



# Wythall Radio Club

## Wythall Contest Group

G1WAC G4WAC G7WAC G0WRC M5W



[g1wac@wythallradioclub.co.uk](mailto:g1wac@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 M0YMM IT manager  
Tom G3PQP Homebrew Leader

### Chairman's Message

What has happened to January and February? Is it just me or is this year flying by, With 5 more Intermediate exam passes (Congratulations guys!) and even I've managed to get one of my projects kind of finished; As I type this I'm listening to the BBC News on my Bush AC11 that was first released in June 1949 at a price of £17 13s. 7d. Thanks Barry for the inspiration and Tom for the telephone technical support.

Well it's March and that can only mean one thing, it's that time of year that your club needs you! It's Rally time and this year is the club's 25th. We need as many club members as possible to help over the rally weekend Saturday 20th and Sunday 21st, even if you can only help out for a couple of hours it all helps. I hope to see as many of you as possible of rally weekend and together I'm sure we can make this years rally a great success and have a lot of fun along the way

Vaughan M0VRR



# Newsletter

## March - April 2010

Voted RSGB Region 5  
Club of the Year 2009

It's Rally time and we really do need your support

Its Rally time folks and as usual we need the support of club members to make this the success that it normally is. Most of you will know that the club only survives because of the financial proceeds we get



from running the rally. If we had to rely on club subscriptions we would need to increase them 3 or 4 fold. Many of you will also know the format, for that weekend. At the Tuesday meeting before the rally (16<sup>th</sup> Feb) we allocate jobs and discuss what needs to be done. On the Saturday before the rally (20<sup>th</sup>), we meet at the club about 2pm to load up Martin's van with stuff to go to Woodrush Sports Centre. The tables normally arrive around 3pm and we offload into the Sports and School Halls and set up ready for the next morning. This normally is finished by 4pm. This is when we need your help because many hands do make light work. Martin and other volunteers will have already gone out in the morning to put up the road signs. On the Sunday, the day of the rally, we need helpers on site

by 7am to help offload traders and direct them to their correct

tors to park. The rally finishes at 3pm and we start the big clear up, such as assisting the traders getting their stuff onto their vans and knocking down tables and stacking them ready for the table contractor to pick up. We are normally clear of the site by around 5pm. This is also a period when we need maximum help.

This is also payback time for all those who we have helped in the past 12 months on their various examination successes. Members of the club have given their time freely to help you get your pass slips. We would like to think that you can spare some time over the rally weekend to help the club out. The more helpers we can get the quicker and easier it is for everyone and helpers will also get free admission to the rally. There is always a great spirit at rally time and although it can be hard work for some people everyone seems to enjoy themselves and it is a great way to put something back into the club. If you are free to help at the rally come to the meeting on the 16<sup>th</sup> or e-mail Chris on [g0eyo@blueyonder.co.uk](mailto:g0eyo@blueyonder.co.uk)

by 7am to help offload traders and direct them to their correct

when we need maximum help.

**Wythall Radio & Computer Rally**  
**Sunday**  
**21st March**  
**At Woodrush Sports Centre**  
**Shawhurst Lane, Hollywood**  
**10am-3pm**  
**Entrance £1.50**

tables. A little later we will need volunteers to direct visitor traffic onto the site. On the Sunday, helpers can assist by not parking in the main car park but use the teacher's car park and the lane in front of it. We need to leave as much space as possible for the visi-

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R1 prevents any instability that otherwise may occur. Bias for Tr1 is provided by R2/R3. The collector load for Tr1 is untuned (R3) as this gave best results. C5 couples the amplified RF signal to the



Photo 1

Described here is an airband receiver with good performance. All parts came from the junk box so there is plenty of scope for experimentation using alternate parts. After much experimenting, this is the final design. The set itself is a double conversion AM superhet which gives good selectivity and sensitivity and covers 110MHz to 136MHz. The first IF is 10.7MHz and the second IF is 455 KHz.

Photograph one shows the RF front end board. The five gang tuning capacitor was salvaged from a scrap FM/AM tuner; the first two gangs of the FM section are used for pre-selector tuning while the last gang (the largest of the three FM sections) is used for local oscillator tuning.

### CIRCUIT DESCRIPTION

Looking at the circuit you will see that the antenna signal is fed to a low impedance tap on tuned circuit L1/C1. This circuit along with L2/C2 form a preselector to attenuate out of band signals. L1 and L2 are lightly mutually coupled and as a result give good preselector performance which is necessary to keep out strong image frequencies (FM broadcast stations). The coil formers for L1 and L2 were taken from the helical filter module of an old Europa PMR set, these were then rewound accordingly. Thick wire can be used so as to avoid having to use a former. L2 has a low impedance tap which gives a good match to the base of Tr1 which is configured as an RF amplifier. It is this stage that effectively determines the noise figure for the rest of the receiver; hence a low noise transistor is used here.

