

Club Call G4HRS

Est. 1938

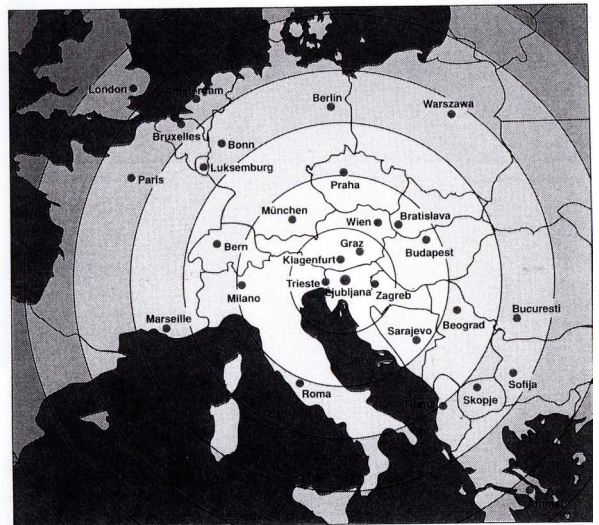
HARCNEWS

RADIO TELEVIZIJA SLOVENIJA
1550 LJUBLJANA, Kolodvorska 2-

We confirm the reception of broadcasting station Radio Slovenija on 918 kHz on 6.1.2017
from 21.30 to 22.00 UTC+MT

TNX FOR YOUR REPORT!
Best 73

RTV Slovenija, Kolodvorska 2, SI-1550 Ljubljana, Slovenija
Telefon: +386 1 475 2437, Telefax: +386 1 475 2440



**The Journal of
Horsham Amateur Radio Club
March 2017**

Affiliated to:



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Cover picture: QSL card received by 2E0NKC from RTV Slovenija

Editorial

These one day trips of mine to London have proved very popular amongst readers of this newsletter. I am still getting very positive feedback and I believe that everyone is waiting to hear about the next one! Another one is on the cards at some point and there will be a radio flavour but you'll have to wait for now!



This month is the junk sale once again and basically it's 'the same procedure as last time'! There will be refreshments such as hot dogs etc and cold drinks and by popular demand tea and coffee will be readily available. When you have washed the whites.... what's that you get your XYL / YL to do that! Here's a tip which you can pass on to whoever. Add to the wash half a cup of vinegar.. yes vinegar! I tried that and it really does work and the whites come out much whiter!

David G4JHI

Copy deadline for emailed items for April edition 20th March - For written items the deadline is 17th March.

For items sent by email please send to this address:

harc.news@g4jhi.co.uk

2017 Subscriptions

Subscriptions are now due for the 2017 Club membership.

Please forward £15 to the Treasurer Paul G4TMC.

Payment can be by cash, cheque (payable to H.A.R.C) or via electronic transfer.

Anyone wishing to pay electronically should send an email:

paul.g4tmc@gmail.com

You will then receive by return the HARC bank details.

Postal address: Paul Barnett, 8 Parsonage Road, Horsham, RH12 4AR.

February Meeting

Software Defined Radio (SDR) by Alister Watt, G3ZBU

Alister introduced his talk and by confiding that had been working for the past year on his presentation but had only just managed to finish it at 6.30pm that evening! Alister went on to itemise the advantages of SDR including removing the need for a VFO and expensive filters in the design of radio receivers and transceivers.

Alister cautioned against working in isolation since developing your own software would involve use of sophisticated mathematics and packages such as MATLAB. This can be prohibitively expensive so it is best to make use of ready-made SDR software packages of which there are several available for amateur use at low or zero cost.



G3ZBU using SDR to view his Jaguar key fob!

What is SDR?

Alister explained that SDR involves digitising RF or IF signals and then using software to filter and demodulate signals. He reminded members that SDR radios don't need many of the traditional front panel controls associated with an HF transceiver. Alister used the ever-popular SoftRock HF transceivers as an example of low-cost SDR equipment currently available.

Alister mentioned that SDR receivers can have multiple uses and can offer significantly better performance than comparable super-heterodyne based receivers.

Types of SDR

Alister introduced a number of different types of SDR currently available. These included:

- Hack Green, Twente and other web-based SDR receiver
- TV/FUN Cube dongles
- SoftRock HF transceivers
- ADC-based radio (e.g. FlexRadio)
- KX3/Icom 7300 SDR-based transceivers (with conventional front-panel controls).

