

**60 years
of HARS!**



Newsletter of the Harwell Amateur Radio Society

Affiliated to the Radio Society of Great Britain
RSGB Regional Club of the Year, 2009 and 2011



QAV

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Editorial Comment

Well, my note last month about the lack of copy for QAV has certainly sparked a lot of interest. We're back to 16 pages this month **and** I have some things held over until next month! Thanks to everyone who has sent something in. Please keep it coming and send it to - QAV@g3pia.net. The emails then come through to me.

On the 17th of this month HARS is hosting the RAL Microwave Round Table. This is one of 5 μ wave events held throughout the year and is looking to be an interesting time. Please see - <http://www.microwavers.org/> and book if you are coming.

Ann and I are still awaiting the result of our planning application for 2 towers in Normandy. Apparently, we will hear on 24th June. Fingers are definitely crossed!

73 Mike, G8CUL/F4VRB

Another over from our Chairman

My thanks to Ann, G8NVI/F4VSO for her contributions over the past two issues. Summer appears to have arrived without any good HF propagation or reasonable VHF/ UHF openings. I have not as yet had any sporadic E contacts, and have probably missed them! Still plenty of time to monitor 4/6m in the next few months.

Members of the committee have been, amongst other things, very busy preparing the statement required to ensure we are, as a club, General Data Protection Regulation (GDPR) compliant. There will be an entry further in this issue relating to and explaining this further.

Last month's meeting with the show and tell was well attended with four items being demonstrated. Mike, G8CUL described a very stable voltage-controlled oscillator (VCO) that is phase locked to a very accurate GPS reference. This can then be used to control the LO in a microwave transverter thus guaranteeing the selected operating frequency is spot on.

Mike, G0MJW demonstrated a digital amateur radio real-time TV transmission system. This relatively low-cost system allows live television pictures using a 1MHz bandwidth to be transmitted on bands 70cm and up. Mike made reference to the British Amateur Television Club (BATC) where more information can be found.

Richard, G0REL demonstrated a simple very cost-effective Morse tuition project that had been used to introduce Cub Scouts to Morse code. The key was fabricated from a bent brass strip, a piece of wooden dowel as the knob, both mounted on a wooden base board. Wires were used to connect to a detached buzzer simulating telegraph wires. A modified bicycle front light with an LED bulb was used to send Morse via light when keyed.

I demonstrated the re-built WW2 RAF R1155L receiver and mains power adapter.

The club's annual dinner also celebrating our 60th year was held at Cosener's House Abingdon. It was attended by around 30 people and proved to be a very enjoyable evening. Our thanks go to John G6ZHB, for his time devoted to arranging menu options and haggling the costs etc.

Arrangements are well on the way for the VHF NFD taking place on Hagbourne Hill on the weekend 7/8th July. We will be operating 4m, 6m, 2m, 70cm and 23cm. I have agreed with the farmer to use this location; however, the area must be treated with respect in order to preserve future use.

Arrangements to celebrate the club's 60th year are being pulled together. We have booked the Chilton village hall for Saturday the 10th November where there will be various activities and demonstrations. We will be on the air with both HF and VHF using a special event callsign, hopefully GB60PIA. Your suggestions, for what you would like to see or be involved with will be very welcome. This is a club event that I hope everyone will, in some way, become involved in even if its only a short spell at operating, assembling aerials or just come along to see what is going on and to support the event. You will be most welcome.

It has been reported that members attending meetings sitting at the back have difficulty hearing speakers. We will endeavour to rectify this problem and are looking into various microphone options for the PA system.

Dave G8DVK

Charlie Sierra Signal Report

The May coffee shop was well attended with the usual 13.5 members reporting for duty. The next CS will be on June 22nd, this time I thought we could try the Potting Shed at the Frost's end of Millett's. When Marian and I went there last Friday (June 1st), there was plenty of room outside under the canopy on the plant display side, away from all the children in the beach area. If anyone has any preference as to where we go, please let me know.

John G6LNU

HARS and GDPR

Over the last few weeks you will have been inundated with emails from various organisations, including HARS, as a result of the implementation of the General Data Protection Regulations (GDPR). As a member of HARS we are required to inform you of what personal data we collect, what we do with it and when we will delete it. You have the right to know what data we hold about you and to have any errors corrected.