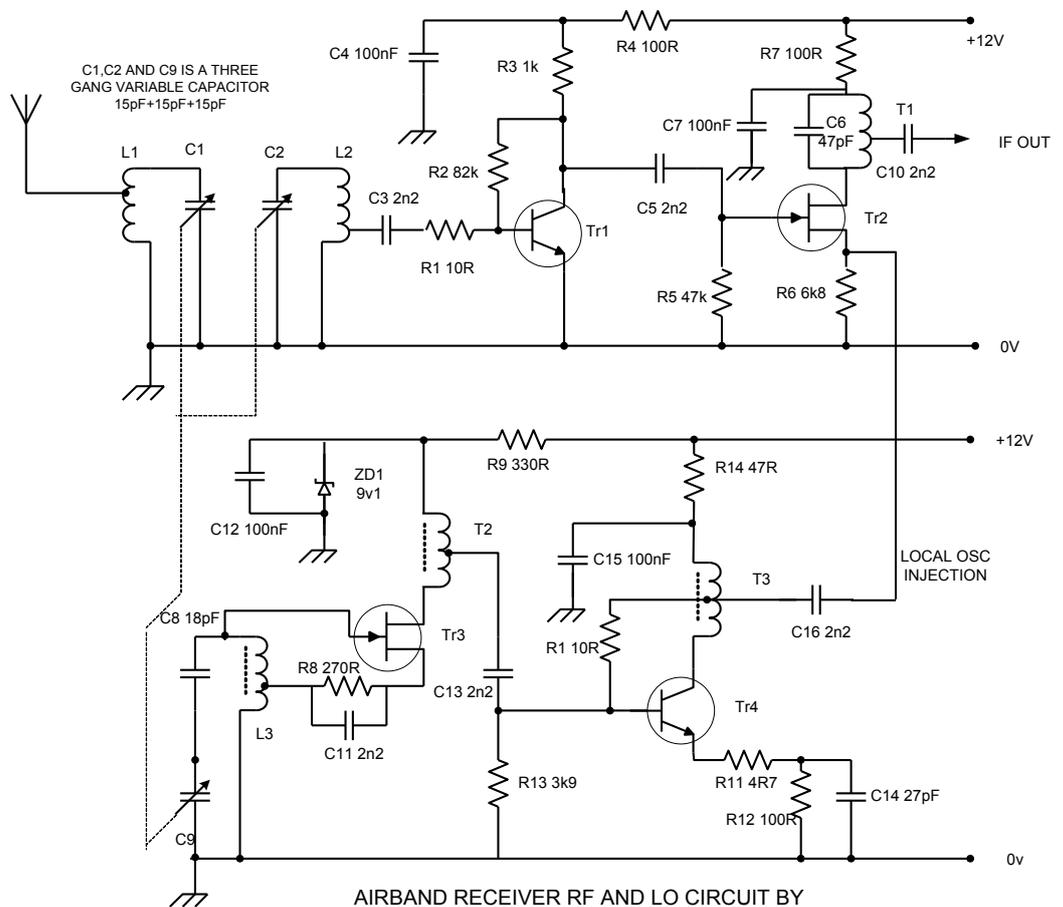
gate of the mixer Tr2 and provides DC blocking. Tr2 is a J-FET (2N3819) and has good signal performance (better than a bipolar transistor). The local oscillator is injected into the source of Tr2. The wanted IF signal (10.7 MHz in this case) as a result of mixing is "picked" out from the drain of Tr2 via IF transformer T1.

The other frequencies present at Tr2 drain (F1, F2 and F1-F2) will be ignored by T1.

The resulting IF signal is then fed to the IF amplifier module.

### LOCAL OSCILLATOR

The local oscillator operates at 10.7 MHz above the wanted incoming signal frequency i.e. if the wanted frequency is 118 MHz, then the local oscillator frequency will be 128.7 MHz. High side oscillator injection was chosen because it aids the preselector effectiveness against strong broadcast FM stations. Tr3 (also a J-FET) along with L3/C8/C9 and associated components form a Hartley oscillat-



AIRBAND RECEIVER RF AND LO CIRCUIT BY BARRY M0DGG

# Airband Receiver Part 1: RF, LO, IF

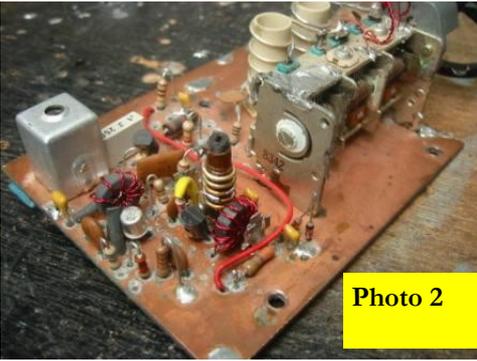


Photo 2

tor which provides a fairly constant output amplitude across its frequency range (120.7 MHz to 146.7 MHz). ZD1 stabilizes the DC supply to the oscillator which aids stability/ drift. The output of the oscillator is taken from a tap on T2 which is then fed to TR4 base via C13. Tr4 is connected as a buffer amplifier to raise the local oscillator level to approximately 500 mV peak to peak and also reduces oscillator pulling. C8 was introduced in series with the main tuning capacitor to reduce its maximum capacitance in order to achieve correct L/C ratio with L3 (remember this tuning cap was robbed from a broadcast tuner operating at a slightly lower frequency than is used here). A result of C8 is a slightly cramped tuning scale at the HF end; a better solution would be to remove some of the moving plates of the tuning capacitor to achieve correct capacitance and a linear scale. Plates were removed on the two preselector gangs, Maybe later I will do the same on the oscillator gang and have a nice linear scale. (I can't remember why I didn't do this, but I know there was a reason at the time – probably laziness!). Looking at photograph one shows the layout I used. You may notice some thin twisty bits of enamelled wire on top of the tuning capacitor. These are makeshift trimmer capacitors of a few pF in value to track the two tuned circuits – unusually there were no built in trimmers on the FM tuning capacitor sections. Photograph two shows a close up view of the local oscillator and associ-

ated components with the screening can removed. All screening cans and formers used in this project came from an ancient duff Westminster set.