WebSDR

Web SDR has many uses with coverage for the HF and some VHF bands. Unfortunately, coverage is usually limited to 200 kHz and often based on multiple SoftRock receivers and Linux software. The low noise floor offered by WebSDR makes it possible for amateurs to operate when their local environment is prohibitively noisy and also to listen to their own transmissions.

TV/FUN Cube dongles

Low-cost TV dongles (available for as little as £10) provide an easy way to get started with SDR but can have serious limitations. More expensive dongles (up to £150) are capable of much better performance. Dongles are available with 8-bit and 16-bit conversion providing 256 and 65,536 levels respectively. Coverage of low-cost dongles extends from about 24 MHz to 1766 MHz but more sophisticated equipment can perform over a much wider range (including all HF bands) from 150 kHz to 2 GHz. Low cost units can be liable to drift.

SoftRock

SoftRock equipment uses an oscillator with divide-by-four logic to provide the required quadrature signals. The Si570 from Silicon Labs provides comparable performance to similar crystal oscillators and uses some innovative circuitry, eliminating the requirements for mechanical resonators, quartz, MEMs or SAW. The SoftRock design is based on two mixers, I and Q-signals, and two low-pass filters using operational amplifiers. The outputs are sent to a PC sound card and the PC application is responsible for tuning, filtering and demodulation. This design eliminates the need for expensive crystal filters and the cash saving can be put towards a more powerful sound card!

Fast ADC-based SDR

Fast ADC-based SDR technology is becoming more affordable. Here again, the considerable saving associated with not having to purchase expensive filters and other frequency conversion circuitry can be put towards an investment in a faster, more powerful ADC. The 16-bit AD9266 is becoming popular and facilitates operation up to 30 MHz at a cost of £49. The ADC output can be taken to an FPGA where all of the logic is implemented using VHDL.

Multiple slices can be processed within the FPGA. For example, one slice could be dedicated to HF SSB whilst another could be used for wideband coverage. Larger FPGA devices with BGA packages can, however, be somewhat difficult to handle for the amateur constructor!



G3ZBU's prototype SDR

SDR performance

Alister used Sherwood Engineering's comparison data to highlight the advantages of SDR over conventional RF technology. Members can download this fascinating data from:

www.sherweng.com/table.html

SDR applications

Alister concluded his talk with a review of SDR applications for receiving and decoding a very wide range of different types of RF signal, including pagers, key fobs, ACARS, analogue TV, weather stations, RDS, DAB, APRS, D-star, and slow-scan TV. It became clear that SDR can have a key role in allowing the radio amateur to receive and decode an almost endless variety of signals.

Mike, G8CKT

News from HARC

Product Recall

RSGB Yearbook 2017 and 2017 Callseeker Plus

Due to some incorrect callsign information supplied by Ofcom to the RSGB for the Yearbook and Callseeker there has been a recall. The RSGB were asked by Ofcom to destroy all affected copies and costs are being met by Ofcom. If you bought the products purchased before 27 October 2016 then you should take action.

If a record of purchase is held by the RSGB then you would have already received a replacement and details about how to return the original product. Anyone who purchased from other sources or where there is no purchase record will need to complete the special yearbook Return form. Full instructions and the form can be found at www.rsgb.org/yearbookreturn

Source RSGB

TX Factor

Episode 14 is now available to view

In this programme Steve Nichols G0KYA concludes with his explanation on how space weather affects our ability to communicate on the HF bands. Bob goes to Hamfest and Mike chats to Phil Willis M0PHI and Cathy Clark G1GQJ, two movers and shakers in the world of amateur radio.

www.txfilms.co.uk/txfactor

April Club Meeting

F/G8CKT

Mike, G8CKT, will describe the trials and tribulations of operating in France, first as F0VW, C31DD from Andorra, and more recently as F8FON. He will delve into French life and culture and will explain just why France is an excellent destination for the radio amateur. Mike will explore key aspects of French culture through language before taking a close look at key aspects of operating an amateur radio station in France, including licence types, regulations and call signs.

As well as introducing a typical French radio club (the French equivalent of HARC) he will give you the low down on how to get your own French call and what to expect when you get there. Mike will conclude his talk by taking a look at some of the latest developments in France including beacons, repeaters, low-altitude scatter, DX TV and the Grand Bleu!

