



Wythall Radio Club

Wythall Contest Group

G1WAC G4WAC G7WAC G0WRC M5W



g1wac@wythallradioclub.co.uk

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

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

Officers

Chairman: Vaughan M0VRR

Secretary: Chris G0EYO

Treasurer: David G0ICJ

Committee -

Martin G8VXX

Chris G6KMQ

Lee G0MTN Contest Liaison

Peter M5DUO Antenna maintenance.

Mike G4VPD

Mel M0MAJ

Martin G7WBX

Colin M0GJM QSL manager

Neil 2E0TUX IT manager

Tom G3PQP Homebrew Leader

Chairman's Message

Phew ! what a busy few weeks. A good night was had by all who came along to the Christmas party, again thanks must go to our quiz master Chris G0EYO. Lots of activity in the Clubs Christmas contest this year and I must say thanks to Chris G0MLY for setting up a cross band repeater to let Colin M0GJM and myself exchange numbers. This has to be the first year we have had so many new call signs issued during the festive season (well done guys). Now is it members or call signs that are the multipliers? Now we are waiting to see who claims the G7OJO Reg Brown Trophy. It was nice to see a good turn out for the fox hunt this year, with the regulars, new members and first timers all off chasing the fox. Going by the post hunt conversation the direction finding skills were still being put to good use after the fox hunt ended ! Looking at the club calendar as we enter a new year we're off to a flying start with the Intermediate course starting 16th January and Clubs 25th Rally not to far off. The 2010 contest season is up and running with 80m CC, VHF and UHF UKAC all starting in January. 2010 should be a good year for amateur radio, as a quote from the film says, "The Year We Make Contact" so with that in mind I extend my very best wishes for 2010 to all members and their families.

Cheers

Vaughan M0VRR

Chairman

Newsletter

January - February 2010

GX4WAC at Vintage Gathering at Stratford Armouries

Special Event Stations, you either hate them or love them. Wythall Radio Club have been running special event stations for many years but for the past couple of years, the organisation of them has been in the hands of Darren GW7HOC (who now lives in Cardiff). Darren has a special interest in Steam and Vintage vehicles and has tied up with Keith Shakespeare who runs and number of such events in the Midlands, to provide Special Event Stations at Keith's shows. This year we have done a couple of Evesham events and the one at Hanbury. Those of us who participated had great fun and found that the club's event rig and a couple of boxes of bits was all that was needed to put on a good show. So, in October, when Darren suggested that we do Keith's new event at the Stratford Armouries in the week before Xmas, a couple of us agreed. Vaughan offered to bring the club's caravan so we knew we would be out of the cold, but a week before the event we found out that we had been allocated space inside on the first floor where we had access to a fire escape to put up our antennas. Well a few days before the event we had a fall of snow and a period of very cold days. So it was with some reluctance that the team dragged itself out of bed on the Saturday morning to help set the station. To be honest I was kind of hoping that Darren would call the day before to say that it had been cancelled, so that we could all stand down. However Wythall



guys are made of hardier stuff, so myself, Tom G3PQP and Martin G7WBX together with Les M0COK made our way to the Stratford Armouries on the A3400 at Pathlow, just north of Stratford upon Avon. We got there about 9am which was bit early as no-one else was about. After a while Keith turned up and showed us where we could set up our station. This turned out to be a large gallery/conference room on the first floor which we would have entirely to ourselves. Tom had brought his 20m C pole vertical dipole which was quickly assembled and erected on the top of the fire escape. Checking the antenna out we found a very high VSWR which turned out to be a duff feeder that Tom had made up earlier that week. Luckily we had a replacement and pretty soon we were registering 1.4:1 VSWR on the 20m band. Various QSO's with European stations were made all with

good signal reports. This is a first class antenna and ideally suited to portable operation. Well done Tom. Eventually, after driving from Cardiff, Darren and Carol arrived and we set up the VHF station using Darren's Ft7800 and co-linear. We didn't get as many visitors as we would normally see at a steam or vintage rally but the experience was great. There is something about playing radio with a group of fellow amateurs which to my mind is the real essence of the hobby. Of course with Darren around there are always lots of laughter and we all had a great time.

The Stratford Armouries are well worth a visit just to look at the weapons. They are open every day from 10am until 5pm and entrance would normally cost £3.50 with kids under 12 free. I am certainly taking my grandson to see it in the spring.
Chris G0EYO



Easy Pal - Digital SSTV using DRM coding

DRM stands for Digital Radio Mondial and was designed in the 90s as a digital standard for HF broadcasting which gave a near FM like quality on the short-wave bands. Like DAB it has been very slow to take off, because of the need for specialist receivers to listen to it. However the concepts and the error correcting algorithms have been adapted by clever hams to produce a new way of sending pictures over the HF bands. The club was introduced to Digital SSTV by Mark M6MSW one Tuesday evening and a few of us have had a chance to play with it with his help and advice.

