

**Wythall Radio Club** meets from 8pm every Tuesday evening at Wythall House, Wythall Park, Silver Street, Wythall, B47 6LZ, near Birmingham. Visitors are very welcome. **Wythall Radio Club** is affiliated to the Radio Society of Great Britain. Contact g0eyo@blueyonder.co.uk

## 28th Annual Wythall Radio Rally—10th March

Well it is that time of the year, March not only heralds the arrival of spring but it's also the Annual Wythall Radio Rally, this time our 28<sup>th</sup> rally and it is on Sunday March 10<sup>th</sup>. The rally is a big event in our calendar and its proceeds pay for much of the club's running costs. It's the one time when we expect members to come and help on the day and also the day before when we set up. There will be a pre-rally briefing on the Tuesday before the rally (5<sup>th</sup> March) in the shack, so come along and hear our plans for the weekend.

The Saturday before the rally is taken up with getting the road signs up, moving the clubs stuff and saleable items up to

Woodrush, taking delivery of the tables and setting them up in the School and Sports Hall at Woodrush. The Bring and Buy is also incorporating the sale of club and members items as well as those the public bring in for sale. Rally Sunday means an early start at 7am to put out the large road signs, help traders find their tables and help them carry their goods inside. We also have to put up no smoking signs, and put out chairs and manage the parking.

The rally usually winds down from 2pm onwards and we are usually cleared away by 3.30pm or 4pm and waiting for Wrights to come and pick up their tables. Once we have taken the club's stuff back down to the shack we are finished for the day. This year we are going to have the talk-in

or information services on S22 (145.550MHz) running from the stage in School Hall.

A lot has been going on since the last newsletter. The CW class has restarted and is attracting a large number of

that Chris G7DDN put together an activity ladder so that we can be encouraged to keep talking to each other on 145.225 or 433.525 each month and this has been well received by the members. An article on the Activity ladder appears on page 8.



One sad event was to hear of the death of Alan Sammons G0HBC who was an early member of the club and became an honorary member when illness stopped him from attending meetings and eventually enjoying amateur radio. Alan played a great part in establishing the club and particularly in the build of the Versa-

members. We have had talks on a dx-expedition to Rockall, the Christmas contest and its results, and we are about to start a construction project of a TRF receiver courtesy of Barry M0DGQ. Details of this project are on page 2 and 3 of this newsletter.

Other talks to come during March and April include Chris G0EYO on "Circuit Wizard, it really is magic" and Lee G0MTN on "Fun with the CQ WW SSB Contest" and Callum's "Knots for Nump-ties". We also have the Easter Contest to look forward to.

The Christmas contest (results further on) was so successful this year with the highest ever entrants, QSOs and fun,

tower at the back of Wythall House. Although many of us knew him well, none of us knew of his experiences as a fighter pilot and POW of the Japanese in Burma towards the end of the war. An obituary of Alan's life is given on page 4.

The club continues to prosper, both financially and socially. The Friday night social sessions are now a regular occurrence and a Sunday night net on 145.225MHz at 8pm still attracts members.

Well done everyone.

Chris G0EYO



# Club Project :Simple 1 transistor TRF receiver

Described here is a simple regenerative receiver. No credit is taken for originality here as there are many similar circuits on the web for this type of RX, this is merely my contribution. Using a good antenna and ground the RX will receive international short-wave broadcast stations, and ham SSB and CW transmissions although practice is required in tuning ham stations. The receiver covers 2.6 MHz to 3.9 MHz approximately, all of the 80m amateur band and some of the S/W Broadcast band.

This set is known as a TRF ( Tuned Radio Frequency ) which means that all



In this TRF set RF Re-generation gives the RX very high gain at RF and also acts as a Q - multiplier for the tuning coil which gives much improved selectivity from a single tuned circuit.

