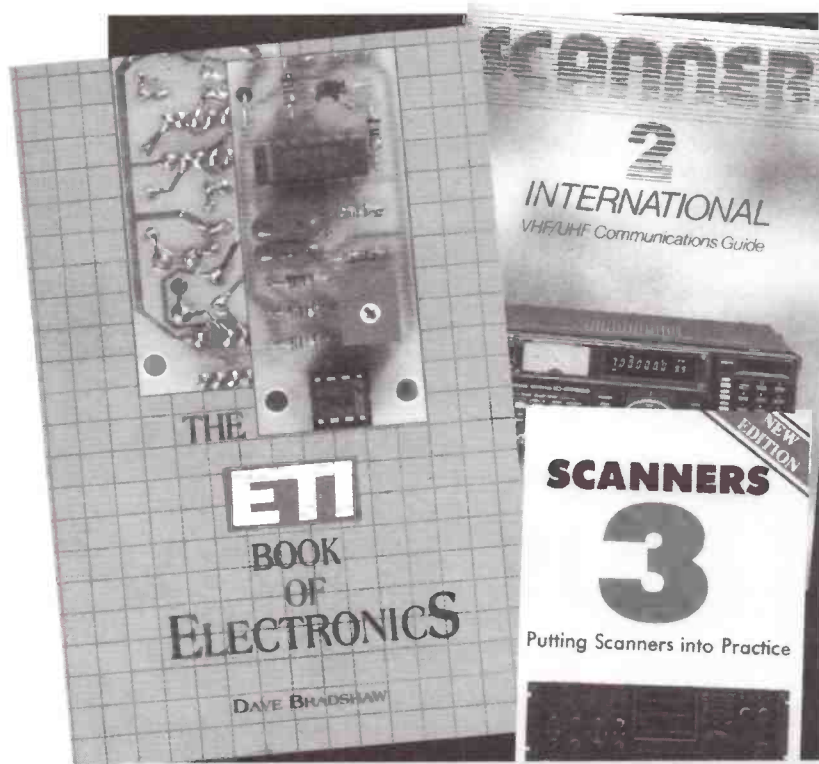
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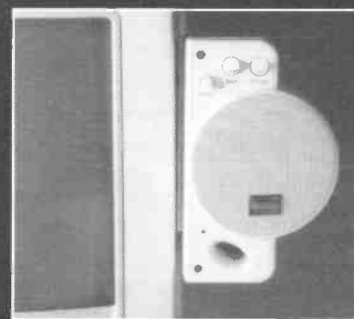
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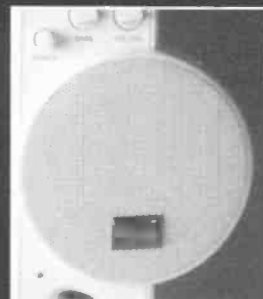
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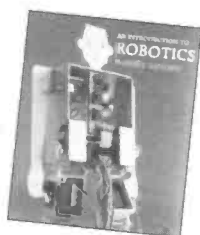
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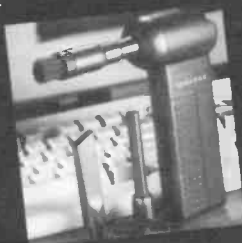
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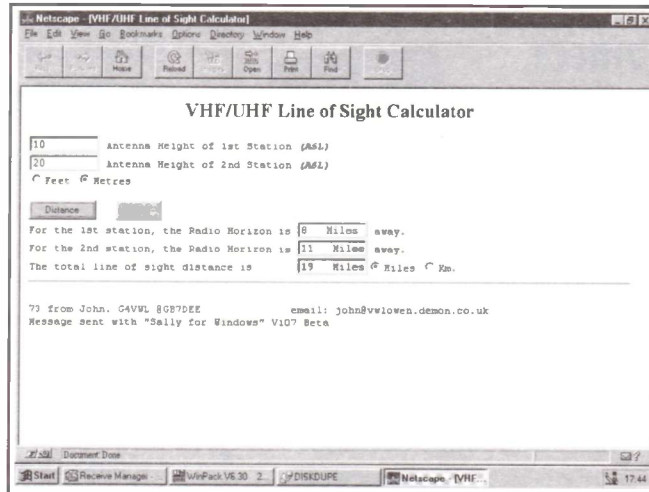
Chris Lorek G4HCL looks at HTML over packet, and at APRS possibilities

Packet radio messages are certainly changing! With the growing use of HTML for packet bulletins on my local BBS, I often find my Internet browser being used more for packet than on the Internet! I've also seen a few examples of this being put to very good use, even with handy HTML 'calculators'. Shown here is an example from John G4VWL, generated by SALLY V1.07 software. Incidentally, the V1.07 Beta test version of SALLY (which is the version as supplied by the HRT Software offer from early Dec 97 onwards) is now valid until next month, the software author Ted is constantly improving it and it now needs two disks just to itself.

This month, if you'd like the very latest versions of virtually every single packet radio software program currently available, including the latest WinPack upgrades, APRS, SALLY etc. as well as SSTV, FAX etc programs, they're all available on a huge collection on a CD-ROM, a new offering from the software service! See page 46 in this issue for info. Also on the CD-ROM is the UK-written Windows logbook 'JOURNAL' (it's over 4Mb in size) together with WPIMPORT which lets you import the automatic log files generated by WinPack into it.

APRS

Have you tried APRS, the Automatic Position Reporting System, over packet? With the growing use of portable low-cost GPS receivers by amateurs, do remember that many



Handy calculation facilities in HTML packet bulletins

TNCs now have a 'GPS mode', which when you've linked the RS-232 output of your GPS receiver to your packet TNC it'll automatically transmit your position over the network. Stations then running APRS software can get a continuously updated on-screen map of all stations. This system has already been successfully used in RAYNET event for a marathon, with moving stations having their positions graphically displayed, but has anyone else tried it? Maybe we could settle on a 'common' APRS 2m or 70cm frequency in the UK? I'm currently 'playing' with a pair of Tiny-2 TNCs linked to small Garmin GPS-38 receivers, and I hope to be able to prepare a 'user guide' soon for these. But I've also heard of others having problems with this configuration, have you tried this. APRS could have great possibilities in amateur radio, and although the available space in this column doesn't allow too

much scope I do hope to expand on some of these possibilities over the forthcoming months.

ChatNode activity

Unlike earlier days, fewer packet operators nowadays seem to have 'one-to-one' QSOs, often instead (and I'm also to blame here) using automated BBSs message retrieval and 'Email' forms of communication over the network instead. However, each Thursday evening, between 1900 and 2000 local, is the time for inter-operator 'ChatNode' activity in the central southern coastal area of the UK. Last week as I write this, G4JXL, 2E1AKW, G3WEG, G7MTX, G0RPA and G8OQN all took part in the first 'activity session', although this identified a software 'bug' causing a linking problem between the NEND (Portsmouth) and BNM (Bournemouth) nodes used. Eventually it is hoped to have a string of these CHAT facilities all permanently linked across the area, so

why not have a listen? You never know who you could 'bump into' on your local node after you've connected and then simply typed 'CHAT'! You can get further information on the ChatNode facility from Jon G7PFT @ GB7PFT.

Packet deviation problems?

After my local BBS SysOp went over to 12.5kHz channel spacing, with appropriate filtering in his receiver as many BBSs and nodes have likewise done recently, I've heard many, many cries of "I can't connect any more!". This is often because some types of TNCs put out a high level or audio which literally 'blasts' the connected transmitter's audio stages into limiting, at 5kHz (or greater) deviation. Often, trying to reduce the audio level from the TNC results in 'all or nothing' due to this excessive level. One way (the correct way!) is to get inside your rig and turn the deviation down to 2.5kHz maximum. But, to help the 'all or nothing' effect I've often found the addition of a high-value series resistor, of between 100k and 220k, in series with the TNC's TX audio output to the rig's mic input, can help a lot. Remember also that, if you're running 5kHz deviation on 2m and others are trying to use packet on adjacent 12.5kHz channels, you'll be causing problems to them, thus slowing up everyone's activity (including your own if you're using 25kHz wide receive filtering in your rig) with increased packet retries.

HF Data

Here are a couple of HF systems you may like to try connecting to on these dark winter evenings. A message from Andy G0VUH @ GB7WRG.#19.GBR.EU tells us that during the winter period, his HF 300 baud packet port (network node TIBET in Sheffield) will be operation on 3.5905MHz from 22.30 onwards. What not give it a try?

From Port Elizabeth on the South East coast of South Africa between Durban and Capetown (QTH locator KF26TA), the ZS2FP Winlink/PACTOR BBS is in operation on a frequency of 21.073MHz mark. The SysOp, Piet ZS2FP@ZS2FP.ZAF.AF says he's beaming northwest into Europe, and has direct forwarding facilities to the regional packet network. He says that if you have the time, to please try and connect to the mailbox and to leave a message/signal report for his attention.

SSTV

Dave K3ASI says he's looking for 10m SSTV contacts, suggesting that you may like to monitor 28.680MHz at weekends and call CQ. You can contact Dave via packet with a message to K3ASI @KC4TUM.#BC.NC.USA.NO AM or see his SSTV web page www.imagnetfus.net/sstv

If you're wondering where to find 2m SSTV activity now that many data channels have been moved around, the answer is that 144.500MHz is still fully OK for SSTV in the new band plan, there's been no current change here at all. So now you know where to give your JVFAX program an airing!

New Packet Frequencies

1998 brings a number of frequency changes to nodes and BBSs, if you've

suddenly 'lost' yours, then take a look at recent downloaded messages in case you've missed some important 'QSY' information! Here's some information on southern area system frequencies which may prove useful, my thanks go to John G8OQN for this information.

1998 BARTG Events

A couple of dates for your diary for 1998. First is the BARTG Spring RTTY Contest, held between 0200 GMT Saturday March 21st and 0200 GMT Monday March 23rd. Single operator and SWL stations are permitted a maximum 30 hours operation, rest periods may not be less than 3 hours per period, although multifoperator stations may work the full 48 hour contest period. There's also the annual BARTG rally, which will be held on Sunday 13th September 1998 'as usual' at Sandown race course, Esher, Surrey. For 1998 the successful 'DataStream' lectures session of 1997 will

be extended to include extra talks, including one by your's truly together with Phil G6DLJ on "Multimode Data Comms for Beginners". Hopefully I'll be able to bring along some software on disk to again give away - (visitors to last year's lectures received a nice surprise regarding this!).

The British Amateur Radio Teledata Group (BARTG) is the only group based in the UK which caters for all aspects of amateur radio data transmission and reception. If you're interested in mechanical teleprinting, packet, FAX, TCP/IP or any other digital mode BARTG has something to interest you. BARTG publishes its magazine Datacom four times a year, and above all, BARTG is run by data comms enthusiasts for data comms enthusiasts. If you'd like more information, contact Bill McGill G0DXB either by Email at members@bartg.demon.co.uk or on packet at G0DXB@GB7WRG.#19.GBR.EU, or visit their Web site at <http://www.bartg.demon.co.uk>.

WinPack Compressed Forwarding

A problem I heard of recently, one that I also had myself a short while ago, was that of downloads of messages from a BBS in FBB compressed format to stall as soon as the title is received, the WinPack error message stating "Unexpected or invalid packet type received from sender". The answer here was found after setting Flow Control to 'None', after which things worked fine. So, if you're having problems, and are maybe using 3-wire RS-232 connection between your TNC and PC, try changing from XON/XOFF to RTS/CTS handshaking in the 'Options/Comms' setup of WinPack and using the 'full set' of RS-232 connections.

CTRL-Z, End of Message

That's it for this month, see you again here in four week's time! 73 from G4HCL @ GB7SUN.#48.GBR.EU

Channel	Call/node alias	Type	QTH/notes
144.550	GB7BNM/ BNM	AX25 BBS	Verwood, QSY, 144.850, Jan 98
	GB7SUN/ NEND	AX25 BBS	Portsmouth, QSY, 144.850, Jan 98
	GB7VES/ FRIMLE	AX25 BBS	Frimley, QSY (?MHz), Jan 98
144.825	9600 baud channel, available from January 1998		
144.850	1200 baud channel, available from January 1998		
144.8625	1200 baud channel, available from January 1998		
144.875	GB7IHA	TCPIP hub	Basingstoke, Hants
144.8875	GB7SWf2:SAL21	Node	Salisbury, Wilts
144.900	GB7DXS/ ANSTY	DXcluster	Ansty, W Sussex
	GB7DXW/ TOTTON	DXcluster	Totton, Hants
	GB7WX:ELEIGH	Node	Eastleigh, Hants
144.9125	Ad hoc 1200 baud channel, will not be issued to GB7 calls.		
144.925	GB7HIP/STAKES	TCPIP hub	Waterlooville, Hants
144.9375	GB7BMT/BMTH	AX25 BBS	Bournemouth, Dorset
	GB7IW:IOW	Node	Isle of Wight
144.950	GB7NWf2:WLTN2B	Node	Swindon, Wilts
	GB7PFD/FIELD	AX25 BBS	Petersfield (being planned)
	GB7SDN/SWINDN	AX25 BBS	Swindon, Wilts QSY, 144.850, Jan 98
	GB7SIG/SIG	AX25 BBS	Blandford, Dorset
	GB7SOU/SOTON	AX25 BBS	Chandlers Ford QSY, 144.8625, Jan 98
	GB7VRBf2/VRB	AX25 BBS	Worthing, W Sussex
	GB7SD:WEY2	Node	Weymouth, Dorset
	GB7VR:BR2	Node	Brighton, E Sussex
144.975	GB7NLY/CAMBLV	AX25 BBS	Camberly [9600 baud access]

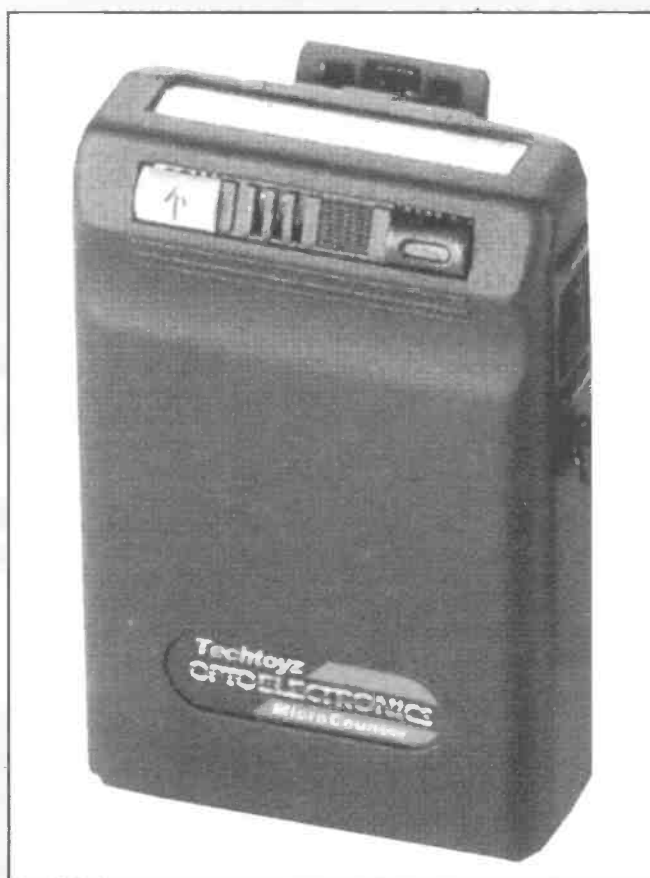
Scanners

Bill Robertson investigates a case of a 'call to prayers' in religious relays over UHF FM

A correspondent on the 'net says that he recently heard an interesting signal whilst he was at a friend's house in Rochdale one Sunday afternoon. It appeared to be a link transmitter carrying 'Koran' broadcasts, or Muslim 'calls to prayer'. Alan says this was on 454.025MHz, and he believes that it may be used to carry the signal either from one Mosque to another, or up to the PA speaker that he's heard broadcasting the calls to prayer out around the Tweedale Street/Milkstone Road area of the town. The signal appears to come on about several times a day, with a blank carrier on the frequency at other times. He adds that the signal wasn't very strong, and was only just audible at his home some four miles to the north, but asks whether anyone else has heard this.

I'm told that in west Lancashire, similar transmissions are to be found on 454.300MHz and 454.700MHz, the former frequency's signal being quite strong with the signals possibly originating from the Preston or Blackburn areas.

In a number of Middle Eastern countries, where Mosques are to be found every mile or so, UHF radio relays are very commonly used for the 'call to prayers', with receivers at several mosques linking these to their tower-mounted speakers, all carrying exactly the same call. I'm told that you can



The Micro Counter from Optoelectronics gives off-air frequency display of nearby signals, an optional aerial plugs into the side of the pager-sized case

even sometimes hear the slight 'delay', sounding like an echo, if you're standing between two or three mosques, from this very effective demonstration of 'quasi-synchronous' audio broadcasting.

Sky Sports on your Scanner?

I've received a few reports of 'strange signals' being

received on scanners throughout the country. One such comment went along the lines of; "Last night I accidentally punched in 158.000MHz on my scanner and there was a fairly strong signal but the audio was not top quality. So I switched over to FM and it cleared up some what and I was able to hear a boxing match ongoing. When I checked the TV guides there was none on terrestrial TV, so I

delved deeper and found that Sky Sports 1 had one on at the time."

The answer here is that, if you're in a cable TV area, then yes, you could very well be receiving satellite TV sound tracks. Most cable operators use frequencies between 128MHz to 544MHz with 8MHz TV channel spacing for rebroadcasting, although there are a few cable operators (and reportedly more so in the near future) using frequencies right up to 750MHz. They also use digital carriers between 5MHz and 50MHz to control subscribers' set-top boxes for 'pay per view' events, where the customer can purchase a 'video on demand' event from the set-top unit.

The reason why you might be able to pick these signals up on a scanner is because of RF leakage from the cable system, either on the cable feeds themselves to various houses, or from a cable company's distribution system. The signals from these are, or at least should be, very low, but 'leaks' can and do occur, and every 8MHz you may find a different TV signal together with a discrete FM sound carrier offset from the video signal.

There is in fact an interesting and quite informative feature on this in the EMC section of the RSGB's December 1997 'RadCom'. This reports that some radio amateurs are suffering from this on the 2m and 70cm bands, either

from cable signals wiping out amateur off-air signals, or amateur transmitters on these frequencies, even small handhelds, 'getting into' the cable system to subscribers' houses.

New 'Techtoyz' from Optoelectronics

I've just been told of a couple of new portable offerings from Optoelectronics, who are already famous for their 'Scout', and Xplorer' plus several other off-air monitors. They've now launched their new "Techtoyz" in a miniature product line, which includes the *Micro Counter* and the *Micro DTMF Decoder*. Both of these are tiny, portable pager-sized units measuring just 71mm x 48mm x 28mm, and each operates from a single internal AA size battery.

First off, covering 10MHz to 1.2GHz, the tiny Micro Counter is an off-air frequency counter with a built-in 12 digit liquid crystal display on the top panel. A side-mounting 3.5mm jack socket accepts a plug-in aerial, a handy matching plastic whip aerial being available as an optional extra. The unit will typically pick up and display the frequency of nearby radio transmitters, e.g. a mobile or handheld within a few metres or tens of metres from the counter. As well as a 'free running' counter mode, a 'filter' mode (which retained the last detected frequency) and a 'store' mode (which automatically stores up to three received frequencies) can be selected.

The Micro DTMF Decoder comes in exactly the same size and style of case, with a 12 character LCD display plus an internal microphone for radio speaker or tape recorder pickup, as well as a line audio input jack for direct connection.



DTMF decoding from your receiver, with a 2000 digit memory display, is offered from the tiny Micro DTMF Decoder from Optoelectronics

Decoding and displaying received DTMF (Dual Tone Medium Frequency) digits, as used for over-the-air signalling, from your receiver it has a 2000 character non-volatile memory, a switchable 'auto blank insert' function after a three second delay in received digits, and rapid backwards/forwards scroll using the front panel buttons. It offers a 200 hour operation from single AA alkaline battery, with an auto low battery shutdown and data save facility.

The Micro Counter is priced at £99.00 with the optional aerial at £9.95, the Micro DTMF Decoder being priced at £89.00. Also coming along soon is a similarly-sized Micro RF Detector to replace the Optoelectronics R20, although a price for this

hasn't been fixed yet. You can get further details on these units from Waters and Stanton Electronics, Tel. 01702 206835.