The problem

Sending analogue data over HF radio has always been a problem because of the vagaries of the signal being received, due mainly to the ionospheric propagation and QRM. Several techniques were developed in the early years including RTTY, Forward Error Correction (FEC) and others like AMTOR and PSK31 specifically developed by Peter Martinez G3PLX and others modes such as MMTTY. Sending pictures over an HF circuit with a 2.7kHz bandwidth was also difficult. With DRM coding, perfect pictures can be received with very low levels of signal strength, because like all things digital, you either get it perfectly or you don't get it at all.

The solution

Digital technology as developed for radio and tv broadcasting uses orthogonal frequency division multiplexing (OFDM) to chop an audio signal up into many carriers using a clever coding system called Reed Solomon Error Correction which will guess what a missing piece of digital signal is by what precedes and follows it. The signal processing necessary to do this is now readily available in home PC systems and software called Dream was developed to enable this to be done. Dream was modified further by HB9TLK into HamDream which used only 2.5kHz bandwidth for transmission and reception of pictures. HamDream is no longer supported but WinDRM is. This uses either 2.3kHz or 2.5kHz bandwidth and has a digital voice mode. HamDRM is a Windows DLL programme developed by HB9TLK. It serves as the engine for various GUI interfaces such as EasyPal which is the software most of us are using to download and upload digital SSTV pictures.

EasyPal

EasyPal was developed by Eric VK4AES and should run on most computers with a 2GHz or faster CPU with Windows Vista or XP. It is designed to be easy to setup and use

and is FREE software. The DRM as used in EasyPal allows very fast data transmissions with error correction enabling very accurate decoding and a means to request missing blocks. Images up to 1280 x 1024 are sent in little over one minute. You can also compress transmissions to shorten transmission times. The programme has the following features:

- Digital SSTV pictures including animations
- FTP uploading of received pictures
- Allows specific recipient e mailing
- QSL template
- Sending of text files
- Waterfall display of received and sent transmissions
- Repeater operation with a host of options
- Can tolerate heavy QRM and QSB

The programme uses real-time decoding so it is possible to monitor the success of the received file as it comes in. The total number of segments, the number of segments received, and the last segment number decoded are displayed as received. The display of the signal to noise ratio (SNR) allows the user to make adjustments to the receiver audio during transmission to see if it improves the SNR and optimise reception. A high speed mode is available for use on VHF/UHF or when conditions are very good on the HF bands. A SNR of better than 18dB is required for this 64 QAM mode.

Installation

To code and decode EasyPal you will need a data interface which can control the audio from and to the radio and the pc as well as generate a PTT command in transmit mode. I use a Tigertronics Signal Link which I bought to operate PSK31 and MMTY. When you come to set up the installation you will need to control the audio levels to enable it to decode properly.

Download the software from G0HWC's web page <http://www.g0hwc.com/digital.html>. It only takes a few minutes. Set up is easy using the drop down menus at the top of the page. (See screen shot below). Based on Mark's advice I set the receiver to 3733kHz LSB and backed off the RF output to about 40W. On the EasyPal screen I set the picture quality to 12k to shorten the transmit time and set the following:

- TX MODE to E
- WIDTH to 2.4
- ERR FIX to HI
- QAM to 4
- LEADIN to 24 and

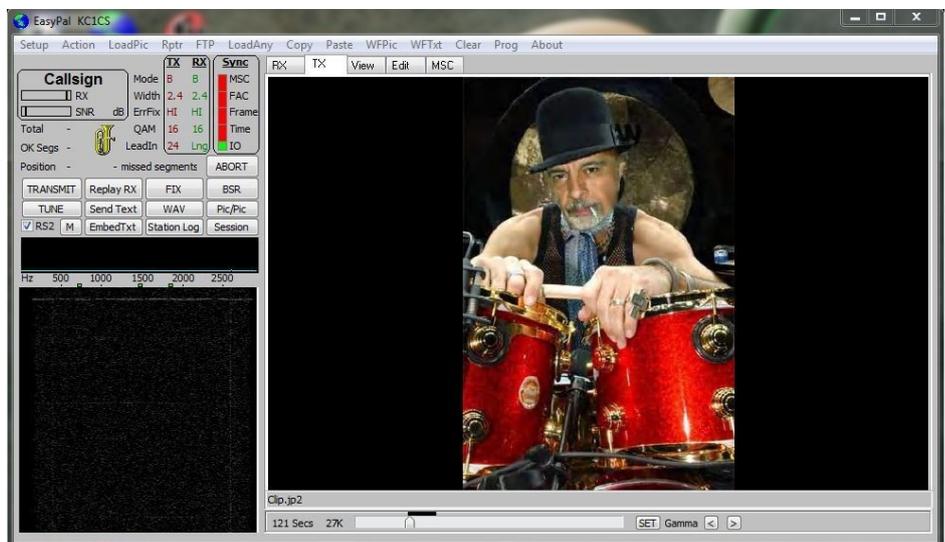
Ticked the RS box on the left of the screen and right click the same box to go to RS2

On the Drop Down menu put in your call sign Set the audio levels on receive so that the three peaks on top of the waterfall display shown clearly

At same time check that the SYNC column runs mostly green

You can tell you are receiving a picture by the waterfall having three distinct lines running down it and with the SYNC column running green. A call sign from the sending station should also appear green on the top left of the screen. Once you have received a picture it will be transferred to your VIEW file. Transmitting a picture is fairly easy although I have only sent one. It is all done with pickup and drop menus and you adjust your audio level on the MIC Control to make sure the it is not overdriving the rig. The 3733kHz frequency can also be used to set up QSO's with receiving stations but I haven't tried this yet. I have had lots of fun with this and would recommend it to anyone.

