



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.

Mel M0MAJ

Martin G7WBX

Colin M0GJM QSL manager

Neil M0YMM IT manager

Tom G3PQP Homebrew Leader

Chairman's Message

I'm going to start off this month with a few congratulations. First a BIG congratulations to the happy couple, Lee and Sylvia. Wishing both of you a world of happiness and joy. (see page 5)

Our Training team has been busy over the summer with more successful candidates passing the Intermediate exam, so well done to Eric, Stuart C, Phil, Mark E and Ian. We have also had 5 new foundation passes so again a very well done to Stacey, Glyn, Mark, Gary and of course Darren and Carol's 9 year old son Philip. Looks like our Christmas contest this year will have lots of shiny new call signs to look out for.

The beginning of July was VHF NFD and after a close call on the motorway and a late night on the Friday we had the generator all working again. Saturday it was all systems go, loads of BBQ food and later on the odd glass of wine. All in all a great weekend and certainly one of the most talked about.

As some of you may already know I have taken over the roll of Deputy Regional Manager (DRM) for district 52 working with your Regional Manager (RM) Trevor Bailey so if you have any RSGB issues or feedback you are more than welcome to drop me an email to drm@m0vrr.co.uk or catch me on a club night.

Well with the sporadic E season coming to a close and the end of summer being signalled by the start of the X-Factor, can mean only one thing; Our AGM on the 19th of October is just around the corner so I'll see you then if not before. 73s Vaughan M0VRR

Wythall Radio Club

Wythall Contest Group

G1WAC G4WAC G7WAC G0WRC M5W



g1wac@wythallradioclub.co.uk

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

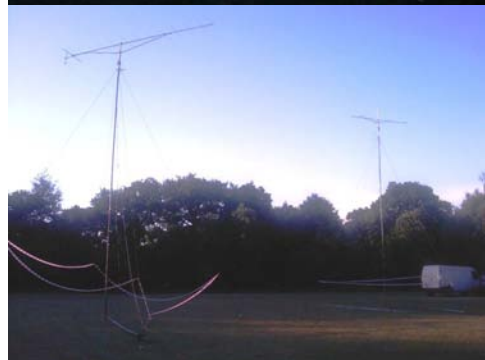
Newsletter

Sept - Oct 2010

VHF NFD 2010

VHF NFD was held on July 3rd and 4th and the club entered in the low power section for 2m, 6m and 4m. Darren and Vaughan arrived on site on the Friday evening with Martin G7WBX who brought the caravan over. Lee and Chris EYO were down the shack getting the stuff ready for pick up Saturday morning. Come Saturday a nice bright morning we all met up at the shack to load up our vehicles and bring the stuff over to the field at the back of the park. Teams got to work on building the lightweight aluminium masts and Chris EYO gave a master class on how to put these up safely using the falling derrick method. Others got the antennas built and prepared the equipment in the caravan. The 2m antenna

went up first followed by the 6m. The petrol generator had got damaged on the journey to the field the night before but Tom, Vaughan and Martin were able to repair it with string and chewing gum. By 3pm we were already to go and over the next 24 hours we recorded the scores below. Al-



though there were a few familiar faces missing on the Saturday, we were quite well attended by members, both new and old. In the evening, Vaughan and Sherryn put on an excellent BBQ and every-

one had a great time. Sunday was quieter but required a change of antenna from 6m to 4m at 9am in the morning. Again the weather was really good all day and come 3pm we were able to knock down and clear away very quickly. VHF NFD is an important part of the

clubs calendar and we hope that the new members will be encouraged to operate so that we can continue to enjoy this contest.

Scores

6m 44 QSOs total 24k points best QSO Crete (last year 61 QSOs total 51k points)
4m 35 QSOs total 11.5k points best QSO Croatia (not entered in 2009)
2m 72 QSOs total 11k points best QSO Spain (last year 75 QSOs 16k points)

More pictures on page 5

Pics far left: Lee operating, above left: Walter, Darren, Lee and Mel. Photos by Stuart 2E0NYC and Lee G0MTN