HARS has produced a Privacy Notice which has been sent to all members and this states how we use your data and why we need to collect it. The terms of the Privacy Notice are now part of your membership of HARS.

If you have any questions or wish to see what data we hold about you, contact the Treasurer at treasurer@g3pia.net.

Radio Active

Alex 2E00FX - Royal Wedding Fever? Having applied for and received my NOV for the royal wedding weekend I decided to have a real push and see what I could work using QRP and FT8 over the 3 days. I was shocked to see what a difference an unusual callsign (2R00XF) made. I ended up working for about 10 hours of the 72 available and ended up with 337 QSOs in 45 DXCC with 153 already confirmed on LOTW as of today (3/6). Perhaps we need these SES NOV's more often. As a separate question which DXCC do people think I show up as when operating as 2R00XF?

Ron, G0BNC - Same old story, lots of work but not a lot of radio. I resurrected a 16A dry cell battery that I purchased used at a Longleat rally, so that was a lot of years ago. I had cooked it once, got the top off and put water in it. It took a few attempts at charging, and in the end I had put 3/4 litre of water, before getting 12.6v. Had several attempts at curing howling brakes on my car that stopped briefly with only a light press of the brakes. I had to pull off the motorway while on the way to the airport and take the

wheel off once. Turned out to be one sticking pad. We just managed to get to the HARS dinner on time after updating my iMAC to High Sierra (unlike Windows, it is free to upgrade) but did not allow time for a full backup then install. But at least I did not have to do hundreds of updates after updating, like you do on Windows. My problem with paying customs on a CCTV camera, I purchased in October, to TNT, that had a huge mark-up is on going. (I have submitted an article in QAV about it and customs fees). I went to another pleasant Charlie Sierra meeting. We went to the Dunstable Downs radio boot sale, got there early for me, but some people were already leaving. The rallies seem to be finishing earlier these days. Spent a bit, but only small stuff, so Val was happy. I dismantled the pump up mast to give it some silicon oil to drink. I decided to fit the 170W module in my 70cm amp, then noticed a very high VSWR, checks done and a piece of thin coax changed so all the same high quality, still the same. It turned out to be one of the CX-120A coax relays that I purchased from an eBay seller, and was manufactured back to front, but I had not tested it at the time of purchase. So I bent the arms to make it work, and it did work

with almost zero ohms across the contacts. Fortunately I noticed the high VSWR early and avoided blowing the PA. I have now abandoned these two relays inside the amp and now fitted a 28V coax transfer relay on the outside of the box, with the ability to take the cover off to adjust the bias. This means I will have to make a new PCB to drive the 28V relay. So back to the drawing board, but will make it modular so I can change the 28V, 12V and bias driver circuits, if I want to change the designs. I have done a few miles looking for a location for our July DF hunt. On the radio operating, I did the RSGB 2m & 70cms contests, 21 contacts in 9 squares on 2 m & 15 contacts on 70cm. I had to stop and take the 70cm LFA antenna down during the contest, to find the "N" Type inner on the expensive ferrite balun had moved away from the pin (rubbish design). I removed the balun for the rest of the contest. It won't pull apart again. I have now replaced the fitting to a chassis connector and fixed it to the boom.

Angus, G0UGO - I've had a busy couple of months redoing the paving behind my shed. This turned out to be a radio project in disguise. When I originally laid the paving I put down some chicken wire to act as a bit of a ground plane and thought this could do with beefing up a bit. Turns out there was nothing left of it so it was a trip to Screwfix to get some mesh panels. I also wanted to take the opportunity to do some antenna maintenance. I was aware that something wasn't right although the it was still functioning and



SWRs were good but as I unslashed the guys I found that the base section had separated from the rest of the antenna (see photo). This meant hacking out what was left of the base

post and concreting in a new one (fortunately I had a spare). The antenna was only out of action for two days and once the paving was finished performance was back to normal.

Operating has been mainly in FT8 and now worked 71 countries in 1600 QSOs. I obtained a NoV to use a GR call over the weekend of The Wedding and made 310 QSOs with 8 new band countries confirmed for DXCC. Best DX was Rodriguez Island on 17m. For most of the weekend 10 & 12m had good levels of activity. FT8 seems to be where the activity is at the moment and is a good bet for the next couple of years but once sun spot activity starts to pick up it will be sad for the hobby if we don't move back to some of the more traditional modes.