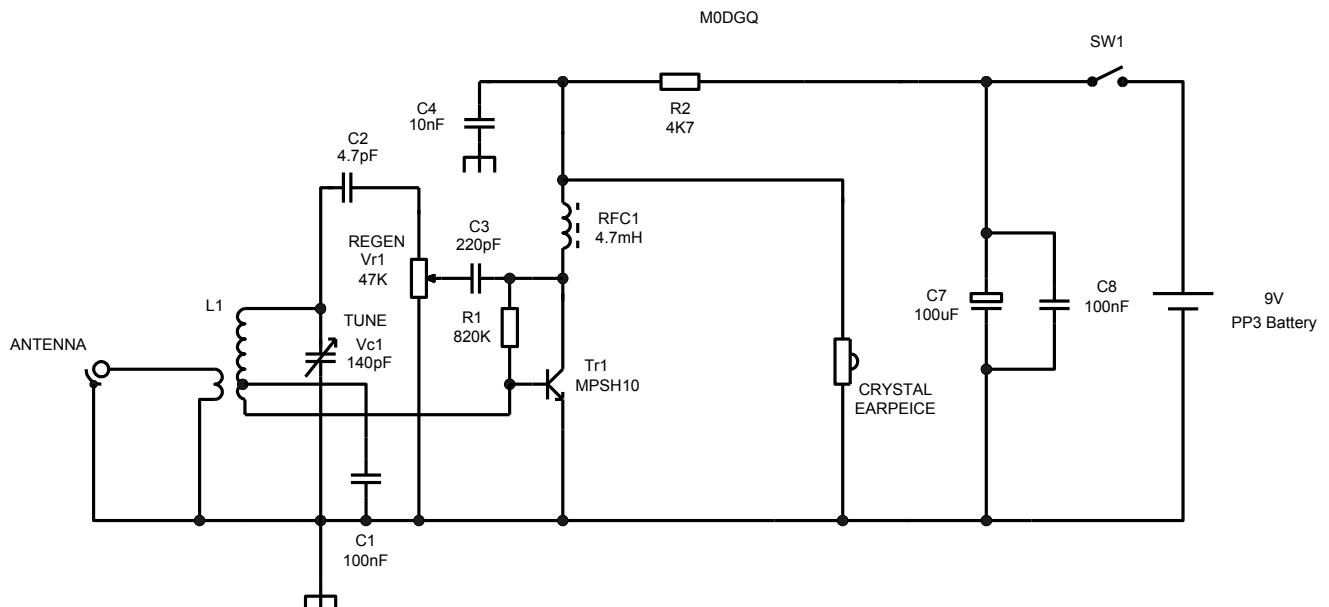
The earpiece used in this set is a crystal earpiece, these are very high impedance and should not be confused with low impedance magnetic types.

When regeneration is applied for CW / SSB reception, Tr1 becomes non linear and acts as a self oscillating mixer thus demodulating the CW / SSB signal. Extremely high gain is achieved with

regeneration making the RX quite sensitive. RF stages are operating at the incoming signal frequency, unlike a superhet which converts the incoming RF signal to a fixed frequency ( Intermediate Frequency ) and it is this IF frequency where the bulk of selectivity and gain is achieved.

regeneration making the RX quite sensitive.

When used for AM reception use the regeneration control to increase the gain / selectivity but do not bring the set into



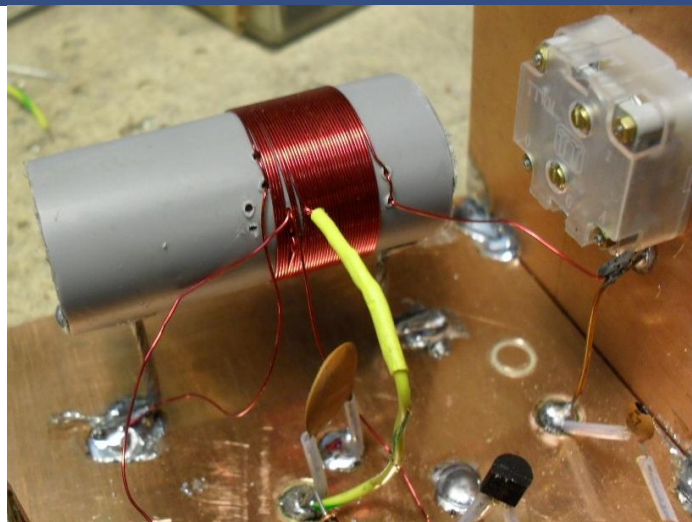
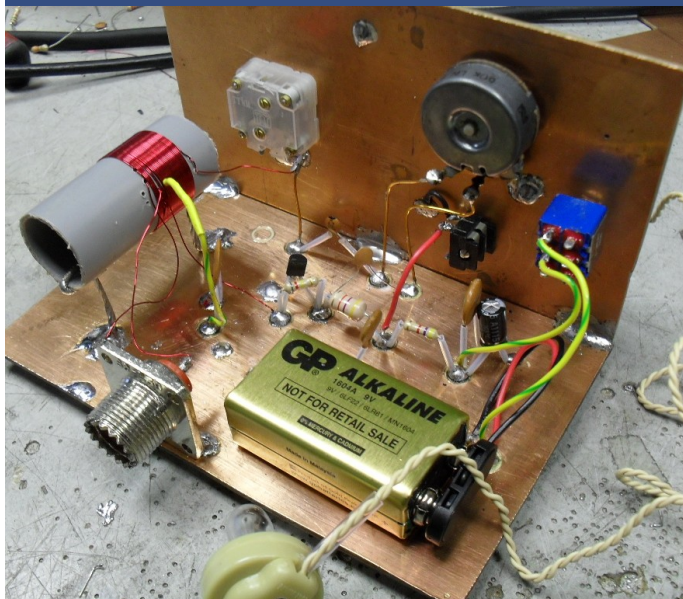
L1 Main winding = 25 turns 30 swg enamelled copper wire, tap at 3 turns from ground end