Simple 4 channel audio mixer

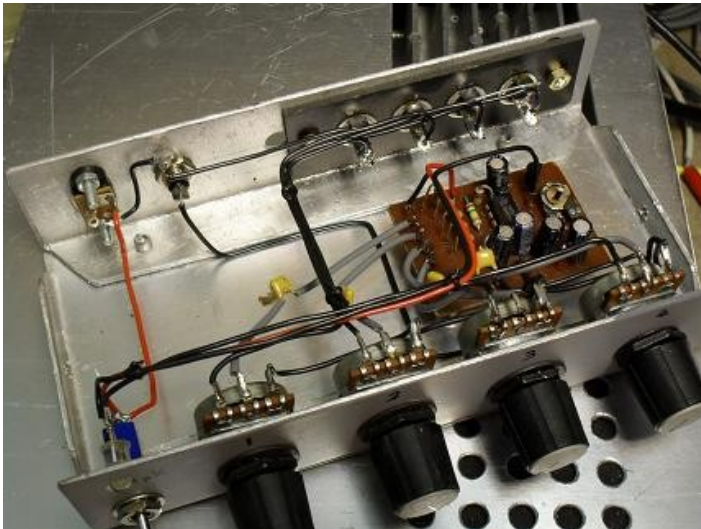
Another exciting project
from Barry's Bench

Here is a very simple project that has proved useful. Occasionally I like to record CW qso's and other stuff from various radios in the shack. Using this mixer alleviates the need to unplug and plug the various audio sources from the recorder input.

The circuit

The circuit is very simple indeed. The four inputs are connected to a summing network consisting of R1 to R4, each input has its own level control (VR1 to VR4). The output of the summing network is connected to the inverting input of the 741 op amp which is configured as an inverting amplifier with a voltage gain of exactly 1, the feedback resistor R5 in conjunction with R1 - R4 ensures this. As the inverting input of the op amp is a virtual earth, each individual mixer input is completely isolated from all the other inputs. Up to fifty or so inputs could be used here

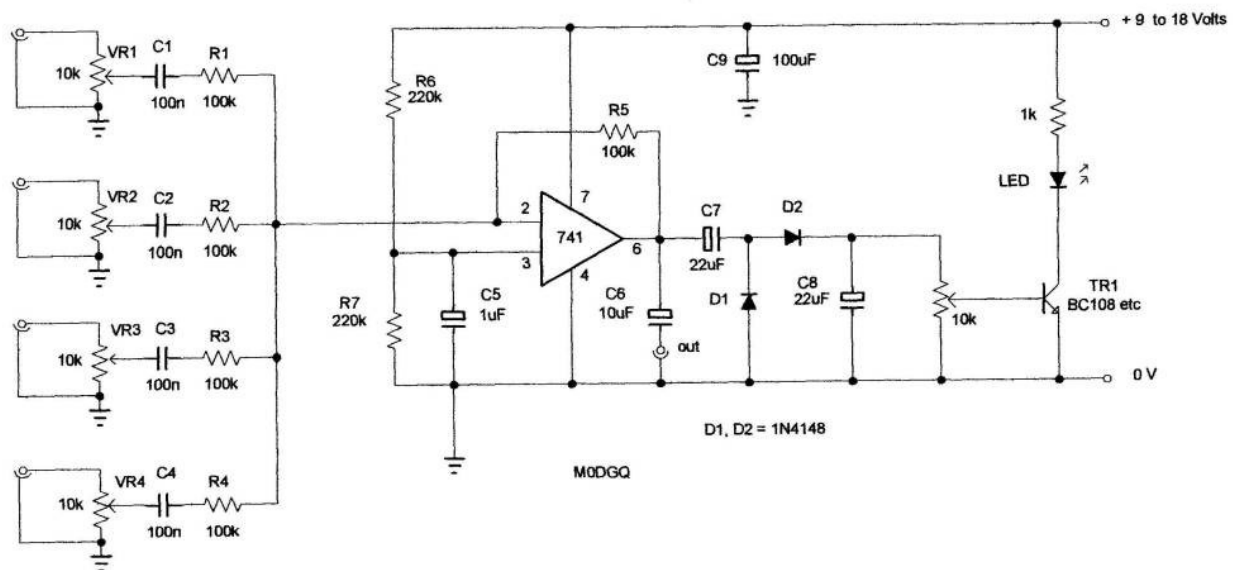
providing the sum of all the voltages present on the mixer inputs never exceeds the supply rail of the op amp (within two volts of supply using this op amp). The non inverting input of the 741 is biased to half supply by R6 and R7. All of the summed or mixed signals appear on the output of the op amp pin 6 and they will be 180 degrees out of phase with the input signal, for this application the phase inversion is



of no consequence here. The output of the mixer is also fed to D1, D2, and TR1 which is a simple peak indicator. D1, D2, C7 and C8 form a charge pump circuit which rectifies the AC signal present on pin 6 of the 741 to an average DC level; this in turn is used to illuminate the LED via TR1. I adjusted the preset pot so the LED just starts to glow for an input of

2 volts peak to peak (any more than this and my recorder complains). Purists may wish to use a better op amp than the ancient and by today's standards somewhat noisy 741, this was used as I have a tube full of them and are fine for the likes of me.

