

ENIGMA 2000 Newsletter - Issue 28

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Mike's report on the Wellbrook ALA1530 active loop antenna

[An owner's view Feb 2000/05]

Before we continue into the rest of the Newsletter here is an interesting piece on the set up and use of the Wellbrook ALA1530 active loop antenna:

I have spent many years with the fascinating hobby as a short wave listener, in that time I have learned much about antenna construction and matching.

A couple of years back now after much research I built my own matching transformer/balun for my long wire, I used it with much success at my old QTH in Gloucestershire England.

During this time I became very interested in Non Directional Beacon (NDB) dx'ing.

Obviously I ran into the same problems as many a long wire listener does, that of local interference and strong signals on the same or very near frequency.

I began to wonder what I could do about this, move the long wire maybe?

Well last year we moved house to my new QTH in Sussex England, despite having more land putting up a long wire outside would be difficult for various reasons.

So I strung it up around the loft, and OK it worked quite well.

About this time I was seeing more and more about the ALA1530 loop on the 'NDB LIST

The reports seemed very impressive and the claims made by owners sounded almost to good to be true!

I was directed to the Wellbrook web site, <http://www.wellbrook.uk.com/> and here I found a number of reviews by radio magazines about the ALA1530.

I would recommend anyone considering the loop to have a look at these reviews.

I then spent a few weeks talking to both other users and the manufacture Mr Andy Ikin from Wellbrook, suitably assured I purchased the loop.

When it arrived, I was very impressed with it, but I did have some concerns as to the mounting facilities.

Reading the instructions it was recommended that a non conductive strut was positioned from the top of the loop to the mounting plate to add strength to the loop in high winds. I used a thick bamboo cane which I water proofed first. (has been replaced twice now)

Also the electronics for the loop are housed in a round plastic box which also acts as the main support.

I spent a number of weeks pestering Andy asking if it really would be strong enough to do the job.

He told me that the box was fully 'potted' and that his ALA1530 had stood up to all manner of adverse weather.

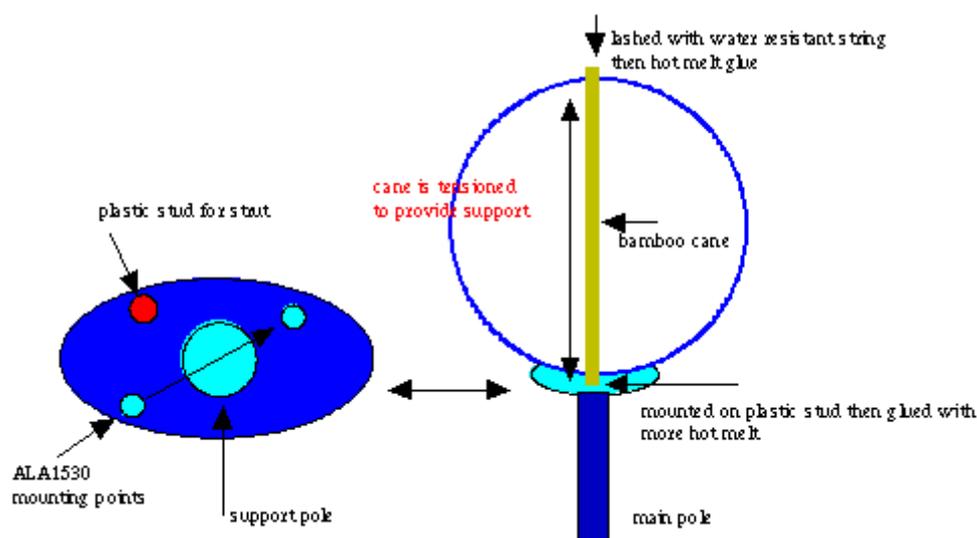
So began my hunt for a suitable mounting bracket, I did not have access to metal plate as suggested in the instructions and besides I wanted something neater.

I eventually tracked down the ideal thing.

Known as a 'Facia' bracket these are used to attach TV antennas to the wooden boards on the side of a house.

In addition they come with ready made holes to act as mounts and the other end of the bracket clamps neatly to a pole.

See my diagram below:-



So now you see how I mounted my ALA1530, I can confirm that it is strong, very strong.

AR-300XL Aerial Rotator Suitable for VHF Beams



Ideal for VHF beam radio or TV aerials with boom lengths up to 4m. Comprises 240V control box with compass bearings and low voltage rotator. Requires 3-core control

Its already survived a mini hurricane we had here Xmas Eve 2000, and ever since I put it up the weather has been diligently trying to blow it down with no success at all.

Here I am in 2005 and still the loop is in place and when I checked it last summer there were no signs of any stress!

The rotator I used was a AR-300XL available from Maplin and Waters & Stanton PLC, e-mail mark@wsplc.demon.co.uk to check availability first.

Below is a small picture of it to give you some idea.

You will find it sells for around £40, so it is quite cheap when compared to other types on the market.

I use a 5amp three core mains cable to feed it.

Actually it is a nice little unit and works by mean of two three phase motors one in the head and the other in the base unit.