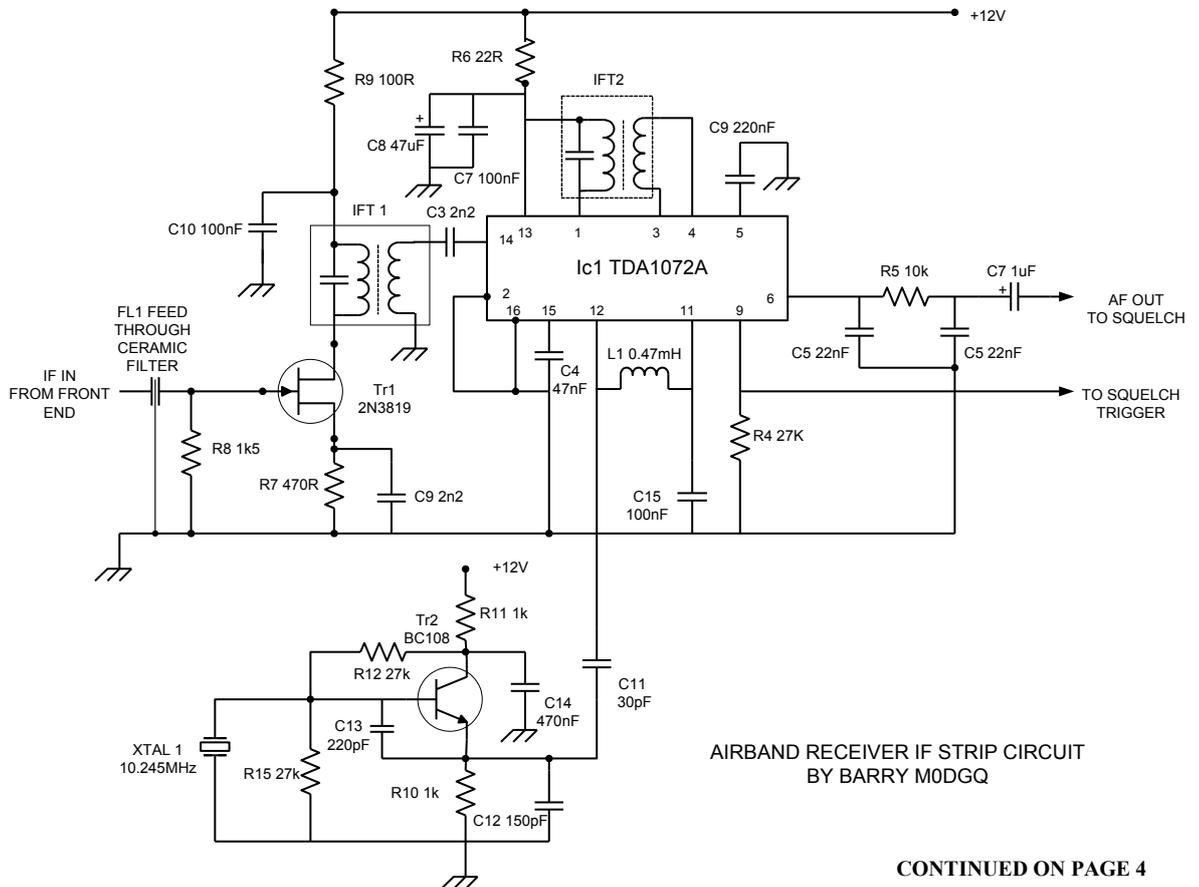
## IF MODULE

Photograph three shows the IF module (the small board to the right of the RF front end board). The heart of this unit is a TDA1072A dedicated AM sub strip integrated circuit. It comprises of a mixer, IF amplifier, RSSI and demodulator, see manufacturers datasheet for details. This chip was taken from an 80's car radio (most car radios of this vintage will have one of these), however it is still readily available to this day. Of all the modules in this project this one gave me the biggest head ache. The manufacturer claims a useable sensitivity of 1.5uV. Two different chips were tried and the best sensitivity attainable was 30uV!! A single stage amplifier had to be added ahead of the chip to achieve a suitable sensitivity. The main reason for using the chip is the RSSI output (received signal strength indication) to drive an S-meter and to run the squelch circuit. The other problem encountered was the second conversion mixer. The chip has an onboard mixer and oscillator which are used for the second conversion to an IF of



Photo 3

455 KHz in this project. According to the datasheet the oscillator will run up to 45Mhz with an external crystal, I tried three different crystal oscillator circuits using the chips internal oscillator but could not get it to run reliably. In the end a separate external oscillator was built and fed into the chip (hence the very small add on board mounted on the IF module – look for the crystal). Looking at the circuit diagram of the IF module you will see the incoming IF signal is passed through FL1, this is a 10.7MHz ceramic filter taken from the scrap tuner. You will also find these in CB sets and FM broadcast radios or they can be purchased new (sharp intake of breath!) from the usual suppliers. Although primarily designed for FM use they work well here.