Barry M0DGQ



Bromsgrove Special Event GB0HVS

The club put on a special event station GB0HVS at the Hanbury Vintage Show in August. This show, which last year was at Evesham, was due to be held at the Stratford Armouries, but after a disastrous Easter show when the site flooded it was decided to move it to Hanbury behind the Vernon Arms. Strangely enough the show had been originally held on this site some years before. The site turned out to be ideal although from a vhf point of view it was shielded by a large ridge to the East, probably rising to about 100ft. Darren GW7HOC was the main club organiser for the special event and he and Carol MW3YKL and their newly licensed son, Phillip, M6YDP set up the station next to their motorhome by the site entrance. A

gazebo provided by Roy G0HDF protected the station from the rain on the Saturday and the sun on the Sunday. Tom G3PQP brought along his doublet and tuner but they struggled to get it to work on the lower bands, but his 20m C pole gave us a few contacts on the Sunday morning. Darren provided his 2m colinear and mast for VHF and to support the doublet. The club's FT847 was the main rig. Not many radio contacts were made but the station attracted a lot of interest from the general public. Several club members attended on the Saturday and Sunday and some stayed over on the Saturday evening to enjoy the hospitality of the beer tent and the vocal skills of Dr Busker



QRM on the bands

The International Amateur Radio Union publishes a monthly newsletter called Monitoring System and this reports on the various types of illegal users of our amateur bands. I happened to peruse through the July issue and was amazed at who uses our bands without authority. The CBers amongst us are already aware of Russian Taxis using the 28-30Mhz band on FM. Apparently they are starting to creep down towards the 24Mhz band. Spanish fishermen are active on the 80m band in USB using CRY2001 encryption. They have been monitored on 3500, 3510, 3550 and 3590 kHz. Moroccan fishermen have apparently been causing interference on all amateur bands for several years.

Amateurs are encouraged to report any interference to the IARU monitoring group and this the report by EI4GXB

"There are always a few intruders in the 21 MHz band audible as soon as we have short skip sporadic e possibilities towards the Canary Islands/North Africa. Heard one station today on 21203 MHz between 1930 and 2000z with a signal strength up to 58. Language was a sort of Arabic dialect. There was a constant machine sound audible- like a ship's motor. I got this sound plenty of times from other stations- sometimes stronger, sometimes weaker. Another frequent operator has a very strong Scottish accent and I have trouble understanding him at all. One time I kept calling and asking for his call sign. After a while he said to his QSO partner that " he has to stop now because the neighbours are calling"- this was probably referring to me...I heard this station also one time around 18170 MHz just above the 17 metre band. All QSOs are always between 21180 and 21350 MHz in SSB. Sometimes they use a modulation I cannot read- neither SSB/USB/LSB,FM or AM. Languages heard so far : Spanish, Arabic and Arabic dialects, Scottish English, Dutch and a Japanese sounding language. Sometimes I can hear both stations in a QSO, sometimes only one station. There are no special times the stations operate-but I can hear them as soon the skip goes South. Judging by the sound of a motor I think they are all fishermen. Either on smaller ships or on big fishing ships like the Atlantic Dawn-which is off the Mauritanian coast all the time...area of propagation. Another permanent big fishing vessel in that area is a Dutch ship from Katwijk/Netherlands."

