



Radio Society of Great Britain



City of Bristol RSGB Group - G6YB

At the Bristol Lawn Tennis & Squash Club, Redland Green, Redland, Bristol BS6 7HF

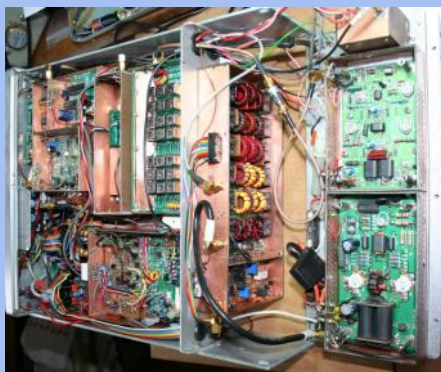
June 29th Jeff Diplock GW3UZS

Developments in Software Defined Radio



Jeff says this will not be an over-technical talk but will cover the basic block diagrams of the various kinds of SDR available and how things have changed over the last 10 years .

He uses modified Power SDR software which allows a panoramic display on his PC and an AM transmit and receive mode to go with his interest in vintage equipment.



His main interest is homebrew and he will outline and show some of his projects to demonstrate what can be done.

Saved from the skip:

A wartime RCA AR88 receiver rescued.

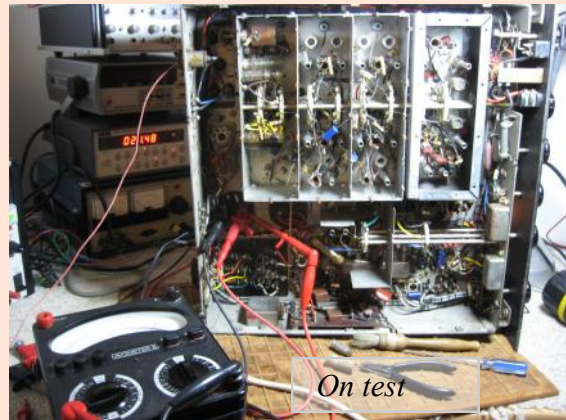
(Ken G3XSJ)

Part 2

Last month Ken told us about his cleaning procedure using soap and water along with a foam cleaner, with compressed air helping to clear debris from above and below the chassis. Rotary switches were lubricated with a drop of machine oil; WD40 enabled allen head securing screws to be freed.

In Part 1 a very sorry looking wartime receiver was acquired and scrubbed up ready for electrical restoration.

Much of the project hinged upon the condition of the mains transformer and this was checked for continuity and looked OK. After lengthy damp storage the insulation was likely to be degraded and needed to be checked. Leakage here is a safety hazard and could fatally damage the transformer, so care and patience are required when testing. I hoped to see several tens of megohms between mains and earth but the initial test was just 700k ohms, an alarmingly low figure that might improve when the transformer was brought into a dry atmosphere. As a further check and with the rectifier removed, mains voltage was gradually brought up and the dial lamps and heaters lit. So far, so good, and the set was now destined for the upstairs work bench. Because of its weight and the need to make the move in one uninterrupted operation, all the doors through which I was to pass were wedged open, inquisitive cats confined to other rooms, space cleared on the work bench and the dangling mains cable tied in place.



Once on the bench a thorough investigation commenced, starting by applying HT voltage through a high value resistor. Checking round the circuit, several failing capacitors were picked up and these were replaced. To keep things looking original under the chassis, some suspect metal "bathtubs" style multiple capacitors were unsoldered and refilled with new components. An earlier owner had substituted one of these "bathtubs" with modern blue plastic capacitors, but fortunately it was possible to adapt and refill an old unit from stock to keep the chassis looking original. With the worst parts now replaced HT was carefully increased and signals could be heard. Further work included replacing many out-of-tolerance resistors, some having almost doubled in value over

time, cleaning some mechanical parts ultrasonically, and fitting a new mains cable. After fixing a couple of further gremlins the tuning gearbox was removed, cleaned and lubricated resulting in a lovely smooth action. The set was now working very well and when connected to the matching RCA loudspeaker the audio sounded very full. A spell of warmer weather enabled the cabinet to be refinished, and the now even heavier assembly was reinstalled alongside my other AR88. What became of that worryingly low insulation resistance? Over time I watched it gradually increase and at the last test it had moved up to greater than 200 megohms, a very acceptable figure.



