



STARLITE

The Newsletter for Members and Friends of

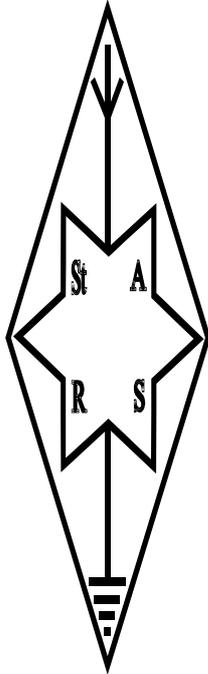
Stourbridge and District Amateur Radio Society

incorporating

Old Swinford Hospital School Radio Club

G6OI
1938

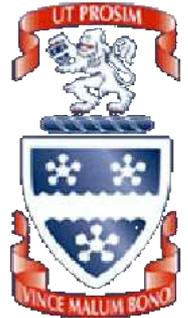
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ISSUE 09/12



Old Swinford
Hospital

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MEETINGS

Visitors always welcome

The Society holds its full meetings on the
1st and 3rd Monday of each month at

**Old Swinford Hospital School
Heath Lane
Stourbridge
(8.00pm – 10.00pm)**

Additionally the shack is open during the same times on the
intermediate Mondays

Telephone Enquiries to :-
Hon Secretary
John Clarke M1EJG
(01562) 700513

Or by e-mail to :-
honsec@g6oi.org.uk

All correspondence/enquiries should be
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21 Mill Lane
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Kidderminster
DY10 3ND

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www.g6oi.org.uk



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EDITORIAL

Dear Readers,

As always I would be interested to receive contributions and feedback on any of the articles. I aim to make Starlite available for the first day of each month, so please can you submit any articles in time for this deadline.

Apologies for the late appearance of Starlite this month. I had a two week break in late August and the SSB field day took up some of the usual spare time at the end of the month.

Adrian Bryan (G0NLA) Editor.

NOTICES

We have booked dates for the next Foundation course, which will start Monday 17th September, if you know of anyone interested please pass their details on to the Hon Sec.

As always Adrian (Newsletter) is interested in your articles for Starlite.



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THE WINDSURFER WiFi SIGNAL BOOSTER

A Simple 2.4 GHz Wifi Signal Booster

Introduction

To make life a little easier and with the holiday season upon us, I was looking for an easy topic for Starlite this month. I thought I would take advantage of a subject that is widely documented on the Internet, so apologies if you have come across this problem and solution already.

What end result am I looking for?

Having recently bought an Android tablet that is reliant on WiFi for internet and e-mail access, I decided to look for a way of improving my WiFi signal. My WiFi access point and the place I need to access the WiFi are at opposite ends of the house. I'm not totally sure what result I am looking for, but I would probably settle for a saturation signal in the house.

You may be looking for an increase in signal strength at specific locations; better selectivity - more of my signal and less of all other signals; increased distance from device to access point; better signal to noise. Or perhaps your views is, "surprise me. I'll know when I see it".

Although not essential, it would be desirable to be able to measure WiFi signal strengths. Tablet PCs, iPhones, iPads and Android phones can download an app to measure signal strength. A Windows laptop user can use a free utility from www.xirrus.com called WiFi Inspector. Armed with such a utility you will be better equipped to make before and after comparisons. See at the end of the article for one of the many displays available from an android WiFi app.

The search begins

To start off my search I Googled "diy wifi antenna". Looking at the results of the google search. relevant hits seem to fall into two categories. Category one entails dismantling your wireless router to expose the antennas internal coaxial cable with a view to fitting an improved antenna. This may invalidate the warranty of your wireless router, but it seems to produce better results than category two results.

The solution I opted for

With the second category of results, the rubber duck antenna is left intact. Category two solutions seem to produce more modest improvements. If you do not have an external rubber duck antenna then this article is of no help to you, but may be of interest.

Most of my Google searches lead to the Windsurfer antenna. In essence the windsurfer is a simple parabolic reflector. The rubber duck sits at the centre of the reflector. The windsurfer relies on a template that can be printed on a sheet of A4 paper. This can be found at URL here :- <http://www.freeantennas.com/projects/template2/>

Print the template out on ordinary photocopy/printer paper or go and take a look it, or better still cut it out and make it up out of paper. It won't work made out of paper, but it will give you a better idea.



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The template is simplicity itself and consists of two main parts. One part for the parabolic reflector and a second more complicated shape which the reflector attaches to. The two parts attach together by tabs and slots which hold the parabolic reflector in the desired shape and position it the desired distance from the rubber duck antenna.



The parabolic reflector will need to be covered in aluminium foil. I used the cardboard for my reflector and glued kitchen foil to it. I also cut longer tabs for the former/spacer part of the aerial. It does not matter which side of the reflector you glue the foil to. However, if the foil is bent one way it may crinkle slightly and bent the other way it may stretch. I went for stretch. Go ahead and try the reflector out.

Did it work

Yes, surprisingly well. Your results will probably be different to mine. The signal I received at my target networked device was improved. Signals from neighbours WiFi equipment were reduced and over all I was most impressed by the results for such a simple device. The indications are that the signal is increased by 9dB up to 12dB. (I don't know if this figure represents a power or voltage improvement or is isotropic, or with respect to a dipole). See the freantennas web site for polar diagrams of antenna performance.

Possible Variant

Another prototype you may wish to try is a similar design but using a beer can or similar. A beer can works best as it is made out of smooth steel, unlike baked bean tins or similar which are corrugated. Cut the tin as shown overleaf with the dotted lines. The Windsurfer should be used as a template to shape the parabolic reflector and position the rubber duck correctly. You may need to use some blutack or similar to make the mounting more robust. To check to see if the tin is large enough try



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wrapping a sheet of A4 paper around the tin to check the tin for size. Similarly you could substitute your cut metal sheet as the reflector and use cardboard for the part the reflector attaches to.