The IARU document has reports from various national societies, Kenya (ARSK), German (DARC), Hungary (MRASZ), UK (RSGB), Switzerland (USKA), Holland (VERON) and Finland (SRAL). These are the RSGB report and part of the SRAL report (see left)

RSGB - Great Britain - G4BOH (Chris)

Society	kHz	UTC	DD	MM	ITU	IDENT	MODE	REMARKS
RSGB	24850-25050	24H	DD	07	I	RADAR	PON	CODAR radar located in Venice. Baldock sent complaint, nothing heard for days as
RSGB	7185-7200	2100-2300	DD	07	F	Radio France	A3J	Splatter from RFI on 7205 kHz. Baldock complained, still there. Observations to
RSGB	7130-7150	1600-1730	31	07	KEN	DRM?		Very loud 20 kHz wide data signal, sounds like DRM but mode not confirmed. DF fixes

SRAL - Finland - OH2BLU (Pekka)

Society	kHz	UTC	DD	MM	ITU	IDENT	MODE	BAUD	SHIFT	REMARKS
SRAL	7008,0	0530-0715	*	7		UiPTR	F1B		250	Days 3, 9, 21, 30
SRAL	7018,0	1045	4	7		UiMUX	J7D	12x120	12x200	
SRAL	7018,9	1345-1515	12	7		UiCarr	N0N			Space of F1 ?
SRAL	7019,0	1150	7	7		UiPTR	F1B			
SRAL	7022,0	0530,1420	3, 4	7		UiMUX	J7D	12x120	12x200	Kaliningrad

More Exam Successes for Wythall

It has been a busy 2010 for Wythall Radio Club trainers, with two Foundation courses and two Intermediate courses run already and we currently running our annual Advanced Course for the exam in November. The demand for courses has meant that we have been unable to have our normal July/August break.

Recent Foundation successes include 9 year old Phillip, the son of long time members Darren GW7HOC and Carol MW3YKL, who now live in Cardiff who passed his exam at Wythall to become MW6YDP. Mum and Dad taught Philip using Wythall

course materials and when they all came up to Wythall for our VHF NFD weekend, Chris G0EYO put him through his practical assessments, which he achieved with flying colours. We timed their next trip to the Midlands for the Bromsgrove Vintage Transport Rally special event station to allow Phillip to take



Phillip MW6YDP with his proud parents Darren GW7HOC and Carol MW3YKL)

the exam under the invigilation of David G0ICJ. Wythall reckon they have the youngest (9) and the oldest (88) licensed members of any club in the country.

Congratulations are also due to Stacey M6STJ, Gary, Glyn

M6AKA and Mark M6RKX also passed their Foundation examination in August and we are currently running our Advanced Course for Mark 2E0MSW, Mark 2E0MSE, Ian 2E0IDR, Staurt 2E0CCB,, Shaun 2E1BWN, Graham 2E0GAT and Terry 2E0XTV who hope to achieve their full licences in the November exam.

Foundation Class l:r. Glyn, Stacey, Gary, and Mark

Been a busy year but well worth it!



Notice of Annual General Meeting of Wythall Radio Club and Wythall Contest Group Tuesday 19th October 2010 at Board Room, Wythall House, Silver Street, Wythall commencing at 8.30pm AGENDA

1. Appointment of Minute Secretary
2. Apologies for absence
3. Proxy's Received (if you wish for a proxy form contact the secretary below)
4. Acceptance of minutes of 2009 meeting
5. Matters arising from 2009 minutes
6. Chairman's Report
7. Treasurer's Report
8. Secretary's Report
9. Matters arising and acceptance of reports
10. Constitutional issues proposed (notice must be given to the committee of any proposed changes 7 days before AGM)
11. Election of Chairman,
12. Election of Treasurer
13. Election of Secretary
14. Election of Committee
15. Appointment of Auditors
16. AGM of Wythall Contest Group
17. AOB

Issued by Chris Pettitt, Secretary Wythall Radio Club

Contact details 07710 412 819 or g0eyo@blueyonder.co.uk

Club Diary

Saturday	4th Sept	Advanced Course Session 1
Monday	6th Sept	Advanced Course Session 2
Tuesday	7th Sept	2m UKAC contest
Monday	13th Sept	Advanced Course Session 3
Tuesday	14th Sept	Committee Meeting
Sat/Sun	18th/19th Sept	Hanbury Steam Rally
Monday	20th Sept	Advanced Course Session 4
Tuesday	21st Sept	Homebrew
Saturday	25th Sept	Advanced Course Session 5
Monday	27th Sept	Advanced Course Session 6
Tuesday	28th Sept	Talk by Callum on Contest Station M0XXT
Monday	4th Oct	Advanced Course Session 6
Tuesday	5th Oct	2m UKAC contest
Sunday	10th Oct	Lord Pettitt Shooting Competition
Monday	11th Oct	Advanced Course Session 7
Tuesday	12th Oct	Committee Meeting
Monday	18th Oct	Advanced Course Session 8
Tuesday	19th Oct	AGM in Board Room
Monday	25th Oct	Advanced Course Session 9
Tuesday	26th Oct	Homebrew
Monday	1st Nov	Advanced Course Session 10
Tuesday	2nd Nov	2m UKAC contest
Monday	8th Nov	Advanced Course Session 11
Tuesday	9th Nov	Committee Meeting
Saturday	13th Nov	Advanced Course Session 12
Monday	15th Nov	Advanced Course Session 13
Tuesday	16th Nov	Homebrew
Monday	22nd Nov	Advanced Exam at 6.30pm
Tuesday	23rd Nov	Natter / On air night