Chris G0EYO



HF Antenna Splitter for Receivers



Those of you that know me, will be aware of my passion for old receivers. Having collected so many I thought it was about time I switched them on and used them occasionally. One of the problems in having a number of sets is, what do you do about a receive antenna? Essentially a long wire will suffice for most applications from 1.5-30MHz, but which receiver to connect it to? Getting to the back of some of my big old sets is a bit difficult so changing the antenna from one set to another was best to be avoided. The answer lay in an Antenna Splitter. This comprises a simple, but low noise, RF amplifier and a toroidal transformer with sufficient windings on it to feed the number of receivers you want to have connected to your antenna. The amplifier is there to provide gain to counter the

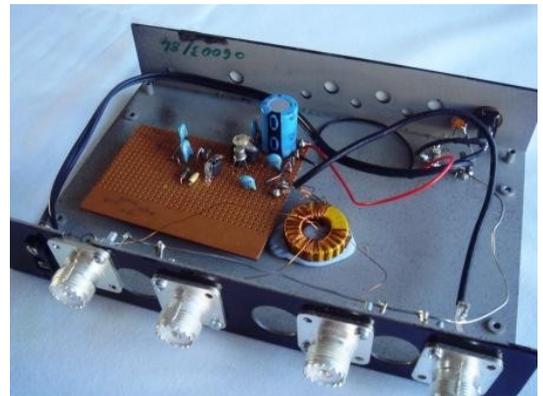
losses you suffer feeding the antenna through the transformer. Two outputs would have 3dB loss. Four outputs 6dB loss. With three outputs I needed at least 5dB of gain. I found a suitable circuit on the internet.

I wanted to make this using as much stuff as I could find from my junk box. The case was something that I found down the club and so I cleaned it up and painted it black. There were enough holes already drilled in it to mount a SO239 socket for the antenna input and 3 x SO239 sockets for the outputs. A DC input connector, switch and LED sorted the power out. (I already had a wall-wart which gave 12V out). I decided to put an extra 1000uF of smoothing in the 12v line after the switch as wall warts are notoriously noisy. The transformer was wound with 32SWG enamelled wire. I cut four lengths, one for the input and three for the outputs. Connecting one end of the four wires together (this would be the earth connection) I gradually wound them around a 35mm toroid that I had in the junk box. This was stuck to bottom of the chassis with a piece of "Blutack".

The pre-amplifier board was made up on a piece of veroboard. I used a BF115 NPN transistor which seemed to have suitable low-noise characteristics and comfortably covered the frequency range. The pre-amplifier circuit was a version of a circuit developed by David Norton and Allen Podell in June 1974. The Norton design uses transformer coupling to achieve "noiseless negative feedback" and is reckoned to

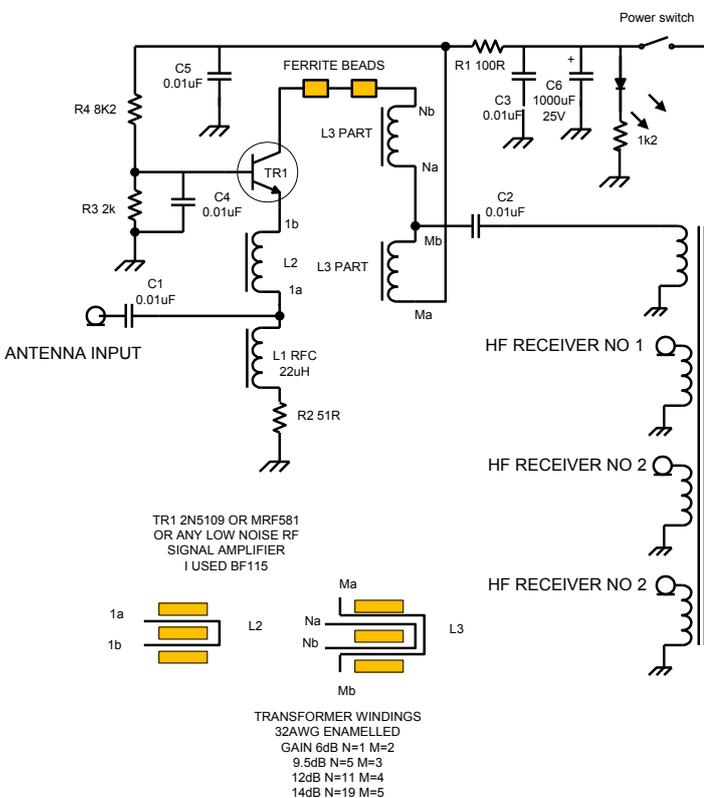


have outstanding performance. The Norton amplifier demands that you keep all component leads as short as possible. I sketched the layout out on a piece of paper before I



