



## Ridgeway Repeater Group. Newsletter First Quarter 2020

### Messages/Notices

I hope you have all had a Merry Christmas and father Christmas was good to you, and wish you a very happy and prosperous new year from the RRG committee.

News from NADARS (Newbury's Radio Club) They now have a permanent special event callsign of GB4GCT based at Greenham Control Tower which is fully operational, so please keep listening and let your scribe know if you hear it all. NADARS also have a new fusion (Yaesu digital voice repeater) currently licensed and sited at Greenham Tower aswell. It's a UHF frequency (RU74) Tx: 430.9250 Mhz Rx: 438.5250 Mhz, the info from the RSGB's repeater page doesn't say if it's operational yet.

If you need any more info please visit NADARs website link below.

<http://nadars.org.uk/GB4GCT.asp>

GB3WH Working okay nothing to report

### GB3TD Update November 2019

The Swindon UHF repeater GB3TD had been operational on the same frequency 433.075 MHz (RB3) and from the same site since 1994 and is managed by the Ridgeway Repeater Group.

In recent years the repeater had been suffering from interference in the form of clicking and pulsing noises and also from wideband transmissions which can severely desence incoming signals.

The group had spent many hours trying to determine the source of some of these without success.

OFCOM were consulted and tried their best to identify the problem without actually finding it due to restrictions gaining access to certain areas of private property.

The main interference to our secondary use of the band is from 433 MHz to 435 MHz which emanates from low power devices.

When GB7TC our DMR repeater was commissioned and co sited

with GB3TD and using the same antenna, the filtering system was complicated and caused extra losses in the system. Never the less has worked well.

A question was asked to the ETCC repeater committee asking if a 7.6 MHz wide band split would be possible for GB3TD.

The RRG were asked if the group would like to try a reverse shift to the normal Tx low & Rx high configuration.

The GB3TD output frequency offered was 438.4375 MHz and the receive being 430.8375 MHz

This was agreed and an NOV issued to Rob, G4XUT.

The benefit is that the filtering for GB3TD and GB7TC will be easier with less through losses with both Tx and Rx being at the same ends of the band.

The disadvantage to you the users was that you and the rest of us needed to reprogram our numerous radios.

The frequency change occurred on the 18<sup>th</sup> October without too many problems apart from we had to temporarily use the transmitter CTCSS tone instead of the logic CTCSS tone.

Within a short length of time reports were being received that GB3TD output was severely affecting the input to GB3BS 12.5Khz away on 438.450 MHz this was despite our deviation being no more than +/-2.3Khz.

It was quite apparent that the GB3BS receiver was not designed for 12.5 KHz channel spacing which was causing the problem.

We offered to return to RB3 to overcome the issue and this was approved by the ETCC.

GB3TD changed back to RB3 on 30<sup>th</sup> October.

Fortunately, the original filtering system was not realigned therefore making the change back to RB3 much easier.

The RRG is now evaluating the situation for future developments and we will keep you informed of any changes. 73 Rob G4XUT

Article from Rob G4XUT      **A Trip To Rhodes.**

Rob met Christos, SV5DDT on a recent holiday to Rhodes, Greece and went to the Rhodes Club for a second time that he had visited, at its present site just outside of Rhodes Town.

They have a permanent site with a well stocked shack and meeting room and a tower with HF and VHF antennas. The local repeaters come from there apart from the 145.650Mhz (77hz CTCSS tone) and other repeaters which are sited some distance away on a very high spot.

Rob was allowed to operate the club station SV5RDS for a short time and worked one station whilst he was there.



The photo is of the SV5RDS illuminated sign at the clubs' entrance which needs some local gardening engineering and was mentioned to Christos!

Rob has known Christos for 25 years after an initial call on the R2 repeater in 1994. Christos activates SOTA so maybe we will work him operating from one of the other Dodecanese islands and although there are 12 main ones, the actual number is more than 70 to choose from



This is a picture of Rob and Christos.



This photo was taken by Rob at sunset with an aircraft on finals coming into land.

Looks very dramatic doesn't it.

## **A Very Home built Loop Antenna.**

First of all let me say this antenna has been years in the making, well not years in that sense of the word but it has taken me a long time to attempt to build this antenna. I first did the calculations some years ago and put various sizes into a loop calculation program (which has long been lost, I haven't been able to find this program either.) and stored the data for future reference.

Then I decided to look for components to make the Loop, a large variable air spaced capacitor, some material to make the loop from and a friend suggested that he had some 8mm solid aluminium cable with an outer sheath of plastic which was perfect for the loop. Recently I decided that I had stored these components long enough and I should really get off my backside and make the antenna. I started by finding something non-conducting to mount the variable capacitor on and that I could use to connect the ends of aluminium cable to. A friend suggested that I could use an old number plate with the backing peeled off, which I thought was a very upcycling idea to use for the mounting plate, which would also suffice for a mounting point. This has all gone very well as I found some plastic brackets to use for mounting the variable capacitor to this base plate so far so good. My next obstacle was how could I wire the end of the cable loop to the capacitor terminals. Then I had a thought I could strip out the copper earth cable from an old left over piece of mains electrical wire that I had kept from a previous project I had completed. Next job was to put something on the end of the loop cable to be able to put a nut and bolt through or onto the said cable. Had a look around one of my junk boxes and found the solution an old earthing lug that I kept from other jobs that I have been involved with, the lugs were a bit tight at first so eased/teased the holes in them with a drill and made them fit nearly perfectly over the end of the wire. Next I thought how do I stop them from coming adrift while in use, so after checking my tool box I found a crimping tool good enough to crimp the lugs onto the cable, job done, great, things now seemed to be coming together very well. All I need next was something to use as a feed point and I remembered I had bought one a couple of years ago as a spare feed point for my commercially bought loop which I hadn't used, this was put into place over the loop cable and completed my very home built loop antenna. I'm not going to say it was cheap as the variable capacitor was the most expensive part of the whole project and the rest was just using what I had to hand to complete this antenna. I'm thinking that I might look into making a copper loop instead of the aluminium one but that is just thought at the moment. Anyone could build one like this if they can source the components.

I haven't mentioned any dimensions as they can vary with what materials you use but if you need any dimensions I'm willing to share them with anybody that is interested.

This is the overall picture of the loop antenna.



Below is a close up of the variable capacitor and fixings.



As I use this antenna I will make notes and pass on the info in the up and coming newsletters.

I don't have any pictures of the swan family this year as they seem to be wandering round the housing estate and not staying on the lake so I only see them very occasionally.

Late Input have two pictures of the Swans as they now appear to be urbanised. They have been driven out a very aggressive older Swan Cobb.



If any of our members gets an idea for an article then please send me an