The original state



Finished condition

This rescued receiver is by no means pristine and bears the patina of age and scars of its past. AR88s are true classics that still provide good performance more than 70 years after they were made. Moreover, they are beautifully built and their fabulous looks always command attention.

Ken Brooks G3XSJ

Thanks for that excellent article Ken - does anyone else have a project they would like to tell us about ?



Another Ken

Ken Greenshields (10yr old son of Ian G4FSU) taking his "On Air" test recently as part of his foundation practical at Robin G3TKF's shack .

He passed with flying colours and hopes to be taking the rest of the exam very soon. Ken will be one of the youngest amateurs in the area.



Railways On the Air 26/27th September

SBARC are looking for additional help to operate a station using the call GB0SDR (Somerset and Dorset Railway) from Midsomer Norton . They hope to put on a station with HF SSB/HF Data/VHF and APRS . Any help appreciated .

Please contact **Andy Jenner G7KNA** BEng CEng MICE secretary@sbarc.co.uk

<http://www.sbarc.co.uk>



National Field Day around 1968 ! Ted Halliday G3JMY logging with Roy Poeton G3CTN operating . A rather young and “bobble hatted” Julian Baldwin G3UHK looking on . Does anyone recognise the others ?

More on a more recent NFD on the next page!

Members of the RSGB Bristol Contest Group entered RSGB CW NFD as G6YB/P on 6/7th June

The location near Marshfield in Wiltshire



The shack



Equipment: 2 x Elecraft K3 transceivers running 100watts , networked logging software (N1MM+) , Anan SDR providing CW spots on 5 bands simultaneously. A large flat field gave plenty of scope for trying various aerials with good separation. A tower at 60ft with an 11el Optibeam, and 40m dipole below, with a doublet and auto atu on a second tower (just visible in the picture)

Results later in the year .



Not the safest way to connect up the aerial!

Professor Chris Budd, G4N BG has been awarded an OBE in the Queen's Birthday Honours for services to science and maths education.

You may remember Chris gave us a talk recently on Code Breaking.

He has been a radio amateur and RSGB member since his teens, when he was introduced to it by his grandfather who held a licence in the 1920s and was a radio scientist during the war. Professor Budd was active first under G8OPB and then G4N BG and, as a student, was President of G6UW, the Cambridge Wireless Society. .

Professor Budd joined the University of Bath in 1995, has published over 100 research papers, raised over £5m in research funding and founded (and still runs) the University's MSc in Modern Applied Mathematics.

He is also the creator of Bath Taps into Science, a major hands-on science festival which has won several national prizes in the 14 years it has been running.



Professor Budd said: "I am very honoured to receive this award. I believe passionately that the importance of maths and science should be communicated in an exciting way to as wide an audience as possible. I could not have done this without the support of many others, and I hope that this honour is a way of recognising the wonderful work of everyone involved in public engagement."

Many congratulations Chris from the RSGB Bristol group !

Next month is Christmas Meal time : July 27th

After previous years' great success it has been decided to go to the same venue again .

The Windmill Inn Portishead BS20 6JZ <http://thewindmillinn.org/>



No reservations required just note it in your diary. Mon July 27th 2015

The Bloodhound Project - Update

Sorry to the dozen or so that applied to go on the visit—unfortunately things are being postponed (including the attempt at the record!) maybe later in the year

I will let you know if I hear anything



Coming soon to the Bristol Group

July 27th : Christmas Meal - Portishead

August 31st : Prof Cathryn Mitchel “HF Propagation”

Bath and District ARC <http://badarc.webs.com/>

Chepstow and District ARC <http://www.gw4lwz.org.uk/>

Chippenham & DARC <http://www.g3vre.org.uk/archive.asp>

MidSARC www.midsarc.org.uk/

North Bristol ARC <http://www.nbarc.org.uk/>

Shirehampton <http://www.shirehampton-arc.org.uk>

South Bristol ARC <http://www.sbarc.co.uk/calendar/>

Thornbury and South Gloucs ARC <http://tsgarc.uk/>

Trowbridge and District ARC <http://www.radioclubs.net/trowbridgedarc/events.php>

******* WANTED Yaesu FT857 radio *******

Anyone thinking of selling one? Please contact G3TKF

[Robin G3TKF](#)

RSGB Bristol Group Sec.

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<http://www.g6vb.org>