Weather satellite reception problems

Steve from Telford tells me he's been trying to receive signals from orbiting weather satellites in the 137MHz band, but all he receives is strong pager transmitter signals which break through on his scanner. He's tried adding an external aerial and preamp but without success, and asks what can be done.

The only way to 'get rid' of this problem is to improve the strong-signal handling performance of

the receiving system. Adding an external aerial, and particularly a preamp, can in fact make the problem far worse by increasing the signal of the unwanted paging transmitters, which operate nearby on 137.975, 138.075, 138.150 and 138.175MHz (so a filter won't usually help unless it's a very high-Q, and thus fairly large, cavity type).

The use of a dedicated weather satellite aerial of horizontal crossed dipoles with reflectors, favouring signals from above the aerial rather than from the horizon, will give better pager transmitter rejection than the usual type of wideband vertical aerial (which isn't too good for overhead weather satellite passes in any case!). The real answer is to choose a receiver with good intermodulation and blocking rejection performance. Take a look at recent Ham Radio Today scanner reviews which always give the lab-measured figures of these, so that you can 'compare' different receivers like-for-like. But I'm afraid that, in today's crowded spectrum, a low-cost handheld scanner often doesn't have the performance required to reject these unwanted pager signals, a better-performing base scanner (not just one with a handheld circuit in a big box!) is often needed.

Bill Robertson is always pleased to hear from readers. You can write to him c/o the Ham Radio Today Editor, or leave a phone/fax message on 01703 263429, or directly by Email to scanman@qsp73.demon.co.uk

Readers should note that, depending upon your country's regulations, reception of some services may not be allowed unless you have appropriate permission. The RA's "Receive-Only, Scanners" Information Sheet provides information for UK listeners.

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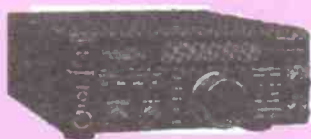
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*CAN BE EX-DEMO OR USED

HF Happenings

Don Field G3XTT brings news on some new prefixes you'll be hearing on the bands

The bands were somewhat variable over the weekend of the CQ Worldwide Phone contest at the end of October but, overall, conditions could be described as good. At least one UK station worked over 100 countries on 10 metres, which certainly wasn't possible the previous year, and conditions on 15 metres were excellent. If anything, it was the low bands which suffered. I attempted a single-band low-power (100 watts) effort on 80 metres, but it was a real struggle. 100 watts goes a long way on CW, but on SSB among all the kilowatts it's hard to make much impression in a contest that has such a high level of activity. Nevertheless, I ended up with over 300 contacts in 54 countries, but heard a lot more than this.

Since then, HF conditions have continued to be erratic, with some intense solar storms, usually typified by an enhancement in HF propagation followed by a near blackout. For example, one Sunday morning in November I worked J16KVR/6 on 15 metres, long-path. Although operating portable from one of the Japanese offshore islands, Yuki had an excellent signal here in the UK and, at the same time, I was seeing packet spots for other Far Eastern and Pacific DX, both on 15 metres and on 12 metres. By the afternoon, in contrast, it was as though my aerials had fallen down, as I could hear just a few weak European signals on

the HF bands, and nothing at all from farther afield.

Reverting to the contest for a moment, for the first time I submitted my log electronically via the Internet. This really does make log submission trivial, and the system has been set up so that you get an e-mail receipt so that you can be sure that your log arrived safely. In addition, a web page has been set up which lists all logs received electronically, and you are given a PIN number so that you can access the contents of your own log if you so wish. Now there really is no excuse for not submitting your CQ Worldwide log, even if you made only a modest effort. Let's hope other contest organisers follow suit (as, indeed, some already have).

Incidentally, if you don't have a decent contest station of your own, but would enjoy being at the controls of one, there are many opportunities nowadays, with potential hosts making details available both on the Internet and in various US ham radio publications. Perhaps most interestingly, for the recent CQ Worldwide contests, mega-station W3LPL in Maryland was asking for additional operators, and for the November contest the group heading out to Thailand to operate the Bangkok club station was doing likewise. In these days of frequent-flyer programs, many of us are in a position to take up such opportunities at little or no cost.

The Year in Review

As 1997 still has a few weeks to run as I write this, it may be a bit premature. But I thought it worth looking back at the HF bands over the past 12 months. At last, and rather later than the pundits have been predicting, we seem to have turned the corner of propagation and the sun is beginning to become active again. Even ten metres was showing serious signs of life as the year wore on, and 1998 should see a dramatic upturn. The converse was that, early in the year, the low bands were excellent, as evinced by the remarkable success of the VK0IR Heard Island expedition on both 160 and 80 metres. That expedition, in fact, must rate as one of the highlights of the year. The VK0IR team set new expectations for major expeditions in a number of ways. They made extensive use of modern technology including the Internet, computer-optimised aerial systems and so on. They set a new record for the number of contacts. And afterwards they produced the most professional book and videotape we have yet seen resulting from a ham radio expedition.

Of course, there were many other notable expeditions, most of which I have recorded in these pages as the year went on. September was a bumper month, for example, with VK9WM from Willis Island, ZK1XXP from the North Cooks and K7K from Kure Island all following hard on

each other's heels. This was either very exciting or very frustrating depending, I suspect, on whether you have to go out and work for a living in among spending time on the bands.

If your interest in HF is ragchewing rather than competitive operation, then perhaps 1997 was a year like most others. There again, if you enjoy a ragchew the return of the sunspots will come as a great relief. Chatting to folk in the other continents is so much easier on the wide open spaces of 15, 12 or 10 metres, both because there is less band congestion and because your signals will propagate better with a given amount of power (I still recall one columnist referring to 10 metres as a "gimmick" band because, when the sunspots are co-operating, you can work round the world with excellent signal strengths using modest powers and a simple dipole or vertical aerial). Even if your interest is in ragchewing on 80 or 40 metres, this will help you, as improved high band conditions will take some of the pressure of the limited low-band spectrum we have available. Talking about which, the various national members of IARU (the International Amateur Radio Union) are working together to table proposals at the 1999 World Radio Conference for a unified amateur band at 7MHz. It would be wonderful if a common 300kHz of spectrum were available to amateurs worldwide, rather than significant parts of the world including Europe

being confined to a narrow 100kHz allocation. The last few years, when the solar flux has been low, have demonstrated that 40 metres offers our best hope of worldwide propagation at such times. The downside, though, is the narrowness of the band. It would be excellent if we had 300kHz to play with by the time we start to head down the cycle again in 7 or 8 years' time.

Islands on the

Web

There is an excellent new site on the Worldwide Web dedicated to the RSGB's popular Islands on the Air awards programme. The site has been established by N1HRW and is at <http://islandchaser.com>

Other DX News

Two US amateurs, K9FD and W0RI, have been planning a trip to China to operate club station BY1QH on 160 metres. This operation may take place sometime in January.

Abdollah, EP2FM, President of the Iran Amateur Radio Society is reported in the RSGB DX News Sheet as saying that he is active again as "the first legal amateur radio station here since my station was closed down in 1983". He hopes that more "legal" EP stations will soon be active. Be this as it may, there has been a fair amount of activity from Iran since that time, and it's hard to believe that anyone would have been active without some kind of authorisation, given the nature of the country. However, to my surprise I find that I have no EP contacts, as such, in my log since late '82. What I did work was the 9D2RR expedition in 1992, but this was led by the now-discredited Romeo

Stepanenko, whose expeditions reportedly had a habit of operating from somewhere other than where they actually claimed to be (XY0RR, P5RS7, etc.).

A large group of Finnish amateurs plans to be active from Guatemala (TG) from 18th January to 5th February, and paying particular attention to working Europe on the low bands. This will be a very welcome operation. In years gone by TG9NX was very active on the low bands, and TG9VT (now a Silent Key) was very active on RTTY, but in recent years, and partly due to the security situation, there has been very little activity from Guatemala.

Our own Chiltern DX Club plans for our February operation from the Spratly Islands as 9M0C remain well on track. Expect us to be active between 13th and 23rd February. As I write this we are taking something of a break, having finally shipped the heavy hardware (towers, aerials, cables, tools, etc.) by sea to Malaysia. It is astonishing how much time it takes to organise expeditions like this, and we have been busy assembling and testing everything both to save time when we get to the island, and to avoid any possible problems (such as finding that there are parts missing, or that we have the wrong tools to hand). Now we can relax a little, and attend to other aspects such as familiarising ourselves with the logging software, getting the latest news out to the magazines and on the Internet and, for myself, aiming to get some scuba training so that I can enjoy the other distractions of the island while we are there. Do look out for us on the bands.

A New Country?

Recent newspaper reports have suggested that the

Caribbean island of Nevis may secede from its federation with St. Kitts following a vote of the island's legislature. The federation came into being after the islands gained independence from Britain in 1983. Let's not jump the gun, though, as a Referendum of the whole population has to be conducted, and requires a 66% vote in favour. No doubt the ARRL will take a view on DXCC status once the situation becomes clearer.

While on the subject of new "countries", just as I write this a couple of stations have appeared on the bands from the Chechnya Republic, using the unofficial prefix 1X5. There have been quite a few instances in recent years of unallocated prefixes being appropriated by regions where there are political disputes, examples including Northern Cyprus (1B), Palestine (ZC6), and the Serbian parts of Bosnia (X5). In addition, there are other oddities, such as Seborga in Italy (1P). Don't hold your breath for any of these to be recognised by the ARRL, though they are interesting ones for the history book. Be careful though, as a strict interpretation of your licence might suggest that, as they are not properly authorised, these are pirate stations and should be avoided.

DXing on the Edge

This is the title of a new book about 160 metre DXing, written by Jeff Briggs, K1ZM, a dedicated topband enthusiast. Jeff recalls many of the highlights of topband DXing achievements over the years, with particular reference to the exploits of the late Stew Perry W1BB, one of the pioneers of the band. A CD with recordings of topband DX is also included with the book. A

must for lowband DXers, and not just because your's truly gets a couple of mentions and a photographic appearance! The book is published by the ARRL, and can be obtained from them by phoning with your credit card number.

By the way, if you are keen on 160 metre DXing, or want to give it a try, there is no better occasion than the CQ Worldwide 160 CW Contest, which is over the weekend of 23rd to 25th January, starting at 2200 on the Friday, and running through until 1600 on the Sunday. The SSB leg takes place over the weekend of 27th February to 1st March. The full rules appear in the November 1997 issue of CQ Magazine, and I can provide a photocopy if required.

Murphy's DX Laws

While some of us manage to work the rare DX on topband and the other bands, there are many frustrating moments. I was amused to find a set of Murphy's DX Laws in CQ Magazine, taken from the newsletter of the Northern California DX Club. I won't reproduce them all here, but mention a couple just to give you a flavour. They certainly rang a bell with me!

The Calling Laws: (1) If you already have the particular country confirmed, you can call him in a world-class pile-up and he'll answer you on your first call. (2) If he's an all-time New One, you can call forever; he will never hear you.

The Middle of the Night Laws (these invariably apply to my 160 metre activities!): The DX is supposed to show up at 3am local time. (1) You are there eagerly waiting - nothing! (2) You give up in disgust at 3.30am and go back to bed. (3) He shows up at 3.35am!

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YAESU	FC-301	MATCHING HF ATU	£149.00
YAESU	FC-707	MATCHING HF ATU WITH SWR/PWR METER	£95.00
YAESU	FC-902	MATCHING HF ATU	£149.00
YAESU	FL-2025	2M 25W LINEAR FOR FT-290RII	£89.00
YAESU	FRT-7700	MATCHING ATU FOR ERG-7700	£59.00
YAESU	FRT-7700	MATCHING ATU FOR FRG-7700	£59.00
YAESU	FRT-770	MATCHING ATU FOR FRG-7700	£59.00
YAESU	NC-50	DESK RAPID CHARGER FOR H/HELDS	£59.00
SHORTWAVE RECEIVERS			
DRAKE	R8E	BASE STATION RECEIVER (PSALE)	£695.00
DRAKE	R8E	BASE STATION RECEIVER	£589.00
GRUNDIG	YB-206	PORTABLE RECEIVER	£79.00
GRUNDIG	YB-500	PORTABLE RECEIVER WITH SSB	£99.00
ICOM	IC-R70	BASE STATION RECEIVER	£449.00
ICOM	IC-R71	BASE STATION RECEIVER	£525.00
ICOM	IC-R71	BASE STATION RECEIVER	£525.00
ICOM	IC-R71	BASE STATION RECEIVER	£525.00
ICOM	IC-R71	BASE STATION RECEIVER	£525.00
ICOM	IC-R72	BASE STATION RECEIVER	£549.00
ICOM	IC-R72	BASE STATION RECEIVER	£549.00
JRC	NRD-525	BASE STATION RECEIVER	£549.00
JRC	NRD-535	BASE STATION RECEIVER	£675.00
KENWOOD	R-5000	BASE STATION RECEIVER WITH VHF CONNECTOR	£749.00
LOWE	HF-150	12V BASE/MOBILE RECEIVER	£279.00
LOWE	HF-225	12V BASE/MOBILE RECEIVER	£299.00
LOWE	HF-225	12V BASE/MOBILE RECEIVER	£299.00
LOWE	HF-225	12V BASE/MOBILE RECEIVER	£299.00
LOWE	HF-250	12V BASE/MOBILE RECEIVER	£449.00
PANASONIC	RFB-65	PORTABLE RECEIVER WITH SSB	£109.00
RADIOHACK	DX-394	12V BASE/MOBILE RECEIVER	£159.00
ROBERTS	R-808	PORTABLE RECEIVER	£69.00
ROBERTS	R-827	PORTABLE RECEIVER WITH SSB	£109.00
ROBERTS	RC-818	PORTABLE RECEIVER WITH CASSETTE	£119.00
SANGEAN	ATS-803A	PORTABLE RECEIVER WITH SSB	£89.00
SONY	ICF-SW100E	PORTABLE RECEIVER WITH SSB	£149.00
SONY	ICF-7600DS	PORTABLE RECEIVER WITH SSB	£79.00
SONY	ICF-7600G	PORTABLE RECEIVER WITH SSB	£129.00
YAESU	FRG-7700	BASE STATION RECEIVER WITH MEMORY UNIT	£279.00
SCANNERS MOBILE/BASE			
REALISTIC	PRO-2039	66-68, 108-174, 380-512, 806-960MHZ	£99.00
REALISTIC	PRO-2039	66-68, 108-174, 380-512, 806-960MHZ	£99.00
REALISTIC	PRO-2045	66-68, 108-174, 216-445, 450-512, 806-1000MHZ	£129.00
REALISTIC	PRO-9200	66-512MHZ (WITH GAPS)	£145.00
YAESU	FRG-9600	60-905MHZ ALL MODE RECEIVER	£269.00
YAESU	FRG-9600	60-905MHZ ALL MODE RECEIVER	£269.00
SCANNERS HAND HELD			
AOR	AR-2000	500KHZ-1300MHZ AM, FM, WFM	£139.00
AOR	AR-2000	500KHZ-1300MHZ AM, FM, WFM	£139.00
COMMTTEL	COM-102	68-512MHZ (WITH GAPS)	£79.00
COMMTTEL	COM-204	68-999MHZ (WITH GAPS)	£129.00
FAIRMATE	HP-2000E	500KHZ-1300MHZ AM, FM, WFM	£139.00
ICOM	IC-R10	500KHZ-1300MHZ ALL MODE RECEIVER	£195.00
REALISTIC	PRO-44	68-512MHZ (WITH GAPS)	£79.00
REALISTIC	PRO-45	66-824MHZ (WITH GAPS)	£109.00
REALISTIC	PRO-50	68-512MHZ (WITH GAPS)	£49.00
REALISTIC	PRO-62	68-960MHZ (WITH GAPS)	£129.00
SIGNAL	R-537S	VHF AIRBAND RECEIVER	£39.00
UNIDEN	BC-100XL	66-68, 118-174, 406-512MHZ	£69.00
WIN	WIN-108	VHF AIRBAND RECEIVER	£109.00
YUPITERU	VT-225	VHF/UHF AIRBAND RECEIVER	£159.00
YUPITERU	MVT-5000	25-550, 805-1300MHZ AM, FM	£99.00
YUPITERU	MVT-7000	500KHZ-1300MHZ AM, FM, WFM	£169.00
YUPITERU	MVT-7000	500KHZ-1300MHZ AM, FM, WFM	£169.00
YUPITERU	MVT-7200	100KHZ-1650MHZ ALL MODE RECEIVER	£239.00

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EKLY GUIDE QUIPMENT

SRP TRADING 0121 460 1581

SECONDHAND LIST

ALINCO	DJ-180	2M FM H'HELD	£89.00
YAESU	F7470	DUAL BAND H'HELD	£189.00
YAESU	F7530	DUAL BAND H'HELD	£189.00
YAESU	FR07	SHORTWAVE RECEIVER X 1	£129.00
YAESU	FT790R	MKII 70CM BASE/MOBILE/PORT ALL MODE	£229.00
KENWOOD	TH42E	UHF H'HELD AS NEW	£179.00
REALISTIC	PRO 2005	BASE SCANNER 400 SN	£149.00
REALISTIC	PRO 43	H'HELD CIVIL/MILITARY	£149.00
A.O.R.	AR2000	H'HELD SCANNER	£139.00
RADIO SHACK	PRO 2035	BASE SCANNER 100CH	£189.00
REALISTIC	DX392	S'WAVE RECEIVER	£99.00
REALISTIC	PRO26	200CH H'HELD SCANNER	£169.00
REALISTIC	PRO29	H'HELD SCANNER	£79.00
REALISTIC	PRO 2036	BASE SCANNER 100CH	£189.00
DEECOMM	ANY TUNER (RX ONLY) X 3		£15.00

MULTICOMM 2000 01480 406770

ICOM IC-706DX	HF+6+2-MTR (BOXED)	£679.00
ICOM IC-720A + PSU	GENERAL COVERAGE RX	£399.00
ICOM IC-720A + PSU	GENERAL COVERAGE RX	£345.00
ICOM IC-725	GENERAL COVERAGE HF TX/RX	£575.00
ICOM IC-726	HF + 6 WITH PSU (MINT)	£695.00
ICOM IC-740	HF GENERAL COVERAGE RX	£499.00
ICOM IC-775DSP	(8-MONTHS OLD) "THE BEST"	£2,225.00
KENWOOD TS-440S	HF GENERAL COVERAGE	£599.00
KENWOOD TS-520		£225.00
KENWOOD TS-520	(BOXED & MINT)	£235.00
KENWOOD TS-520 SE		£249.00
KENWOOD TS690 SAT	HF+6MTRS FULL RX	£869.00
KENWOOD TS-820	(MINT)	£325.00
YAESU FT-1000 MP AC	(EX-DEMO)	£1,699.00
YAESU FT-101B HF	(GOOD CONDITION)	£140.00
YAESU FT-101E	(MINT CONDITION) CLASSIC	£195.00
YAESU FT-757GX	FULL COVERAGE HF£349.00	
YAESU FT-757GX	FULL COVERAGE HF£399.00	
YAESU FT-840	(MINT)	£599.00
YAESU FT-840	GENERAL COVERAGE TRANSCEIVER	£599.00
YAESU FT-902DM	GREAT TRANSCEIVER	£325.00
VHF/UHF TRANSCEIVERS		
FDK MULTI 2 FM	MOBILE GREAT VALUE	£69.00
ICOM IC-211E	2-MTR MULTIMODE	£269.00
ICOM IC-2350	(EX-DEMO)	£329.00
ICOM IC-245E	2-MTR MULTIMODE	£139.00
ICOM IC-251E	2-MTR BASE MULTIMODE	£289.00
ICOM IC-290E	2-METRE MULTI-MODE 25W	£249.00
ICOM IC-2E	2-MTR HANDHELD	£115.00
ICOM IC-V200	2-MTR FM MOBILE	£99.00
ICOM ICW-21-ET	DUAL BAND HANDIE	£199.00
ICOM ICW-32-E	DUAL BAND HANDHELD	£169.00
KENWOOD TH-78E	DUALBAND (MINT)	£199.00
KENWOOD TH-79E	HAND HELD	£299.00
KENWOOD TR-741E	TRIBAND 6-2-70 MINT	£499.00
KENWOOD TR-751E	2-METRE MULTIMODE	£375.00
KENWOOD TS-711E	DELUXE 2MTR MULTIMODE	£449.00
STANDARD C-156	2-METRE HAND HED (EX-DEMO)	£125.00
TRIO TR-780	2-MTR MOBILE	£119.00
YAESU FT-10R	2-METRE HAND HELD	£129.00
YAESU FT-23R	2-MTR HANDHELD	£110.00
YAESU FT-2500M	2-MTR/70CMS MOBILE (6-MONTHS)	£299.00
YAESU FT-290R MK-1	"GREAT" 2-MTR PORTABLE	£210.00
YAESU FT-3000M	(3-WEEKS OLD)	£335.00
YAESU FT-480R	(MINT CONDITION)	£300.00
YAESU FT-480R	(MINT CONDITION)	£325.00
YAESU FT-480R + PSU	(MINT CONDITION)	£350.00
YAESU FT-51-R	DUAL BAND HAND HELD (MINT)	£289.00
YAESU FT-690 MK2	6METER MULTIMODE	£299.00
YAESU FT-727R	DUALBAND WITH ALL ACCESSORIES	£199.00
YAESU FT-790R 70CMS	MULTIMODE	£219.00
SHORT WAVE RECEIVERS		
AOR AR-3030	WITH COLLINS FILTER	£399.00
AOR AR-7030	LATEST HOT RECEIVER	£599.00
DRAKE SW-8	SHORTWAVE + AIRBAND (MINT)	£399.00

