

HARCNEWS

The Journal of

Horsham Amateur Radio Club

Est. 1938



G4HRS

May 2007

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Notes From The Editor

Those going on the Aspidistra tour this month will either have or be receiving full details very shortly from David M3NKC direct via the post. Would you like to volunteer to do a write up of a particular club meeting? Yes..... then please get in touch with a committee member to let us know.

I have been testing out three items digital and a full report will appear in future editions of this magazine and I still have one item that is not digital to test in the near future. In March I went to Potters Bar for a visit and you can read about my findings in this month's Harcnews. You will remember that I spent January in London on an IT course and straight after Easter I started my first full time job as an IT technical support assistant.

The company I now work for is based in Pulborough and it is a delight to travel to compared with Crawley as the general traffic both morning and evening is going the other way! As with several other club members I visited the recent Kempton Park rally and this was as always an enjoyable event. It was well attended since there was not much room to move around especially in the club stand areas, unusually there were several craft stalls.

I returned with a keyboard, connectors and details of three rallies coming up. Those being Dunstable Downs (worth a visit), Milton Keynes (only 1 mile from Bletchley Park) and Newhaven Fort the closest! Dates for these will appear in Harcnews. Finally I would like to thank my Sister Sue and Brother in law Bill for allowing Bella to appear in last months edition of Harcnews when we ran a somewhat spoof article!

David G4JHI

A message from Mick G4EFO

Regret to inform everyone that

Prof. John Webb G3VGI passed away on Monday 2nd April 2007 after a long illness. John was a keen supporter and benefactor of the local radio club having presented the 'Webb Cup' which is given annually to the amateur in the local area who the club members think has done most or something special for the amateur community.

His son Stuart (G3VGJ) gave a remarkable insight into John's many interests at the funeral service. John lived at Stone Cottage, Slinfold for forty years, which he regarded as his sanctuary from the stresses of London life. He worked at the Imperial College London where he ran his own department for many years, where he was a professor of Applied Geochemistry.

I remember reading some of the interesting articles he published where he describes the minerals that can be found under the earth by analysing some of the deposits on the surface. In addition to amateur radio, John's other interests were fishing, and producing Medlar wine. He often took trips to North Wales and Scotland on his fly fishing trips. He was also a keen bird watcher as was Jean his wife who died some years earlier.

John's interests in the earlier years of his radio activity were the HF bands including eighty meters. In later years most of his activity was on two meters and seventy centimeters. John suffered from Alzheimers, he died at the age of 86. John leaves a son and two grand daughters.

A floral tribute to John was left on behalf of the club and HARC was represented at John's service by Robin, G3OGP and myself G4EFO.

April Meeting Review:

bhi DSP Noise Reduction

by Graham Somerville

Graham started his talk by telling us about some of his previous employers such as MEL and Farnell components, both of which are familiar to many HARC members. Currently he is marketing director for bhi, a Bexhill on Sea company. As soon as he gets the chance, he will take the Foundation course! The next step was to explain what the acronym DSP meant: digital signal processor and digital signal processing.

The development of DSP ideas began in the 1960's, the Fast Fourier Transform algorithm in the 90's, but it was not until the 80's when manufacturers such as Texas Instruments, Analog Devices and Motorola brought out DSP integrated circuits that practical use was made of DSP. Digital signal processing involves converting the input analogue voltage into a series of numbers (hence digital), applying some mathematical functions on the numbers and finally converting the output numbers into an analogue voltage.

The clever bit is in the writing of the mathematical functions to obtain the desired results, which could be low-pass, band-pass, high-pass filtering or something different. bhi is involved with noise reduction on communications, so their DSP device is programmed to detect speech.

Normally speech consists of audio frequencies of 300-3000Hz that are amplitude modulated at frequencies between 0.6 and 6Hz, so their software puts the incoming audio into 'frequency

bins' and looks for this modulation. If a bin is not being modulated, it is thrown away. Net result is speech only.