Travel news

Sewer works

From 20th February works around Billingshurst were due to start with traffic lights in place. This is for a period of 48 weeks! The Editor suggests finding an alternative route to avoid delays. David who works in Pulborough has already had 2 weeks of 4 way traffic lights outside the works QTH during February so knows what these delays can be like! Back in January road works took place at Five Oaks causing horrendous delays for motorists and David completely changed his route to avoid the area. There were lots of complaints and action was taken regarding the permit to do the work at the location and soon after the works vanished!



Broadcast Listener

Radio.garden plants sound seeds. Surely not?

Thursday, February 9th 2017 by Julian Thompson G1ODN

What could be easier? Search for *Radio.garden* on your smartphone, tablet or laptop; and wait for the message 'planting sound seeds' to populate each country's radio stations with bright green dots. OK you might need to recognize one country's geographical location from another's. Then there's a catch. For any given city, the list of green dotted digital radio stations that have been seeded: might look thin.

Finding fertile or stony ground?

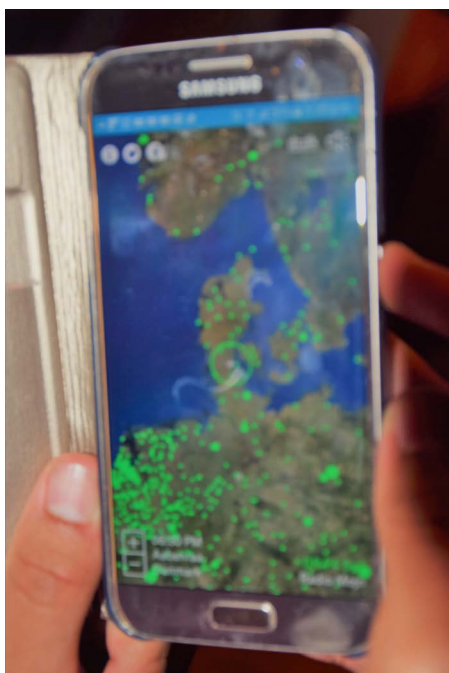
Success depends upon '*pointing your finger*' (practically that's more like '*waving a stick*') at Planet Earth and waiting for up to twenty seconds for a response (in green) or report (in red) that your station is unresponsive. The key determinant factor is whether your radio station is one of the 7,700 that were listed at launch, during December 2016. That's completely independent of population density.

So, what did the Press say?

Rather than find ways to gauge popular demand, Journalists parroted the Dutch University who developed the smartphone 'app;' and their source of funding. Also, mentioned was the queue of e-mails sitting in their 'in' box, received from radio stations wanting to be listed; i.e.: from the supply side.

What should the Press have said?

The unique proposition that *Radio.garden* allows, is that you can continue listening to internet radio on your smartphone as you walk out the door, well beyond the constraint of your home's broadband router. For me, it enables mobility and passes the critical 'So what?' test for that very reason.



Planting Sound Seeds



References

1. Coldwell (2016) Want to Tune into the World's Radio stations? Grow your listening with radio. garden, The Guardian UK edition 16/12/2016. *Accessed from the Internet on 9/2/2017.* <https://www.theguardian.com/travel/2016/dec/16/tune-in-to-worlds-radio-stations-radiogarden>
2. Benwell (2016) Radio Garden: Close your eyes and listen to the word, from the live broadcasts of Havana to Aleppo. The Independent UK Edition 16/12/2016. *Accessed from the Internet on 9/2/2017.* www.independent.co.uk/life-style/gadgets-and-tech/radio-garden-listen-to-worlds-stations-aleppo-havana-london-korea-a7479031.html
3. Singh (2016) Radio Garden lets you tune into a world of global broadcasts. 16/12/2016; NPR-Goats-and-Soda. *Accessed from the Internet on 9/2/2017.* www.npr.org/sections/goatsandsoda/2016/12/16/505829305/radio-garden-lets-you-tune-into-a-world-of-global-broadcasts



Broadcast Listener

Monthly Roundup

by David Ansell 2E0NKC

All times UTC

Short-wave

Radio Australia left short-wave after 70+ years. This led to negative comments in the Australian and overseas press around the closure on January 31st. It was also raised in the Australian parliament. Also they closed their 60 and 120 metre services to the outback and Northern Territories. Cattle ranchers protested by smashing their radios on the fence of Alice Springs transmitter site. The decision to close short-wave was made by a female ABC executive with little idea about international broadcasting and short-wave radio.