started working on the veroboard. The transistor collector has ferrite beads to aid stability and should squash any oscillations that may develop. I decided to make a 9.5dB amplifier so N= 5 turns and M=3 turns on dual core ferrites. It was best to start off by making these transformers and carefully placing them on the board before mounting the other components. You need to clearly identify the lead ends as designated in the circuit Ma Mb Na Nb. Once the board was complete I tested it by injecting a low level signal at the input from my signal generator (say 14.2MHz) and also monitoring it on the scope in channel 1. I then monitored the output on the scope's channel 2 to see what gain I was getting and whether I was getting any distortion. I did the same for other frequencies across the band 1.5-30MHz. When I was satisfied with the performance of the pre-amplifier I mounted it in the case and made a label for the front which also covered up the original holes in the case. I have yet to try it on air as I need to do some work on the receiving antenna but it was an interesting project with most parts coming from the junk box.

Chris GOEYO



HF ANTENNA SPLITTER DRAWN BY GOEYO

G3PQP Multi-match ATU



This ATU was conceived to match the 100 watt, 50 ohm, unbalanced output of most transceivers on the market to any type of antenna, balanced or unbalanced. This is not my design; I found it on the Internet whilst idly browsing ham radio sites. (If you wish to see the original design just google "snot box ATU")

There is a similar unit in the current ARRL Antenna Handbook. It embodies the latest thinking regarding the use of baluns. In this design only one balun is used and it is



placed before the matching network. This achieves two things; firstly only one balun is needed to match any impedance antenna; secondly the balun always sees a 50 ohm resistive load, not the varying inductive or capacitive loads seen by baluns placed after the matching network, as in most current commercial ATU's. This is important as it reduces the losses that can occur when a balun faces these hostile conditions. I have modified the original design by incorporating two low capacity high current slide switches. This enables the balun to be switched out for unbalanced loads where it is not required.

I built it, not because I thought it was a brilliant design but because I thought it simply couldn't work in its balanced mode efficiently. I was intrigued because it was simpler than any other all mode ATU I had ever made; believe you me I've built just about every conceivable design out there.

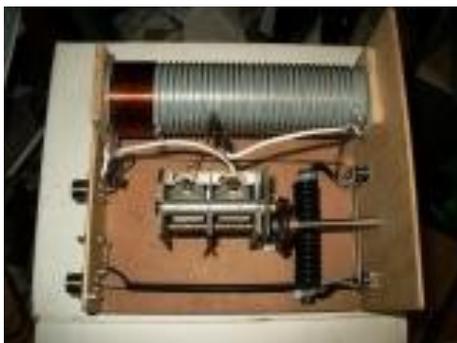
The original prototype took me about 6 hrs. to construct from scratch. When I tried it out on my 40m full wave loop, to my amazement it worked like a dream; balance was perfect and the transfer of power was as good as either of my current ATU's. Much easier to tune and impossible to tune up incorrectly. It will only match the antenna at one setting, unlike many other designs where a 1.0:1 SWR can be obtained at more than one setting.

I felt it was an ideal first project for any newly licensed Ham and indeed for anyone searching for a great ATU at a reasonable cost.

I can assure you this will equal, and in many cases exceed the performance of any commercial ATU, no matter how much you pay for it; quite frankly I am amazed by it. Over the years I have been searching for the ultimate ATU, now I really believe I've found it. On my 40m loop It gives me a 1.0:1 SWR on all bands 40m. through to 10m. On 80m. I switch my loop to a random wire (approx. 7/16ths. of a wavelength long) again 1.0:1 no problem. It also tunes this length of wire right through to 10m. I've also tried another random piece of wire approx. 36ft. long; it tuned this 80 through to 10m. without batting an eyelid. Just to be certain it was OK on a dipole I put up a temporary one fed with twin speaker wire, approximately a 1/2 wave on 20m. again a perfect 1.0:1 match easily obtained and perfectly balanced.

I cannot guarantee that the unit will tune anything with the values used for the coil and capacitor. In some rare instances you may need more capacity or more inductance. This is because some antenna lengths may present extreme impedances, if this is the case adding or subtracting one or two feet from the offending antenna will normally cure the problem. .

The matching system used is the "L" match, this is a very low loss system transferring maximum power to the antenna. Most commercial ATU's use the "T" match



system, which can incur losses in excess of 22% at certain settings. This begs the question why do MFJ etc. use this potentially lossy system? well, it will tune a wider range of impedances with lower values of L & C than any other matching network, but at price....low efficiency. My experience, so far, is that the capacitor and coil combination that I have used has tuned everything I've connected it to without any problems.