Dave, G8DVK - Having not made an entry for several editions I thought it was time to admit to the activities at 'DVK towers.

I have purchased from eBay an Icom IC735. This is an old-style transceiver covering the HF bands with up to 100W. It is a particularly good radio for a new comer as it will easily operate



from around 5W up to full power, there is an internal power selector switch. I have repaired and fully re aligned the set and is now available for loan or purchase.



I acquired a very poor condition Bird 43 power meter off eBay. This has been completely stripped, resprayed and re built including a PEP and range extender.

I recently acquired a redundant Dolphin Tetra transmitter unit. The Dolphin's Tetra transmission system failed to take off and thus there became many redundant units. The unit is not much use in itself, however there is onboard a very nice



UHF power amp. With some careful modifications this could be capable of providing 150W+ on 70cm. I have cut the PA section from the main

board and mounted this in a separate containment attached to the original heat sink. The project is part complete as the attached picture shows. Further report on this project next time.

The spare Yaesu G650 rotator has been stripped and fully serviced and tested ready for VHF NFD.

I've not been very active on the air other than to have worked one or two of the RAF100 stations but no new

countries on 80m. I take part in the UKAC VHF/UHF contests on most Tuesday evenings apart from the challenge of improving my personal score the points are also credited to HARS entry and as a club we are well placed thanks to the total number of members entering. More members entering would be welcome.

Malcolm, G8NRP - Only managed six contacts for the May 2m UKAC but at least I tried! It seems impossible that it was forty years ago this month that I went up to London to take the Amateur Radio examination. I don't remember much about it but I do remember that it was held in a huge hall and I did not know anyone there. I had to wait nearly three months before the results were announced and then apply for a licence using a pen to fill in an application form and sent it off with a cheque. (There were virtually no credit cards and the Internet and Email did not exist!) *(Interesting as my parents, G8NRK/G8NRL and Ann, G8NVI got their licenses in 1977! - Ed)*

The sporadic E season has started and I use an app called EsSense (free Android download) which monitors 6m, 4m and 2m for Sporadic E/TEP (Trans Equatorial Propagation) and Aurora. It also lists recent activity on any of the bands or modes. There has not been too much activity but what there has been has been fascinating with stations from Finland popping up and disappearing just as quickly as well as Spain and Portugal. There has been a lot of activity on 50.313MHz FT8 but I fear that dx stations are not interested in anyone from IO91 square! However, I have been heard by: **Monitor:** YT2AAA, (Serbia) **Mode:** FT8 **Band:** 6m **SNR:** -21db, **Date:** 28/05/2018 **Time:** 16:35:44, **Frequency:** 50.3145 MHz, **Locator:** JN94WG, **Distance:** 1771 km / 1100 miles according to PSK Reporter.

Tim, MOKEP - This month I managed to get on top band! I have previously loaded up an antenna on 160m but it did not work very well. This previous attempt involved using two ATUs in series and loading up the shield + inner conductors of the coax feed to a vertical HF antenna, using a long wire as a counterpoise. While I could get some FT8 contacts within a 400 mile radius, attempts at joining a net and speaking with people in the UK failed with them barely able to hear me. The new antenna is a full wave loop made using a 4:1 balun and wire strung around my property. I kept the wire as high as possible but most it is laying in the plastic guttering or tacked to wooden fascia boards and fence panels at 6ft and 10ft high.

I first measured up the intended wire route and thought it should be about 86m. I then bought the balun and 2 x 100m rolls of cable as I thought I would have to add extra somewhere! I then made the wire loop, tacking it around as I went, and cutting myself on all of the rose bushes that my wife must have planted to keep me out. After forming a complete loop that was cut to whatever length I ended up with, I measured the antenna response with an antenna analyser. I discovered the lowest resonant frequency was 2.3MHz and that I had 8m of cable left over from the 100m reel, giving me a 92m loop length. Using the equation of $Velocity(V) = Frequency(F) \times Wavelength(L)$, $F \times L = 2.3MHz \times 92m = 211.6E6m/s$. The speed of light is about 300E6 so the velocity factor of my antenna is $211.6/300 = 0.705$. I then worked out how big the loop would have to be to resonate at 1.9MHz, the centre of top band. I know my velocity is $211.6E6m/s$, so $L = V/F = 211.6E6/1.9E6 = 111.37m$. This meant I needed another $(111.37 - 92 = 19.4m)$ of cable so I cut the wire where it ran behind my garage, spliced in the 19.4m

of cable, and draped the wire on the ground where nobody can get to it. The antenna resonates perfectly!