L1 Link winding = 5 turns 30 swg enamelled copper wire

Former = 50mm Length of 20mm plastic overflow pipe



# Club Project :continued



oscillation ( this will sound like a squeal / hissing sound in the earpiece ). For SSB reception bring the set to "almost" oscillation, CW reception requires slightly more regeneration. The tuning of SSB and CW stations will be very sharp and requires practice, a large control knob on the tuning capacitor is recommended.

The circuit board is made using some single sided copper clad board. Copper islands are cut into the copper clad using a pad cutting tool, these are available from the [G-QRP Club](#) at reasonable cost. A drill stand must be used with the pad cutting tool. Square islands can be cut with a hacksaw and glued to the main board if a pad cutting tool is not available. The given layout is a guide only, my finished board is slightly different due to a smaller piece of board used.

The tuning coil is made from some plastic

overflow pipe and enamelled copper wire - see circuit diagram.

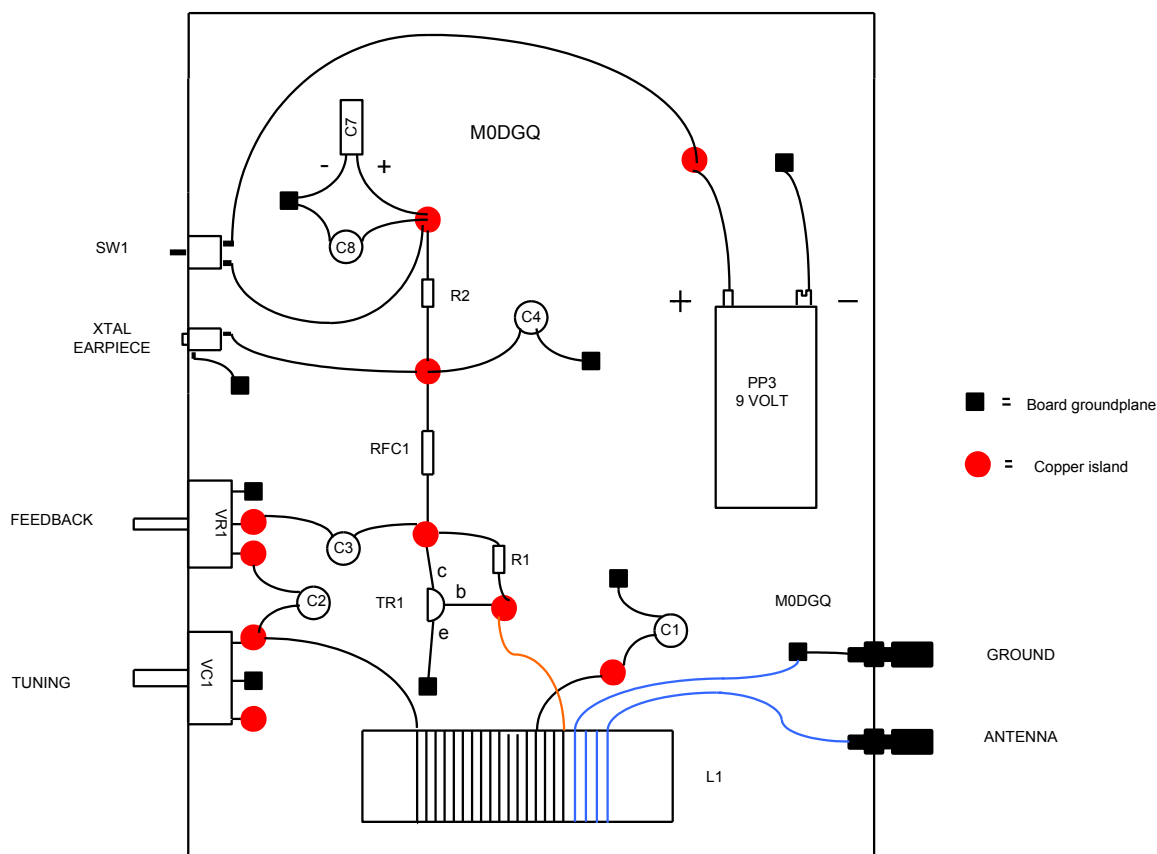
## In use - limitations

This is a fun receiver providing its limitations are realised ; it will not resolve very weak signals and its selectivity on CW / SSB signals is far from ideal but for a single transistor its performance is quite amazing. In use best results have been

had using a antenna consisting of 10 - 15 metres of wire as high as possible. Longer antennas are not of any benefit as broadcast stations tend to swamp the simple receiver. A good earth connection is recommended, I use my shack RF earth ( external ground spike ) however a good mains earth gives good results also.

Practice is required to use this simple receiver but once mastered you will appreciate the performance of this set.

Barry M0DGQ



# Alan Sammons G0HBC SK

It is with regret that we advise members that long time WRC member Alan G0HBC, passed away on Friday 5th of January 2013 at the age of 90 years. He will be greatly missed by his wife Rosemary and his three sons and family and friends. Alan was a very active member of the club from the early eighties until the late nineties when hearing problems forced him to give up amateur radio. Alan generously donated his radio equipment to the club a short while later and this was sold to support club funds.

Alan was born in Plaistow, East London on 2nd November 1922. When he left school he became a tool maker and worked for the famous tool company, Buck and Hickman in London, eventually, as a Sales representative. Alan joined the RAF as soon as he was able and served as a flight sergeant flying Hurricanes with 20 Squadron RAF. War service took him to the Far East in 1943 and it was whilst flying over Burma, on 24<sup>th</sup> February 1944, attacking Japanese forces that he was shot down when machine gun fire damaged his engine. He was