ICOM ICR-72E	SHORT-WAVE RECEIVER	£450.00
JRC NRD-525	"GREAT RECEIVER" (MINT)	£650.00
KENWOOD R-2000		£335.00
KENWOOD R-5000	DELUXE SHORT-WAVE RX	£515.00
KENWOOD R-5000	DELUXE SHORT-WAVE RX (INC VHF)	£599.00
KENWOOD R-5000	DELUXE SHORT-WAVE RX (INC VHF)	£629.00
KENWOOD R-5000	DELUXE SW RX	£579.00
LOWE HF-125	RECEIVER GREAT VALUE	£99.00
LOWE HF-225	GENERAL COVERAGE RECEIVER	£319.00
LOWE HF-225	GENERAL COVERAGE RECEIVER + KEYPAD	£325.00
LOWE HF-235	COMMERCIAL SHORT-WAVE RECEIVER	£559.00
RACAL RA-1792	(EX-GCHO) 4 FILTERS	£579.00
RACAL RA-1792	(EX-GCHO) 6 FILTERS (AS NEW)	£675.00
REALISTIC DX-394		£165.00
SONY SW-100	MINI PORTABLE	£125.00
SONY SW-7600G	PORTABLE	£95.00
WIN RADIO PC-RX	WITH NEW SOFTWARE	£275.00
YAESU FRG-7700	GENERAL COVERAGE	£265.00

SCANNERS		
AOR 3000A	SW+VHF+UHF	£550.00
AOR AR-2000	HAND HELD (BOXED)	£115.00
AOR AR8000	SCANNER	£245.00
AOR-AR-5000	(EX-DEMO)	£1,050.00
BEARCAT 220-XLT	HANDHELD HI SPEC.	£130.00
EUROSONIC	HANDHELD HI SPEC	£130.00
ICOM ICR-1 (NEW)	MINI-SCANNER	£259.00
ICOM ICR-7000	VHF/UHF RECEIVER	£575.00
ICOM ICR-7000	VHF/UHF RECEIVER + HF	£575.00
ICOM ICR-7000	VHF/UHF RECEIVER + HF (EX-DEMO)	£645.00
REALISTIC PRO-2039	(EX-DEMO)	£139.00
YAESU FRG-9600	VHF/UHF ALL MODE	£299.00
YUPITERU MVT-8000	*AS NEW*	£199.00
YUPITERU VT-125	MK-2 CIVIL AIRBAND	£125.00

ACCESSORIES		
DAIWA 12-AMP	PSU (MINT)	£50.00
DAIWA CNW-727	VHF/UHF ATU (MINT)	£145.00
DATONG FL-3	AUDI FILTER	£69.00
DATONG	MORSE TUTOR	£35.00
ERA	MICRO-READER V-2.0	£90.00
ERA	MICRO-READER V-4.0	£125.00
ERA RS-232	DISPLAY	£125.00
GLOBAL AT1000	RECEIVING ATU	£55.00
GLOBAL AT1000	RECEIVING ATU	£59.00
GLOBAL AT1000	RECEIVING ATU	£50.00
GLOBAL AT2000	RECEIVING ATU	£75.00
HOKA CODE 3 V5.0	ALL OPTIONS	£499.00
ICOM AH-3 AUTO	ATU	£225.00
ICOM AT-100	AUTO ATU MINT	£145.00
ICOM HS-51	HEADSET/MIC	£29.00
ICOM IC HP-1	HEAD PHONES	£29.00
ICOM IC SP-3	SPEAKER	£60.00
ICOM IC SP-3	SPEAKER	£60.00
ICOM RC-12	REMOTE	£35.00
ICOM RM-3	REMOTE	£49.00
ICOM SM-2	MICROPHONE	£30.00
ICOM SP-2	SPEAKER	£45.00
KENWOOD TL-922	LINEAR	£995.00
MFJ 1278-B	"AS NEW"	£225.00
MFJ 447	DELUXE KEYS	£39.00
MFJ 914D	SW ATU	£69.00
MICRO NTA 12A PRO	PSU	£50.00
MIZUNO AX-1 6-WAY	ANTENNA SWITCH	£45.00
SEM	HF CONVERTER	£25.00
SEM TRANSMATCH	INCLUDING EZTUNE	£89.00
SEM	WIDE-BAND PRE-AMP	£25.00
TOKYO	HF TRANSVERTER	£69.00
TONNA A-550	MONITOR	£125.00
TV-1000 RTTY	DECODER	£40.00
UNIVERSAL M-45	DECODER	£279.00
UNIVERSAL M-7000	+ MONITOR	£479.00
VARIOUS FILTERS	FROM	£20.00
YAESU FR7-7700	ATU	£80.00
YAESU FRV-7700	VHF CONVERTER	£50.00
YAESU MD-1	MICROPHONE	£50.00
YAESU SP-5	SPEAKER	£65.00
YAESU SP-901	SPEAKER	£59.00
YAESU SP-901	SPEAKER	£55.00
YAESU YD-14	MICROPHONE	£60.00
YAESU YH-2	HEAD-SET	£18.00
HITACHI 20MHZ	AC DC SCOPE	£95.00

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YOUR 4 WEEKLY GUIDE TO USED EQUIPMENT

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6MTR AMPLIFIER	6 MTR AMPLIFIER (30 WATT)	89.00
ADI AT-18	2MTR HANDHELD TRANSCEIVER	99.00
ADI AT-18	2MTR HANDHELD TRANSCEIVER	120.00
AKD-6001	6MTR TRANSCEIVER	139.00
ALAN AT-18	2MTR HANDHELD TRANSCEIVER	99.00
ALAN CT-145	2MTR HANDHELD TRANSCEIVER	99.00
ALINCO ALM-203E	2M/70CMS HANDHELD TRANSCEIVER	149.00
ALINCO DJ-180	2MTR HANDHELD TRANSCEIVER	150.00
ALINCO DJ-180	2MTR HANDHELD TRANSCEIVER	150.00
ALINCO DJ-FI	2MTR HANDHELD TRANSCEIVER + AIRBAND	179.00
ALINCO DJ-FI	2MTR HANDHELD TRANSCEIVER + AIRBAND	149.00
ALINCO DR-112E	2MTR HANDHELD TRANSCEIVER	125.00
ALINCO DR-130	2MTR MOBILE TRANSCEIVER	225.00
ALINCO DR-605	2M/70CMS MOBILE TRANSCEIVER	265.00
BELCOM LINER	2MTR MULTIMODE TRANSCEIVER	199.00
CTE CT-1600	2MTR HANDHELD TRANSCEIVER	99.00
DENPA M-22	2MTR MOBILE TRANSCEIVER	249.00
FDK 750X	2MTR MULTIMODE TRANSCEIVER	199.00
FDK MULTI 700	2MTR BASE TRANSCEIVER	325.00
FDK MULTI 700EX	2MTR MOBILE TRANSCEIVER	135.00
ICOM IC-240	2MTR MOBILE TRANSCEIVER	140.00
ICOM IC-2400R	2MTR/70CMS MOBILE TRANSCEIVER	345.00
ICOM IC-W2E	2M/70CMS HANDHELD TRANSCEIVER	275.00
ICOM T-41	70CMS HANDHELD TRANSCEIVER	185.00
KENPRO 202	2MTR HANDHELD TRANSCEIVER	65.00
KENPRO KT-22	2MTR HANDHELD TRANSCEIVER	99.00
KENPRO KT-44	70CMS HANDHELD TRANSCEIVER	95.00
KENPRO KT-44	70CMS HANDHELD TRANSCEIVER	95.00
KENWOOD TH-215E	2MTR HANDHELD TRANSCEIVER	119.00
KENWOOD TH-215E	2MTR HANDHELD TRANSCEIVER	119.00
KENWOOD TH-26	2MTR HANDHELD TRANSCEIVER	95.00
KENWOOD TH-28E	2MTR HANDHELD TX+70CM RX	199.00
KENWOOD TH-45E	70CMS MOBILE TRANSCEIVER	145.00
KENWOOD TM-751E	2MTR MULTIMODE TRANSCEIVER	295.00
KENWOOD TM-451E	70CMS MOBILE TRANSCEIVER	295.00
KENWOOD TM-751E	2MTR MULTIMODE TRANSCEIVER	425.00
KENWOOD TS-700S	2MTR BASE TRANSCEIVER	349.00
NAVICO AMR 1000-S	2MTR MOBILE TRANSCEIVER	195.00
REXON RL-102	2MTR HANDHELD TRANSCEIVER	129.00
SANTE MX-145	20MTR PORTABLE	125.00
STANDARD C-500	2M/70CMS HANDHELD TRANSCEIVER	225.00
STANDARD C-500	2M/70CMS HANDHELD TRANSCEIVER	225.00
STANDARD C-5200	2M/70CMS HANDHELD TRANSCEIVER	345.00
STANDARD C-5800	2MTR MOBILE TRANSCEIVER	175.00
STANDARD C-78	70CMS MOBILE TX + 10W AMP	199.00
STANDARD C-8800	2MTR MOBILE TRANSCEIVER	175.00
TRIO TR-2200	2MTR MOBILE TRANSCEIVER	95.00
TRIO TR-2200GX	2MTR MOBILE TRANSCEIVER	95.00
TRIO TR-7010	2MTR MULTIMODE TRANSCEIVER	139.00
TRIO TR-7200	2MTR MOBILE TRANSCEIVER	80.00
YAESU FT-11	2MTR HANDHELD TRANSCEIVER	125.00
YAESU FT-202	2MTR HANDHELD TRANSCEIVER	55.00
YAESU FT-208R	2MTR HANDHELD TX + ACCS	185.00
YAESU FT-208R	2MTR HANDHELD TRANSCEIVER	69.00
YAESU FT-211	2MTR HANDHELD TRANSCEIVER	145.00
YAESU FT-212RH	VHF MOBILE (45W)	225.00
YAESU FT-221	2MTR BASE TRANSCEIVER	299.00
YAESU FT-23R	2MTR HANDHELD TRANSCEIVER	125.00
YAESU FT-290	2MTR MULTIMODE TRANSCEIVER	245.00
YAESU FT-290 MKII	2MTR MULTIMODE TX + AMP	425.00
YAESU FT-411	2MTR HANDHELD TX + ACCS	189.00
YAESU FT-470	2M/70CMS HANDHELD TX	225.00
YAESU FT-470	2M/70CMS HANDHELD TX	225.00
YAESU FT-4700RH	2MTR/70CMS MOBILE TX	345.00
YAESU FT-480R	2MTR MULTIMODE TRANSCEIVER	225.00
YAESU FT-5100	2MTR/70CMS MOBILE TX	329.00
YAESU FT-530	2MTR/70CMS HANDHELD TX	225.00
YAESU FT-726	6/2/70CMS BASE TRANSCEIVER	695.00
YAESU FT-726	6/2/70CMS BASE TX	799.00
YAESU FT-790R I	70CMS MULTIMODE TX	325.00
AOR AR-7030	HF RECEIVER	649.00
DRAKE-R8A	HF RECEIVER	825.00
DRAKE-R8A	HF RECEIVER	899.00
DRAKE-R8E	HF RECEIVER	795.00
ICOM IC-R7000	SHORTWAVE RECEIVER	450.00
ICOM IC-R71E	SHORTWAVE RX+R/CONTROL	575.00

ICOM R-7000	SHORTWAVE RECEIVER	595.00
ICOM R-71	SHORTWAVE RECEIVER	550.00
ICOM R-72	HF RX + BATTERY PACK & FILTERS	675.00
JRC NRD-345	HF RECEIVER	525.00
JRC NRD-525	HF RECEIVER	299.00
LOWE HF-225	SHORTWAVE RECEIVER	395.00
LOWE HF-225	HF RECEIVER	395.00
MATSUI 4099	SHORTWAVE RECEIVER	85.00
NR-56VFI	SHORTWAVE RECEIVER	49.00
PHILIPS D-2999PL	BASE RECEIVER	129.00
RACAL RA-17	HF RECEIVER	140.00
REALISTIC	SHORTWAVE RECEIVER	110.00
ROBERTS R861	SHORTWAVE RECEIVER	145.00
SAISHO SW-5000	SHORTWAVE RECEIVER	69.00
SANGEAN ATS-803A	SHORTWAVE RECEIVER	85.00
SANGEAN ATS-803A	SHORTWAVE RECEIVER	99.00
SONY SW-7600G	SHORTWAVE RECEIVER	145.00
SONY SW-77	HF RECEIVER	249.00
YAESU FRG-7700	HF RECEIVER	189.00
YAESU FRG-7700+MEM	HF RECEIVER	285.00
YAESU FRG-9600	BASE SCANNER	345.00
YAESU FRG-9600	BASE SCANNER	299.00
YAESU FRG-9600	BASE SCANNER	345.00
ATLAS 350XL	HF 100 WATT TRANSCEIVER	325.00
DRAKE TR/RC4	SEPARATE HF TRANSMITTER & RX	325.00
ICOM IC-706	VHF/HF TRANSCEIVER	795.00
ICOM IC-725	HF 100 WATT TRANSCEIVER	595.00
ICOM IC-728	HF 100 WATT TRANSCEIVER	795.00
ICOM IC-728	HF 100 WATT TRANSCEIVER	795.00
ICOM IC-756	HF 100 WATT TRANSCEIVER	1499.00
JST-100	TRANSCEIVER	395.00
KENWOOD TS-120S	HF 100 WATT TRANSCEIVER	299.00
KENWOOD TS-120V	HF 100 WATT QRP HF TRANSCEIVER	275.00
KENWOOD TS-180S	HF 100 WATT TRANSCEIVER	345.00
KENWOOD TS-440S	HF 100 WATT TRANSCEIVER	595.00
KENWOOD TS-50	HF 100 WATT TRANSCEIVER	625.00
KENWOOD TS-680	HF 100 WATT TRANSCEIVER	625.00
KENWOOD TS-850	HF 100 WATT TRANSCEIVER	999.00
KENWOOD TS-850SAT	HF 100 WATT TX INC ATU	999.00
KENWOOD TS-850SAT	HF 100 WATT TX INC ATU	1199.00
KENWOOD TS-930S	HF 100 WATT TRANSCEIVER	699.00
KENWOOD TS-940	HF 100 WATT TRANSCEIVER	899.00
KENWOOD TS-950S	HF 100 WATT TRANSCEIVER	1799.00
YAESU FT-1	HF 100 WATT TRANSCEIVER	650.00
YAESU FT-1000D	HF 200 WATT TX - DVS-2	1699.00
YAESU FT-101	HF 100 WATT TRANSCEIVER	225.00
YAESU FT-101ZD	HF 100 WATT TRANSCEIVER	325.00
YAESU FT-107	HF 100 WATT TRANSCEIVER	499.00
YAESU FT-107	HF 100 WATT TRANSCEIVER	475.00
YAESU FT-277	HF 100 WATT TX - HAMBANDS	325.00
YAESU FT-650	HF 100 WATT TRANSCEIVER	699.00
YAESU FT-707	HF TRANSCEIVER	399.00
YAESU FT-747GX	HF 100 WATT TRANSCEIVER	475.00
YAESU FT-747GX	HF 100 WATT TRANSCEIVER	475.00
YAESU FT-747GX	HF 100 WATT TRANSCEIVER	450.00
YAESU FT-757GX	HF 100 WATT TRANSCEIVER	499.00
YAESU FT-757GX	HF 100 WATT TRANSCEIVER	399.00
YAESU FT-77 + PSU	HF 100 WATT TRANSCEIVER	595.00
YAESU FT-900AT	HF 100 WATT TRANSCEIVER	899.00
YAESU FT-980 HF	HF 100 WATT TRANSCEIVER	699.00

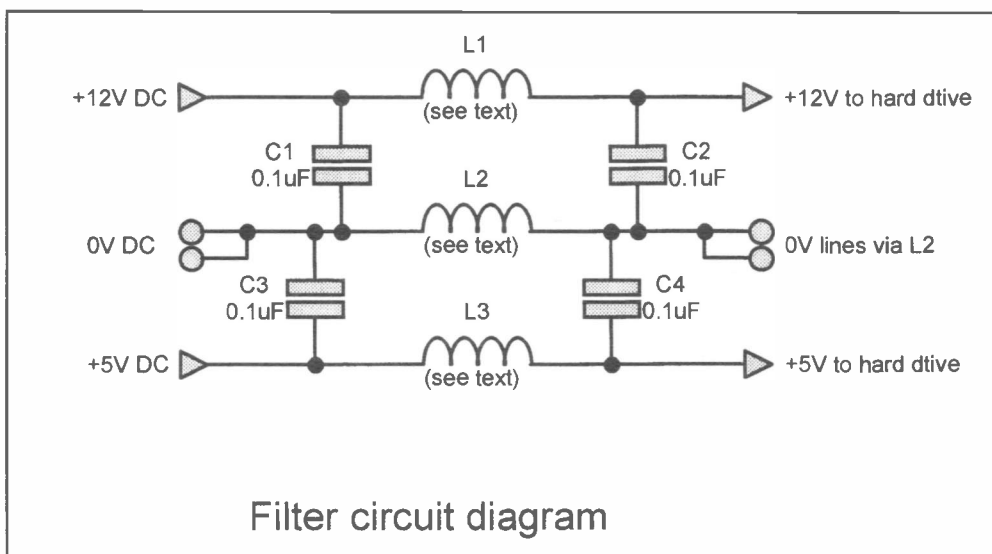
LINK 01733 345731

REALISTIC	PRO 28 SCANNER	AS NEW - 68-88, 137-174, 380-512MHZ	£59.99
REALISTIC	PRO 60 SCANNER	AS NEW - 30-512, 760-1000MHZ	£149.99
REALISTIC	PRO 70 SCANNER	AS NEW - 68-88, 137-174, 380-512MHZ	£79.99
REALISTIC	PRO 62 SCANNER	AS NEW - ONLY A FEW LEFT	£129.99
REALISTIC	PRO 2045 SCANNER	AS NEW - 68-88, 108-174, 216-380, 406-512, 806-1100MHZ	£229.99
REALISTIC	PRO 2014 SCANNER	AS NEW - 68-88, 137-174, 380-512MHZ	£99.99
REALISTIC	PRO 2006 SCANNER	SECOND HAND AVERAGE CONDITION	£180.00
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COMMTL	COM 205	AS NEW - SAME SPEC AS PRO 2006	£289.99
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Weekend Project An RF Noise Filter for your PC

Andy Little F.I.Diag.E G7EYV shows how you can build a simple filter to reduce or eliminate generated RF noise on the HF bands



mounted either on Veroboard or on a dedicated PCB, I've given a suitable PCB pattern here. In either case, the filter should be physically mounted as close to the hard drive as possible. For ease of wiring, the use of screw terminals on the strip is recommended.

Components

L1, L2 and L3 are each made from ten turns of 1mm diameter enamelled copper wire on a 3/8in ferrite ring, close wound.

C1, C2, C3 and C4 are each 0.1µF 240V DC Mullard C280 type capacitors. The capacitors may alternatively be disk ceramic types, I simply used what I had available in the shack.