I tried joining a net that night and was amazed by the performance. I was given a 59 report from stations from Devon up to Scotland running 100W SSB. I also ran a test with Roger, G0AOZ, with a 59+ signal report showing the antenna also works very well locally. On higher frequency bands my long wire still seems to perform a little better so I will be sticking with it for DX, but I look forward to seeing if the loop will work better for local contacts on the other bands which seem to have alluded me so far using the long wire or HF vertical. I hope to speak with more club members on top band!

Jonathan, M0ZGB - Much of early May was spent designing and building a portable Moxon antenna for 6m, ideally one that was easy enough to break down and take away on our family holiday to Cornwall. The ideal lightweight material I thought, would be my old favourite of plastic electrical/plumbing pipe. In the shed, I found a 4 way conduit centre box, which would make the ideal centre for the Moxon. The main problem was that the 4 outlets on the box were at 90 degrees to each other and the normal angles for a Moxon are around 60 degrees to the sides and 120 degrees front and back or something like that. However, by using plastic pipe, it would bend easily and could form the correct angles whilst providing tension for the wire elements.

With this in mind, I managed to construct a reasonable lightweight antenna which breaks down into 5 parts, which are 4 spreader beams and a centre support which has the wire elements attached.

I used 2mm electrical wire for the elements and some acrylic strips for the end spacers on the driven/reflector elements and a piece of fibreglass tube to support the centres of the elements front and back.

On testing and despite using an online Moxon calculator, I got 1:1 SWR at around 48.700 MHz. Some way off my desired centre of 50.100 MHz. I tried it with and without a choke coil, but it made little difference. However, the curve up to my desired frequency was quite gradual and 50.100 had an SWR of 1.5:1, with it flattening out after that. Not perfect, but usable on the lowish power I would be using when portable.

The test area of my back garden is also not ideal, with several large (neighbours') trees invading our space. It will be interesting to measure it again in free air and see if that makes a difference. In the end, the antenna never got its trip to Cornwall, so is still untested on air.

Talking of Cornwall, we holidayed in Mullion on the Lizard Peninsula for a week at the end of May. Just by pure chance (insert evil laugh here) we were only a mile from the Marconi Centre at Poldhu, where Marconi sent his first Transatlantic radio message (the letter S in Morse). I walked down there on the Sunday afternoon and spent an hour or so looking around the centre and chatting with the Hams there. There is also a granite pinnacle on the cliff top nearby to commemorate the event.

I also took a marine VHF radio down there and spent many an hour in the evenings listening to the marine traffic and Coastguard comms.

Hopefully, I will be out portable during June and will be taking a trip to the Newbury Rally.

(Dave, M6NDU has sent me a lot of interesting news on what he has been doing, together with a large number of photos! I don't really have space to put it all in this month, so here is the first item and more will follow in succeeding months! Thanks Dave! - Ed)

Dave, M6NDU - I thought it was about time that I shared some of my projects with the club. I discovered crystal radios by accident while surfing the net and became interested in making radios and other electrical circuits. I progressed through battery powered valve receivers on to the new-fangled transistor and solid state circuits. I never have touched mains powered circuits as I do not trust my knowledge or experience of radio construction to touch lethal voltages yet. Although some of my valve radio HT voltages can wake one up!

From 2009 – 2016 I was working week on week off at Brussels Airport and I often found I had time on my hands when the aircraft I was responsible for were away. As my new interest in radio construction progressed I put up a 100ft + antenna strung up from our hangar workshop to the roof of the adjacent hangar to test the receivers that I had built. Interestingly this antenna was never discovered by the airport authorities and I thought it best to take it down when I retired in July 2016.