forced to land on a swampy island on the Mayu River, North of Akyub in Burma. He was taken into captivity by the Japanese and imprisoned in Rangoon Jail and had a very tough time. Alan spent just over one year as a POW, and with the Allies closing in on Rangoon, the Japanese guards left and they were looked after by local Burmese guards whom the Japanese had seconded for the job. With the allies getting ever closer, conditions and food for the prisoners improved dramatically. Alan was finally liberated on the 3<sup>rd</sup> May 1945 and was shipped back to Calcutta by ship the next day. Eventually he found his way back to the UK.

After the war came demobilisation and Alan met Rosemary and in 1949 they married. Alan went back to his old job at Buck and Hickman in London. Later on B&H asked Alan if he would like to transfer to



their Birmingham branch as a Sales Representative which Alan agreed to and the family moved to Shirley. Alan spent some time in America learning the about new machines that B&H sold in the UK.

In the late seventies Alan became interested in CB and had the handle Goliath.



CB on FM became legal in 1981 and that year he joined the Wythall Radio Club, which was a CB club, which had started that same year. Eventually Alan got his B licence and went on to become an A licence holder around 1987. He was G0HBC. Alan had a great interest in homebrew and when the club started home brew projects in 1988, Alan was keen to have a go. We started off with a simple 40m CW single transistor tx which Alan modified and added to, to eventually end up with a QRP SSB tx. He is pictured with his BRUTON 40m SSB transmitter. Alan was active in many of the clubs projects including the building of the Versatower at the back of Wythall House

Alan and Rosemary moved to a second floor maisonette in the late 80's and Alan was restricted for antenna space but he managed to fit a long wire from his back bed-

room to a pole fitted to the garages at the bottom of the garden and also built a couple of indoor antennas, including a 6m or 10m loop which was in the bedroom with him.

Alan did have a problem with deafness and wore a hearing aid for all the time that he was a club member, eventually this condition worsened and we even looked at providing some kind of loop in the shack so that Alan could pick up what was being said to him. However his hearing got so bad that he decided that he could no longer visit the club. After a couple of years, and in recognition of his service to the club, he was made an honorary member. Eventually Alan's deafness meant that he could not enjoy his hobby any more so he gave it up and donated his equipment to the radio club for club funds. Alan was a kind and gentle man, who served his country, his family and his church, as well as Wythall Radio Club. We are proud to have known you Alan. Thank you and RIP.