Pictured below is where to cut the beer tin and an output from a sample WiFi meter android app.



Acknowledgements

The credit for this article goes to the author of the www.freeantennas.com. You should visit this web site for authoritative information. The above article is based on my experiences of building and using the Windsurfer or EZ-12 antenna and I claim no credit for the design of this antenna.



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FROM OUR ROVING REPORTER

Starlite 2012 August

I don't have too much to report this month and I won't be able to attend too many events especially with the run up to SSB field day which, all being well, I will attend on Saturday the first of September. I can't make the Sunday because I will be at church for the afternoon organ concert at Holy Trinity in Wordsley. Our son Andrew will be away for the weekend and Glenys does not like being left too long by herself. I would also have liked to have visited the Telford Radio Rally. I have not been there for a few years as it is always on the same day as SSB Field day and of course the organ concert.

My colleague from Wem Shropshire and I have another trip planned to go up Snowdon before the nights draw in. This time we will take notice of the weather reports before booking and starting out. It will give me a chance to try out my latest piece of Radio equipment. The equipment is a 2m & 70 cm. hand held TX/RX which I purchased from Sinotel UK Ltd. Warwick for £29.99 +£3.99 postage. I have had very few contacts on it and never realised 2M was so quiet. However it is unlike the other 2m equipment I have previously owned. It is truly pocket sized and can be easily carried.

Everything seems to be fitting in place for the return of the organ concerts at the Buttermarket at Shrewsbury. As soon as the £1 million refurbishment of the 200 year old grade two listed building is completed in Sept 2012, the Shropshire Theatre Organ Trust can clean and test the organ. Then organists can be booked and posters printed to let every one know over a wide area and in a very much restored venue.



The Butter Market



Vintage BBC Outside Broadcast Truck

On August holiday Sunday I was at the Shropshire Steam Rally, Onslow Park. At the last minute one of my other STOT committee members decided to book a stall in the craft marquee to sell audio cassettes, cds etc. to raise money for the organ while I was busking in the vintage car area (see photo). I raised £24 while £30 was raised on the stall. I did not go on the Monday but a further £40 was raised. One of the highlights was doing my "Riding the TT Race" number from the George Formby film "No Limit", as the vintage motor bikes entered into the arena. It is the fourth time I have done that spot and thanks to the commentator David Bradbury who has done an excellent job



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over nearly 50 years. It's a good rally with lots to see, but I did not have chance to see any of the stalls. There is always one stall in the marquee who have the best Cider I have ever tasted. It is made by Gwatkin from Moorhampton Park Farm, Abbey Dore, Herefordshire.

The business plan has been submitted to Dudley Council by the Friends of Dudley Hippodrome Trust and they have another meeting with a council representative on Wednesday 12th Sept. If the plan is accepted and the trust can gain control of the Hippodrome there will still be a lot of work to be done. There is a Free Exhibition taking place on Friday evening 7-30—9-30 pm & Sat 11am -4-30pm, 7-30 -9-30 pm & Sun 11 am-4-30pm about Dudley memorabilia. It includes the Hippodrome and is held at The Station Hotel, which was where I started collecting signatures 12 months ago. I never realized that my project would get so much support and meetings with Dudley Council and having a Friends of The Hippodrome Committee. To date there are nearly 10,000 signatures including Ken Dodd (my scoop) and it has generated a great amount of interest through out the theatre media. Finally, on Friday 24th there was a new volunteer at the Carriage and Wagon Works, Bewdley. Although he had been working at Kidderminster for two years I soon got into conversation with him and discovered he lives at Hayley Green Halesowen and he has a transmitting licence, G8TXA Bob Heeley. So that makes three in the Carriage and Wagon works, Bernard Strutt G1BJS, Bob G8TXA and myself. It's a small world, there is also ex STARS member Mike Bristow who works at the Severn Valley Railway. You never know where these radio amateurs will get to next!

Best 73s Malcolm G8BOP Your Roving Reporter
Did I say there was not too much to write about ?





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YOUR COMMITTEE

Hon. President	JAMES	G7HEZ	
Vice President	ADRIAN SIMMS	M3HBA	
Hon. Secretary	JOHN	M1EJG	(01562) 700513
Hon. Treasurer	JOHN	G8UAE	
Committee Members	NICK	G6DQN	
	MARK	G7EDZ	
	MALCOLM	G8BOP	
	ANDREW	M6APJ	
	ADRIAN BRYAN	G0NLA	

CALENDAR OF EVENTS

It should be noted that the Shack will be open every Monday evening unless shown otherwise in the Calendar

September	Sat 1st	SSB Field Day contest
	Sun 2nd	same location as last year
	Mon 3rd	Open Shack Night - On air or natter
	Mon 10th	Talk by Dr. Paul Collins From Bridge Radio
	Mon 17th	Foundation Course Session 1
	Mon 24th	Foundation Course Session 2 & Committee
October	Mon 1st	Foundation Course Session 3
	Mon 8th	Foundation Course Session 4
	Mon 15th	Foundation Course Session 5 and WHICH Computer Talk
	Mon 22nd	Half Term - Open Shack Night - On air or natter
	Mon 29th	Foundation Course Session 6
November	Mon 5th	Foundation Course Session 7 + (Exam)
	Mon 12th	SURPLUS SALE
	Mon 19th	Talk on the RNLI
	Mon 26th	Open Shack Night - On air or natter
December	Mon 3rd	Open Shack Night - On air or natter
	Mon 10th	Christmas Meal - Probably Carvery
	Mon 17th	Open Shack Night - On air or natter
	Mon 24th	Open Shack Night - On air or natter