I have built many receivers and a couple of QRP transmitters and must say it has been a great learning experience. Most of them worked to some degree and some even well. I found that I had touched a subject that proved addictive, challenged my few brain cells and added yet one more interesting hobby to my already busy life. As anyone who has retired they will

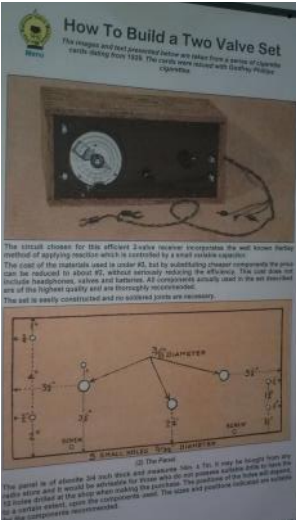
know that life just gets busier when they step off the treadmill.

my head away from my ears until I had the reaction control set correctly. Getting it wrong can result in a VERY

Anyway, here are a few of my projects. You have already seen the single valve honeycomb coil and Denco coil valve radios that I showed at the club beginner's construction competition. I feel guilty winning this as I was the only entrant!

1929 2 valve replica receiver

I saw the instructions to build this set on the national valve website, a good site to search, and being a sucker for anything old I decided to try and make it. The set instructions were originally issued as a set of cigarette cards in 1929 and show the complete build from start to finish.



loud squeal and hurts. I think anyone who has played with valve reaction will know what I mean. My only variation from the design was to fit a volt meter so I would not burn out the valve filaments. The components are mounted on a wood base or the paxolin front panel and connected using 16 SWG tinned copper wire. I was surprised that this old design worked and it worked quite well. Different plug in coils bring in all sorts of stuff.



I suppose the set was typical for its day in that it used 2 Volt battery valves, plug in coil, LF transformer, HF choke , reaction and tuning controls, 120 Volt HT and a 9 Volt grid bias battery.

All this was quite a challenge for a beginner. Good old eBay furnished most of the components.

I made the grid bias battery using 6 AA dry cells and can find the most efficient bias by connecting to the various voltages along the battery. Trial and error but it works quite well. The radio needs a 2000 Ohm headset and I found it better to rest these on top of

An interesting paper article found by Richard, G0REL -

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17 MAY 2018

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Cure for loneliness

After my wife died, some four years ago, I took up amateur radio as a hobby. I joined a local Amateur Radio Society, where I was made to feel most welcome.

I was encouraged to study for the foundation licence, and so I took the exam and passed.

Advice was offered concerning the options open to me as someone living in a flat: that advice resulted in the world coming into my flat.

From Curacao to South Korea, from Denmark to New Zealand, pleasant and friendly voices joined me in my armchair.

I still live alone but I am never lonely! In my first year as a "ham", I have heard over 600 stations and talked with over 200 of them, spread over 20 countries!

JOHN KELLY
HARBORNE,
WEST MIDLANDS

A DXpedition with a difference! - I received this from Liz, G0RJX about their friends in Iceland.

In August 2018 Vala and Anna go to France and participate in their first expedition as YL operators! TM64YL will be run from some island which name I can never remember! We decided to try this to find out if this is something we would like to do again. Here you can see the YLs that will also be there:

<https://www.qrz.com/db/TM64YL> - and the name of the island!

(A salutary tale from Ron, G0BNC for those, like me, who buy a lot of bits from China! -Ed)

Customs duty/VAT on purchases from China

A lot of us purchase products from China-USA - Outside Europe, and most times get away with not paying VAT or duty. When you do get over the shock if you receive a demand as I did, in April for an item ordered in October, you may try to find the duty payable on the HMRC site or others you may find, a Minefield. You need to find a code for the product, not easy unless you are lucky. I tried to find a CCTV camera, things like professional recording cameras are there, and bits like washers but was not able to find CCTV. So I settled for £12 to £19 dependent on the % rate for the £60.74 camera. (I have since found a 10 figure number, but not checked if correct yet). This number does not apply on this purchase, as you will see later.