CONTINUED ON PAGE 4

# How I became a Radio Amateur—Mel M0MAJ

So, you are sitting in a field next to Lake Bala, which is on the edge of the Snowdonia National Park, sipping at a 12 year old single malt, when your mate of the last 20 odd years finally arrives. Usual greeting exchanged, suitable refreshment offered, and then on to the business of helping him with the erection of his tent. Amongst the language and general abuse used to establish the correct assembly of the afore mentioned accommodation, the conversation comes round to our usual little challenge that we set each other as we break camp the each year, and we both discover that we have been successful in our efforts. More drinks! Colin ( G8BCO ) then tells me that he already has my challenge ready for next year and that tomorrow we will be starting on it. ( Oh sh-- )

The following morning finds me standing on a footpath, behind a hedge and under a tree waiting for a lead weight on a long piece of twine to be launched over the highest branch possible. I am to catch the lead weight at it descends from somewhere up there in the morning sunlight and then make fast the end of the twine, detach the weight, pass it back through the hedge and then wait further down the path for the weight to descend once more. Yeah right course I am! Lead hurts don't it? Anyway with a lot of back and forthing, what I now know to be a 'long wire' ( useful stuff eh?) is finally established in the foliage above, an earth spike is driven in to the ground, and all connections made

to the 'radio' via an ATU ready for the power to be finally connected. ( already half way to foundation licence. Got some of the terminology already. Good this radio stuff, innit?) The radio is switched on and away we go. Colin is in his element and before long we are making 'contacts', Ireland, Cyprus, Japan but I still can't see if there is a tape recorder playing anywhere. It is announced that my challenge for the following year will be to get at least a foundation licence.

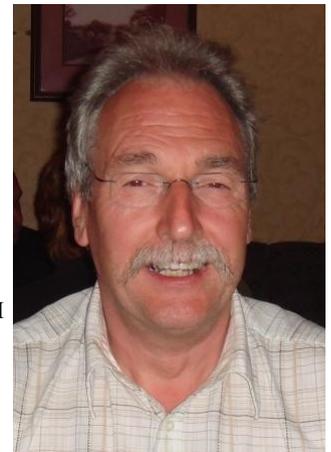
Christmas comes and goes and the year ticks gently by and thoughts return to the annual holiday. Oh bugger, what have I forgotten? Yep you are right. Oops! Just at this time I am driving my vintage car at Jannie ( Known as Lamb Chop to some of us ) and Graham's wedding. Hold up! ( inspiration!) Graham is one of those radio ham people, ( short fanfare ) maybe I should ask him if he knows how I can extricate myself from the mire and shame of not completing the challenge from last year. Yep. Graham knows just the chap from the Wythall Amateur Radio Club .He is called Chris Meadows and there is a course about to start. Phew might just get away with it. Meanwhile back at the wedding, a Peugeot with an antenna on the back turns up and I find myself talking to the late Reg Brown. I am now assured, that I am going to be able to complete the challenge. Calls are made to Chris, course dates sorted, sessions attended,

test passed, licence applied for and lo and behold, I become, with great pride I might add, M30FJ. Celebrations all round! ( Radio does seem to involve a lot of drinking somehow. Thirsty work eh! )

I arrive at Bala with some borrowed gear. Drinks are called for to celebrate the success of completing the challenge. We set up a radio station, and play radio during the time not spent sailing or socialising on site. Happy days! Advancement is now a requirement. Intermediate is taken followed by Advanced. M0MAJ has made it, but not without a few doubts at the final hurdle including an Ofcom cock up. I enjoy listening more than talking on air but isn't it great to be able to butt in when you want to and do it all legally!

My thanks go to all those friends, enthusiastic and dedicated people, who have given so much and helped me and many others, along the sometimes difficult way, in order that we might achieve the dizzy heights of holding a full amateur radio licence. I salute you all.

Mel.  
M0MAJ



## Airband Receiver cont

This filter gives the radio most of its selectivity and is good for 50 KHz channel separation. From the filter 10.7 MHz IF signal is amplified by J – FET Tr1 (another 2N3819 – you will find these in abundance inside old Europa PMR sets or you can buy new). IFT 1 is a 10.7 MHz IF transformer also taken from a tuner. The low impedance secondary winding is fed into IC 1 (TDA1072A) on pin 14. Second local oscillator signal (10.245 MHz) generated by Tr2 (a Colpits crystal oscillator) is fed into pin 12. The crystal used in conjunction with Tr2 is a 10.245 MHz type used for second local oscillator in many different PMR sets, mine came from an old Storno ( Westminster's use a 11.155 MHz type which is also suitable) These two signals are mixed together within the chip to produce the second IF of 455 KHz. This second IF leaves the chip on pin 1, passes through IFT 2 and reenters on pins 3 and 4. A 455 KHz AM filter was originally fitted between IFT1 and pins 3/4 but was found unnecessary as there is sufficient selectivity given by FL1 and the IF transformers. The 455 KHz IF signal is AM demodulated in

the chip, audio appearing on pin 6. A received signal strength indication voltage is output on pin 9 of the chip which is used to drive an S-meter and provide a sample voltage for the squelch circuit. The manufacturer's datasheet is not very detailed and no chip internal circuit diagram is given. As a point of interest, it was found that there must be a DC path between pins 11 and 12 when using an external crystal oscillator hence L1. The AF signal is then fed to the squelch circuit and finally to the audio power amplifier.