Chris G0EYO  
(Thanks to Rosemary, Colin G6ZDQ and Alf G1MJO or information above)



# M0RKX's 4m Transverter Project (part 2)

## Part 2. PCB assembly:

I decided to tackle the linear amp PCB first seeing as it looked easier. Instructions were easy to follow and very detailed. Usual order of passive components first and leaving the easily damaged output transistors until last. There is a lot of ground-plane area on both sides of the PCB, with several joining pins soldered on both sides, so I had to use my larger iron to successfully flow the joints. 80 components and around two hours later it was finished with no problems.

The main transverter PCB looked like it might take a while longer, so I did this in two sessions of around two hours each. Again quite straightforward following the instruction sheet, until I came to the small MOSFETS where there were markings on both sides, so which way was up? Figured it in the end after a closer inspection with a magnifying

glass. After fitting 157 components I realised there were two zener diodes missing from the kit. Luckily they were in stock at Maplin so I didn't bother calling Spectrum about it. The next step was to commission the boards before mounting them in the case.

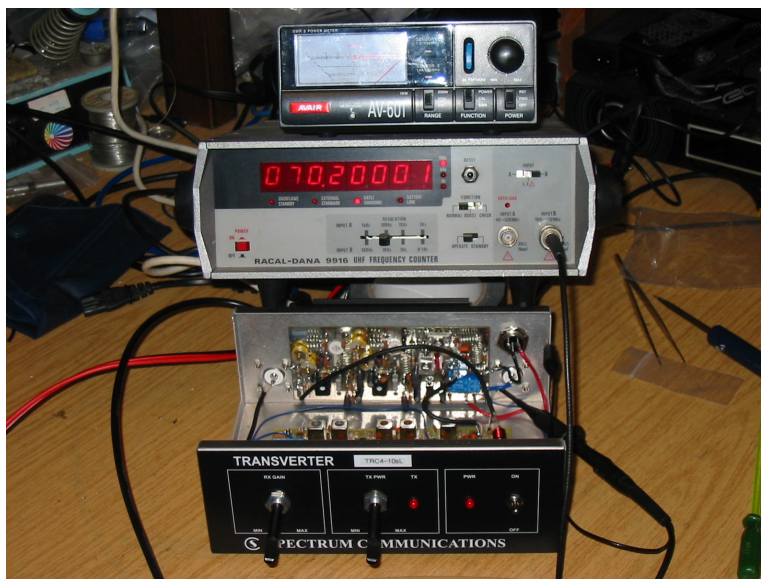
The Linear amp board required a dummy load connecting, and a multimeter on 100mA current range connected between test pins, to set the output transistors bias current. With the power supply connected the correct readings of 35

and 50mA was set using the two preset pots.

The main PCB required the transmit section adjustments to be peaked while monitoring the output on a wattmeter, no problems there it produced the stated 250mW easily. The 42MHz oscillator coil was set using a frequency counter.

The receive section coils are adjusted simply by listening to an on-air signal and "peaking for maximum smoke", no problem there either.

I was pleased that everything seemed to



be working as it should, so I proceeded to assemble the case.

## Part 3. Case assembly:

The case required the SO239 sockets, pots, LED's, switch and heatsink fitting, before mounting both PCB's and interconnecting wires. No problems here, apart from the miniature coax being a little fiddly. The fused power cable was assembled and it was ready for powering up.

## Part 4. Final alignment:

I hooked it up to my IC-706 and switched on, remembering to set the power output of the rig to a low 5W drive. I could see power being produced instantly, and a quick peak of the variable caps on the linear amp soon realised over 30W output into the dummy load. The instructions tell you to back off the drive pot to give a maximum of 25W output for best performance, so this was done. The front panel power control then has a range of 4W to 25W.

The receive section coils were peaked again using a very rough received signal as

no active stations could be heard, but finding the "sweet spot" was easy enough as the filters are very sharp.

Output frequency was checked, and given a final tweak, so that 28.200MHz in gave 70.200MHz out, and that was it, job done. 4M here I come...

73 Mark M0RKX



# Xmas Contest 2012 Results

Participation in this event has gone through the roof again and for the 3rd year running all records have been broken.