Noise, tones, car noise, cw etc are all removed or attenuated. This system is unique, which is why the DSP functions often available on modern rigs do not perform noise reduction of this level of sophistication. bhi sell the noise reduction system in a variety of modules. The first is the NES10-2 MkII, which looks like a small external loudspeaker.

Since its introduction a few years ago, comments by amateurs have improved the design: a red/green led shows noise reduction on/off state, 3.5mm headphone socket added, and a power switch added. On the back is a dip switch to select the optimum reduction level from 8. A small pcb (NEDSP1062-KBD) with 3W power amplifier is sold for mounting inside one's own speaker, as there is often an empty box behind the speaker itself.



(Above) The bhi setup

It has a relay on the pcb so the audio input is fed directly into the speaker if power (12-24V) is removed. This board is available without relay and power amplifier (NEDSP1061) so it may be fitted inside a radio. Instructions are available for fitting inside the FT817, TS440 and Icom 706 to name but 3.

External modules are also available so they may be easily wired into existing audio cables. The NEIM1031 is a large module with front panel controls for ease of operation, and can remove up to 98% of background noise. Of course the noise reduction system can be connected to the microphone so that external noise is not transmitted. bhi sell to the emergency services, military and covert operatives.

We had a demonstration of these units and a variety of input signals were fed in from a CD and HF radio. The CD



(Above) Graham with his display

contained pre-recorded CW and speech from AM, FM and SSB transmissions. Even though the unit is not designed to improve CW reception, some settings were effective at removing background hiss thus leaving the CW.

Luckily turning up the noise reduction soon eliminated all traces of the CW! Speech was definitely made more intelligible because background noise disappeared. These devices are sold on a sale or return basis and they rarely get any back. One case was an amateur who had a major QRM problem as mains grid power cables went right next to his qth. bhi also make the Radio Mate keypad.

This fits under small hf rigs and is somewhat easier to operate than the rig's own controls that are often behind menus. The keypad holds 20 memories, and allows direct frequency input, change mode etc. A clever function is a 10 second tune command. The buttons had a quality feel to them. Graham very generously offered a discount and free postage to HARC members. He is off to Japan soon and we wish him great success in selling radio equipment to the Japanese!

G3ZBU

Membership List 2007

Many HARC members will have a copy of last years list of members with details of callsign, address and telephone number. In the near future an updated list for this year will be distributed.

If any member has any amendment from last year or doesn't wish for specific details to appear in print then now is the time to get in contact with either the Newsletter Editor or Treasurer. Email addresses are not included and the list is only distributed to members of HARC.

The RSGB Experience

Just before Easter I set off by train from Horsham to Potters Bar. One thing here that should be noted is that this destination is one stop outside of the Travelcard zone. There are regular trains between Moorgate/Kings Cross and Potters Bar and easy access via First Capital Connect at Three Bridges or Gatwick Airport.

When you arrive there is a walk of around 15 to 20 minutes to RSGB headquarters. Perhaps you would like to drive there on the M25 as it is quite near by. After signing in at reception I was greeted by the Society Historian John Crabbe G3WFM. I was then given a private tour of the museum, library and shack. There are many things to see in the museum dating back to 1900 up to the present times.

Two things of note were a Panda Cub transmitter and G2DAF transmitter and receiver that were my first and second setup respectively back in the 1980's. There are collections of valves, morse keys, in fact most things to do with amateur radio! The library has enough books to keep you busy for weeks on end! They have complete editions of RadCom and books/magazines from the ARRL to mention but a few.

Every month they receive club and society magazines from many countries in Europe and beyond. If you need any particular bit of information you can contact John and he can supply a photocopy of it. To finish off I spent the rest of my time in the shack but it is important to remember to bring your licence with you or you may not be able to operate. First I had a listen on 80m but only found one station already in QSO so went to 40m.