### NEXT ISSUE

In the next issue the squelch and audio circuits will be described along with a add on RF pre-amplifier. Also described will be some of the practical construction methods and RF alignment.

**COIL DETAILS – RF FRONT END BOARD**  
L1 and L2 - 5 turns Cu 18 swg on 10mm former, air cored. L1 tap at ¾ turn from cold end (ground end). L2 tap at ½ from cold end. Space wound and occupies all of former length (25mm).  
T1 – 25 turns 32swg enamelled Cu on 5mm IF former. Tap at 7 turns from cold end (HT end). Slug tuned.  
L3 – 5 turns 18 swg enamelled Cu on 5mm IF

former space wound and slug tuned.  
T2 and T3 – 10 turns 32 swg enamelled Cu bifilar wound on Amidon FT50-43 torroid core.  
All IF coil formers taken from old PMR sets (Westminster/Europa).

### VARIABLE TUNING CAPACITOR

C1,C2,C9 15pF+15pF+15pF

### SEMICONDUCTORS

Tr1 – BFR91

Tr2 and Tr3 – 2N3819

Tr4 BSX20

Tr2, 3 and 4 can be found in Europen PMR sets.

### COIL DETAILS – IF BOARD

IFT 1 – standard 10.7 MHz IF transformer (CB sets etc.)

IFT2 – standard 455KHz IF transformer (CB sets)

Misc.

Xtal 1 – 10.240 MHz second conversion crystal (11.155 MHz also ok) found in various PMR sets.

FL1 – 10.7 MHz ceramic filter (tuners, FM radios, CB sets)

### SEMICONDUCTORS

Tr1 – 2N3819

Tr2 – BC108 (lots in Europa)

# Club Diary

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
Monday	29th Mar	Foundation Course session 1
Tuesday	30th Mar	Homebrew evening
Sat-Mon	3-5th Apr	Easter Vintage Special Event Station at Stratford Armouries
Tuesday	6th Apr	2m UKAC contest
Monday	12th Apr	Foundation Course session 2
Tuesday	13th Apr	Committee Meeting
Monday	19th Apr	Foundation Course session 3
Tuesday	20th Apr	Homebrew evening
Saturday	24th Apr	Foundation Course session 4
Monday	26th Apr	Foundation Course session 5
Tuesday	27th apr	Talk by Martin on PA systems for gigs
Monday	3rd May	Foundation Course session 6
Tuesday	4 th May	2m UKAC contest
Saturday	8th May	Foundation Course session 7
Sat-Sun	8-9th May	Special Event Station VE day in Wythall Park (tbc)
Monday	19th May	Foundation Course Exam
Tuesday	11th May	Committee Meeting

## VE day 65th Anniversary 8th May GB4VE SE station

Our chairman Vaughan M0VRR, suggested recently that it might be a good idea to set up the caravan on the park one weekend before VHF NFD and have some fun operating HF/VHF into various antennas. This would give new operators some experience of field day operating in preparation for VHF NFD. Thinking that this might be something we could get a special event call sign for I looked up some anniversaries on google and found that it was the 65th Anniversary of the VE day on the 8th of May. Just in case this weekend was suitable for what Vaughan had in mind, I have taken a NOV for GB4VE callsign. I don't know if any other special event stations will be celebrating this anniversary, but I wouldn't be surprised if there were other stations on air that weekend. If you are interested in coming along and having a go then

contact  
Chris  
G0EYO  
or  
Vaughan  
M0VRR.



### RSGB VHF Contests:

Date (2010)	Time UTC	Contest Name	Sections	Notes/Special Rules
Every 1st Tuesday	2000-2230 (Local)	<a href="#">144MHz UKAC</a>	<a href="#">AO</a> <a href="#">AR</a>	QTH Locators , Activity contest , Club Championship
Every 2nd Tuesday	2000-2230 (Local)	<a href="#">432MHz UKAC</a>	<a href="#">AO</a> <a href="#">AR</a>	QTH Locators , Activity contest , Club Championship
Every 3rd Tuesday	2000-2230 (Local)	<a href="#">UHF UKAC</a>	<a href="#">AO</a> <a href="#">AR</a>	QTH Locators , Activity contest , Club Championship
Every 4th Tuesday	2000-2230 (Local)	<a href="#">50MHz UKAC</a>	<a href="#">AO</a> <a href="#">AR</a>	QTH Locators , Activity contest , Club Championship
Every 5th Tuesday	2000-2230 (Local)	<a href="#">70MHz UKAC</a>	<a href="#">AO</a> <a href="#">AR</a>	QTH Locators , Activity contest , Club Championship
6-7 Mar.	1400-1400	<a href="#">March 144 432MHz</a>	<a href="#">SF</a> <a href="#">SQ</a> <a href="#">Q</a> <a href="#">6S</a> <a href="#">6Q</a>	
14 Mar.	1000-1200	<a href="#">70MHz Cumulatives #2</a>	<a href="#">Q</a> <a href="#">SF</a>	Cumulative contest ( <a href="#">S5</a> )
4 Apr.	0900-1200	<a href="#">First 70MHz Contest</a>	<a href="#">Q</a> <a href="#">SF</a>	
11 Apr.	0900-1200	<a href="#">First 50MHz Contest</a>	<a href="#">Q</a> <a href="#">SF</a>	Post Codes, Countries and Locators ( <a href="#">M3</a> )
1 May.	1400-2200	<a href="#">432MHz Trophy Contest</a>	<a href="#">Q</a> <a href="#">SF</a>	Runs concurrently with the first few hours of an RSGB 24 hour event ( <a href="#">S6</a> )
1-2 May.	1400-1400	<a href="#">432MHz-248GHz Contest</a>	<a href="#">Q</a> <a href="#">SF</a>	