There is a lot of conflicting info on the net, on the fees and the companies collecting the fees. A lot of the info is old so fees have changed, but the crunchers are the fees charged by the collection companies, like Royal Mail, TNT, UPS, Fedex etc. These fees are almost impossible to find out. Royal Mail USED TO CHARGE £8 +VAT, but I think it is now about £12 + VAT IE £14.40, TNT charges £20 + VAT = £24 for items less than

35kg or £82.50 over 35kg. UPS & Fedex do not have a fixed charge, but it is variable from £12 to £45 + VAT. So that bracelet you may be thinking of buying for your XYL for £20 could cost you, £20 + VAT + TNT charges of £24 inc VAT = £48, an expensive bracelet. This is a 600% mark up on the VAT duty payable.

If your out of Europe purchase gets picked up, you will be liable to pay VAT on the item, and on postage, and insurance, and duty on it if over a certain item cost. Some of the info I have picked up, some good and true, others false or inaccurate. You do not have a contract with the company collecting the fee, only the seller, this may be true, but the company has a contract with HMRC so can collect the fee. A couple of people said they had the handling fee dropped by TNT, but this has not worked for me, and even if it did, the VAT would need to be paid. A few others said just send them the VAT, not the fee. The companies have more money to pay solicitors' fees than I have, and I certainly would not want to go on any black list from HMRC or the collectors. Some sites have calculators, but several are wrong, when you input items under £15 it gives duty, not VAT, which is not applicable under £15. Another blog the figures did not add up. Item cost £84.54 plus £1.50 credit card conversion, £17.31 – 20%, giving £113.35 to pay. (Is it, but I can't see how they worked that out).

NOW THE TRUE BITS, You pay VAT on postage if charged and insurance. Your bank may charge you a currency conversion fee, Paypal converts currency at purchase only, Farnell, Mouser, charge duty /VAT at purchase time, so Ebay, Aliexpress, RF Parts Co etc watch for the duty and VAT fees.

HMRC fees. Gifts up to £39	= No VAT or duty
Gifts £39 to £135	= VAT payable but no customs duty
Gifts over £135	= Import duty and VAT to pay
Other Items up to £15	= No duty or VAT to pay
Other Items £15 to £135	= VAT to pay
Other Items over £135	= Duty and VAT to pay

This is a condensed version of info I have collected in nearly a week, for contacting TNT for my £60.74 CCTV camera purchase, £12.14 is VAT which is fair at 20% as we would pay for items purchased in UK, and TNT £24 inc VAT fee, which I do not think fair or reasonable. So watch your purchases carefully. REMEMBER the things that could take you over the £15.01 limit.

Postage and insurance, Fees charged by your bank to convert pounds sterling, the Country Currency Conversion Rate, that is Set Monthly by the powers that be, Any of these could tip you over VAT/DUTY purchase base figure after the purchase price.

That bank currency conversion fee of say £1.50 on that item that you purchased for say £14. Oh dear , now costs £15.50, but that's not all is it. It becomes £18.50 plus say TNT fee of £24 = £42.50 gulp gulp,

So the best solution I can see if over £15, spend high up-to below £135. Say £100, so VAT would be £20 plus say TNT fee of £24 inc VAT with a total of

£144. So the mark up on TNT fees would be £24 divide by £100 times 100 = 1% for TNT fees. You would have had to pay 20% VAT anyway. **DO NOT ASK FOR THE ITEM AS A GIFT OR FALSE PRICE.** You could get the goods confiscated. I have had items in the past like this, But I did not request them and sometimes they have put a small trinket or key ring in the package.

Ron G0BNC

G3LLZ - Silent Key

Some of you may have known Dennis, G3LLZ, who sadly became SK last year. On behalf of his estate members of Swindon & District Amateur Radio Club have been sorting and evaluating Dennis's kit. We believe that Dennis would have wished his kit to go "local" where possible and hence we are circulating the initial list to "local" clubs.

The instructions how to access the list are given below and we would be pleased if you would circulate it, at this stage, to your club members only. Please stress that contact should only be made as shown otherwise the task become very onerous for us.

You may be interested in seeing the list of for sale items of G3LLZ SK. This equipment is being disposed of on behalf of his estate. The list of items for sale can be viewed on the following link

<https://www.dropbox.com/s/keur4vgzknwnkp1/G3LLZ%20SK%20Sale%20public.xlsx?dl=0>

This list will be updated as matters progress and may include new items as they are identified.