In the 2 metre FM section, it was Stu MONYP who came out on top, just pipping the "Voice of the Midlands" Jim 2E0BLP into second place. Third was a very creditable showing from Ian M0IDR, as he lives a long way from the club near Evesham.



The overall winner in the Open Section, and thus the winner of the Reg Brown G7OJO Trophy for 2013 is Chris G0EYO. David G7IBO finished in second place and Chris G7DDN picked up the 3rd place cer-

tificate.

Stan G4GJV got an award for the "Station Improvement" on account of he struggled with a bent coat hanger to make contacts on 2m!

Howard M6AUL got an award for Best placed Foundation licensee in the 2m section and Juliet M6RSC was awarded a certificate for best Foundation licensee in the All Mode section. David and Juliet were on holiday on the evening of the presentations so could not be photographed

Jon M0JMM got the 2m "Out of town" award and was delighted to receive his certificate over the webinar.

Over 50 club members were on air during the contest making this the most inclusive event ever in the Club's History.



Our thanks to Lee G0MTN for sterling work on the organisation, adjudication and software fronts – and for putting adjudicating our contest ahead of some small event he also helps adjudicate called "CQ World-wide"!!!



# Xmas Contest 2012 Results



**Stuart M0NYP has been busy with his pen again, can you spot yourself?**





# The Club's new Activity Ladder

Following the excellent turnout for Wythall Radio Club's Christmas Contest (see below!), Wythall members having trying out a new way of getting members on air all year round. If you have been monitoring 145.225 FM then you will be hearing lots of contacts between members as they participate in our new Activity Ladder scheme which started on the 1st February.

Chris G7DDN has devised some rules and has developed a fantastic spreadsheet that we can all use to log our contacts. The spreadsheet tells us whether we have already worked them that day or if they are not a member of the club

The idea of this is to give points whenever club members work each other. It is not a contest as such; there is no exchange to record, for example. However, whenever members work each other, rag-chew style, they can enter that contact in their new club logging spreadsheet.

This clever piece of coding allocates points depending on who they are working. The Club Station is worth 10 points, the Chairman 9, Secretary and Treasurer

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1019

wythall radio club

having fun with RF

activity ladder logging spreadsheet v1.08

Today: 21 February 2013      Month: FEBRUARY 2013      My Call: G0EYO

BONUSES= 50      TOTAL POINTS= 992

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8 and 7 respectively, and Committee Members 6 points. Ordinary Members are worth 5 points. In addition, members can claim bonus points for working mobile, portable, from each other's stations and for operating our Club Callsign G4WAC.

Each month, our Ladder Co-ordinator Colin M0GJM, will produce a "League Table" of how members are doing and

we hope this will encourage all of us to come on the air more to chat with each other. Regular morning and evening rush hour nets have already got themselves established with the retirees amongst us dipping in and out during the day. Some mobile stations have been worked right across the Midlands.

Chris G0EYO

## Training News

We are currently running our biggest ever Intermediate Class with seven students, Paul M3PMP, Howard M6AUL, Howard M6HWK, Tom M6CTX, Andy M6VGG, Darren M6LPD and Rob M6HCS and we are about half way through it. The examination is set for March 18<sup>th</sup>. We wish them all well.

In April we will be starting a new Foundation course and we already have six people expressing an interest in doing this. We will publish details closer to the event. The RSGB have published a new e mail newsletter for new members. The aim of the newsletter is to help members progress with their hobby by answering all those little questions that you might have, such as what is WSPR, what are QSLs, what is PSK31 and is it worth bothering with Morse? There is also a new "Getting Started" section of the RSGB website which also has a whole host of other ma-

terial for you to read. Unfortunately only RSGB members can log into this service.

The RSGB are proposing to change the marking system to an optical reading system. We still be able to mark papers locally at Foundation and Intermediate level but the RSGB team will use the optical mark sheet to give out the official pass or fail result. Originally it was proposed that students would transfer the answer to the separate optical sheet and this cause some concern amongst tutors that students might make a mistake in transferring the answer across. However after listening to these concerns and following extensive negotiations between the RCF's exam committee and the RSGB's Training and Education Committee it has been

confirmed that local marking and centralised optical marking will be carried out against a single set of answers.

Advanced exams will continue to be marked centrally only against the optical mark sheet. I am not sure when the new system will start but I would expect it to be in place by the summer

Chris G0EYO



**The next issue of the Wythall Radio Club Newsletter will be published at the beginning of May 2013**

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