### RSGB HF Contests:

Date	Time (UTC)	Contest Name.	Dates - Mode - Frequency - Exchange
January	2000-2130.	<a href="#">80m Club Championships</a>	5th - CW; 14th - SSB; 22nd - Data
Jan 11	1400-1800.	<a href="#">Affiliated Societies Team Contest</a>	3510-3590kHz, RST+Serial (CW)
Jan 17	1400-1800.	<a href="#">Affiliated Societies Team Contest</a>	3600-3750kHz, RS+Serial. (SSB)
February	2000-2130.	<a href="#">80m Club Championships</a>	2nd - SSB; 11th - Data; 19th - CW.
Feb 14/15	2100-0100.	<a href="#">1st 1.8Mhz Contest</a>	1810-1870kHz, RST+Serial+District.
March	2000-2130.	<a href="#">80m Club Championships</a>	2nd - Data; 11th - CW; 19th - SSB.
Mar 13/14	1000-1000.	<a href="#">Commonwealth Contest</a>	3.5-28MHz, RST+Serial
April	1900-2030.	<a href="#">80m Club Championships</a>	5th - CW; 14th - SSB; 22nd - Data
Apr 4	0700-0830.	<a href="#">RoPoCo 1</a>	3520-3570kHz, RST+Postcode Received
May	1900-2030.	<a href="#">80m Club Championships</a>	3rd - SSB; 12th - Data; 20th - CW

### Other HF Contests:

Contest Name	Dates
<b>March 2010</b>	
ARRL Inter. DX Contest, SSB	0000Z, Mar 6 to 2400Z, Mar 7
BARTG HF RTTY Contest	0200Z, Mar 20 to 0200Z, Mar 22
Russian DX Contest	1200Z, Mar 20 to 1200Z, Mar 21
CQ WW WPX Contest, SSB	0000Z, Mar 27 to 2400Z, Mar 28
<b>April 2010</b>	
SP DX Contest	1500Z, Apr 3 to 1500Z, Apr 4
EU Spring Sprint, CW	1600Z-1959Z, Apr 10
EU Spring Sprint, SSB	1600Z-1959Z, Apr 17

**Wythall Radio Club have just been voted**  
**Region 5 Club of the Year by the RSGB**  
**Well done everyone for making us the great club we are!**

# G3TXQ Hexbeam built by Ant MW0JZE and Chris G1VDP

*(Editor's note. In the Nov-Dec 2009 issue of the Newsletter, I wrote about the G3TXQ Hexbeam and how despite its compact size, it promised excellent performance. Chris G1VDP recently completed building his and writes of his experiences)*

When I decided that I was going to build a Hexbeam I had made a comment in passing to Ant (MW0JZE) at one of the events the Strumble Head DX and Contest Group were putting on, that I was going to build one. And at the same time, without knowing, Ant had also made the decision to build one for himself. What Ant and I were looking for was a



multiband antenna that covered 20, 17, 15, 12, 10 and 6M, with one feed line, and that would perform better than the Cushcraft MA5B I had and the MQ36 hybrid quad he had (both compromise antennas that had worked well for both of us).

So when I returned to my home in the Midlands following the CQWPX contest 2009 I started to get the bits and pieces together to



start this project. Luckily Rob (MW0RLJ) had had some of the bits of metal necessary in the construction in one of his sheds and kindly donated them to the project.

Reading all the various web pages on the construction of the antenna I decided to go with the G3TXQ broad band hexbeam using fishing poles for the spreaders. Looking around for the best prices for these simple items was a task on its own, and eventually I managed to get them from a well known – within fishing circles that is – tackle shop in Norfolk, England. It was at this time that Ant and I were having a chat and discussing our SHDXCG trip to Ramsey Island for the IOTA that he mentioned he had built one and was on with a second one to take with us – see <http://www.mc0shl.com> for details and photographs – on the mini dxpedition.

This meant that not only could I see the easiest way to construct the antenna and solve some issues I had, but it would give me the opportunity to try the antenna out for myself.

Come the day we sailed over to Ramsey, I saw for the first time the engineering that Ant had performed on building these antennas. Not only were the materials used stronger than the parts I had, the overall construction was one that was going to last for quite a number of years – and these 2 were his prototypes!

After the event I sat chatting with Ant and asked him if it would be possible for us to get together to build one for my home. Ant said yes and we eventually managed to do this one November weekend where I went down and acted like Igor to Dr Frankenstein – Ant's assistant in the building of the monster.

Prior to my arrival at Ant's home he had requested I get some bits from a supplier for the construction and have it delivered to his home ready. Ant also made the centre post and did all the wiring for the connectors within the post before I got to him. Again I was amazed at the quality of the engineering in this part, in fact all the engineering of the antenna is second to none and I personally don't think that it

could have been constructed any better if in a factory environment.