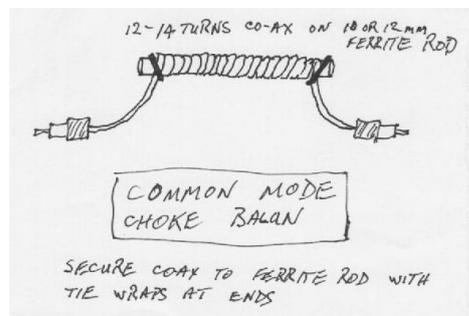
Setting Up

Be sure to use very low power and switch the TX off before disconnecting the croc. clips between adjustments. Do not on any account switch the TX on with the croc. clips disconnected you will risk serious damage to the PA transistors.

Start by setting the capacitor to half mesh. The croc. clip on the tuning cap. should be connected to the antenna end of the coil (marked C) unless you are feeding a quarter wave vertical tuned against ground or radials when it will be attached to the switch end (marked A).

As you find each tapping point and capacitor setting make a note of them on a piece of paper before moving on to the next band. When all your settings have been noted down attach these to the front panel with sellotape for future ease of adjustment.

On 80m. try using about 14 turns down on



the 30 turn coil with the 17 turn coil in circuit, switch to transmit and turn the capacitor back and forth watching the SWR meter, if you are anywhere close you will notice a slight rise in forward power and a slight lowering of the SWR, then move the tapping point by 2 turns and try again, if you are getting closer the forward power will rise even more and the SWR will lower slightly. If it does the reverse you are moving the wrong way. Keep moving the tapping point and turning the capacitor back and forth until you get a 1.0:1 or certainly less than 1.5:1 SWR. With all the antennas I have tried a 1.0:1 SWR has been achieved on all bands. On 40m try 7t on the 30 turn coil with the 17 turn coil shorted out. Proceed as above but moving only one turn at a time until a 1.0:1 SWR is achieved. On 20, 15 and ten >>>

Club Diary

Friday	1st Jan	Xmas Contest Ends 8pm
Tuesday	5th Jan	2m UKAC
Saturday	9th Jan	Advanced Revision (am)
Tuesday	12th Jan	Committee Meeting
Saturday	16th Jan	Intermediate course starts
Sunday	17th Jan	Advanced Revision (am)
Monday	18th Jan	Intermediate course session 2
Tuesday	19th Jan	Homebrew evening
Saturday	23rd Jan	Intermediate course session 3
Monday	25th Jan	Intermediate course session 4
Tuesday	26th Jan	Lee G0MTN talk on CQ WW CW
Saturday	30th Jan	Advanced Revision (am)
Monday	1st Feb	Intermediate course session 5
Tuesday	2nd Feb	Advanced Exam 6.30pm
Tuesday	2nd Feb	2mUKAC 8.30pm
Monday	8th Feb	Intermediate course session 6
Tuesday	9th Feb	Committee Meeting
Monday	15th Feb	Intermediate course session 7
Tuesday	16th Feb	Intermediate course session 8
Monday	22nd Feb	Intermediate Examination
Tuesday	23rd Feb	Homebrew evening
Tuesday	2nd Mar	2m UKAC contest
Tuesday	9th Mar	Committee Meeting
Tuesday	16th Mar	Pre rally meeting
Saturday	20th Mar	Rally Set up
Sunday	21st Mar	WYTHALL 25th RALLY
Tuesday	23rd Mar	Rally debrief
Tuesday	30th Mar	Homebrew evening

Xmas Party - everyone's a winner

The club held it's Xmas Party on the 11th of December and everyone seemed to enjoy themselves. We had around 18 members and their families, making around 40-50 people in total. As usual we provided the normal quizzes, bingo—stand up and the normal kind plus a mega-raffle with prizes kindly donated by club members and the club. There were some excellent raffle prizes including a brand new colour printer and a Yaesu shoulder bag full of goodies. Members brought an enormous amount of food, far more than could be eaten on the night, so no-one went away hungry. Chairman Vaughan M0VRR organised some music and microphones for which we thank him. David reckons that with the money collected from the various bingo and raffle games minus the cost of the hall and club prizes, the evening only cost the club about £30. The winners were:

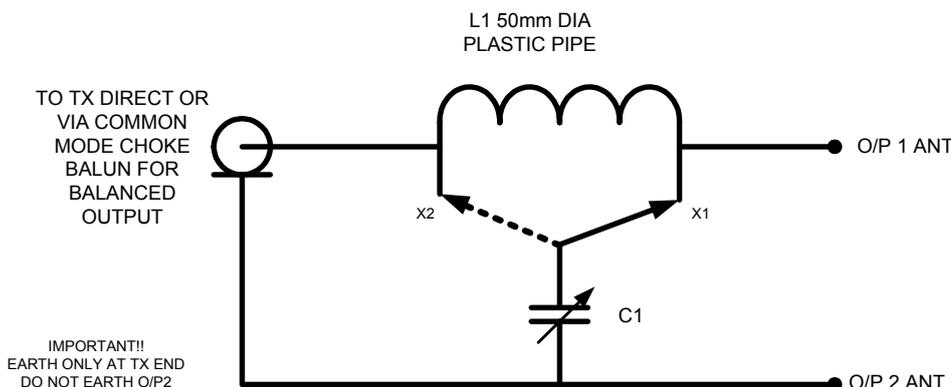
Stand up bingo £20 - Peter M5DUO
 Bingo Line £5 — Christina (Vaughan's daughter)
 Bingo Full House £20—Colin M0GJM