From there I had a few contacts in Britain using a dipole antenna fed into a Kenwood TS950S transceiver. I then went onto 20m and using a tri band beam and an Icom IC756 had very reasonable reports across Europe.

I did not hear any DX stations at all. There is also a Yaseu FT847 for the VHF and UHF bands that can be used for satellite communications as well phone or cw. Yes there are one or two keys floating around! For the different aerials there is a set of patch leads, which can easily be rigged up to the transceiver of your choice.

Before you go you must fill in QSL cards for your contacts. If you fancy a visit to RSGB Mondays and Thursdays are the days when the museum, library and shack are open. However before you travel you should telephone to make sure John will be in to avoid disappointment!

G4JHI



(Above) David G4JHI in control

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TV Addict

“Now then now then” is a well known phrase to many viewers and in 1975 the series Jim’ll Fix It with Jimmy Savile started on BBC1 and attracted a very large audience around teatime of Saturday afternoons. During March UkTvGold has started a new series entitled Jim’ll Fix It Strikes Again still presented by Sir Jimmy himself. This new programme has given the chance to some of those who starred in the original series to come back and relive their experience by taking part once again and doing what they originally did.

Clips of some of the old fix it’s have also been shown along with some totally new ones! The programme airs first on Thursday’s at 9pm with many repeat showings and is likely to be repeated for some time yet! There is to be a second series and if you want to appear on the programme now is the time to write in! Jimmy ran a disco at one time, which was the first time anyone had actually danced to records rather than a liveband. At one time he presented on 208 Radio Luxembourg and ran shows such as the Teen and Twenty Disc Club.

He regularly presented Top of the Pops on TV and spent many years at BBC Radio 1 with show’s Savile’s Travels, Speakeasy, Double Top Ten show and The Old Record Club. In those days the signal was broadcast on 247metres medium wave and Horsham was in an area where both the Southwick and Brookmans Park transmitters service areas met.

This type of phenomena gave a characteristic type of fading and phase distortion whilst the signals added and then subtracted due to mutual interference between them! Careful positioning of the internal ferrite rod gave a stable signal although many listeners didn’t seem to know how to do this! During the night hours was a different story with strong interference from Radio Tirana in Albania and the overall reception was not really much good at all!

WEB Trawl

Do you often want to send an email with an attachment but the file is too large then here is a solution. You can use a tool such as Winzip to compress the file to a manageable size but what if the end result is that it's still too large? Some files particularly those that are already compressed won't get that much smaller. If you go to Mailbigfile this site could solve the problem.

You simply enter the recipient's e-mail address into field 1 and using field 2 attach a file up to a maximum size of 100MB using the browse facility and away you go! There are optional fields where you can put in your e-mail address and a message if you so wish. The recipient will get an email directing them to the URL where the file is located and they can right click to save it onto their computer.

www.winzip.com
www.mailbigfile.com

A message from Les G3VQO

Peter Pointer (G8MTR) became a Silent Key on 14th March. He was not a member of HARC, but had visited the club nights on occasion. Licensed for many years, although never particularly active on-the-air, Peter was probably best remembered by several generations of Collyers pupils as their Physics teacher and the Commanding Officer of the Combined Cadet Force.

Please send contributions for the June edition of HARCNEWS to the editor by 21st May. Items received after the deadline will be held over until a later edition.

All input is subject to suitability and available space.

For items sent by email please send to this address:

harc.news@g4jhi.co.uk

Radio Diary

May 3rd, Club Night: The Future of Electronics - Mike Underhill, G3LHZ

May 7th, 80m SSB Club Championship 20:00 - 21:30

May 12th,
Aspidistra visit
HARC Day Trip to France - Note date change

May 16th, 80m Data Club Championship 20:00 - 21:30

May 17th, Social Evening - The Frog and Nightgown - Faygate

May 20th, Dunstable Downs Amateur Radio Car Boot Sale

May 24th, 80m CW Club Championship 20:00 - 21:30

All above times are BST

Committee/Club Meetings and Socials start at 8pm