## **Building and Erecting**

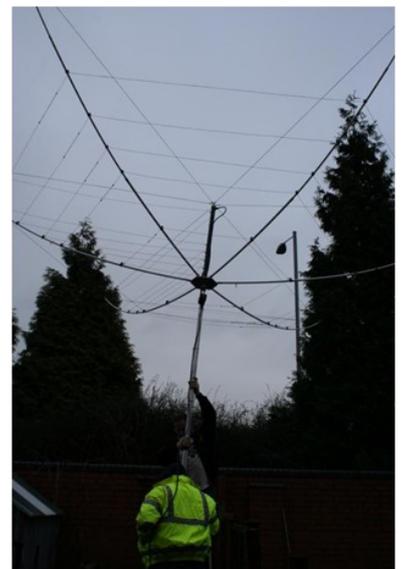
Having built the antenna towards the end of November and not being able to get an antenna party together until the last weekend of January 2010 the antenna was in my house waiting to go up in the air.

This was done with the assistance of Tim (M0URX), owner and user of one of the



Ramsey Hex beams, and Vinnie (2E0COV), who also is having one of these antennas. We got together on the Sunday morning and started by attaching the rotator to the mast. The actual construction of the antenna was the easiest and simplest of tasks in antenna building I have ever undertaken.

Starting with the centre post the spreaders are inserted into the hub, each having 2 support chords to get the shape – one to the centre and one to the next spreader to give the whole lot a little rigidity – taking opposite spreaders to the centre and then >>>



## Training Report

### Intermediate Successes

Our five candidates successfully passed their Intermediate course examinations on Monday 22nd Feb. Congratulations (l:r) to Paul M3XWI, Terry M3XTV, George M6GWS, Malcolm M6MGR, and Mark M6MSW. Advanced course next chaps?



L:R Paul (2E0?). Terry 2E0XTV, George 2E0GWS, Malcolm 2E0MGR, Mark 2E0MSW

### New Foundation Course

The club will be running a Foundation Class starting Monday 29<sup>th</sup> March and every Monday until the 10th May. This course is now full. We are considering running a weekend course sometime in 2010 so if you are interested in doing Foundation course with Wythall register your interest with Chris G0EYO on g0eyo@wythallradioclub.co.uk

## Have you paid your Subs yet?

Club Subscriptions run from September to August each year and we normally start collecting subs at the AGM in October. We still have a few members who have yet to pay their subscriptions for this year and David G0ICJ our Treasurer would love to receive your payment as soon as possible, either direct at the club or by cheque to his home:

David Dawkes G0ICJ  
95 Houndsfield Lane  
Wythall  
Birmingham  
B47 6LX

Cheques should be made payable to Wythall Radio Club

Club Subscriptions are:

£15 for individual membership £25 for family membership (Pensioners 65 or over, full time students and Unemployed persons will pay half the membership rates)

Member who fail to renew by the end of March will be taken off the e mail list and won't receive club news and information

## G3TXQ Hexbeam continued

>>>>the cord to each spreader all the way round. This is should take no longer than 15 minutes.

The next phase is the attaching of the wire for each element. Starting with six meters it is a simple task to thread each band through the premeasured support loops and connecting with a locking nut to the centre post. Again this took about 30 minutes due to the constraints and room in my small rear yard. But if you have the room in the garden then the whole construction should be around 30 minutes for 2 or 3 persons.



### On air performance.

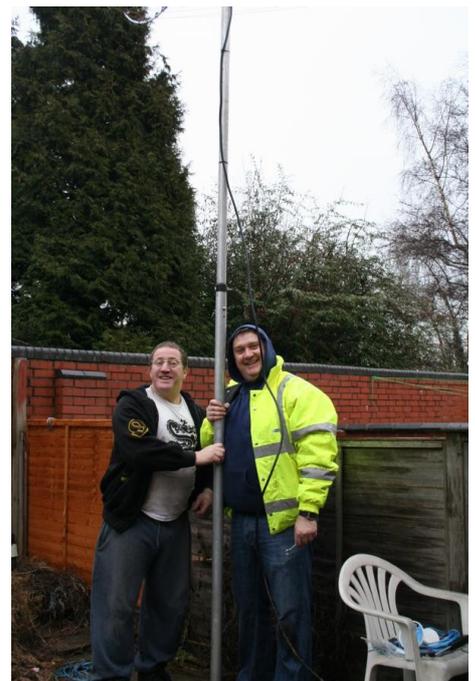
All I can say is "WOW". If I can hear them I can work them. Using only 100w from my FT2000 I am working stations that I couldn't hear with my old Cushcraft MA5B. I use all modes and working most DX with one call – especially on CW. This past weekend (6<sup>th</sup> and 7<sup>th</sup> February 2010) I had a play in the XE RTTY contest and I had a small pile up of Japanese stations on 20M, this could never have been achieved with the MA5B, and both antennas were mounted at the same height in the same spot at the bottom of my yard. All I need now is to get my amplifier working and I will be a big signal on the bands. I am so confident and happy with the antenna that I am going to enter this coming weekends CQWPX RTTY contest on 20M using the antenna to again put it through its paces.