This info from Glen Hauser's "World of Radio" Sats 10:00 Sky 0122. Channel Africa heard at 17:00 with "Africa Digest" in English on 15235 kHz. Radio Veritas (Philippines) heard on 15325 kHz in Tagalog and English via relay from the Vatican. Madagascar World Voice heard at 19:30 on 9495 kHz in Russian and at 21:00 on 11610 kHz in Chinese. Radio 'Voice of Hope' Lusaka, Zambia heard at 21:00 on 6065 kHz in English. All India Radio heard at 15:30 on 11560 kHz with English "News at Nine". This is a domestic broadcast. Transmitter site is Panaji?

Reminder

The "A-17" HF broadcast season starts Sunday March 26th. Some stations will QSY to higher frequencies. Also British Summer Time commences on that date. WRMI Florida U.S.A. heard with "Jazz from the Left" at 22:00 on 11580 kHz.

Medium-wave

Radio Kurdistan Iran heard at 21:00 on 1476 kHz in Kurdish and Farsi. A number of low power stations have been licensed in the Netherlands on 1395 kHz with 100 watts. Dominant at night here is Radio Seabreeze from Grou. Rumours are circulating that Radio Tirana plans to return to 1395 kHz now that Trans World Radio has stopped using the 500 Kw transmitter at Fllaka. During the Cold War Radio Tirana used this for propaganda purposes.

Some older DX-ers such as myself will remember Radio Tirana in the 40 metre amateur band when the band was 7000 to 7100 kHz only making the amateur band unusable at night. New station I AM Radio Milan, Italy heard at 21:00 on 1350 kHz with English Id's and pop music. This is co-channel locally with the hospital radio at Haywards Heath Mid Downs Radio. Kossuth Radio Solt, Hungary heard like a local station at 17:00 on 540 kHz. The transmitter at Solt is one of the most powerful in the world at 2000 Kw (2 megawatts).

The transmitter has recently been renovated. A London ethnic station for London is Spectrum Radio, Crystal Palace on 558 kHz. Much of the schedule is Sout AL Khaleej in Arabic or "World Music". Surprisingly Spectrum Radio 558 carries "Let the Bible speak" in English Saturday's 18:00 to 19:00. Also Spectrum has DAB outlets in London carrying other programming.



QSL
DSWCI -
The Last
AGM
2016

Rhein-Main-Radio-Club e.V.

Anschriften: WWW.RMRC.DE / mail@rmrc.de

RMRC QSL card

Finally **Walter Blanchard G3JKW** advises that following the demise of modulation on France 163 kHz LW that means that the Rumanian station Antena Satelor on 153 kHz is now fairly easily audible in UK particularly at night. The programme contains very nice non-stop traditional Rumanian music after 2300 if you find it hard to get to sleep!

Diary

Mar 2nd, Club Night: Junk Sale

Mar 6th, 80m Data Club Championship 20:00 - 21:30

Mar 11th, 41st Dutch National Radio Flea Market - Autotron Rosmalen 09:00 - 15:30*
http://radiovlooiemarkt.nl/?page_id=4601

Mar 12th, Dover Rally - Whitfield Village Hall 10:00 - 13:00
www.darc.org.uk/index.php?page=dover-radio-rally

Mar 15th, 80m CW Club Championship 20:00 - 21:30

Mar 16th, Social Evening: The Selsey Arms - Coolham
www.horshampub.co.uk/selsey-arms.php

Mar 23th, 80m SSB Club Championship 20:00 - 21:30

Apr 3rd, 80m CW Club Championship

Apr 6th, Club Night: Vive La Difference

For details on the above contests use this link and follow to the appropriate section
<http://rsgb.org/main/radio-sport/>