Quiz results were as follows:

1. Any chance (Steve & Walter) - 19
2. Famous Six (Stewart and family) - 18
3. We don't care who wins (Chris and Vaughan and Family) 34
4. Box of mince pies (David, Lee and Peter and families) - 36
5. Strugglers (Vic, Jane and Wendy) - 21
6. Tiger Woods (Colin, Neil and Darren) - 33
7. The Dimwits (Peter, Roy and David and families) - 34

The Box of Mince Pies Team were the winners

G3PQP Multi-match ATU continued



C1 = 250pF OR 500+500pF DUAL GANG EX BROADCAST TUNING CAP WITH GANGS CONNECTED IN SERIES TO GIVE 250pF
 L1 = 28uH ROLLER COASTE OR 30 TURNS 16 SWG TINNED WIRE, SPACED 4 mm + 17 TURNS CLOSE SPACED ENAMELLED WIRE

CIRCUIT OF G3PQP MUTI-MATCH ATU

meters. you will probably need between 3 and 4 turns only.

Please note that the above starting settings are approximate only and may be different on your antenna, however they were almost the same as above on all the antennas that I have tried. Changing the antennas only moved the tapping points slightly.

If you find you simply cannot sort out the correct tapping points in a few minutes don't just keep shooting in the dark, contact me and I will do all I can to assist. You will not be left floundering, my reputation is at stake here.

Finally, when you have established the appropriate tapping points, turn the power up and make final fine adjustments on full power.

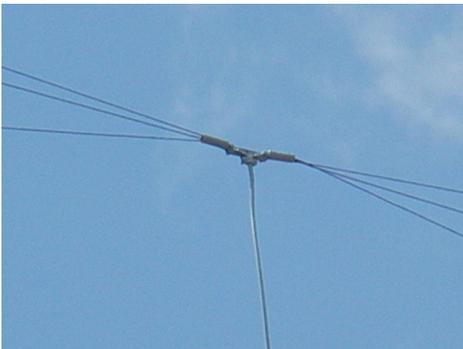
Tom G3PQP

How to improve your G5 RV aerial (Without maths and in plain English)

Louis Varney's original aerial was designed to optimise his transmitting and receiving capability on a limited budget from a modest house and garden.

Sounds familiar? Lets look at what his own antenna system comprised. His rear garden was about 100ft long, he had a tree at the end and his house with chimney at the other. His favourite band was 20m CW (14 Mhz Band) OK, Lee ? But, he wanted to work other bands as well.

He wanted to have more gain than a classic half wave dipole and not have significant nulls off the ends, so a 1.5 wavelength on 20 metres, top was chosen for CW on 20metres. This worked out as a 103 ft top section. It had two major lobes and four minor lobes to give almost 360 degree propagation. Now this was fine for 20 metres operation, But what about other bands ??



His solution was to feed the top section as a doublet antenna with an "Aerial System Tuning Unit" NOT an ordinary type of impedance matching ATU !. Electrically speaking, a doublet antenna is two inverted L antennas mounted back to back such that the parallel vertical feeder lines are balanced and do not radiate. The aerial system tuning unit loads and resonates each half of the antenna equally and by switching the loading coils as balanced pairs for each band and final adjustment with separate or ganged capacitors to achieve "resonance"

Yes, just like two base loaded verticals side by side with the tops bent away from each other so in fact, a fixed length doublet can be resonant on any chosen frequency.

So what about the usual G5RV you say? It's not like that at all. It's 102 ft long and has a length of feeder section of 300 ohm, 450 ohm or 600 ohm ladder line coupled to a length of coax which goes straight to my ordinary impedance matching ATU. The length of "impedance matching line" should be an electrical half wavelength at 20 metres which helps the top section tune easier on 20 metres



and other bands. However, when tuned on other bands the coaxial feeder length can be critical to obtaining a good or possible match at the 50 Ohms impedance required for most rigs. The feeder line and coax cable is then said to be reactive. That is when there are standing waves on the feeder line and different values of SWR will be measured dependent upon the length without changing the length of the top section. It is well known that this more usual version of the G5RV also works well on 80m and other bands

Now with reference to a "Smith Chart" (If, you understand them, but it doesn't matter if you don't) The 40 metre band has the highest SWR and can be difficult for some ATU's to achieve a 1:1 SWR match at 50 ohms impedance.

What do you do ? The easy way is to cut a pair of dipole lengths for 40 metres (33ft each) and connect them to the same feedpoint, then radiate them at 20 to 30 degrees away from the original top section. AND.....BINGO.....40 metres will now be much easier to tune and 15 metres should bring in more stations as this is now also a 1.5 wavelength dipole for 15 metres. If you're fussy, you can now carefully match each leg of your antenna for the respective bands by shortening or extending to achieve a dip (Minimum SWR) at the centre of each band.