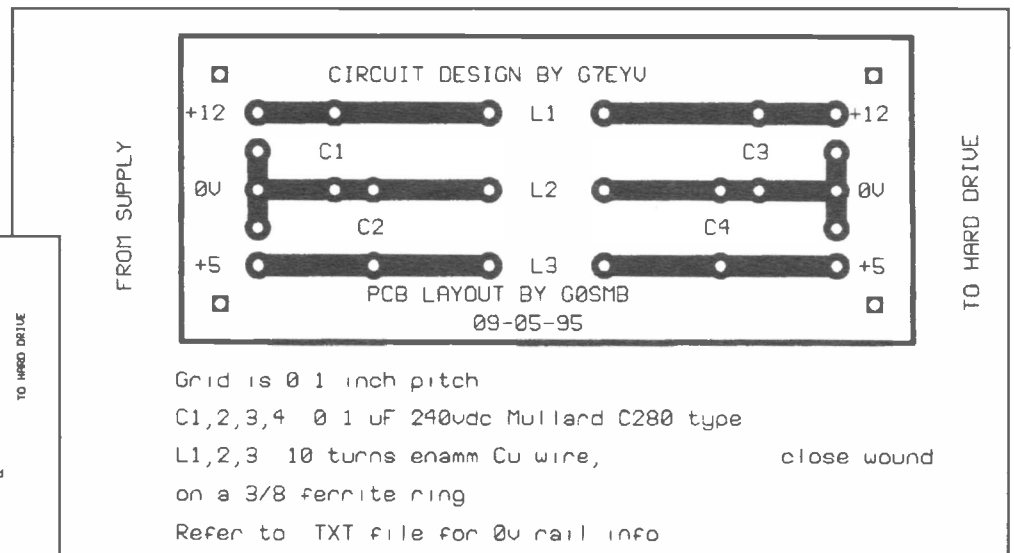
Circuit diagram of the filter

This filter was designed to knock out interference from hard drives in a PC that gave high noise levels on HF rigs. I've found it works, and a colleague of mine, Ray G4SFK has one which he constructed from this design and he reports 100% success in removing the PC noise. Please note however that I accept no responsibility

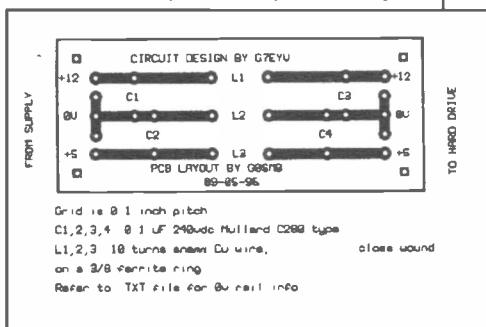
for misuse or damage that may result in its construction, use, or addition to any equipment - build and use it at your own risk!

Construction

The filter can be constructed using normal construction techniques, with the components



Grid is 0.1 inch pitch
C1,2,3,4 0.1 uF 240vdc Mullard C280 type
L1,2,3 10 turns enamm Cu wire, close wound
on a 3/8 ferrite ring
Refer to TXT file for 0V rail info



PCB pattern, track side, shown here full size

PCB pattern, reproduced here at four times full size

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SRP TR

**(COM213)
100 CHANNEL SCANNER**

A high-specification scanner offering 100 channels in 10 banks, with 1 Priority Channel in each bank. For speed and ease of use it offers Jetscan, which can scan 100 channels per second, and also Jetsearch, which can search at up to 100 steps per second. It also features programmable band search, lock-out for up to 10 frequencies, channel look-out, 2 second scan delay, data noise/birdies skip, a key lock and a green back-lit display. 66-88, 108-174, 406-512, 806-956.

£119.99 + £5 P&P.



**(COM102)
10 CHANNEL SCANNER**

This state of the art 10 channel scanner is fully programmable and can receive a variety of PMR communications. It is robustly designed and offers a full frequency LCD display for ease of use. Also features an in-built circuit for recharging Nicad batteries. 66-88, 137-174, 380-512.

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**(COM205)
400 CHANNEL SCANNER**

The B111 is the last word in programmable scanners. A free standing desk top unit covering nine radio bands in the 25-512MHz and 806-1300MHz ranges. Operates from AC mains or car cigar lighter via suitable adaptor. It incorporates a microprocessor avoiding the need to change crystals and gives special functions such as scan delay, memory back-up, priority channels and many more.

£249.99 + £5 P&P.



**(COM215)
200 CHANNEL SCANNER**

A highly-featured desktop scanner offering 200 channels arranged in 10 scanning banks, with one Priority Channel in each bank. For ease of use it offers Turbo Scan at 100 channels per second max with Autosort for maximum scan speed and Turbo Search at up to 100 steps per second. Other features include direct search programmable band search, auto station program mode, lock-out for up to 10 frequencies, manual frequency sort, programmable auto-recording and optional CTCSS tone squelch. The unit is powered by AC mains or 13.8Vdc. 66-88, 108-174, 216-512, 806-956.

£219.99 + £5 P&P.



SANGEAN ATS 909 FM-Stereo/MW/LW/SW PLL Synthesized receiver

The ATS-909 is a continuously tunable receiver from 153kHz-29999kHz. This receiver is capable of receiving and tuning all the short wave bands and any stations in between

- 307 memories (261 in SW, 18 each in MW/FM, 9 in LW plus priority station)
- Five tuning methods – direct frequency tuning, auto scan, manual tuning, memory recall and rotary tuning
- ATS (auto tuning system) – auto scan and preset in priority of signal strength in FM/MW/LW bands
- E2 PROM for memories back-up
- FM stereo via earphones
- 29 pages SW stations name memory, 9 memories in every page
- Automatic search strongest signal station within SW station pages
- SSB (USB/LSB) 40Hz/step on fine tuning
- AM RF gain control
- Built-in 42 world cities time plus D.S.T. device
- 3 individual timers
- Adjustable sleep timer
- Alarmed by radio or HWS (Humane Wake System) buzzer
- Battery and signal strength indicator
- Direct key to recall favourite station in one button
- Dual conversion device
- REC out and standby control output
- Pre-programmed station name and frequency according to customer's requirements before ex-factory
- AM wide/narrow filter and FM mono/stereo selector
- Optional features for European market
- RDS (Radio Data System) on PI, PS and CT for station name and clock time
- Size in mm: 215 x 133 x 37.5
- Weight: 850g without batteries



£169.95 + £5 P&P.

- ★ Free batteries
- ★ Free SW frequency book
- ★ Free SW antenna
- ★ Free headphones

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Super Syncro 1100 – 1100mAh Nickel Metal Hydride (NiMH) AA size rechargeable cells. No memory effect. Twice the capacity of NiCds. **£3.00** inc P&P.



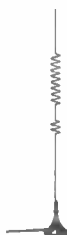
Skyscan DX-V1300 base disconn – Most disconnes only have horizontal elements and this is the reason that they are not ideal for use with a scanner. Most of the transmissions that you are likely to receive on your scanner are transmitted from vertically mounted antennas. The DX-V1300 has both vertical and horizontal elements for maximum reception. Constructed from best quality stainless steel and aluminium and comes complete with mounting pole. **£49.95** + £3 P&P.



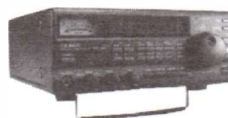
Skyscan Desktop Antenna Model Desk 1300 disconn – Built and designed for use with scanners. Coverage: 25 to 1300MHz. Total height 36" and 18" wide at widest point. Comes complete with 4m of RG58 coax cable and BNC connector. High performance antenna, ideal indoor or as a car antenna when vehicle is stationary. **£49.00** + £3 P&P.



Airband mini-mag antenna – Civil (108-137MHz) and military (225-400MHz) dual band receive antenna featuring super strong miniature magnet and coax cable terminated in BNC connector. **£24.95** + £3 P&P



Wideband mini-mag antenna – Wideband (25-1300MHz) receive antenna featuring super strong miniature magnet and coax cable terminated in BNC connector. **£29.95** + £3 P&P.



Yaesu FRG-100 communications receiver – Award winning 50kHz to 30MHz base station AM, CW, USB, LSB, FM (optional) communications receiver. Features include two clocks and timer, 50 memories, FM option, remote control jack. Superb value at **£449.95** + £7 P&P.



Roberts R861 – compact digital world band receiver – Fully featured 153kHz to 30MHz (AM, SSB) and 87.5MHz to 108MHz (FM) portable digital world band receiver. Features include RDS, world time clock, 306 memories, RF gain control, direct frequency entry. Comes complete with free PSU, antenna, frequency guide and case. **£199.00** + £5 P&P.



Radio shack DX-394 communications receiver – 150kHz to 30MHz base station AM, CW, USB, LSB communications receiver. Features include clock and timer, signal meter, 100+ memories, RF gain control and direct frequency entry. A steal at **£149.95** + £7 P&P.



Uniden Bearcat 9000 XLT – AM/FM/WFM switchable base station HF/VHF/UHF scanning receiver. Covers 25-550 and 760-1300MHz. Features 500 memories, auto sorting, backlit orange LCD display. Scan rate of 100/300 channels/sec. **£249.95** + £10 P&P.



AKD Target HF3 communications receiver – 30kHz to 30MHz mobile or base station AM, USB, LSB communications receiver. Very simple to operate. Ideal for the novice, but with a performance more demanding listeners will appreciate. **£159.95** + £5 P&P.



Commtel COM 206 – AM/FM handheld VHF/UHF scanning receiver. Covers 66-88MHz (FM), 108-137MHz (AM), 137-174MHz (FM), 380-512MHz (FM). Full civil airband coverage, comes complete with free case and rechargeable batteries. **£129.95** + £5 P&P.



Yupiteru MVT-7100 – All mode switchable handheld HF/VHF/UHF scanning receiver. Covers 0.5-1650MHz. Features 1000 memories, over 500 pass memories, 10 limit search banks, 12 step sizes. Comes complete with earpiece, belt clip, wrist strap, rechargeable batteries, PSU, in-car adaptor and telescopic antenna.

£199.99
+ P&P.
(10 only)

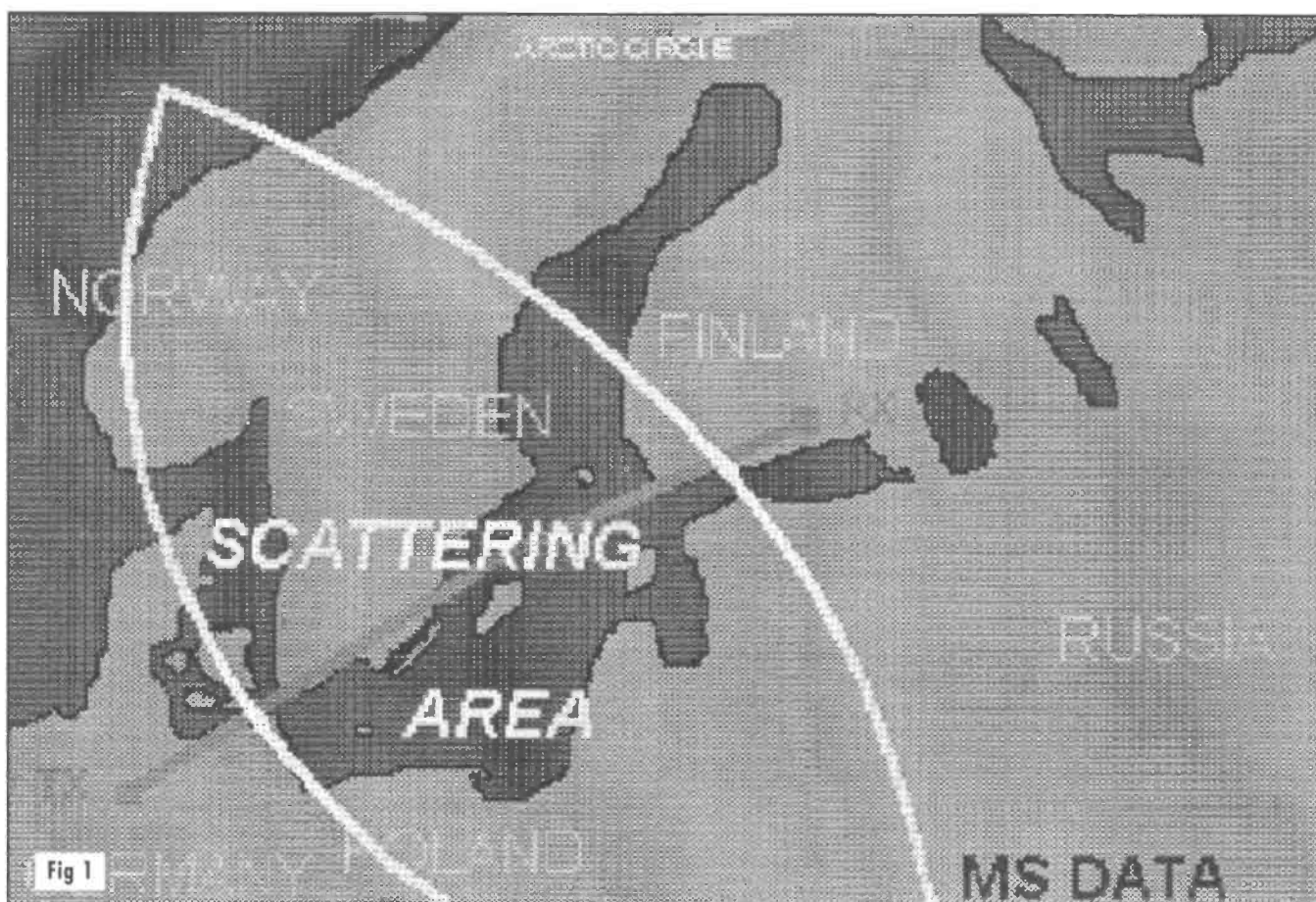


Realistic PRO-2042 – AM/FM/WFM switchable base station HF/VHF/UHF scanning receiver. Covers 25-520 and 760-1300MHz. Features 1000 memories, 100 monitor channels, backlit orange LCD display. Scan rate of 50 channels/sec. **£249.95** + £10 P&P.

WE ALSO HOLD A LARGE RANGE OF SECOND USERS SHORTWAVE AND SCANNING RECEIVERS. PLEASE CALL WITH YOUR REQUIREMENTS

VHF/UHF Message

Premier DXer Geoff Brown GJ4ICD provides a guide to working meteor scatter on VHF plus the latest news from the bands above 30MHz



It has been many years since an article was produced on Meteor Scatter, and several readers who are new to amateur radio have asked for such an article. Here is a simplified account of an SSB QSO.

Random MS is one such method used whereby you can increase your Country score, especially if the Country in question is too near for ES or too far for

tropo. One such station that has had success was Gavin GM0WDD in IO85, Gavin runs 50 watts to a 3 element beam on 6 and was most surprised to find how easy and simple it really is. Using standard IARU Region 1 techniques Gavin completed an SSB sked with myself in just over 15 minutes, he was astonished at the 45 second burst in mid January peaking S9+.

Gavin's words were This method is certainly under-used.

Many operators think that only major showers produce results, however, on 50MHz things are much easier, and, if you monitor the 48.250MHz TV carriers you will soon learn that there is an awful lot of random activity. The main meteor showers fall in early January, mid August and mid December, however,

there are smaller showers that will produce results even on 2 metres. So how is it all done? Well let's take a look at an SSB sked between G9ZZZ and G19XXX; G9ZZZ lives in Southampton and G19XXX lives in Belfast. The possibility of a tropo contact is possible on 144MHz but really quite hard on 50MHz, so we set up a sked maybe via email or phone or even a letter.

The sked consists of a one hour trial between the two stations. IARU R1 techniques state that the station in the East will start the first one minute period on SSB, and so, G9ZZZ starts to call G19XXX on a predetermined frequency for the first minute 1000z to 1001z, possibly leaving the occasional break just in case there is a major reflection from his signal.

After the one minute period, G19XXX starts his one minute period 1001z to 1002z, G9ZZZ now listens carefully! G9ZZZ is now hoping to catch both callsigns. Both calls must be received before a report is exchanged, by the way the reports are not the usual 59 or 55, there is a scale that has a significance, that is why you hear MS operators giving reports of 26 or 37. I have included the reporting system for you to study. For instance, G9ZZZ now hears G19XXX calling G9ZZZ - G19XXX, G9ZZZ - G19XXX break. At this point G9ZZZ picks up his microphone and reports the following; G19XXX - G9ZZZ R26 G19XXX - G9ZZZ R26 break. What has happened here is that G9ZZZ has heard the two callsigns and so transmits both callsigns and a R26. The R bit is Roger I have the two callsigns, and the 26 is the burst duration and signal strength. (as in the reporting system). Once the other station has all the information (R26 and the callsigns) then it's time to send RRRRRRR for the whole one minute period. The other station then does the same once the RRRRRRR have been received and the contact is complete.

First number (burst duration); **2**; up to 5 sec. **3**; 5 - 20 sec. **4**; 20 - 120 sec. **5**; longer than 120 sec.

Second number (signal strength); **6**; up to S3, **7**; S4, S5, **8** S6, S7, **9**; S8 and stronger.

Fig 1. shows a typical test between OH5IY and a German station. (thanks OH5IY). Finally, if you are not sure about anything, then listen to somebody else's sked, but please do not interrupt the contact, wait until the contact is complete, i.e.: RRRRR, and then if you heard the DX station have a go at calling him!

You will also need an accurate timepiece like a Junghans Radio clock as the timing should be precise. Good DX!

Beacon News

The KE4SIX beacon on 50.078MHz is off the air temporarily for maintenance, it will be back on soon. The maintenance of the 50MHz JA7ZMA beacon has finished and it is now on the air again with a new message. This is a dual band beacon which transmits exactly the same message at the same time on 50.027MHz and 28.188MHz. FP5XAB (50.038MHz) has found a new home. It is now operating continuously and should be long after Ron (FP5EK) has left FP (last week of November). Here are the details; Ident FP5XAB, Keying CW, (on-off keying), Output power 15W, Grid square GN16, Aerial - horizontally polarized - V shaped dipole - no gain over a dipole - mounted 7 metres AGL, about 40 metres ASL, Overseers - Jean Porquet, FP5BU - Jean-Pierre Carrier FP5CJ. 73 de Ron FP5EK.

Michael OX3LG confirmed that the OX3VHF beacon in south Greenland GP60XR on 50.045MHz is on the air again. The Beacon is running 20W into a ground plane.

Stefan LA0BY writes with the following news; I am sorry to inform you that both the LA7SIX and the LA7VHF beacons are QRT. This is

because the owner of the beacon's QTH has died in August. After that the beacons were still operational for a while, but had to be removed recently. Aasmund Birger, LA5TFA, the beacon keeper will endeavour to find a new location as soon as possible.

50/144MHz Trans-Equatorial Openings!

There have been numerous openings on both 50MHz and 144MHz via this mode, in fact too many to list. So here are a few of the reports I have received via Email just to whet your appetite for what may be in store for us next year as the sunspot cycle peaks towards the year 2000. On the 18th October, Peter PY5CC worked Europe on 50MHz from Brazil for his first opening since last cycle. He worked CT1AL, EH1YV and CT1HB and heard the CS1ACP beacon in Portugal.

Brazil to the Caribbean report; Nice propagation to Europe today, October 19, again. Start to hear CS1ACP Beacon at 2143z and the signal go up to RST 579. Worked only EH7CD at 2218z, CT4QP at 2228z and EH7KW at 2244z. No more stations. At 2300z the beacon was RST 519. At 2312z TEP started to Central America and the Caribbean, I worked KP4EIT at 2312z, V44KAO at 2318z, WP4O at 2325z. At 2344z 8P9HA on six metres was 59++, then we moved to 2 metres. I also worked him on 2 metres with a 51 signal. At 2359z I worked 8P6ER on six metres also very strong and we QSY d to 2 metres, he was also 51. Very strange propagation from here (GG54RE) to Barbados Is. Always a good TEP path, on 6 and also on 2 metres. 73 de PY5CC. Wow!

On the 20th October there was a very big opening to Gabon (Africa)

on 6 metres. Allain TR8CA was S9+ into Jersey for over an hour. On the 22nd Leo PP1CZ in Brazil mailed the following information about his opening on 6 metres; The very good news is that we (me PP1CZ - Leo and PP1BG - Pat) worked D44BC tonight. It was 21:50z on 50.110MHz SSB, and his signal was very weak, but we could copy him well.