More pictures from NFD



Mel arriving in style in his old flat nose Morris Oxford Tourer with Vaughan as a passenger and son Nick overtaking them



An evening around the camp fire at VHF NFD. Pics from Wythall RC Facebook page courtesy of Sherryn M3SVR

Lee & Sylwia's Polish Wedding

After over a year's planning and preparing, Sylwia and I were married on 7th August 2010 in Warsaw. We were engaged for over a year, and all of this time was needed to get everything ready. We had several trips to Poland beforehand to sign official papers, get them translated, and to arrange the church and reception. We even ended up with a different church to the one we originally planned and booked. All of this preparation could be a very long story in itself. Finally we were prepared, with the rings ready, dress chosen, and all of the flights booked.

In the end everything went very well, and all the guests and ourselves had a very memorable weekend with friends and family. In Poland, the bride and groom arrive at the church together. We waited at the back for photographs, but suddenly

when the music started the guests and I had to run to the front, so that the bride would be able to walk up the aisle for her big entrance! There was also no wedding rehearsal, so the (partly) bi-lingual service was certainly keeping me on my toes.

After the wedding service, Sylwia and I walked around the Warsaw Old Town for photographs. Even tourists starting taking a few snaps! Some other wedding couples could be seen as well. In the evening we had a lovely reception at a local restaurant. The vodka started flowing and soon the party was in full swing. On the Sunday we took the UK visitors by coach to visit Sylwia's Mum's country cottage where we had a

barbecue. Lots of the village helped with this party, and one man bought his horse!

After the blur of the week in Poland, we were soon home, only to jet off again on honeymoon for a relaxing week's cruise around the western Mediterranean, visiting EA6, IT9, I, TK, F and EA, but not taking a radio!



The saga of making an end fed 5/4 wave antenna for 2m (Part 1)

The resurgence of interest in the club's FM channel 145.225MHz made me realise that my old loft mounted 2 element ZL special (pointing due north) was not the best antenna for talking to our members who cover a wide area. It was ok for local stuff, say about 5 or 6 miles but no further.

I had previously built (and described in this newsletter) at Slim Jim for 2m made out of 300 ohm ribbon feeder and that seemed to work quite well but was mounted on the rear of the house for use by my main rig. Because I wanted to work on 2m FM whilst working in the office which is at the front of the house I decided that another antenna project was required to be started. Surfing the net on Google I came across this antenna. <http://www.dxzone.com/cgi-bin/dir/jump2.cgi?ID=12966> (Figure 1)

This antenna was made up of 300 ohm ribbon feeder and 18swg wire tied to a wooden dowel and inserted into a 20mm electrical conduit. It seemed simple enough. I gave the design some thought and cast about the workshop to see what materials I had to hand to make it. It did occur to me that nearly 80 inches of plastic conduit would whip about a bit in the wind but I suppose the wooden dowel would stiffen it up.

As I looked at the design more I realised that this was similar to an end-fed zepp design. This antenna is as old as radio itself and was originally used on the old Zeppelins where the long wire was strung out from the Zeppelin and the shorter wire was used as a form of matching. In the old Zeps the shorter wire was in the form of a ladder line which extended at right angles to the longer wire. A couple of years ago I saw an article about HF portable antennas where someone had made one out of twin speaker wire (web site http://www.outsideshack.com/no_cpoise_v_10m_comparison.pdf) and actually made one from 50ft of wire with 25ft cut back to one of the wires. This was to use with my FT817 and SGC211 tuner. I wasn't that impressed with the results. Anyway, not deterred by that experience I decided to knock up the antenna shown above with the intention of mounting it on the apex of the roof line. The expected gain was supposed to be 6dB but to what reference; dipole, isotropic??.