You will now have slightly more gain as ALL of the antenna legs receive, ALL of the antenna legs transmit and either of the dipoles will RESONATE at the frequency in use (Now 40 metres, 20 metres and 15 metres). Therefore, NO traps to buy or make, less weight in the air and cheap to make, dead easy too. Any old electrical wire will do, any colour, with or without insulation. If you are happy with the performance then you can tidy it up later with flexiweave or similar.

Getting it up and keeping it up
For most antennas and bands, "HEIGHT IS MIGHT" so poles on chimneys, poles down the garden as well as lovely high trees are a

necessity especially when skyhooks are now in short supply. Single dipole antennas are fairly straightforward to erect but can still blow down in gales when it all gyrates like a gigantic skipping rope. Firstly, to prevent the soldered tags breaking off from the aerial wire at the dipole centre, simply cut a couple of 3 inch lengths of half inch garden hose and pass the aerial wires through them at the dipole centre. Thus the wires won't snatch at an angle to the soldered joints.....It really works !!

**" My trees wave about in the wind
".....So do mine !!**

Each leg of my antenna is connected to an insulator then to pre-stretched nylon line



which then passes over a pulley and then vertically down to a rubber luggage bungee with hooks. Sounds simple, it is, if you like climbing trees. I attach the pulleys (small yacht or dinghy blocks) with a suitable screwed "shackle" which couples to an old car fan or generator belt which is then doubled around a convenient tree branch.

So far so good. The Nylon rope is then looped loosely around a lower branch and secured with a "Bowline" knot. The loose line is then pulled through the pulley until the desired aerial height and tension is achieved. A simple loop knot is then tied a foot or more below the pulley and the hooked bungee is then connected between the lower loop and the loop knot. The spare line used to raise and lower the antenna is then gathered up and looped and secured onto the lower loop.

Yes ?? Clear as mud ?? It's a bit like a gigantic cats cradle on the ground, but once it is all up and adjusted for tension and resonance your qso's should improve both in quality and distance. Have a good look at the photograph of the upper of three pulleys tensioning the legs of my antenna system in a tall Silver Birch tree. It has not been adjusted for the last four years and has now been fully operational for almost eight years. I added a third dipole pair for 80 metres (67 feet each side) which gives very satisfactory performance.>>>>>

Training Report

Another 100% success story

Six of our students took the Advanced examination in December and a couple of days before Christmas they all heard that they had passed. So well done, Darren, Mike, John, Neil, Stuart and Walter. Walter and Stuart started with their Foundation course in October 2008 and John did his Foundation course with us in April 2009. They all, together with Darren and Mike who came from Malvern did their Intermediate with us in May. Finally, Neil who passed his intermediate with us a year earlier started the 15 week Advanced Course in September. This was a pretty intensive course and we held a couple of revision morning to-

wards the end of the course to build up their confidence in the use of formulae and also basic electronics. Wythall's courses are developing as we do them and I am confident

we can offer one of the best training programmes in the region.

Our next course will be an Intermediate one starting on the 16th of January and we currently have 6 students signed up for that course. If anyone knows of anybody looking for a Foundation course let me know as we will be planning a Foundation course for April.

Chris G0EYO

L-R; Walter M0GRO, Mike M0JVP, Neil, John M0RJH, Stuart, and Darren M0JJM just before their examination



This the business end of my RG214 coax to a 1:1 Voltage balun rated at 2 Kw feeding Belden 72 Ohm transmission line up to the dipole centre. The vertical tube is plastic pipe which allows the the transmission line to loop well clear of the ground and prevents snatching in high winds. As I live very close to overhead three phase powerlines this type



of balun passes any static voltage build-up to earth. (The hollow pole on the brackets is a stiff plastic tube)

73's de Nigel (G4 NRR)

Xmas Fox Hunt 2009

After a week of snow and ice, it was a relief that the day of the Fox Hunt on the day after Boxing Day turned out to be a glorious sunny day with the previous night's rain having washed most of the snow away. Fourteen of us turned up at the Barley Mow in Studley, though not all at the designated time of 9.45am for a 10am kick off. It was good to see some new club

members taking part, Jon 2E0JMM and Darren M0JJM, Mike M0JVP and Andy G1?. They were joined by Chris G0EYO and Peter M5DUO, Vaughan M0VRR, Sherryn M3SVR and Nick N6NJR and his sister Christina, Chris G6KMQ and Paul, and finally Steve 2E0SDD, Stacey and Stuart 2E0NYC. This gave us six teams.

Chris G0EYO and Peter M5DUO

Chris G6KMQ and Paul

Vaughan M0VRR, Sherry M3SVR and Nick M6NJR

Steve 2E0SDD and Stuart 2E0NYC

Darren M0JJM and Jon 2E0JMM

Mike M0JVP and Andy G1?