I was pleased to see that report, as I personally left Julio D44BC a 50MHz radio when I visited him in 1995, so at long last he has propagation! There were lots of other TEP reports especially on 6 metres, D44 to EH8, LU to TI, KP4, YV5, even into the southern USA! Australia were also having a ball with openings from VK to Japan, and KH6 to V73 in the Pacific. In Europe V51KC, ZS6 s, A22BW, TR8CA, and 7Q7RM were all worked, along with ZD8VHF being heard nearly every night during October and November in Spain and Jersey.

144MHz Sporadic E

On the 19th October, Graham F/G8MBI reported that there was a 144MHz opening at 1410 from Italy to EA/CT. At 1530 the lower bands were still crazy here and the MUF was over 80MHz in JN04 to eastern Europe. This was a very rare event for October, although 50MHz Sporadic E events are common in the month.

That's all for this month, I'm not sure who is taking over the Editor's job for the VHF/UHF Message pages as things seem to be changing, so I thank you all for the six years of information you have supplied, and see you on the VHF/UHF bands sometime. Geoff Brown GJ4ICD.

SATELLITE RENDEZVOUS

Richard Limebear G3RWL brings AMSAT-UK news on the International Space Station amateur radio project



January 1999 for a five month stay. It must provide the basic capabilities that will allow the crew to establish voice and packet contacts with friends, family, school groups and other amateur radio operators. It must be capable of operating from within the Russian Service Module, a

module with good Earth visibility and the primary crew residence during the early part of the assembly sequence.

2. External pallets will provide the second capability and location for amateur radio equipment. The EXPRESS pallets are a perfect location for potential repeater and microsat-type payloads. These pallets, which are due to arrive on ISS-UF4 in January 2002, have power, thermal, and telemetry connections. They also have good Earth visibility. Each pallet will be installed robotically.

3. The permanent station will provide the third distinct capability. This is expected to house the most complete amateur radio station with the greatest functionality. The U.S. Habitation Module, currently scheduled for delivery sometime in 2002, will have good Earth visibility and plenty of feedthroughs for external

aerials. During the international partners meeting in Houston, the team agreed that this station should include slow scan TV, fast-scan TV, packet, voice, and experimental modes. Moreover, the plan is for the station to include several frequency bands and modes (SSB & FM) and have the ability to interface with the ISS audio and video subsystems.

For more information on the International Space Station and the planned assembly sequence, see: <http://station.nasa.gov/station/assembly>

ASUSat

Another future amateur radio satellite is approaching: ASUSat, which is now in the integration phase, will be an 'easysat'. It will have an FM repeater which is hoped will be as good as the one on AO-27. The FM repeater will have an uplink on 145.990 MHz, and a downlink on 436.700 MHz. The difference between the AO-27 and the ASUSat is that the repeater will be operated by a sub-audible tone so that the transmitter will go on the air only if an amateur wants to access it (rather than unlicensed users as at present happens on AO-27 with e.g. Spanish taxis). This enables ASUSat to improve its power budget,

and make the transmitter a bit stronger than AO-27's.

In addition the ASUSat team will be able to make their digital communications system available to the general public. ASUSat does not have a Pacsat type application on board, as it does not have a Ram-Disk. The ASUSat team is considering new experiments, such as a store and dump digital repeater using standard 9600bps technology. Right now the ASUSat team does not have a launch scheduled, but apparently they have a good chance of getting a lift from their sponsors at OSC in mid 1998.

Oscar 10

Current estimations of AO-10's attitude suggest that, by early November, illumination will have been down to about 35% and signals should be getting weaker. The sun will directly shine on the antenna end of AO-10 (illumination = 0) at about the end of November and it should be in the middle of its next "sleep" at that time.

It's still operational in Mode-B and available when in view but *please* do not attempt to use it if you hear the beacon or the transponder signals FMing but generally, once AO-10 hits darkness, it shuts down.

The international delegates that represent the Amateur Radio on the International Space Station (ARISS) team were told that NASA has given us a commitment. Amateur Radio is now an official payload on the International Space Station. For the past few years, the SAREX Working Group and last November the ARISS-International team, have met with members of the International Space Station Program Office to gain acceptance of amateur radio on board. These efforts, as well as discussions held this past month at the Johnson Space Center in Houston, have led to the following plan for amateur radio on ISS.

The plan is divided into three distinct capabilities. 1. First, the delivery of a transportable amateur radio station. With the first crew scheduled to arrive in

Russian Satellites

The RS-12 transponder still seems to be operating in Mode A with modes K and T not operational apart from the 15m input to the robot. The 145 MHz uplink is reported to work very well.

Since RS-16 went up there have been reports on the 70cm signals but the mode-A transponder has not been made available despite frequent promises.

Several reports have come out of Russia saying that their military and/or scientists are finding that the amateur equipment is better than their own; so they are using the amateur's equipment for their experiments.

I've been making a few noises about this recently along the lines of non-amateurs using amateur frequencies for non-amateur purposes and isn't it about time we got a piece of the action?

The Germans echoed this and added that it is the same groundstation which is responsible for AO-21 where they simply shut-down the spacecraft at the end of the primary mission.

UA3CR has responded, agreeing; they are trying to pressure the authorities about the matter.

The Sputnik model displayed at the Colloquium is now on Mir but the launch has some extra delay; the EVA where it will be ejected was scheduled for November 3rd, The official name is Sputnik-40 but folks are generally calling it RS-17. The guys on Mir say the beacon will be on 145.820 MHz.

If you would like to familiarize yourself with the actual beep-beep sound it will make, this can be found on the Amsat-France Internet site:

ftp://ftp.ibp.fr/jussieu/labos/physio/AMSAT-F/DIVERS/sp_outnik.zip

Two flight units are aboard Mir; there is no information about what will happen to the second unit (might they throw it out the door later ?)

While on the subject of Sputniks, if you have worked the special calls MX1ASE, GX0AUK and RS3A, on any of the operational analogue birds until 2359 UTC November 3rd, you can claim the Sputnik award. You only need to work one Sputnik Station to qualify for the special award certificate, printed in colour and endorsed with your call sign. Send your QSL card and £4.00 pounds to: PO Box 29, Earl Shilton, Leicestershire LE9 7ZE England.

Proceeds from the event are being used to purchase much needed equipment for the RS satellite ground station near Moscow.

Amateur radio aboard MIR will continue at least for another four months. US astronaut David Wolf, KC5VPF, has replaced his colleague Mike Foale, KB5UAC, aboard the Russian space station.

David Wolf, 41, is both an electrical engineer and a medical doctor. A native of Indianapolis, David is single, has been an astronaut since 1990, and served as a mission specialist aboard the shuttle Columbia in late 1993.

Virtual Space Museum

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. Virtual Space Museum: <http://www.ccas.ru/~chernov/vsm/>

Digital Satellites

No news apart from mentioning that KO-23 is back out of the doldrums after experiencing some heat-induced over-deviation of its downlink signal while in full sunlight.

Phase-3D

The launch of Ariane-502 grows closer but still seems a little variable. By various press releases, ESA and the French space agency, CNES have most recently announced that the flight test of the second Ariane 5 vehicle would be delayed for various technical reasons and the latest guess is that it will happen sometime soon.

Some have asked if this delay means that Phase 3D may yet fly on Ariane 502. The answer to this is a definite no. At the time of writing this, the 502 launch vehicle is already assembled on the pad at Kourou and there is no chance that Phase 3D can be accommodated on it.

Negotiations are proceeding between Phase 3D Project Leader Dr. Karl Meinzer DJ4ZC of AMSAT-DL and various parties in Europe concerning another launch opportunity for the satellite. It is not expected that any word on this will be forthcoming until after the launch of A-502.

Apparently they did not require our space-qualified lump of concrete after all, but they are using the P3D support structure which we always knew we would have to supply.

Those interesting in tracking the launch date 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.

Fuji Oscar 29

FO-29, from 07:33z Friday 5th December, will switch from JD9600 mode to JA

mode. There have been some reports of FO-20 transmitting a strange beacon signal but the transponder continues to operate normally.

AMSAT-NA Meeting

Among the issues that were brought before the Board was included a complete rundown of the status of the Phase 3-D spacecraft. Significant progress has been made on upgrading the spacecraft structure, and the structural modifications are now nearing completion. A module-by-module status review of each spacecraft system was also offered, and, while some work on a number of different systems remains, the spacecraft is becoming "flight ready".

The Board of Directors also selected a team headed by Russ Tillman, KC5JVB (AMSAT's Journal Editor) to host next year's AMSAT Annual Meeting and Space Symposium at Vicksburg, Mississippi. As yet, no firm date for the meeting has been set but mid-October looks likely.

AMSAT-UK News

Ron G3AAJ brought back some copies of the US Proceedings they're available while stocks last for £14.00 inc p&p.

For further information about Amsat-UK contact: AMSAT-UK, c/o Ron Broadbent MBE, G3AAJ, 94 Herongate Rd, London, E12 5EQ. Big SAE gets membership info. SWL's are welcome.

A copy of the latest keplers is available on request by packet; my mailbox is GB7HSN 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 want).

QRP CORNER

Dick Pascoe G0BPS reports on the successful Rochdale QRP Convention

The annual pilgrimage to Rochdale for the QRP Convention

took place over the weekend of 25th October. What a change though, I had just returned from Cyprus on the family holiday with temperatures in the high 20's and the low temperatures of the moors brought out an awful cold. Oh well. Those visitors who braved the cold had a great day out with the outside low temperatures soon vanishing as many warm bodies in an enclosed space soon made the jumpers vanish.

The usual club stand manned by John G0BXO, Graham G3MFJ, Peter G3PDL and others did a roaring trade as usual, Gus G8PG spent many happy hours answering members questions on aerial problems. The Bring and Buy stand run by the local radio club went smoothly once they realised that seven members in a small space resulted in no punters being able to see the goods for sale. Next to the Bring and Buy was the largest stand of all, Chris from the famous 'sheds' who sells huge amounts of valuable surplus equipment. Some may call it junk, but one man's junk

is another man's delight. Until the wife sees it of course.

The main hall is always set out with traders around the outer edge, and the middle of the hall set out with tables and chairs for visitors to chew the cud and explain the intrinsic parts of their latest project. Lunch is also consumed by many here. The traditional lunch of meat pie, mushy peas and red pickled cabbage always goes down well.

The traders there included Hands Electronics, JAB Components, Essex lads, Kanga, Practical Wireless QRP Component Company and a few members disposing of their junk, sorry, quality used equipment. One of the more interesting traders this year was Steve Smith G0TDJ with his wife Jo G0UAO. They sell beautifully made fretwork callsign badges, not only to wear but to sit on the rig or mantelpiece. I knew they were coming but was pleasantly surprised at the quality of their work. For those on Email you can contact Steve at stevesm@zoo.co.uk or better still check his www pages on <http://www.zoo.co.uk/~z0>

001275/index.htm For those readers electronically challenged try 'phoning 01322 551973 to get a free catalogue.

This year the number of visitors increased to a massive 375 which blew away the old record of 320. This sounds, on the face of it, as good news but when you think of the normal church hall, this amount of people can only cause problems. We again talked of moving the event, and again came to the same conclusion that we should not.

It is usual to have a series of talks in the church during the day, this year saw George kick off with a tribute to the late Doug DeMaw W1FB, readers will have seen my last column with the announcement of his death in September. Doug will be sorely missed by all that knew him. The next talk was from Dick G0BPS on home construction techniques to a packed church. Covering everything from Veroboard to PCBs via blob boards and island cutting. Fitting of components, even soldering hints. Following this was Rob G3XFD with his usual session on matters of interest to all amateurs, and finally the

Guru himself, David GM3ZNX. David is one of those (enviable?) people who have total recall. Ask him a question on almost any subject and he will give you the (correct) answer at any level you may require. He always comes down to the lowest common denominator so that everyone can understand. In all the years I have known David I have never known him stumped by a question. His sessions are always the last as we have to drag him out of the church to lock up and go home!

Visitors this year included the usual Dutch contingent, with the addition of another old friend, Edwin PB0AOL, on his first visit. No visitors from the north of America this time but a first timer from Spain. Known from his comments on the ggrp-l email list, Jon Iza EA2SN thoroughly enjoyed himself, so much so that he presented several of us with a small Morse key made in Spain as a memento and 'thank you'. The usual bunch from Germany made it over again with their wives, albeit for a short trip. One couple were off to the Far East for some shopping they said. Johnny and Birgita Apell



Jon EA2SN



Graham G3MFJ



Klaus DL2MTG



Tony G4WIF

from Sweden brought their usual range of salmon and herrings over, no need to ask who pigged out on all this wonderful fish!

The selection of date this year was also a good thing for several members who were teachers. They were able to stay over rather than dash up on Saturday morning and leave on Sunday to dash back. Next year it is intended, but not yet confirmed, that the convention will be on Saturday 24th October. A special note for your diary is required. The end result was a great day out for all those who made the effort.

Events

Another great QRP event is, of course the Yeovil QRP convention. I was a regular visitor until the I decided to join George G3RJV in Dayton. The Yeovil committee tried to change dates to avoid the clash with Dayton but the organisers of the Dayton Hamvention immediately responded by changing to the same weekend Yeovil had chosen! Murphy's law again, and I was forced to make a choice again. Needless to say, Dayton won. I am glad to report that Yeovil have done us all proud and changed the date of their QRP Convention so that it doesn't clash with Dayton. Let's hope that the Ohio organisation don't respond by changing again. The guest of honour and main speaker this year will be Rev, George Dobbs G3RJV, who has been the main target of

the Yeovil committee for some years.

The dates for your diary are;.Yeovil QRP Convention, Sunday 19th April 1998 at the Digby Hall, Hound Street. Sherbourne. Dorset. Contact Peter, G3CQR on 01935 813054 for more information. The Dayton Hamvention will be held over the weekend of May 15th, 16th & 17th 1998 at the Hara Arena, Dayton Ohio USA. Current plans are for George G3RJV, Dick G0BPS, Tony G4WIF, and Graham G3MFJ to be there to man the club stand. More details, such as ticket information and time of opening can be found on their www pages <http://www.hamvention.org/dayton.html>. It also shows rooms available for those who have had trouble in the past, even airlines giving discounts, but only within continental North America unfortunately.

As usual, the G-QRP club will also have a stand at the Friedrichshafen show in southern Germany. Again George G3RJV and Dick G0BPS will be there, rumours also are that Sheldon from Hands Electronics and also Peter from JAB may also be there again. Many British stands are to be seen such as Waters and Stanton, Heatherlite, Bob Kent with his keys, Mike with his scanners and several of the more usual UK surplus equipment stockists. Friedrichshafen is usually on the last weekend in June, which should make it the 25th, 26th & 27th. I understand this is a change from previous years in that it has been

brought forward a day to leave the Sunday free.

QRPP Activity

Members of the OK QRP club remind me that they have QRPP (the small 'p' indicates power levels of under one watt) activity times for members, not only the OK club but for all QRP'ers. They have a QRPP activity days on 80m on the third Friday of every month around 3.560 from 2200 until 2400 local European time. Readers may wish to check on the local time in the Czech Republic before hunting for OK callsigns.

NorCal

I have recently heard that the NorCal (Northern Californian QRP club) has a British representative now. Steve G0XAR is the one to contact. NorCal currently has over 2000 subscribers to their magazine with members in over 75 countries. Started in 1993 by Doug Hendricks KI6DS and Jim CatesWA6GER its aim is to promote QRP fellowship. For a new club started only four years ago it has rocketed to success. I first met Doug at Dayton in 1993 when obviously the thought got into action. Doug insisted in taking George G3RJV and I to breakfast at the local Bob Evans, just across the road from our hotel. We meet there each year where NorCal members gather, and they sponsor a talk and the annual Dayton QRP building contest, your's truly is one of the judges! Doug stayed with

me in Folkestone last August with his wife Jo-Anne. A great couple.

NorCal also promotes the hobby by providing very cheap QRP kits such as the NorCal 40 and 20, complete transceivers for those bands and others including a small superhet transceiver for the 30m band called the 38 special. This ran to over 2000 sold! One of the best parts of the club is their quarterly magazine, I had hoped it would match SPRAT and one issue almost did, but like most American radio magazines that I take it leans heavily into text rather than circuits. Don't get me wrong, there are circuits and several of them but SPRAT aims for 1/3 text and 2/3 circuits. The QRPP (NorCal's magazine) is the other way round. The last issue ran to 67 pages and 21 articles. Membership of the club is free but if you want the magazine then it will cost you £12.50 for a year. If you're interested then contact Steve Farthing G0XAR at; 38 Duxford Close, Melksham. SN12 6SN, or email at: stephen@stevef.demon.co.uk

The photographs taken at the mini-convention show Tony G4WIF the G-QRP homepages author. Graham G3MFJ the Database keeper and Jon Iza EA2SN our Spanish visitor this year.

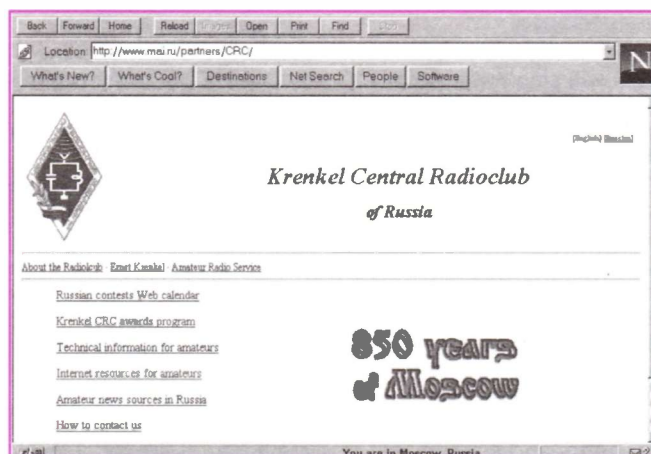
That's it for another month, news, views to me via the Editor or direct, packet to GB7RMS, snail mail to Seaview House, Crete Road East, Folkestone CT18 7EG. Or Email, Dick@kanga.demon.co.uk.

Net Communications

Jeremy Boot G4NJH bridges the former Iron Curtain with Internet-based Ham Radio

Our's is a global hobby. Our horizons are, or ought to be, wide. Having been made to do Classical Greek instead of Geography at my old school decades ago, it also does wonders for your skills in locating places. The best way to explore them though is to go there, or, ever a privilege, to receive amateur friends from abroad and this is what I was recently able to do.

RA3AKR. Arseny Tarasov is from Moscow and we have known each other through radio for about six years. I visited him and his family in Russia just as the post-Soviet crisis was receding. Some goods were still in short supply and Moscow at that time was just a mass of small kiosks where you could buy any number of socks or pirated videos or sports clothing, but bananas or oranges *nyet!* A lasting memory of the visit though was the warm-heartedness of the Russian people. Anyone who has ever befriended a Russian will recognise this; collectively they are quite faceless in the street or even hostile, but individually and behind the doors of their flats, they are the kindest and friendliest people you



could wish to meet. Arseny now works for a large international computer company and is doing very well for himself with enough money to travel and buy western goods. In fact he had come to England for a

management training course, but managed to add on a few days to stay with us. His principal work at the moment, as an IT Consultant, is to install full Internet service at a series of universities throughout Russia. The project is

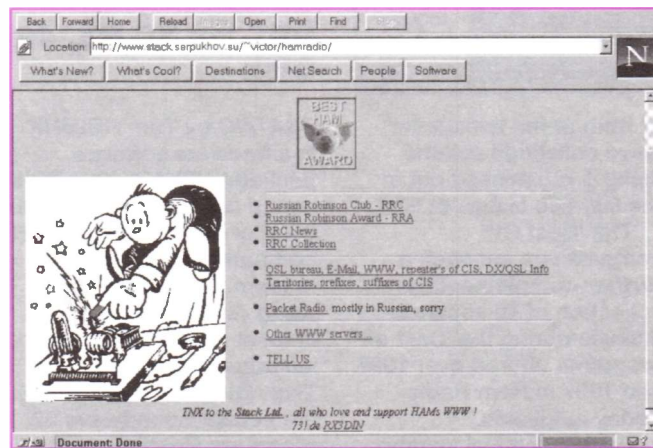
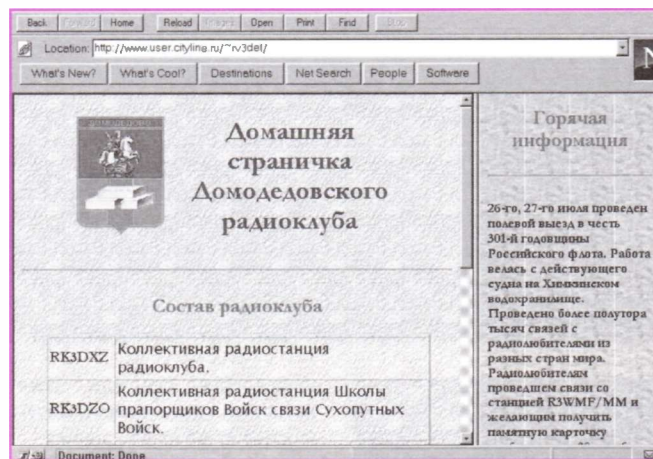
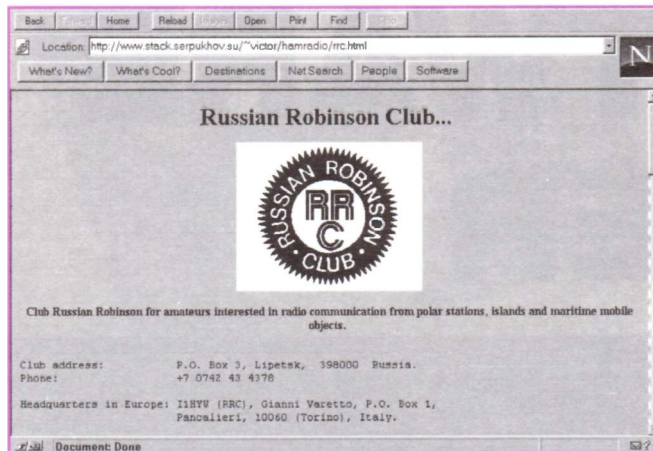
sponsored by a well-known American tycoon and it is startling to see just how far new technology is gaining pace in the old USSR. It was a good opportunity to ask just to what extent the Internet and Amateur Radio has progressed now in Russia and also to see how it compares with here in the UK.