Don't get me wrong that all I have done is used it on 20M. I have tried every band – including 12, 10 and 6M – with good results. Although the 3 higher bands haven't yet started to show any real DX I have made some contacts on them. On 17M over a period of about 3 hours I managed to work 6W/GM4FDM and 6W/PA3EWP on 3 modes CW RTTY and finally SSB through the usual EU pileup. 15M has also allowed me to crack the pileups on all modes, with 5X1NH, OH1VR/VP9, XE1CQ, and 6W/GM4FDM all being logged (these are just a selection on one page of my log) on this band.

If you are thinking of building one, or just

want to buy one to erect then I can definitely recommend the G3TXQ Hexbeam being built by Ant. If you need more information then visit his website at <http://www.g3txq-hexbeam.com> where there are dimensions and constructional details, along with photos of mine being built within my yard. And I am not just saying this because Ant is a friend, I do believe this antenna is the best for any compromise type of antenna on the market. And I also think this would be a good antenna for portable use.

Chris G1VDP



# Contest Group Report

The sun has come alive once again. In the last couple of weeks I've taken part in a few HF contests, and the 15m band (21 MHz) has finally started to yield some consistent F layer propagation, after lying quiet for several years, with the exception of the summertime E's propagation around Europe. In the WPX RTTY contest in mid-February, I worked several JA stations, and there was a sustained opening to all parts of the USA and Canada in the afternoons. Alaska also went in the log, but I missed out on Hawaii as the pileup was too big. The same was repeated in the ARRL DX CW contest a couple of weeks later. I focused my activity on 15m. As my antenna is higher, in wavelength terms, on 15m compared with 20m, I found my signal was getting out a lot better. HF antenna height should be at least a half wavelength above the ground if possible for low angle (i.e. long distance) radiation. So now's the time to think about some 15m or 10m antennas! On the Sunday evening of the ARRL contest, I was giving away a few points on 40m. This was with 100 watts, and my windom dipole antenna centre at around 12 feet above ground – I had not extended my fibreglass mast. Most of the stations heard me first time. When I called K3LR, they asked me to move to 80m, where I also went straight in the log. Admittedly, it was the antennas at the far end doing the hard work, and this is a good example of how contest stations can give you new DXCC countries or States for your own tally easily, even when your own antenna farm is quite modest.

## Christmas Contest Results

Congratulations to everyone who took part in last year's Club Christmas Contest. There was a huge amount of activity, with the majority of the club's membership on air some time over the Christmas week. The club officers have been very pleased to see a number of the newer club members, and those recently passed through the training courses getting stuck in.

At the top of the table, it was very close between multiple past winner Jim 2E0BLP, and

Place	Call-sign	Score	Mults	Total Score
1**	G0MLY	81	28	2268
2*	2E0BLP	83	27	2241
3*	M6FAB	77	27	2079
4	2E0NY C	76	23	1748
5	2E0SD D	62	21	1302
6	G0EYO	54	22	1188
7	M3XIV	60	18	1080
8	M0DG Q	54	19	1026
9	G0ICJ	46	19	874
10	M0GJM	50	16	800
11	M0RJH	39	14	546
12	M0AEJ	32	12	384
13	M0VRR	23	13	299
14	M0COP	12	9	108
=15	M3SSP	7	7	49
=15	G0MT N	7	7	49

Chris G0MLY. Chris wins this year, just by a whisker ahead of Jim. Special mention also to Lynne M6FAB with a very creditable 3<sup>rd</sup> place. Chris was presented with the Reg Brown G7OJO Trophy at the February committee meeting.

There may be some tweaks to the rules for the 2010 event. Thanks for feedback received so far. It would add to the fun if more of the members active in the contest could send in a log, or at least a score to add to the results table for next time.

## RSGB Contest Reminder Service

On several occasions I've been asked to send email reminders before the next 2m or 80m club championship contest session. Sometimes people like to be reminded a couple of days before the event, and others just a few hours. Also, it does require me remembering myself, and be in a position to send the reminder at an appropriate time. Now Pete G4CLA from the RSGB Contest Committee has created an email reminder service. Go to

one of the links below (one for VHF, one for HF) and you can set yourself up a series of reminders for any events that you are interested in. You can choose how many hours or days before the contest the reminder alert should be sent. I've had a play with this and it works well. I'd suggest we don't try to set this up for the club list, as there are lots of contests and people have different preferences. Instead register using your own email address. Please have a look at the below if you're prone to forgetting when the next contests are.

<http://www.rsgbcc.org/cgi-bin/vhfalerts.pl>  
<http://www.rsgbcc.org/cgi-bin/hfalerts.pl>

## QSL Bureau

This past weekend I've taken advantage of a little bit of free time to catch up with my QSL card chores. These days I keep an electronic log book, so I can type in call-signs from received QSL cards, and then mark them for having a QSL label printed. Later, I will print off a batch of labels, stick them to the QSL card, and then send them off to the RSGB QSL Bureau.

If you make any QSOs at all on HF, you're almost certain to be sent some QSL cards. So don't forget to send a number of Stamped Self Addressed Envelopes to your QSL sub-manager. You can find out who he or she is on the RSGB website. If you've recently upgraded your call-sign M6 -> 2E0 -> M0, you'll need envelopes with different sub-managers.

You could make your own QSL cards, and in small volumes printing them yourself at home is an option. Alternatively you can order cards from a variety of businesses. Some European QSL printers have better rates than UK printers. Try searching for UX5UO or LZ1JZ online, for some good examples.

73,

Lee G0MTN

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

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