Chris KMQ went off to be the first fox and he was eventually found by Vaughan.

Vaughan became the fox and was fairly quickly found by Chris KMQ. As Chris



KMQ had already been a fox Chris EYO offered him and Pete to be the fox as they were completely lost and reckoned that as they didn't know where they were, then others would find it hard to find them. Eventually Jon 2E0JMM and Darren M0JJM found them and so Jon and Darren went off to be the fox and were found by Vaughan. Towards the end of the fox hunt we started to be interfered with by a station somewhere in the Astwood Bank Headless Cross area. Whistling, DTMF tones, playing music etc., however we had great fun and it was decided that it would be a good time to break for lunch so we made our way back to the Barley Mow and it was there that most of us had a good lunch and a few laughs reminiscing our experiences of the morning.

Chris G0EYO

Contest Group Report

Happy New Year from me. The start of the year is traditionally a time for forward planning, so why not consider what contests you might be interested in over the next few months. January sees the start of the 80m Club Championships. There are three 90 minute sessions per month, one on SSB, one on CW, and one using RTTY and PSK. In the first few months, propagation can be a little challenging, but as we get towards the summer, the bands will be jam packed full of local UK signals. The club has taken part in these every year, and has normally ended up with a placing in the top third of clubs. Also the VHF / UHF UKAC activity contest season restarts. 2009 was a good year for Wythall in the 2m UKAC, so why not give this a try in 2010? Even a short spell of activity in a few sessions throughout the year will bring some good results.

Aside from the regular events, there are the 80m AFS contests in January. These are 4 hours long, and stations can use high power, so it's fun to try to keep up with the leaders. February sees the final AFS contest with 432 MHz AFS. Maybe we'll have more activity from the club shack this year too – please let me know about any ideas or suggestions.

As I write this, the Christmas Contest is still in full swing, but the 1st Jan end is getting ever closer. Don't forget to send your Christmas Contest logs in to me as soon as possible. Any format will do – text file, spreadsheet, or paper logs. I can then do a spot of cross checking and help form the overall results. It would be a shame if over half of the club membership take part in this competition, but I'm only able to present scores for a small number in the results table. The full results will be presented in the next Newsletter, and the first official results and the presentation of the Reg Brown Trophy and certificates will happen as part of the February committee meeting.

Lee G0MTN

G0MTN visits K3LR for CQ WW CW

As reported in the last newsletter, at the end of November I flew to Pittsburgh to be part of the K3LR team for the CQ WW CW contest. 7752 scoring QSOs were keyed in 48 hours by the 12 man team. I was on 20 metres, and 4 times 6 element yagi's to use for the run station, and the multiplier hunting station had 2 times 6 element yagi's. The top antenna is situated at 230 feet, just next to the aircraft warning beacon. The scale of the engineering and dedication to this station is truly amazing.

RSGB VHF Contests:

Date (2010)	Time UTC	Contest Name	Sections	Notes/Special Rules
Every 1st Tuesday	2000-2230 (Local)	144MHz UKAC	AO AR	QTH Locators , Activity contest , Club Championship
Every 2nd Tuesday	2000-2230 (Local)	432MHz UKAC	AO AR	QTH Locators , Activity contest , Club Championship
Every 3rd Tuesday	2000-2230 (Local)	UHF UKAC	AO AR	QTH Locators , Activity contest , Club Championship
Every 4th Tuesday	2000-2230 (Local)	50MHz UKAC	AO AR	QTH Locators , Activity contest , Club Championship
Every 5th Tuesday	2000-2230 (Local)	70MHz UKAC	AO AR	QTH Locators , Activity contest , Club Championship
7 Feb.	0900-1300	432MHz Affiliated Societies Contest	Q SF	Affiliated Societies contest
28 Feb.	1000-1200	70MHz Cumulatives #1	Q SF	Cumulative contest
6-7 Mar.	1400-1400	March 144 432MHz	SF SO Q 6S 6O	

RSGB HF Contests:

Date	Time (UTC)	Contest Name.	Dates - Mode - Frequency - Exchange
January	2000-2130.	80m Club Championships	5th - CW; 14th - SSB; 22nd - Data
Jan 11	1400-1800.	Affiliated Societies Team Contest	3510-3590kHz, RST+Serial (CW)
Jan 17	1400-1800.	Affiliated Societies Team Contest	3600-3750kHz, RS+Serial. (SSB)
February	2000-2130.	80m Club Championships	2nd – SSB; 11th – Data; 19th - CW.
Feb 14/15	2100-0100.	1st 1.8Mhz Contest	1810-1870kHz, RST+Serial+District.
March	2000-2130.	80m Club Championships	2nd – Data; 11th – CW; 19th - SSB.
Mar 14/15	1000-1000.	Commonwealth Contest	3.5-28MHz, RST+Serial.

I'll be giving an illustrated talk to the club on January 26th at 8.30. Please come along if you'd like to see what goes in to building, and then operating from a US "super-station."



The next issue of the Wythall Radio Club Newsletter will be published at the beginning of March 2010

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