The first obvious barrier would seem to be the language and the alphabet, but Cyrillic script is now integrated into the main browsers and from here Arseny had no trouble reading his mail (via Hotmail) or accessing his favourite sites. Many Russians in fact use the Latin alphabet and overcome letters such as (with a 4. But there are now quite a few sites of interest to the amateur in English. Part of the reason I ever began to contact friends in Russia at all was because of the "Club of Friendship", founded by Ken Norton G3IFN, in darker economic times, to encourage Anglo-Russian friendship, learning the language and some exchange visits. Friendships quickly built up and there are weekly skeds. My pages contain some details of the club, but the UK secretary is Howard Ketley, G1JGY,

Email;
howardk@proweb.co.uk
 who's web page about the Club of Friendship is to be found at;
<http://www.proweb.co.uk/~howardk> He would be happy to hear from you I am sure should you want to know more. The page is very extensive.

With the huge divisions between the 'haves' and the 'have-nots' in Russia, you have the situation where some Russian amateurs have money in profusion, first-class radio stations and, yes, also the Internet at home. Mind you, if they do, the cost of a personal account with unlimited access could be as high as £200 per month or more, though phone calls locally are free. Many more will use a business account however and students will (as here) often be able to use the college or university's facilities. You can see their presence for yourself in the newsgroups and on IRC. I quite often get Email these days from Russian amateurs, and I am always delighted to do so. In language skills they put us to shame and it is now fair to say that most if not all new Russians will be learning or speaking and trading in good English. It is quite simply the lingua franca of the modern age, which explains perhaps why we, alas, are so disinclined to learn other people's languages. Big companies in Russia, the Internationals, will do business and communicate in the office in English, not Russian now.

So the effect of the Internet for the average Russian ham is predictably more limited. If you haven't got the money or the language skills, you won't have access to the Internet and its impact upon you will be negligible. If you have, the effect will be similar to



here, or nearly. Of course the whole of the WWW is available from Russia with all its wealth of amateur material, but the major snag lies in the telephone infrastructure, which in Russia is basically inadequate, not to say antique. The bandwidth

required for data on phone lines is just not there and connection speeds are often not even up to 14,400 level let alone anything faster. Dropped lines, no lines and line-noise are part of computer life there. ISDN does exist, though not for

domestic use, but with foreign money and investment, the lines are now (at least to Moscow and the big cities) much better and more reliable than just two years ago. I am told too that filters were put on some lines in order to detect and block fax and data signals. A fee was payable to remove the filter, but this seems to have been overcome now with the expansion of modem use and the inability of the authorities to keep track. In fact the exponential growth of internet is about 400% per year though this starts from a very small base. Last year there were about 500 Russian WWW sites, this year there are at least 2,500 and growing daily. I have identified the following sites of interest as starters;

The Domodedovo Amateur Radio Club;
<http://www.user.cityline.ru/~rv3del/>

The Krenkel Amateur Radio Site;
<http://www.mai.ru/partner/s/CRC/>

Amateur Radio Pages
<http://www.stack.serpukhov.su/~victor/hamradio/>
 (seems to be Russian only, but supposedly bilingual: has English links)

From these, you will also find some interesting links elsewhere. Since this article will be published close to the new Year, may I thank all those who have commented upon or Emailed me about this column. May Santa reward us all with copious new toys to play with on radio and the Internet and super HF conditions too, which at the time of writing are already much improved. I wish all readers of Ham Radio Today a prosperous DX-filled 1998.

Jeremy Boot, G4NJH,
 Email;
asperges@innotts.co.uk
<http://www.innotts.co.uk/~asperges/>

SOFTWARE OFFER

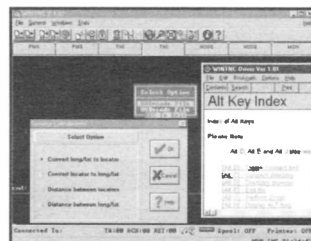
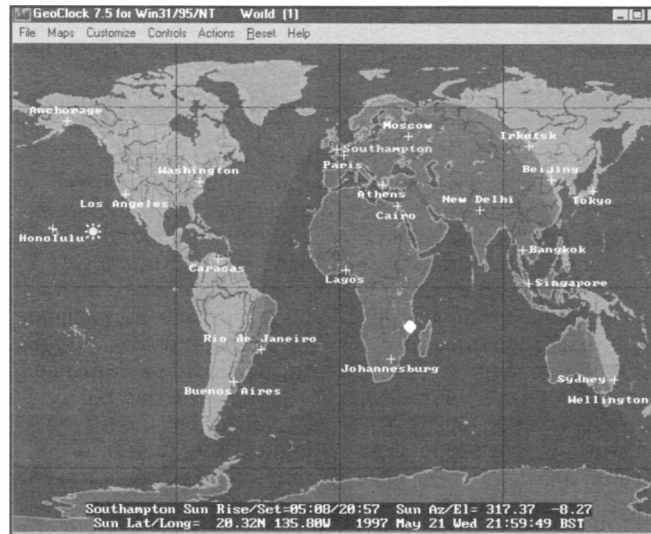
Did you get a new PC for Christmas? Have you missed our past software offers? This could be your last chance to obtain your copy of the very latest and very best amateur radio freeware, shareware, and public domain software!

CD-ROM

For the first time, you can get all of the software detailed below, plus *every single* monthly software collection we've offered in past years in Ham Radio Today's 'software offer', all written onto a single CD-ROM. Not only that, there's plenty more great new ham software also on the CD-ROM, including the new 'Journal' ham radio Windows-based logbook. Yes, we've just (in Dec 1997) downloaded over 1000Mb (phew!) of the latest released amateur radio software from the 'net and selected the very latest and best of this for storage on the CD-ROM for you, in addition to all of the programs below! So even if you have a 'net connection, just think of all the time and money you'll save on your phone bill by having it already on this CD-ROM!

1.44Mb disks

We haven't forgotten our friends who prefer 1.44Mb disks, as each collection detailed below can also be supplied on 1.44Mb disk format which contains all the programs and files given for that collection or volume. This issue, you've the chance to order either



or both of the two earlier issue collection volume disks if you missed out in the last two issues of HRT.

The 'Best Of' compilations are each a *further* complementary collection of 10 separate disks featuring the 'best of' programs offered over 1996 and 1997 in Ham Radio Today magazine.

Each individual volume 3.5in disk is offered at just £2.00 per disk, inclusive of UK p/p (£2.50 to counties outside Europe, including Eire, by airmail). The 'Best Of' collections of 10 disks is offered at £15.00 inc. UK p/p (£20.00 outside UK, inc. Eire, by airmail). All Software Collections are supplied on 1.44Mb PC

Your last chance to get a great collection of the very best ham software, exclusive to HRT readers

automatic. It indicates details of your last QSO with a given station, and keeps a running tally of DXCC countries worked on each of 12 bands for different modes.

C-LOG, version 1.9, is a freeware easy to use and well tested logging software for Region-1 VHF/UHF/SHF contests. It's designed for real-time operation including QSO input during a contest. Features of the program include support for all bands from 50MHz to 76GHz, and you can input the QSO data in any sequence, with easy correction of incorrect details, 4-letter input of the locator, dupe-check, computation of distance and direction, use of a locator database, and there's even a locator map of Europe built in.

Morse Academy V5.2q by Joseph AH0A is a Morse code teaching program incorporating Computer Aided Instruction (CAI) that is extremely useful in teaching the code. It is designed to help students who have no knowledge of the code or computers and it's operation is simple with functions selected by a single key.

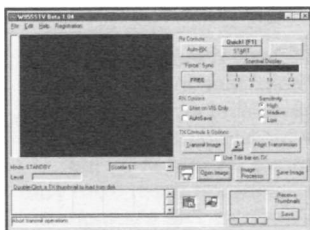
WinSkat is a shareware Windows-based program which uses your PC's SoundBlaster compatible sound card to receive and transmit SCOTTIE 1 and MARTIN 1 type SSTV pictures. Registration adds further SSTV modes and thumbnail pictures / clipboard facilities. If you'd like to try something different to Win 95 SSTV,

disk format. You may order as many disks as you wish from this offer for orders received up to 1st March 1998.

HRT Vol 15 No. 12 Disk

PSATNC by Tom HB9JNX is a freeware software package which uses a PC's sound card as either a 1200 baud or 9600 baud (G3RUH compatible) packet radio modem. A sound card using Analog Devices PSA chipset is needed, these include the Cardinal Technologies DSP16 (Plus), the Orchid Soundwave 32, Wearness Beethoven and Speech Corp. Personal Sound System.

Easilog by Don G0MDO is a shareware program providing an amateur log that should make your life on the key or mike that much easier. All that needs to be entered is callsign, RST received, RST given and comments, the rest is



now's your chance!

WXGraph V1.0 by Marcel PA3GGI displays SHIP/SYNOP weather reports received, decoded and logged with HAMCOM 3.0/3.1 in a graphic format. For example, fixed stations are displayed as dots while a ship is displayed as a square, the flag points in the direction of the wind and the length corresponds with the air speed.

POCSAG Decoder 'PD' version 2.04, together with a receiver or scanner, gives off-air decoding of POCSAG paging signals at 512, 1200 or 2400 bits/second. Decoding of both numeric and alphanumeric pager data is supported, as is the hex dumping of raw POCSAG codewords. The shareware version is limited to 15 minutes per session, registration giving unlimited use.

Vol 15 No. 13 Disk

COAXTRAP by Tony VE6YP is a Windows 95 program which calculates the design parameters for coaxial traps for wire aerials. Full on-line help and information is provided, allowing you to design your own easy-to-build multi-band HF aerials at very low cost.

Antenna System Analyzer allows you to determine the performance of your existing aerial system, as well as aid in designing modifications. With the "Analyzer", you can determine the effect of changing to an aerial with different gain or changing the feed line, information for common coax cables is also included.

Aerial Design Article Collection includes over 65

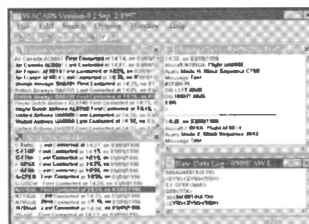
articles on all types of aerials, very interesting with masses of useful ideas and tips, plenty to keep you occupied

TNC-EMU is a freeware MS-DOS program which can, as its name suggests, emulate a packet radio Terminal Node Controller (TNC). That is, having a second PC and a BayCom modem, you can use it as if it were a TNC, with all advantages it has, including using DOS or Windows software etc. How's that for a low-cost fully-featured packet TNC!

Last but not least; **PC-HAM** by Joe G3ZCZ is a superb collection of programs (72 files in all!) covering a wide range of amateur radio interests, including awards, contests, DX and several DXCC subjects, a complete amateur radio logbook, QSLs, DXpedition help, HF propagation prediction, there's even a simulation 'game' for the ARRL Sweepstakes amateur radio contest included so you can 'play radio' without even switching your transceiver on!

'Best of 1996' Collection (for 'Best of 1997' - see later)

Based upon our monthly software disks offered during 1996, we've put together the following as a collection of ten 1.44Mb disks, the total programs expanding to over 30Mb. 'Best of 1997' (detailed later) also covers 10 disks of the best software offered during 1997. In the 1996 collection you'll find all of the following, in easy to use format with easy extraction and copy routines to your hard disk and on-disk documentation. Note that this is a collection of 10 disks and must be ordered as an entire collection.



Packet Radio

WinPack, which is a superb Windows based program for amateur packet radio. The latest full distributed version will be supplied (currently V6.1 - note a V6.2 update is available separately).

Introduction to Packet by Larry Kenney, a very comprehensive 20 part guide to virtually every aspect of packet radio, all stored in ASCII text format on the disk for you to read on-screen or print out.

Morse

Super Morse V4.16 by W5CID, independently described as being the very best amateur radio Morse training aid in the world.

Next, there's **CW**, which is W5CID's CW QSO simulator & trainer, which can send a simulated QSO, or random words, groups, a message text you've entered, or a disk-based text file, to help increase your Morse code proficiency.

From the UK, there's **GM7AVE's CW Tutor** helps you learn Morse code and builds up your speed for the Morse test, with a number of facilities including sending random lines of text from a very large text file.

SWL and Scanners

UK VHF/UHF Frequency database contains over 6,000 UK frequency allocations between 30MHz and 1,000MHz together with their users, location, channel numbers, etc. A fast 'search' program utility is also provided on the disk which lets you quickly find

the frequencies of any given user, whether this is by name, service, or location. For example 'Beacons' will give you the frequencies and locations of amateur radio beacons, entering a town or city name will give you the same for users in that area, and so on.

Introduction to Scanning is a superb information file, which you can either read on your PC screen, or print it out, or even display or print just the specific parts of the information you're interested in!

For the short wave listener, there's the **SWL Database**, a frequency and broadcasting guide which will read your PC's clock and give up to the minute information on broadcast station schedules, either on- screen or printed in station, frequency, or country order.

Also there's the latest version of **PD, Version 2.03** for POCSAG pager decoding, with extended 'time-out' and message length facilities over earlier versions.

The **HF FAX Frequency Database** is a series of files giving an extensive listing of HF Fax stations worldwide, as well as stations which automatically rebroadcast satellite received pictures. Current to March/May 1996, details include operating schedules, modes, idents, locations etc. A superb companion to programs such as JVFAX.

Data with simple interface

Here's a complete collection of programs which you can use for either TX/RX or for 'listening', with a very simple (one IC and a handful of components) interface connected to your PC's serial port.

JVFAX V7.1a is a very popular FAX and SSTV

program, which lets you transmit and receive fax and full-colour SSTV from your PC. Add an AM interface (circuit details again being given on the disk) and you'll be receiving weather satellite pictures from both orbiting and geostationary satellites!

HamComm 3.1 is a superb DOS based program for RTTY (Baudot and ASCII), AMTOR ARQ/FEC, SITOR A/B, NAVTEX, Morse code (CW) and SHIP/SYNOP weather reports using the simple interface above. PACTOR decoding is now also included when you register your software!

MSCAN (V2.10) is a program for Fax and SSTV using the same simple interface as JVFAX and HamComm. MSCAN however is fully multi-tasking, and lets you load, save, digitize and edit pictures while receiving or transmitting another picture.

GSH-PC is another superb DOS program, this time for sending and receiving SSTV (Slow-Scan Television) pictures, again using the simple interface above. It supports all commonly used speeds, (ROBOT, SCOTTIE, SC-2 and MARTIN), and you can load and save in BMP and TIF image formats. It has split TX/RX 'windows', and supports the VD-720 real-time frame grabber.

Satellites

STS Orbit Plus lets you track orbiting satellites such as the NASA Space Shuttle, the Mir space station, and of course orbiting AMSAT satellites.

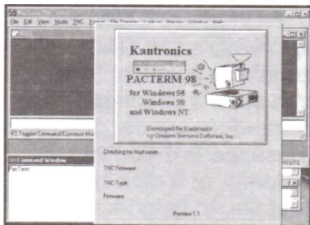
LogSat Windows V3.0 is a very impressive satellite tracking program, with data on a very wide range of orbiting satellites. As well as multi-window tracking and orbit information in both 'real time' and future scheduling, it includes aerial analysis including 3D

radiation diagrams, a logbook and even a callbook section, plus propagation and locator calculations. A very impressive shareware program!

WHATS-UP by G3ZCZ is a tool for experimenting with orbital dynamics and Telemetry Decoding and display for the DOVE, UoSAT-2, Fuji-OSCAR 20 and the AMSAT Microsat Spacecraft (OSCARs 16, 17, 18 and 19). It can also beacon [APRS] and/or automatically attempt a connect to MIR/SAREX, as well as having a Morse code terminal for use with satellites and other links.

Rig modifications

Amateur Rig Service Bulletins is a superb collection of 'information files' on disk, including a massive collection of over 800 separate files from manufacturer's service departments and repair



centres, giving plenty of handy tips and upgrade information on equipment from Alinco, Icom, Kenwood, AEA, KDK, Bearcat, PacComm, Kantronics, MFJ, Realistic, and plenty more!

Rig Modification Database is a collection of several hundred 'rig mods' for extended frequency, better performance, and additional facilities for a very wide range of amateur radio equipment including packet TNCs.

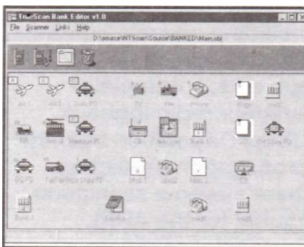
Operating aids

MUFsight is a superb world-map based HF propagation program, giving MUF and LUF to any point on the globe from

your location, even graphs of MUF/LUF based on the time of day - fully working but limited to fixed sunspot count and date.

VHFProp allows you to estimate the received signal strength from a distant VHF/UHF amateur radio station in the 6m to 23cm bands (excluding 4m), based on distance, transmitted power, aerial gain of each station, coax losses, aerial heights, and station site heights.

GRAFICDX V6.1 by ON4DM, draws an azimuthal projection of the world centred on either the geographical coordinates, the Maidenhead locator or the IARU prefix of your home QTH. The program



then provides the 'straight-line path together with distance, bearing, sunset/sunrise, and grey line if appropriate to any entered 'target' location, plus the locator, geographic coordinates, prefix, CQ zone, ITU zone, country etc.

QLOG V3.30 by IK5HGL is an integrated logbook and terminal program, for HF and VHF use. As well as having several utility facilities such as QSL card label printing, when used with a DX Packet cluster it can intercept the spotted DX and fill in the required logbook fields for call data etc.

Locator is a handy Windows-based utility for your PC, where you can enter the 'start' and 'end' QTH locators and you'll instantly see the bearing and distance to your QSO partner. Great for VHF/UHF and HF enthusiasts!

Windows GMT Clock helps you always put the right time in your logbook!

There are also several superb Windows-based 'help' files in full colour graphical and text formats, which you can view and move around in by just clicking on them from your Windows File Manager or Explorer. These are;

Bandplan - which contains a list of all the allocated radio services from VLF right up to UHF in each region of the world. Know exactly what you'll hear in any frequency range!

Foreign Language Recognition - great for the SWL, it contains a breakdown of the major language families, descriptions of language characteristics and tips on distinguishing languages from their sounds and usage.

Modulation - with useful info including CW (there's even a nice picture of Samuel Morse himself), AM, SSB, FM, FSK, HF Fax, SSTV, Data (including ACARS, ERMES, POCSAG, Golay, APOC, Ramp, Packet, etc), PSK, there's even a short introduction to QAM and Spread Spectrum.