All above times are UTC except * which is CET


Committee/Club Meetings and Socials start at 20:00

RSGB Club Champs 2017 - Horsham Club Scores

Issue: 21st Feb 2017 Rev A

PARTICIPANTS	FEBRUARY			MARCH			APRIL			MAY			JUNE			JULY			TOTAL POINTS	%	MODE TOTALS		
	SSB	Data	CW	SSB	Data	CW	SSB	Data	CW	SSB	Data	CW	SSB	Data	CW	SSB	Data	CW					
G3LET Pete																			0	0.0	0	0	0
G3OGP Robin																			0	0.0	0	0	0
G3SWC Bryn	1000	805																	1805	33.2	1000	805	0
G3VQO Les																			0	0.0	0	0	0
G3WZT John																			0	0.0	0	0	0
G3ZBU Alister	444	325																	769	14.1	444	325	0
G4EFO Mick																			0	0.0	0	0	0
G4LRP Adrian	481																		481	8.8	481	0	0
G4TPO Steve	435																		435	8.0	435	0	0
G7DFV Gavin																			0	0.0	0	0	0
G8CKT Mike	306	545																	851	15.6	306	545	0
M0GJH Andrew																			0	0.0	0	0	0
M0GUZ Dominic																			0	0.0	0	0	0
M0TWM Jon	259	519																	778	14.3	259	519	0
2E0WEK Keith	324																		324	6.0	324	0	0
2E0XRT Richard																			0	0.0	0	0	0
Mode totals	3249	2194	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	5443		3249	2194	0
Month totals to date			5443			0			0			0			0			0			60%	40%	0%

Contest dates/times 6th 15th 23rd 23rd 6th 15th 12th 27th 3rd 1st 10th 25th 22nd 5th 14th 12th 27th 3rd - Start times are all 2000 clock time, ending 2130 local

HARC overall position after above results announced 2/27 3/28  **HARC POSITION Down from 2nd to 3rd place**

All entries to be uploaded with the www.rsgbcc.org/cgi-bin/hfenter.pl Latest robot entries may be viewed at:- www.rsgbcc.org/cgi-bin/hfposted.pl
 Contest Robot at:- <http://www.rsgbcc.org/hf/> Contest rules may be viewed at:- <http://www.rsgbcc.org/hf/rules/2017/r80mcc.shtml>

<p>This update: - Initial 2017. Added: Feb SSB & Data results.</p> <p>A good initial turn-out for SSB from HARC but where were the Data ops??</p> <p>No competition from our usual competitor Tall Trees CG this year as they are now entered in the General Clubs Section.</p> <p>The above list shows last year's participants. If you do not intend participating this year then please let me know and I will remove you from the list. If you change your mind then you can easily be added again. New participants are needed and will be most welcome - you will automatically be added to the listing.</p>	<p align="center">THE TOP EIGHT CLUBS - LOCAL CLUB SECTION out of approx 28 participating in this section (58 total all club participation)</p> <table border="1"> <thead> <tr> <th>Pos</th> <th>Club Name</th> <th>Total</th> <th>SSB</th> <th>DATA</th> <th>CW</th> </tr> </thead> <tbody> <tr> <td>1</td> <td>Torbay ARS</td> <td>6,195</td> <td>3,710</td> <td>2,485</td> <td></td> </tr> <tr> <td>2</td> <td>Cambridge & DARC</td> <td>5,680</td> <td>2,468</td> <td>3,212</td> <td></td> </tr> <tr> <td>3</td> <td>Horsham ARC</td> <td>5,443</td> <td>3,249</td> <td>2,194</td> <td></td> </tr> <tr> <td>4</td> <td>Sheffield & DWS</td> <td>3,462</td> <td>2,262</td> <td>1,200</td> <td></td> </tr> <tr> <td>5</td> <td>RAF Waddington ARC</td> <td>3,233</td> <td>1,943</td> <td>1,290</td> <td></td> </tr> <tr> <td>6</td> <td>Blackwood & DARS</td> <td>2,228</td> <td>1,188</td> <td>1,040</td> <td></td> </tr> <tr> <td>7</td> <td>Weston-super-Mare RS</td> <td>2,222</td> <td>852</td> <td>1,370</td> <td></td> </tr> <tr> <td>8</td> <td>Scunthorpe Steel ARC</td> <td>2,149</td> <td>239</td> <td>1,910</td> <td></td> </tr> </tbody> </table>	Pos	Club Name	Total	SSB	DATA	CW	1	Torbay ARS	6,195	3,710	2,485		2	Cambridge & DARC	5,680	2,468	3,212		3	Horsham ARC	5,443	3,249	2,194		4	Sheffield & DWS	3,462	2,262	1,200		5	RAF Waddington ARC	3,233	1,943	1,290		6	Blackwood & DARS	2,228	1,188	1,040		7	Weston-super-Mare RS	2,222	852	1,370		8	Scunthorpe Steel ARC	2,149	239	1,910	
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(all results data courtesy of RSGB website)

prep by: Bryn Tinton G3SWC