Items for sale may have an asking price shown. Offers may be accepted but the estate reserves the right to accept any offer for the benefit of the estate and not necessarily the first or highest.

Please quote the ITEM number with any enquiry or offer.

Items already under offer are highlighted **YELLOW** and those sold will be crossed out (strikethrough).

Where possible equipment has been checked and the results are stated but working does not imply fully tested.

Any postage costs must be paid by the purchaser.

All replies should be sent to tony.lidl@ntlworld.com please with G3LLZ SK Sale as the subject.

A brief history of the R1155 WWII military communication receiver.

In 1939 the Air Ministry (AM), presented a requirement to produce a communications system for WW2 military aircraft to the Marconi Wireless Telegraph Company. This evolved into the development of a transmitter/receiver system, the T1154/R1155. The system was used in light bombers such as the Blenheim and Mosquito, and in heavy bombers like the Stirling, Halifax, Manchester and the famous Lancaster. The first production set was installed and tested in June 1940. Marconi had the overall technical responsibility and EK Cole (Ekco), Plessey, EMI and others also produced receivers in addition to Marconi and Ekco. In mid-1941 Coastal Command reported a serious interference problem from Radio Athlone in Ireland on the frequency 565 kHz (100kW commercial station), which is close to the R1155 IF (560kHz). Three IF traps added to the receiver to reduce the problem proved very satisfactory.

In 1941 problems with the tuning knob on the 1155A were reported to Marconi. The coarse tuning control moved with the fine tuning knob because of unsuitable friction and because the operators are wearing thick gloves against the cold. An alternative version was produced to alleviate the problem and was incorporated in all future builds. Many, but not all, earlier sets were modified to this later tuning control. The coloured pictures shows the modified tuning control.

The receiver covered the frequency bands 75kHz to 18.5MHz in five ranges. Both AM and CW signals could be received on all ranges and provision was made to operate with a D/F loop aerial on certain ranges. The Wireless/Navigator Operator could take direction-finding bearings by either visual or aural means.

In airborne use the receiver could be operated with either fixed or trailing aerials. HF ranges used the fixed aerial, and trailing aerials for MF ranges. The D/F loop aerial, was the standard fit for the direction finding facility.

In airborne installations, a rotary transformer power unit driven from the aircraft electrical system provided the power supply for the receiver and associated transmitter T1154. For ground installations, a mains powered supply was available. This also included an audio stage to drive a loudspeaker.

There were 10 different versions of the radio produced, some with aluminium cases which were intended for airborne use, non-airborne sets used steel cases reducing the aluminium demand. These steel cased sets would find use in Marine vessels as part of the Coastal Command service, ground stations, and even some mobile installation in vehicles.

By the end of the war around 80,000 sets had been produced and as the demand reduced many were made available through military surplus stores,

these being purchase by radio amateurs and shortwave enthusiasts. The sets needed mains operated power supplies to operate and would only drive headphones.



Receiver Data

The R1155 is a single superhet with one RF stage, mixer/oscillator, two IF amplifiers, detector/AF amplifier, BFO and magic eye tuning indicator. A total of 6 valves + the tuning indicator. Three other valves were used in the DF section of the receiver. The -6dB bandwidth is 5kHz and sensitivity better than 10 μ V on all bands. Although rather simple the receiver performed the immediate military requirements.

The two pictures show the R1155B receiver with matching T1154 transmitter and a typical aircraft installation.

An article in the July 1946 Wireless World described the basic circuit diagram, Jones plug connection details and a suggested power supply

and audio amplifier circuit. This information must have been used by many operators including myself and I still have the original article.

A fully operational TX/RX system recently fetched over £1500 on Ebay. Receivers can be obtained in various states from £150 - £500 depending upon model and condition Transmitters not working but complete can reach around £750.

Dave G8DVK



Contest News

Forthcoming VHF/UHF/SHF Contests

14th June 50MHz UKAC

16th-17th June 50MHz Trophy Contest (VHF Championship)

19th June 1.3GHz UKAC

21st June 70MHz UKAC

24th June 70MHz Cumulative

24th June 50MHz Contest CW

26th June SHF UKAC

3rd July 144MHz UKAC

7th-8th July VHF NFD (see below)

Forthcoming HF Contests

28th June 80m CC SSB

2nd July 80m CC CW

11th July 80m CC SSB

Full details of all forthcoming contests can be found on <http://www.rsgbcc.org/>

Contest Results

May UHF Contest

Congratulations to Roger (G3MEH) who came 2nd in the Single Operator Fixed section of the 432MHz section and 4th overall. Well done Roger!