Radio Propagation, including plenty of colour diagrams and charts as well as text, on Free-space waves, Ionospheric wave, Tropospheric waves and Ground waves

Rig control

Total Ham and Total Ham Plus are a complete operating and control centre for your station, with rig control, packet radio DX Cluster integration, logbook, QSL look-up and label printing, the works!

QRP and Homebrew

QRP HomeBuilder version 2.0 is a freeware Windows program, for amateurs who enjoy building their own radio equipment, or indeed are interested in learning!

Chnl	Frequency	Step	Text	Mode	Att	Pass	Auto
0	39.5400	12500	StatePD	NFM			
1	154.6650	10000	StatePD	NFM			
2	154.6800	5000	StatePD	NFM			
3	154.6950	5000	StatePD	NFM			
4	154.9050	5000	StatePD	NFM			
5	154.9350	5000	StatePD	NFM			
6	155.4450	5000	StatePD	NFM			
7	155.4600	5000	StatePD	NFM			
8	158.9850	5000	StatePD	NFM		X	
9	159.0000	5000	StatePD	NFM		X	

Included are designs and schematics for a universal VFO and universal diplexer, a capacitor code reader, coil builder, power converter, and QRP article references.

Coilbuilder VSR is a Windows 95 coil winding program and allows the user to design, edit, save and print files for many types of inductors.

NEC4WIN V1.5 is described as 'Mininec for Windows'. If you ever wanted to know what your aerial's really doing, or how it's height difference above ground affects your signal take-off, this one's for you. It's a very user-friendly and fully-featured aerial simulation program, you define the aerial and the program then can then plot and print Azimuth and Zenith patterns, compute impedance, SWR, lobe angles and width, F/B ratio, and plenty more. Full on-line Windows-based help is given in this program.

'Best of 1997' Collection

Based upon our monthly software disks offered during 1997, we've put together the following as a collection of ten 1.44Mb disks, the total programs expanding to over 30Mb. In the collection you'll find all of the following, in easy to use format with easy extraction and copy routines to your hard disk and on- disk documentation. Note that this is a collection of 10 disks and must be ordered

as an entire collection.

Packet Radio

WINTNC by Jon G7JF is a Windows program for use with a BayCom packet modem or for KISS mode TNCs. It's a multi-tasking program and can handle multiple users.

WinPack HTML Library and Plug-Ins is a huge collection of HTML 'GIF' files for use with WinPack V6. Also included is a ready-made HTML 'greetings' page, and a number of add-on 'plug-in' files.

RXCLUS V6.5 lets you receive information transmitted on the PacketCluster system without an on-air connection, so you get the same result as if you would be connected to the cluster.

Morse

Morse Code Made Easy is for beginners or Novices wishing to expand their amateur radio horizons, both DOS and Windows versions of this program are included.

CW Reader automatically reads the text from your electronic keyer (el-bug) into your computer's logging program - great for contests!

SBPMORSE gives you CW with your SoundBlaster compatible sound card.

International Morse Code Processor is a Morse tutor for Windows, covering 3-50 WPM with character speeds of 10-50 WPM for

Farnsworth code. It includes 'pop-up' menus and eleven code practice lessons.

CAMP 2.0 is for DOS users who'd like a superb graphical Morse training system. This has a 'Novice' mode, a 'Code Sentence' function, random character generation, and code from a pre-stored text file.

DMORSE from G0MDO teaches Morse Code in simple steps. Additional facilities are provided to send any typed message, typical QSO phrases, a 40 word test and a text file from disc. By connecting a Morse key to a COM port the program will decode your Morse.

CWTSR is a small 'Terminate and Stay Resident' CW utility so your PC can play the role of a CW keyer, all you need is a paddle and a simple CW interface connected to your serial port.

SWL and Scanners

WXSAT is a superb Windows-based program using your PC's sound card as the interface, for storage, demodulation and display of received HF fax and satellite weather fax signals.

ACARS; For airband enthusiasts, we've **ACASORT v1.10**, which is a message sorting and decoding program for ACARS log-files, ACARS Help is a collection of text files with ACARS information, and finally there's a complete directly printable schematic diagram for a simple

ACARS Interface, which can also be used with other data programs.

FREQS by Rob Davis of Leicestershire is a scanner frequency database. It tracks frequency, user name, remarks, channel number, and displays the data by channel number or frequency order, and can provide a printed copy of the information.

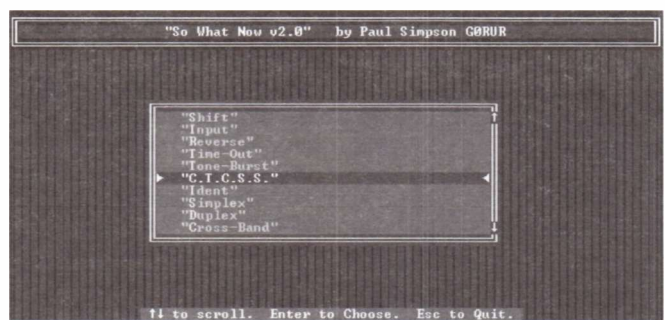
All Day Audio Recorder is a PC-based automatic recorder using your PC sound card as the interface, which only records when the incoming signal is above a user-specified threshold. This allows the recorder to pause while nothing is being received. It's useful for unattended recording of amateur radio or scanner activity as well as for DX chasing and audio logging.

SEMASOFT V1.12 is a Windows program for decoding and display of received POCSAG paging signals using your PC's sound card. It even keeps a log file of decoding sessions for you.

UK VHF/UHF Frequency Updates and Listings is a huge collection of text-based files with frequency listings for users throughout the UK, regional listings, i.e., London, Sheffield, Leicester etc., and for events such as several UK air shows, carnivals, rallies etc.

Inverse uses your PC soundcard to decode scrambled frequency-inverted transmissions, providing fully readable audio from those strange-sounding scrambled mobile radio signals.

WEFAX is a simple



freeware program for weather fax reception, viewing, and printing with your PC and TNC.

SELCALL translates maritime SITOR selcalls. If a selcall number matches the selcall ID of a known coast station, the program will show this and report the coast station's name. A useful appendix also gives the tables of blocks of selective call numbers for both ship and coast stations, and a listing of international coast stations.

Shortwave Listener v2.0 is for anyone who's new to shortwave listening and scanners. It includes a UK frequency list for VHF and UHF as well as HF information and plenty of hints and tips.

1997 UK Airband Frequency Listing covering both VHF and UHF, giving frequencies and usage. The file is in text form so you can easily export or print it, as well as browse for keywords, i.e. airports, locations etc.

Data with simple interface / sound card

Blaster Teletype demodulates and decodes amateur and non-encrypted commercial HF radio teletype (RTTY). It uses a PC's Soundblaster compatible sound card and modern DSP techniques to give outstanding demodulation performance.

DTMF_FFT is another program for Soundblaster compatible cards, it's a DTMF and CTCSS generator and decoder and a spectrum analyzer program for DOS. It samples the input, performs an FFT, and

graphs the output, as well as decoding and generating DTMF digits and CTCSS tones.

FTV is a DOS-based program for WEFAX, full-colour SSTV, and RTTY, using your PC's sound card as the interface. It can be used to receive commercial and amateur radio RTTY, FAX, and SSTV signals and can transmit FAX and SSTV.

RadioRaft is a multimode radio decoder which runs in DOS. It supports either the simple one-IC HamComm interface or an external modem. It can handle 9 ARQ modes, 10 FEC modes, CW, packet, RTTY etc. with automatic decoding of any mode at any speed. Modes are; Baudot, ASCII, SITOR-A/B, ARQ-E, ARQ-M2/4, Packet, ARQ-E3, RUM-FEC, FEC-A, SI-ARQ, SWED-ARQ, ARQ-6/90 and 98, CIS11, Spread11/21/51, CW, AUTOSPEC, SI-FEC, ARQ-N and HNG-FEC.

Blaster Teletype is a feature-packed radio teletype DSP modem and terminal package, which is DOS-based. 'BTL' requires only a 386/20 PC, any SoundBlaster card and an SSB transceiver or receiver.

POCSAG Encoder, is a shareware program for encoding alphanumeric POCSAG pager messages for transmission using your rig. It uses a very simple circuit (either one IC or two transistors) to interface between your PC's RS-232 port and your transmitter, full schematic details are included on the disk text file.

Satellites

WinOrbit V3.3 is a satellite tracking and display program for Windows. It can give a graphical display of satellite positions in real-time, simulation, and manual modes. It can also provide an output of current

tracking information to a client program for control of tracking hardware such as aerials and your TX/RX.

WiSP is a complete Windows package for amateur satellite communication. Using the Low-Earth-Orbiting satellites you don't need large aerials, even a small 2m/70cm collinear is often enough, and with Phase 3D coming along soon this program is going to be very popular! There are full mail facilities including automated upload/download, including image files to and from the satellites.

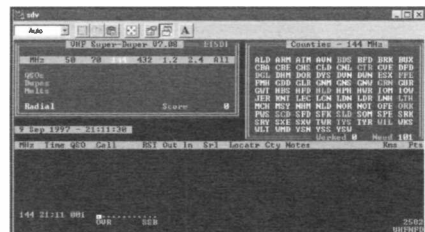
FODTrack by XQ2FOD (the latest version as of Nov 97) is an automatic amateur satellite tracking control system for your rotator, controlled via your PC's built-in serial and printer I/O card. Complete schematics are provided for the hardware interface to your rotator, as well as transceiver interfaces for different rigs, there's even a PCB and component layout for the rotator interface.

Rig modifications and general information

Rig Modification Database is a huge collection, updated to August 1997, of the very latest modification files available for transceivers, receivers, scanners, packet TNCs and accessories, including manufacturers' update files, and user-derived modifications.

There's also a large collection of the very latest **Ham Radio Information Files** covering all sorts of topics ranging from buying a new rig, to curing telephone interference, to packet radio, to tips on increasing your CW proficiency, and much more.

GORUR Programs, a number of self-running guides which can be run

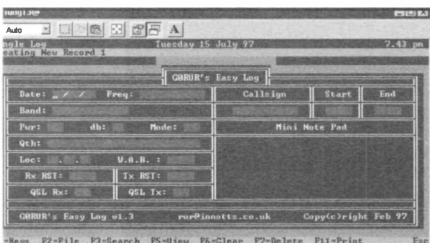


under either DOS or Windows, including; **JV71DOC** (using JVFX V7.1), **RURHC31** (Using HamComm V3.1), **RURBP** (Full amateur radio band plans, HF, VHF and UHF), **RURClus** (Using the DX Cluster), **RURLOC** (How to work out your locator), and **RURQSL** (World QSL bureau listing), **"So What Now V2.0"** which is an NRAE guide with answers to numerous of frequently-asked questions on amateur radio, **"Understanding Computer Terms"** which explains all those abbreviations and exactly what they mean, **"Useful PC Connections"** with pin-by-pin connections for computer cables and the like, **"Using 7 Plus"** on packet radio and how it can be used for sending and receiving multi-part files, and **"GORUR's Simple Guide to the Internet"** explaining what it is, what it costs, useful locations and plenty more.

Year2000.EXE is a small resident program for DOS and Windows which fixes the year 1999 to 2000 date change flaw of the CMOS RTC in AT-class PCs and PS/2s, 286 through Pentium and clones.

Operating aids

DX Hunter is designed to help you in DX chasing on HF, VHF and UHF in conjunction with your TNC and DX Cluster, whether you're linked or not. A voice keyer with your Soundblaster card can record up to 10 voice messages with PTT activation, and an audio loop recorder can record 25-30 seconds of audio with selectable playback



speeds (useful for Meteor Scatter!), and an automatic 5- 100WPM CW memory keyer. Automatic connection/reconnection to the DX Cluster is provided, and a monitor mode function allows you to operate without being connected. Remote RS232 control of your TX/RX is available, either manually or fully automatic (linked to the last received spot).

Great Circle Maps for Windows version 2.1 is a freeware program which can be used to make equidistant azimuthal maps, which you can print or save as bitmaps. You can alter fonts, line- font-background-colour, scale and size of the bitmap.

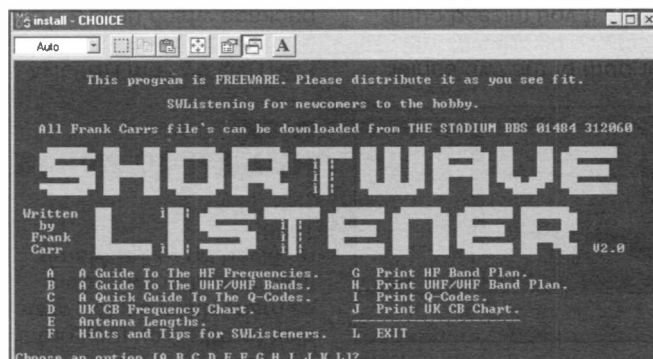
WorldClock is a daylight position map for Windows 3.1 upwards, that shows which portion of the Earth's surface is illuminated by the sun. It displays the current time in both the local time zone and UTC, and a full-colour world bitmap is shown with the sun projected into the map. The map window can be moved and resized, and can be 'stuck to desktop', to emulate a dynamic background bitmap.

Total Ham QSL Manager is a listing is over 8,000 managers or direct addresses, and will run on software such as Dbase and Vplus as well as 'Total Ham'.

QSL Manager Database is complementary to the above, and is an ASCII text file of no less than 35,382 callsigns, each with information on their respective QSL manager or QSL address.

World Time for Windows is a graphical world time clock for your PC, you can even use it in the 'background' with other programs running.

MUF for VHF is an Es MUF calculator for PCs. Give it details of a known path that is open via Es (e.g. from the cluster, off-air, Band II, etc), and it will calculate the critical



frequency, the Maximum Usable Frequency, and the Frequency of Optimum Traffic in the E layer, as well as giving a hint as to where you should beam and into which region you might make contacts.

QSL Printer is a simple but useful program to let you create and print your own personalised QSL cards on a postcard, no more excuses for not having any QSL cards to send out any more!

Ham Log V4.88 is an amateur logging and QSL management program, and will handle QSO statistics, with print, export, and import individual information on any call. It comes with complete databases including prefix, WAE, WAS and DXCC lists, aerial bearings from Europe, and example QSL label word processor 'macro' files.

HAMVIEW is a Windows program to display information on a number of UK amateur radio repeaters, beacons etc. The overlays supplied with the program include 2m repeaters, 70cm repeaters, UK beacons at 50MHz and above, ATV repeaters, microwave repeaters, and packet BBSs.

UK Repeater information and Maps is a repeater information package in Windows 'Help' format which gives text and maps, with links between channels and repeater information.

GEOclock V7.5 is the latest version of this popular 'sunlight clock' for Windows, which displays

the current sun and moon positions, and the parts of the Earth in sunlight and twilight, on high quality maps. Sun rise, sun set, and local times around the world can also be displayed.

MS DSP emulates a multi-speed tape recorder with changeable play speed, using a PC's SoundBlasterPro compatible card. It's great for VHF MS CW contacts! With this program you can slow down the recorded sound down to 60 times and speed up to 4 times, the received audio is stored in a buffer which can then be played back at any speed.

QTH is a simple 'pop-up' QTH bearing and distance program by SM2LCI. As well giving you information for your beam heading and the QSO distance, it provides a QTH locator to latitude and longitude conversion.

RUR Easy Log by G0RUR is an easy-to-use PC based logbook with full operator 'look-up' facilities. Fields are used for all the usual QSO information such as date, time, frequency etc. together with the power used as required under UK licensing requirements, as well as locator, and a mini-notepad.

DXCC Score Keeper is a DXCC information and record-keeping program. You can browse both current and deleted countries with their prefixes, detail statistics, show your 'wanted countries' in a table, tailor

the program for modes and bands, and either print or display the details.

QRP and Homebrew

Would you like a great collection of test gear in your shack, like an oscilloscope, frequency counter and audio signal and sweep generator? But you've only got your PC and sound card? No problem! We've collected just this for you, with three separate Windows-based **SCOPE**, **COUNTER**, and **AUDIO GENERATOR** programs. These freeware programs use only the sound card on your PC as an interface, and can save you hundreds of pounds in what you'd otherwise spend on equipping your shack for homebrew projects or setting your rig up for 12.5kHz channel spacing.

HAMCALC version 3.b.1 offers a wide variety of circuit and conversion calculations, such as a tuned circuits, frequency and wavelength, horizon distance, inductive and capacitive reactance, filter / CR times, single layer inductors, Ohms law, decibel calculations, AC voltage conversions, series capacitor and parallel resistor solutions, and a unit conversion calculator.

QRP projects is a collection of homebrew projects in text form with circuit diagrams and parts lists. They include a 40m QRP TX, 20m TX, 160m TX, 15m TX, 80m 'colourburst' crystal CW TX, 15W on 80m and 40m, 1.5W on 80m CW, a 2m CW TX, BFO for a low cost SW receiver, a two transistor 15m TX, 1-2W 80m TX, long-wire aerial coupler, and a '10 component' TX..

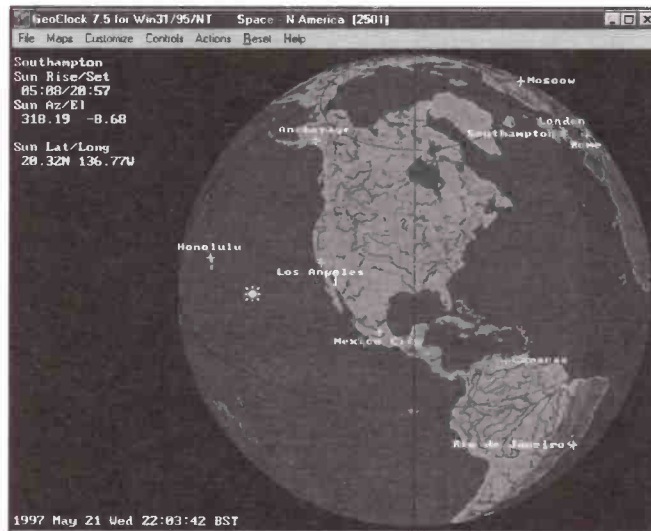
Coil V2.00 is a handy program to calculate inductance for many amateur radio coils and loops, including those used in aerial traps and receiver/transmitter circuits.

HRT Vol 16 issue 1

The above 'Best Of' collections are each a combined collection on 10 separate 1.44Mb PC format disks.

How to get your disks

Simply send a cheque or Postal Order payable to QSP73 SERVICES together with your completed coupon and cheque/PO to; QSP73 Services, PO Box 400, Eastleigh SO53 4ZF England. If you don't wish to cut the coupon, a photocopy or an order on a plain piece of paper is perfectly acceptable, provided this is accompanied by the original page 'corner flash' from this offer as proof of readership. If you would like the added security of recorded delivery (UK only), include



a fully completed recorded delivery form (available from your post office), add £1.00 to the total to cover the additional costs, and allow extra time for delivery. Readers outside the UK (including Eire) should instead send a Sterling (not foreign

currency) bank draft/demand which can be drawn on an English bank, or cash, to the value of £2.50 per disk (i.e. a UK £5.00 note for two disks etc., or a £20.00 note for the CD-ROM). Foreign currency unfortunately can't be accepted. You send cash at your risk,

use registered post if you wish added security. All UK orders are sent by standard post, those outside UK by airmail. Disks are sent by standard post at readers' own risk. Queries regarding supply of disks should be sent to the above address with an SAE for reply. Faulty disks will be freely replaced if returned with an SAE within 28 days of receipt. Disks are usually placed in the post within 48 hours of the receipt of your order, but please allow up to 28 days for delivery in case of exceptional circumstances.

Note: This is postal only service - please don't contact the Nexus Editorial staff regarding these disks as they cannot help you. Please call 01703 263429 for more details on any updates or for further information.

HRT Software Collection Offer 1998

This offer is only valid for orders received by 1st March 1998.

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Qty ____ of '1998 CD-ROM Collection' (£15.00 UK, £20.00 overseas) which includes all of the software detailed in this offer, plus all past software offer collection disks and plenty more of the very latest and best amateur radio software, supplied on a CD-ROM (not on 1.44Mb disks).