I didn't have any 20mm plastic conduit in my workshop but did find some 1 1/4 inch plastic waste pipe, which I thought would do the business, but after hearing a comment from Stuart 2E0NYC about neighbours complaints, I thought that 7ft of 1 1/4 inch waste pipe mounted on the front of the house might attract the wrong kind of attention. Looking around the workshop I found a stainless steel whip antenna some 53 inches long, so I looked for a way of using that with some 300 ohm ribbon feeder which could be put in some 20mm conduit.

So, one morning I cut the ribbon feeder to the sizes shown above and pinned it to my deck table. Using a choc block I connected the whip to the one side of the ribbon feeder. At the bottom of the ribbon feeder I connected some RG58 as shown in the diagram below.

I measured the SWR with the MFJ259 analyser and it showed 4.0:1 SWR. I trimmed the short side of the ribbon and the SWR came down to 2.8, then I adjusted the whip element by making it shorter and by trial and error it came down to 1.5:1, which was the lowest I could achieve. I then taped the ribbon feeder to a piece of dowel and checked the SWR again; it had gone up to 1.8:1. With a bit more adjustment to the shorter side of the ribbon feeder and the whip I managed to get it down to 1.5:1 again. I then inserted the

whole assembly into the 20mm conduit with the whip sticking out the top. I measured the SWR again and this time it had gone up to 2.8:1 (still lying horizontally on the deck table). I held the antenna up in the air in a vertical position and this time the SWR climbed to 3.2:1. I clearly needed to give this a bit more thought. Did I have a duff connector, a poor contact in the terminal block, what was going on?

According to the original write up the length of the antenna gives it a significant inductive reactance which must be tuned out by a suitable capacitance. This is what shorter side of the ribbon feeder does. It acts as a capacitor, and by cutting it to the correct length you equal out the inductive reactance of the radiating side. I decided to look further into the use of 5/4 wave antennas and came up with this article on the internet. (<http://www.hamradio.me/antennas/2-meter-5-4-wave-antenna-revealed.html>). This article told me that a 5/4 wave 2m antenna would give a very poor radiation pattern. The author decided to model a 5/4 wave end fed and compare it with a 5/8+5/8 centre fed collinear. The results are shown below.

As you can see the 5/4 centre fed has more gain at the horizon which is ideal for VHF communications whereas the 5/4 end fed has less gain at the horizon with max gain at about 45 degrees to the horizon, however the author concluded that the end fed could still