I do find that you need to run it from one side to the other to ensure it is still calibrated properly, i.e. from 0' to 360' and back.

I set mine up in the garden by putting a compass on top of a plastic pole fitted to the rotator head, I then made sure that the compass was pointing due North and then moved the rotator control and marked off on its face in 10' steps, it takes time but worked!

Once its up and running you can use your local NDB's to check!

So how am I finding my ALA1530 then?

Well I have had a lot of fun with beacons, logging many more than I ever thought possible and many off them are on the same frequency as each other, using the directional properties of the loop I have been able to null out beacons in different directions, here is a short extract from my recent NDB log.

Well I have had a lot of fun with beacons, logging many more than I ever thought possible and many off them are on the same frequency as each other, using the directional properties of the loop I have been able to null out beacons in different directions, here is a short extract from my recent NDB log.

290.0	TR	Tirana	S2	Albania	31.01/2000	19:47	116/296'	116'	1163
326.0	DL	Ghazala	S3	Oman	31.01/2000	20:03	101/281'	101'	3689
371.0	NH	Nowbi	S3	England	02.02/2000	14:58	33/213'	33'	154
371.0	MLX	Mortain/Ploujean	S6	France	02.02/2000	15:02	213/33'	224'	206
380.0	BPI	Bristol	S5	England	02.02/2000	15:04	294/114'	294'	99
340.0	HAW	Hawarden	S2	Wales	02.02/2000	15:11	294/114'	329'	192
429.4	SSD	London Stansted	S7	England	02.02/2000	15:16	26/206'	26'	83
406.0	BHX	Birmingham	S6	England	02.02/2000	15:20	337/157'	337'	123
326.0	PSH	Dublin	S2	Ireland	02.02/2000	21:04	311/131'	311'	298
343.0	CGO	Paris	S3	France	02.02/2000	21:22	132/312'	132'	184
360.0	SL	Stranraer	S3	Ireland	02.02/2000	21:25	336/156'	336'	107.9
314.0	DC	Brussels National	S3	Belgium	02.02/2000	21:41	88/268'	88'	221
378.0	ILY	Billiey	S2	Ireland	02.02/2000	21:48	308/128'	308'	288
397.0	OP	Dublin	S1	Ireland	02.02/2000	21:52	310/126'	310'	296
399.0	EAG	Agnolles	S2	Spain	02.02/2000	22:02	310/126'	177'	233
284.5	MA	Cabo Machichaco	S4	Spain	06.02/2000	20:53	64/244'	192'	518
290.0	ONL	Liege / Bierse t	S3	Belgium	06.02/2000	21:00	64/244'	89'	269
301.5	L	Torre de Hercules	S1	Spain	06.02/2000	21:04	64/244'	218'	630
318.0	LE	Luxembourg	S2	Luxembourg	06.02/2000	21:55	64/244'	102'	313
307.0	DIK	Dikrich	S2	Luxembourg	06.02/2000	21:47	64/244'	100'	304
517.0	ARD	Arad	S5	Romania	14.02/2000	23:22	64/244'	99'	1044
520.0	BS	Budaors	S2	Hungary	14.02/2000	23:28	64/244'	97'	912
432.0	TVV	Mozgosa Trebova	S3	Czech Repub	14.02/2000	23:33	64/244'	89'	764
490.0	WAK	Nakarej	S3	Buraria	14.02/2000	23:26	64/244'	107'	127.5

So you can see it works very well for NDB's.

I have also been able to use my loop to home in on local sources of radio interference, you do this by finding the null or weakest signal from the loop then subtract 90' and you have the bearing of the signal, the null of the loop is very sharp hence you use it to direction find

One of these local interference sources lasted for some time while investigations took place, it was horrid and put out a large S7 signal on 10 MHz and at various other harmonics, but using my loop I was able to null it out so much that I could SWL without problem so long as I did not want to listen in the same direction as the interference!

You will find that the directional properties of the loop is effective on long range signals (i.e. not within a few miles) from longwave up to around 5 MHz, however as I said if you have a signal that is interfering with a desired signal you can use the loop to null out the offending signal.

Even QRM/N can be reduced by rotating the loop at higher frequencies!

So there it is, I use my ALA1530 as my one and only HF antenna and wish I had had it many years ago.

I should mention that the loop comes with a interface box which is kept near the radio this takes the power supply for the loop 12v and also provides the connections for the radio and loop, these are BNC both at the loop itself and the interface box but obviously you can use what ever connector your radio needs.

I can on my experiences recommend the Wellbrook ALA1530 to you if you want a high performance low profile low maintenance HF antenna system with no matching or tuning to be done.

In addition the loop is of the magnetic type and so offers superior noise rejection when compared to other antenna types.

[Mike February 2000]

I have found the loop indispensable for number station monitoring, being able to get the best signal possible with greatly reduced QRM/N has made it possible to hear transmissions when others have reported it impossible!

I do service my loop and rotator once a year if I can, a little time spent weather proofing everything will pay dividends later.

I would still happily recommend it to anyone who loves HF.

©Author's Copyright. [Tnx Mike excellent piece].

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