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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, i.e. 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

Appledore & District ARC meet on the third Monday each month, 7.30pm, at Appledore Football Clubroom, Devon. Club CW net; 8.00pm - 8.30pm every Wednesday on 28.350MHz, 8.30pm - 9.00pm SSB. Morse speed adjusted to the slowest sender. 2m FM every Tuesday 145.475 at 8.00pm. Planned club events/talks; Jan 19th - Illustrated talk by Sq. Ldr. H. M. Williams (present Manager Red Arrows) on the Red Arrows. For further details contact Den Williams G0UMT, Tel. 01237 471802

Bangor 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; Jan 7th - Quiz night Feb 4th - Cellular telephones Mar 4th - Packet radio, by Hugh G13TLT with live demos. Constructors' contest. Apr 1st - Talk by RSGB President Dave Kyle May 6th - Barbecue and QRP talk and demo Jun 3rd - Rally preparations, CW night and display of Morse keys. Further details from Terry Barnes G13USS, Tel. 01247 473948

Bristol (South) ARC meet every Wednesday at the Whitchurch Folkhouse Association, Bridge Farm House, East Dundry Road, Whitchurch, Bristol. The club hold regular 'activity nights'. Planned events/talks; Jan 14th - Demo of 70cm

repeater
Jan 21st - History of SBARC (The Archives)
Jan 28th - Bring & Buy car boot sale
For more information and meeting times, Tel. 01275 834282 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; Jan 20th - AGM
Further details from Alan Messenger G0TLK, Tel. 0181 777 0420

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 25th - 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 820118

Coulsdon 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; Jan 12th - Competitive construction evening, plus interchange of construction ideas, Dave G8VXB
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 684 0610

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; Jan 5th - Competition evening and a variety of things
Jan 19th - To be arranged
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 G3XFD, 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; Jan 12th - How to solder coax connectors
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 10th - Visit to Stockland Hill transmitter
Sep 14th - Lifeboat visit
Oct 12th - Annual General Meeting
For further details contact Theo G3EQM, Tel. 01392 875498

Halifax and District ARS meet at 7.30pm on the first Tuesday 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; Jan 20th - Charles G0ACX, Lancaster Bomber
Feb 17th - Bill G4KQV, Cranwell 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

Hambleton ARS meet 7.30pm, at Allertonshire School, Northallerton. Planned club events/talks; Jan 8th - Video
Jan 22nd - Annual General Meeting
Feb 6th - Talk on 6m
Mar 5th - Demo of new equipment
mar 19th - Operating night VHF/UHF
Apr 2nd - Construction Competition final

For further details contact John Hampson, G0VXH, Tel. 01845 537547, or via Packet @ GB7CYM

Hastings Electronics and RC meet, 7.30pm, on the third Wednesday of each month at West Hill Community Centre, Croft Road, Hastings. The club run RAE and Novice courses and is a registered City and Guilds examination centre. Planned club events/talks; Jan 21st - Clandestine Radio Feb 18th - AGM Apr 15th - Auction May 20th - Engineering experience for Orange For further details contact Doug Mephram, G4ERA, 8 The Close, Fairlight, E.Sussex TN35 4AQ, Tel. 01424 812350

Horndean and District ARC meet on the first and fourth Tuesday of each month, 7.30pm, at Lovedean Village Hall, 160 Lovedean Lane, Lovedean, Hants. The first Tuesday is usually a 'Natter Night'. Visitors welcome. Club nets are Sundays 1.955MHz 09.00hrs CW, 09.30hrs SSB, and Wednesdays 145.350MHz at 19.30hrs. Planned Club events/talks; Jan 27th - German Military Radios, slide show by Jihn 2E1COC 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 - Spratty Island Dxpedition by CDXC member Mike G3SED Further details can be obtained from Stuart Swain, Tel. 01705 472846

Lothians Radio Society meet on the second and fourth Wednesdays each month, 7.30pm, at Orwell Lodge Hotel, Colinton Road, Edinburgh. Planned club events/talks; Jan 14th - Packet radio, GM0ALS

Jan 28th - Talk by GM4OYV For further details contact Tommy Main GM4DCL, Tel. 0131 663 8501, or GM3HAM@GB7EDN

Newbury and District ARS meet on the fourth Wednesday each month at the Bucklebury Memorial Hall, Bucklebury near Thatcham, at 7.15pm. Planned club events/talks; Jan 11th - AFS CW, 13.00-17.00z Jan 17th - AFS SSB, 13.00-17.00z Jan 28th - Junk Sale Feb 25th - Club meeting Mar 25th - Homebrew transceivers and mobile aerials, by Mike G3TSO Apr 22nd - Annual General Meeting May 27th - 3rd Method SSB by Peter Rhodes G3XJP Jun 21st - NADRS Amateur radio Boot Sale, Cold Ash, near Newbury For further details contact the club secretary, Tel. 01635 863310

Shefford and District ARS meet every Thursday, 8.00pm, at the Church Hall, Amphill Road, Shefford, Beds. CW practice from 7.30pm. All newcomers are welcome. Planned club events/talks; Jan 8th - Welcome back Jan 15th - GPS, by Gerard G4YRS Further details contact Derek Clarkson G4JLP, Tel. 01462 851722

West Somerset ARC meet on the first Tuesday each month, 7.30pm, in Room GB7, Gibbs Block, West Somerset Community College, Minehead, Somerset. RAE and Morse instruction available. All visitors are welcome. Planned club events/talks; Jan 6th - Social evening For further details contact Alan. C. Elliott, M0AOJ, Tel. 01643 707207

Stourbridge and District ARS meet on the first and third Mondays each month (except bank holidays), at the Robin Woods Centre,

Scotts Road Entrance, off Enville Street, Stourbridge. Club Nets 2m Mon, Wed, Fri, 7.00pm 145.375MHz, 70cm 433.525MHz, 10m Mon (Tues on club weeks) and Fri 8.00pm, Wed 9.00pm, 28.050 CW. The first Monday is usually an 'on air and natter night'. Visitors always welcome. Planned club events/talks; Jan 6th - Informal On Air night Jan 20th - Main Meeting 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, NRAE & 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; Jan 12th - Social evening Jan 26th - Direction Finding, talk by Geoff G8UKT Feb 9th - Test equipment evening Feb 23rd - Members projects and problems Mar 9th - Surplus equipment sale Mar 23rd - Practical Wireless Past, Present and Future, by Rob G3XFD Apr 13th - Night on the air Apr 27th - Annual General Meeting May 11th - Annual 2m direction finding contest May 25th - Night on the air Jun 8th - Members' QRP equipment display and demonstration Jun 22nd - Visit to be decided Jul 13th - Soccial Evening Jul 27th - Annual Construction Competition Further details from Club Secretary Jeff Porter G4OHJ, Tel. 01789 773286

Sutton and Cheam RS meet on the first Thursday (natter night) and third Thursday (formal meeting) each month, 7.30pm for 8.00pm at the Sutton United Football Club, The Borough Sports Ground, Gander Green Lane, Sutton, Surrey. Club 'natter freq' 70.3875MHz, Club nets; 20.30 Mon starting on 145.500MHz then QSY, Tue at 10.30 on 3.760MHz. Club talks/events; Jan 11th - 3.5MHz AFS (CW) Jan 15th - Spread spectrum, G0IAY Jan 17th - 3.5MHz AFS SSB Feb 1st - 432MHz AFS contest Feb 19th - Construction contest Mar 14th - Golden Jubilee Dinner For further details, Tel. 0181 644 9945

TARB
Torbay ARS meet every Friday at the ECC Social Club, Highweek, Newton Abbot at 7.30pm. They have informal meetings most Fridays with a talk/event once a month, details as follows; Jan 2rd - Constructors Cup Feb 20th - Annual General Meeting Mar 20th - Astronomy Talk Mar 21st - Annual Dinner, Dolphin Hotel, Bovey Tracey. Further details from Peter G4VTO, Tel. 01803 864528 (day works No.)

Wirral ARS meet, 8.00pm, at The Club Room, Ivy Farm, Arrowe Park Road, Birkinhead, opposite Landican Cemetry. 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 evenings. Visitors welcome. Planned club events/talks; Jan 21st - David Norris G4TUP, The Why and How of TCP/IP Feb 18th - President's Night Mar 18th - 1st Surplus equipment sale Apr 16th - George Robbins G3LNG

May 21st - Bob Blian G3NTI, Thailand and its People Part 2

Jun 18th - Mike Tyrell G6GAK, Another Construction Project. The society puts on Special Event Stations usually at the request of a third party, tin 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 Email; vectis@nordee.u-net.com

National and International



British Amateur Radio Teledata Group (BARTG) have a quarterly magazine, 'Datacom', and hold a rally and HF RTTY contest each year. For more details about the group contact Membership Secretary Bill McGill, G0DXB, 14 Farquahar Road, Maltby, Rotherham, S.Yorks S66 7PD, Tel. 01709 814010 (Tues, Thurs & Fri, 7.00pm to 9.00pm. Sat/Sun before 9.00pm), or via GB7WRG Internet: <http://www.bartg.demon.co.uk>

British Amateur Television Club, are particularly active with Amateur Television (ATV) - the transmission and reception of vision. They produce a quarterly magazine entitled 'CQ-TV' and have regular get-togethers at their rally stands, and hold their own rally each year. For details of BARTC 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. Aiden's Vicarage, 498 Manchester Road, Rochdale. Lancs. OL11 3HE. Tel. 01706 31812 or see their web site at <http://ourworld.compuserve.com/homepages/g4wif/gqrp.h tm>

International Short Wave League who as well as running an International QSL bureau for amateurs and SWLs, have a monthly magazine 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, 3 Bromyard Drive, Chellaston, Derby DE73 1PF. Internet: <http://www.aber.ac.uk/~srj5/iswl.html>

The Irish Radio Transmitters Society 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 EI7GY, Tel (Eire) 01 2854250 or by Email: jryan@iol.ie and for Book Sales; Dave Moore EI4BZ, 12 Castle Ave, Carrigtwohill, Co Cork. Tel. (Eire) 021 883555,

Radio Amateurs' Emergency Network (RAYNET) 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, P.O. Box 2, Chinnor, Oxon OX9 4JY. RAYNET Supplies, Tel. 01842 860475. Packet @ GB7NRC. Internet Web Site: <http://www.reality.sgi.com/csp/raynet/>

The Radio Amateur Invalid and Blind Club are a registered charity who raise

money for radio/computer equipment, and audio cassette courses for home study, for blind, deaf and disabled amateurs. Information from Vice Chairman Margery Hey, Tel. 01953 454920. The club attend rallies throughout the year, and collect surplus equipment for resale. If you have equipment to donate, contact Ian 2E1EGV, Tel. 01274 723951. The Northern Ireland Club collect unwanted tokens or vouchers (e.g. petrol etc.), these can be sent free of charge to; The Charities Appeal Officer, RAIBC NI, Freepost BE 1789, Belfast BT15 3BF.

Radio Amateurs 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 required to support this work both at home and by taking part in expeditions. Please contact The Secretary, RARE, 1 Allfield Cottages, Conover, Shrewsbury SY5 7AP, Tel. 01743 873815. Fax. 01743 874729 Packet; G6FHM@GB7PMB. Email: rare@donsun.demon.co.uk

Radiocommunications Agency are 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) are a National Society representing UK radio amateurs. They are based at Lambda House, Cranbourne Road, Potters Bar, Herts EN6 3JE, Tel. 01707 659015. Internet: <http://www.rs.gb.org.uk> or Email; info@rs.gb.org.uk

United Kingdom Radio Society (UKRS) are again a 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 6597. Via Packet UKRS@GB7OAR, Email: admin@ukrs.org Internet: <http://www.ukrs.org>

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

Rallies

If you're travelling a long distance to attend rallies, we recommend you contact the organisers of the events first, to check if there has been any changes since this magazine went to press.

January 18th

Oldham ARC Mobile Rally, Queen Elizabeth Hall, Civic Centre, West Street, Oldham, Lancs. Featuring the usual traders plus bring & buy sale. Morse tests on-demand. Doors open 11.00am (10.30 for disabled visitors). Talk-in on V44 (145.550MHz) via GB4ORC, commencing 7.30am. Mobile contact prize up to 2.00pm. Refreshments and free

parking available. For further details, Tel. 01706 846143, or 0161 652 4164

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 & 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 G4UVJ, Tel. 01268 697978

February 8th

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 G8MGK, Tel. 01527 545823, or Tony G4ALT, Tel. 01562 69652

February 15th

Northern Cross Rally, Thornes 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 & buy). For further details contact Peter G0BQB, Tel. 01924 379680, or 0976 834938 (mobile). Email: rally@waveg.demon.co.uk Internet: <http://www.waveg.demon.co.uk/rally/>

March 7/8th

London Amateur Radio and Computer Show, Picketts Lock Leisure Centre, Picketts Lock Lane, Edmonton, London N9. Doors open 10.00am to 5.00pm each day. Featuring over 100 exhibitors, RSGB Committee & book stands, lectures, disabled facilities, free parking, restaurants, On-demand Morse tests (2 photos needed), bring and buy, and special interests section. Talk-in will be on 2m and 70cm. Admission: Adults £3.00, Pensioners/under 14's £2.00. For further details Tel. 01923 893929

March 15th

Norbreck Radio, Electronics & Computer Exhibition, organised by the Northern Amateur Radio Societies Association (NARSA), will be held at the Norbreck Castle Exhibition Centre, Blackpool. The organisers say it's the largest single day exhibition in the country. For further details contact Peter Denton, G6CGF, Tel. 0151 630 5790

March 29th

The Pontefract & District ARS Component Fair, will be held at Carlton High School. Featuring traders (on the ground floor) and Morse tests. Tea room and bar available on the first floor. Doors open at 11.00am (10.30 for disabled visitors). Talk-in on 2m. Admission by prize programme. For further details contact Nigel G0BPK, Tel. 01977 616935 evenings, or 01977 606345 daytime (Trade bookings Tel. 01977 677006). Email: g0bpbk@aol.com Internet: <http://members.aol.com/g0bpbk/pdars.htm>

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 Sharward 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. Sie open 09.-15.00. 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 5ZJ

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 21st

Newbury & District ARS Annual Radio Car Boot Sale, Cold Ash Playing Field, near Newbury. Seller/Traders to arrive at 8.00am, no earlier please. For further details contact Ian Trusson, Tel./Fax. 01635 826019 Email: G3RVM@compuserve.com

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 21729

July 11th

Cornish 35th Radio Rally and Computer Fair at the Penair Scholl, Truro. Doors open 10.30am. Further details from Robin Worsley G0MYR, Tel. 01209 820118

August 16th

9th Great Eastern Radio & Computer Rally. For further details, Tel. 01553 765614

September 25th & 26th

The Leicester Amateur Radio Show will take place at a new venue this year which is Donington International Exhibition Centre, Donington Park, just a few minutes further up the M1 from the Granby Halls. The organisers expect it to be the UK's biggest Amateur Radio event in 1998! For further details, or to book stand space, contact Geoff Dover, G4AFJ, Tel. 01455 823344

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 & buy. Doors open 10.00am to 4.00pm. For further details please contact Sharward Promotions, Tel. 01473 741533

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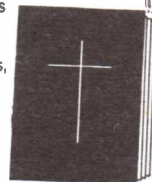
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AVO Electronic test meter Type 4 handbook / circuit required, buy, loan or copy. Also, sketch of device to tension steel bands on 'C' core transformers. Bryan (Eastleigh, Hants), Tel. 01703 615722

Manual for Kenwood TH215 wanted, will pay expenses for photocopy. David Dodds GM4WLL (Penicuik), Tel. 01968 677868

Wiring diagram for Reflectograph stereo tape recorder model 570 needed, or to borrow for photocopying. Reg Scott, 'Rosenthal', Caudle Hill, Fairburn, Knottingley, Yorks WF11 9JQ Tel. 01977 678564

FOR SALE

Yaesu FT7 HF mobile transceiver with FL110 Linear, GWO £290. Heathkit SB1000 HF linear, excellent order with Manual £320. IBM XT Computer, Ideal for first time Packet. 3.5in floppy 30Mb HD £45. Philip Webster G3WEG (Hants) Tel. 01703 267126

Yaesu Musen FRG-7 short wave receiver, mint, £110. McKemish (Ipswich, Suffolk). Tel. 01473 743363

Icom IC281H FM 2m mobile transceiver, RX 70cm 5/10/50W, Manson 30A 0-30V PSU, Kantronics KPC-3 TNC and collinear aerial. £450 ono the lot. Chris G7UPV (Thatcham) Tel. 01635 869743 evenings

Standard C520 2/70cm handheld FM transceiver, extended receive 124- 980MHz (with gaps), c/w box PSU manual, £160. Steve G7IMB (Aylesbury), tel. 01296 428584 evenings

Simpson Frequency Counter, 10hz to 60MHz, £50. Audio generator, Maplins Seesure, 15Hz to 200kHz, £25. Transistor tester, £15. All plus postage (N.W. London). Ken, Tel. 0181 455 8831 any time

Yupiteru MVT-7200 multiband receiver scanner, 1000 memory channels inc. 12Volt mains adapter and charger. As new, unwanted gift, £200, no offers (Southend on Sea). Kevin, Tel. 01702 612674

Kenwood HF transceiver TS-50S mobile SW bands 0-30MHz manual £650 cash. ADI200 hand held transceiver 130Mhz to 174MHz transmit low £100 cash (Hertfordshire). Tel. 0181 386 0345

IC275E 2m all-mode base station 25W output, built-in PSU, £650. Versatower EW45 wall mount, parallel and right angled brackets, dismantled ready for collection, £375. Icom PS55 20A PSU £90. Simon G4TVR (Solihull). Tel. 0121 745 8222

Yaesu FT-900AT with auto tuner and car mounting kit, very good condition, £570 no offers. FT290R somerrkamp 2m multimode £100 no offers. R. Dexter (Manchester). Tel. 0161 286 2490

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Kenwood TS570D boxed mint CW filter matching DSP desk mic £1100. MFJ mag loop never used outdoors mint £200 ono. Chelcom 80m vertical £60. 6m vertical £15. (Evesham). Tel. 01386 48056

Kenwood TS530SP transceiver, Kenwood AT230 ATU and low pass filter, good condition, boxed with manuals, £475 ovno. Buyer collects. Brian G0OQS (Rugeley, Staffs). Tel. 01889 574282 or mobile 0976 354247

Kenwood TS-140S HF transceiver, Kenwood PS-50 power supply, AEA Econo-Tuner model ET-1 300W. All boxed with manuals and hardly used, £600 ono. Adam (Norwich), Tel. 01603 665657 (Ans. machine).

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Kenwood MC-55 mobile mic, unused and boxed, new price £71 for quick sale £40 plus carriage. Ken (Whitley Bay, Tyne and Wear), tel. 0191 252 7141

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AOR AR1500 scanner, all mode handheld, 500kHz - 1300MHz, AM, FM(N), FM(W), SSB, 900 memory channels plus 100 for auto memory, excellent sensitivity, with nicad charger, instruction book, £125. Dave London), Tel. 0181 341 5617

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Microwave Modules 432MHz 100W linear amplifier for 70cm, model MML 432/100, 10W in 100W out, good working order, £125. Michael Watkins G0NBB (Whitstable), Tel. 01227 266460

Icom IC-R7000, 25MHz to 2GHz, mint, boxed, service manual, DC cable kit, £625. Marconi TF2008 AM FM signal generator, also sweeper, 10kHz to 510MHz, GWO, service manual, £180. S.E. Labs SM202 timer counter, fitted 10MHz crystal oven, DC to 150MHz, GWO, £40. Cliff (Surrey), Tel. 0181 656 3137

Kenwood TS-670 quad bander, 7,

21, 28 & 50MHz, all modes, FM, AM, SSB, mint, boxed, mic, schematics, and with all filters. Also GC-10 receiver board, 500kHz to 30MHz, no gaps. Got details for TX on 24 MHz. 50MHz + HF aerial switch, with 50MHz 6-ele Tonna beam. Sell for £500 ono. Mike 2E1FCG (Barnsley), Tel. 01226 742971

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MuTek SLNA 14556 preamp for FT-290 Mk1, unused, £30. Dymar Lynx converted to 2m, 100 channels, toneboard fitted, with mobile bracket and base station power supply, £45. Mike G7NBE (Leics), Tel. 01530 414473

AR8000, few weeks old, 500kHz to 1900MHz, no gaps, AM, USB, CW, NFM, WFM, computer

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Racal RA17L 30kHz to 30MHz receiver, £125. Anglian 1000 all band transceiver, 1kW output, superb engineering, damaged PA hence £50. Robin (Ipswich), Tel. 01449 740780
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