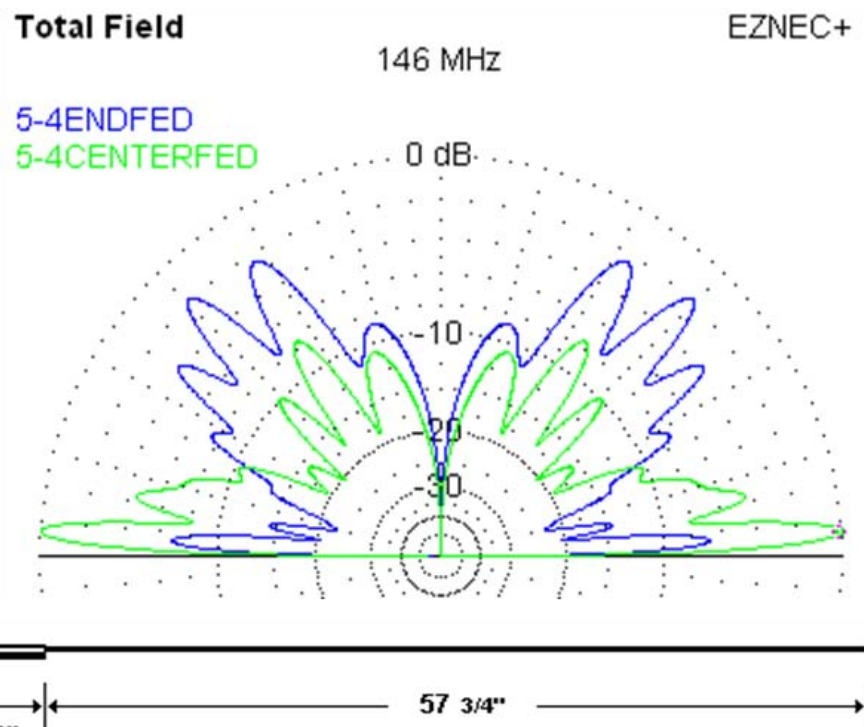


Figure 1

5/4 wave end fed antenna continued

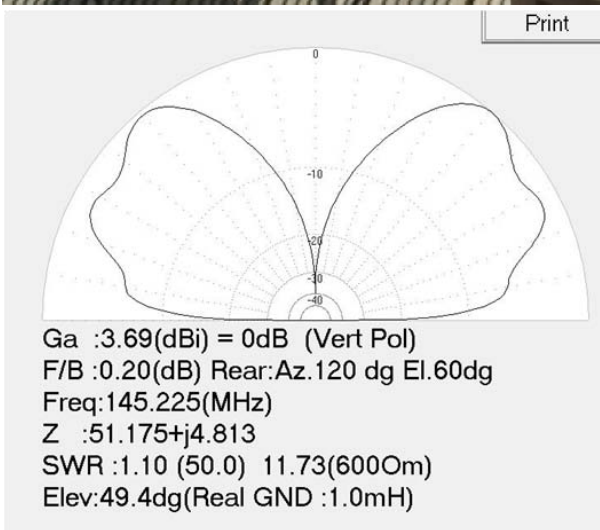
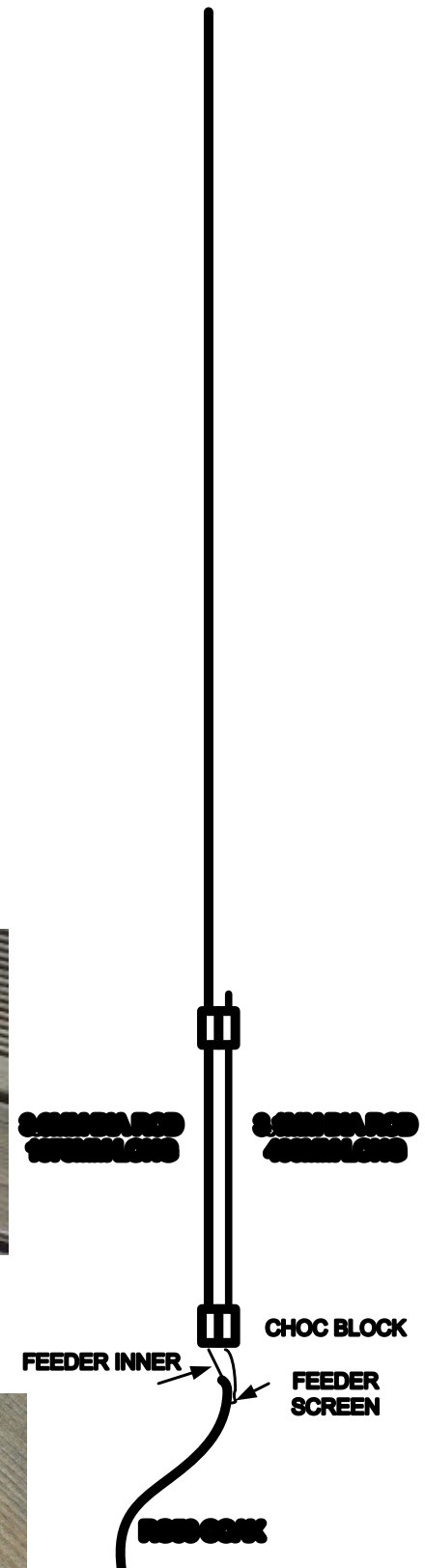
make a useful VHF antenna. He modelled that the gain at max lobe for the centre fed would be 8.8dBi and for the end fed 6.9dBi. I decided to have a go at modelling the antenna myself using the MMANA programme (free from <http://mmana-gal.findmysoft.com/>). This is a very useful version of EZNEC which has been around for quite a few years as an antenna modelling tool. These programmes are not the most user friendly as you have to turn your antenna design into a geometric wire model. I eventually got the original design modelled and found that SWR was always very high until I thickened the wire elements to 3.6 mm diameter and reduced the long wire to 1.878m and the short wire to 400mm and spaced 11mm away from the long wire. This took me away from my hybrid of stainless steel whip and 300ohm ribbon feeder, to a version made of entirely of 3.6mm dia. stainless steel for the long wire and 3.2mm for the short wire, using choc blocs as 11mm spacers (see below). The pattern is still not great with a high elevation angle of 45-60 degrees (great for aircraft flying overhead!) as you can see below. However the great thing about MMANA is that you can make minor changes until you get the sort of SWR you can live with. In this case my Z_0 was calculated as $51.175\Omega + j4.81\Omega$. This tells me that it is almost 50Ω resistive with a small

inductive reactance of 4.18Ω . Ideally the reactive component would be 0Ω in which case the SWR would be 1.0:1 instead of the calculated 1.1:1. The one thing that I don't seem to have improved is the gain which is computed at 3.7dBi but not surprising when you see how big the lobes are.