WELCOME BACK GÉRARD!

Bienvenue Gérard! It is good to see F8BRK QRV from JN05! We are looking forward to working you soon!

VHF NFD—7th-8th July—Hagbourne Hill Farm

This will be the first time HARS has entered VHF NFD portable on all bands for nearly 30 years.

I have the following registered to help over this weekend: G8DVK, G6SRX, G0UGO, G8NRP, G0BNC, G6LNU, G0MJW, G8CUL, G8NVI, G4BRK, G3MEH, G00DQ and G7TRV. Details about the weekend—who is bringing what, setting up times, operating rotas where appropriate, details about the barbecue in the evening (for helpers only) and everything else will follow in an email to those concerned.

If I have left you off the above list or you would like to come along and help out over the weekend, or just want to come and see what we are up to —please register with Ann at annstevens1256@gmail.com **PLEASE NOTE MY NEW EMAIL ADDRESS**

UKACs April-May 2018 (overall position 3rd)

	Callsign	Section	Position
2.3GHz (Apr)	G4BRK	SAO	5 th
	G8CUL	SAR	1 st
3.4GHz (Apr)	G4BRK	SAO	3 rd
	G8CUL	SAR	4 th
70MHz (Apr)	G3MEH	AO	9 th
	G4BRK	AO	12 th
	G8CUL	AR	14 th
	G0ODQ	AR	20 th
144MHz (May)	G3MEH	AO	13 th
	F8BRK	AO	32 nd
	F1BHL/P	AR	2 nd
	G8CUL	AR	9 th
	G0ODQ	AR	16 th
	G4BRK	AR	25 th
	G8DVK	AR	31 st
	G0BNC	AR	98 th
	G6NRP	AR	166 th
	M0PXM	AL	38 th
	G6LNU	AL	55 th
432MHz (May)	G3MEH	AO	9 th
	F1BHL/P	AR	1 st
	G8CUL	AR	7 th
	G0ODQ	AR	10 th
	M0KEP	AR	55 th
	G8DVK	AR	57 th
	G4BRK	AL	11 th
	G0BNC	AL	46 th
50MHz (May)	G3MEH	AO	5 th
	G0ODQ	AR	49 th
	F1BHL/P	AR	50 th
1.3GHz (May)	G4BRK	AO	6 th
	G3MEH	AO	15 th
	G8CUL	AR	3 rd
	G0ODQ	AR	16 th
	G8DVK	AR	17 th
	M0KEP	AL	46 th
2.3GHz (May)	G8CUL	SAR	1 st
3.4GHz (May)	G8CUL	SAR	4 th

CLASSIFIED ADS

No adverts have been received this month. Remember that you can advertise suitable radio equipment here for **free!**

DIARY

Thursday 14th June
Fuelling Systems in the 747

Sunday 17th June
RAL microwave Roundtable
Please visit <http://www.microwavers.org/>

Sunday 24th June
Newbury Radio Rally
Please note change of date

Saturday/Sunday 7th/8th July
VHF NFD

Thursday 12th July
Summer DF hunt

August
No meeting this month

OFFICERS

Chairman: Dave Aram, G8DVK
Vice-Chairman: Ann Stevens, G8NVI
Secretary: Elle Frost, M0NRK
Treasurer: Angus Wilson, G0UGO

ORDINARY MEMBERS

Alex Comerford, 2E0OXF
Roger Powell, G0AOZ
John Durban, G6LNU
John Morris, G6PEP
John Booth, G6ZHB
Tim Keep, M0KEP

CONTACT DETAILS

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Opinions expressed in QAV are the personal views of the contributor and cannot be taken as reflecting the views of the society, committee or editor.

The deadline for the June QAV is 4th July 2018. Articles submitted after this date cannot be guaranteed to be included.

Contributions from all members are greatly welcomed. They may be submitted to qav@g3pia.net Please note the new email address!