I built the antenna to the dimensions as computed, allowing a little bit for adjustment, but before I tested it I decided to check my feeder cable into a 50 ohm resistor. I re-soldered the plug to make sure that was good and then soldered a 47Ω resistor on the other end and connected it to the analyser. The result was unexpected. As the frequency changed from 3 to 150MHz so the SWR went from 1.05 to 1.6. So I made up a fresh length of URM43 with new plug and got the same result. The only thing I can think of that could cause this result is the fact that the non plug end is causing a mismatch. It seems to be frequency dependent. Still a mystery though!

With my made up antenna (see photo) I measured the SWR and the best I could get it to was 1.7. but it seemed very inconsistent so in the end I abandoned this design as too quirky and decided to go for a 5/8 over 5/8 centre fed design to give me a better gain towards the horizon and which you can read about in the next newsletter (hopefully)

Chris G0EYO



Contest Group Report

As we enter September, this marks the near end of the VHF summer contest "season", and the ramping up of the HF contest one through the autumn. A number of club members have taken part in VHF portable contests over the summer and they've found them to be great fun. Simple, low power stations, when in the right location, can be good performers. It's good to hear that there will be an HF SSB Field Day activity again this year. Sorry I won't be able to join in the fun. I made no QSOs at all in August and entered no contests. I can't remember the

last time I had a month with no contacts at all! I was a bit disheartened to hear some comments from club members made verbally and via email over the last month or two, decrying those whose HF-centric or VHF-centric interests may be different to their own preferences. Amateur Radio is meant to be an inclusive hobby, and a great part of it is that there are so many different facets to it. So if operating at either end of the spectrum is your thing, constructing, teaching, DX'ing, Contest operating or having a

casual rag-chew, please be respectful to those folks who gain pleasure from other parts of amateur radio. With that in mind, please shout up at committee meetings if you want your contest committee to organise more (or less!) contest events, fixed or portable, over the next year for you to be involved with.

Lee G0MTN

RSGB VHF Contests:

4-5 Sep.	1400-1400	144MHz Trophy Contest	SF SO Q 6S 6O	Runs concurrently with all or part of an IARU co-ordinated contest (S7)
5 Sep.	1100-1500	5th 144MHz Backpackers	3B 10H	Countries and Locators (M4) , Special Backpackers Rules (Backpacker)
12 Sep.	0900-1200	Second 70MHz Contest	Q SF	
2 Oct.	1400-2200	1.2GHz Trophy / 2.3GHz Trophy	Q SF	Runs concurrently with the first few hours of an RSGB 24 hour event (S6)
2-3 Oct.	1400-1400	432MHz-248GHz IARU	Q SF	Runs concurrently with all or part of an IARU co-ordinated contest (S7)
17 Oct.	0900-1200	Second 50MHz Contest	Q SF	Post Codes, Countries and Locators (M3)

RSGB HF Contests:

4-5 Sep.	1300-1300	SSB Field Day	Open (SSBFD) Restricted (SSBFD)
9 Sep.	1900-2030	80m Club Sprint SSB	LOW QRP
22 Sep.	1900-2030	80m Club Sprint CW	LOW QRP
3 Oct.	0700-1900	21/28MHz Contest	UK Open UK Restricted UK QRP Overseas Open Overseas Restricted Overseas QRP
14 Oct.	1900-2030	80m Club Sprint CW	LOW QRP
27 Oct.	1900-2030	80m Club Sprint SSB	LOW QRP

Other Contests:

Scandinavian Activity Contest, CW	1200Z, Sep 18 to 1200Z, Sep 19
CQ Worldwide DX Contest, RTTY	0000Z, Sep 25 to 2400Z, Sep 26
UBA ON Contest, SSB	0600Z-1000Z, Oct 3
EU Autumn Sprint, CW	1600Z-1959Z, Oct 9
JARTS WW RTTY Contest	0000Z, Oct 16 to 2400Z, Oct 17
CQ Worldwide DX Contest, SSB	0000Z, Oct 30 to 2400Z, Oct 31

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

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