

Zululand Amateur Radio Club News

The newsletter for the discerning Ham

May 2014

ZARC Committee

Chairman: Andrew Jansen ZS5AND

Vice Chairman: John Kramer ZS5J

Treasurer: Willie Axford ZS5WI

Secretary: Dawn Snyders ZS5ME

Ham Net: Jo Snyders ZS5PO

Editor: Jo Snyders ZS5PO

Webmaster: Andrew Jansen ZS5AND

Member: Warren Snyders ZS5WOZ

Member: Anne Griffiths ZS5FAB

Club Repeaters

Ntumeni 145.675 MHz

Empangeni 145.700

Club Packet Digipeater/Mail-drop & APRS Digipeater

Ntumeni 144.625 (ZS5ZLB Mail, ZS5ZLB-2 Digipeat, ZS5ZLB-7 KA-Node) PBBS: ZS5AND

Club Nets

ZS5PO & ZS6AE Have A Sched On Thursdays From 18:30 To 18:45
On 7.175 Or 3.635 Depending on propagation
ALL are more than welcome to join us for a "rag chew"

SARL News

08h30 - Sundays - 145.650, 7.066 MHz

NEXT ZARC MEETING

WILL BE THE AGM

DATE: 27th July 2014 (**Sunday**)

TIME: Meeting will take place Approx 13:30 ish, after **the annual luncheon @ 12:00**

QTH: At the QTH of ZS5ME & ZS5PO

E-Mail: dawnjo@telkomsa.net (Secretary)

Club Web site: <http://zs5zlb.zs5and.co.za/>

Editor, Q.R.L.



Greetings & Salutations fellow members, I trust that this news letter finds you all in good health. The next club meeting will be the AGM, on **27th July 2014**. The venue will be at the home of ZS5ME & ZS5PO. The meeting will take place at **13:30**. Please make a note in your day books and diaries. The time for the Luncheon will be **12:00**, giving everybody a chance to get there after Sunday morning commitments.

**Have you bought insurance to continue enjoying your hobby yet? SARM membership IS that insurance!!!
Is your hobby worth R1.09 per day to you? YES?! Then join the SARM, it's the RIGHT thing to do!!!**

The radical opinions, and rantings of the Editor, are not necessarily the opinions of, or supported by, the ZARC Committee, or it's members.

Wots Potting In The ZARC

Birthday Greetings Go To:



May: Tinkie, SW of ZS5WI, on 18th, J-J, Son of ZS5WOZ, on 23rd

June: Reg, ZS5REG, on the 4th, Sakkie, ZS5ID, on the 9th

July: Dawn, ZS5ME, on the 12th, John, ZS5J, on the 20th, Rod, ZL1RK, on the 31st

August: Anne, ZS5FAB, on the 2nd, Melissa, daughter of ZS5WOZ, on the: 17th, Andrew, ZS5AND, on the 18th, Bridget, daughter of ZS5ME & ZS5PO, on the 20th.

Many happy returns to all of you, and may you be spared for many more years.

(If your birthday wishes do not appear here, it is because you have not informed me of your birth date).

Get Well Soon



I have not heard of anyone who has been doctor bothering lately, except Willie ZS5WI, who has been in and out of hospital with back problems. We wish you well, and a quick and total recovery after your next visit to hospital, which is coming up.

Club Happenings

It has been decided, by the majority of club members, who have so far bothered to reply, that the club AGM will take place on **July 27th 2014**. The Luncheon will begin at **12:00 SHARP**, and the meeting will follow at **± 13:30**. After hearing some reports of dissatisfaction regarding the quality & pricing of the last "Christmas" luncheon, Dawn, ZS5ME suggested that we rather have the club annual luncheon on the same day as the AGM. She also offered to cater for the lunch at around **± R80.00** per head, compared to the **R120.00** charged by our usual venue. She said she could also offer a similar menu. **The venue MUST be in Mandeni.** (Where her kitchen is) The luncheon will be held first at **12:00** followed by the meeting at around **13:30**. SO, can all the members **PLEASE let Dawn know, ASAP**, who, & how many in your party, will be attending, so that she can do her planning. If you would like to enjoy an alcoholic drink with your lunch, please bring your own. Cool drinks & tea or coffee will be available.

The menu that Dawn is envisaging follows below:

STARTERS:

Choice of: Salmon Mousse or Butternut soup Served with Melba toast

MAINS:

Roast Pork Roast Lamb Cold Tongue Chicken Casserole

Vegetables:

Roast Potatoes Cauliflower & Broccoli Bake Roast Pumpkin Green Beans Baby corn Rice
Gravy Mint Jelly Apple Sauce Green Salad

DESSERT:

Pavlova Lime Cheese-cake Chocolate Mousse
Tea, Coffee

For the kids:

Starter: Mini Pizzas Beef Lasagna and of course - Desserts

Brian, ZS6AE & I have a sched at around **18:30** every **Thursday** evening on **7.175** or **3.635** depending on propagation. Anyone who feels like it is welcome to join us for a general “rag-chew”.



Light houses It is nearly time for **Lighthouses-on-the-air** again. Is there anyone in the club who is interested in taking part?? Please let us know as soon as possible, as arrangements need to be made for permission for St Lucia Light, or failing that, accommodation must be booked for Tugela Bluff. I also have to register us as well. It takes place **16th -17th August** this year.

[New ZARC Web Site](http://zs5zlb.zs5and.co.za/)
<http://zs5zlb.zs5and.co.za/>

The owners of our previous web server, that hosted our old web site, asked us to “vat jou pie en waai” 🇷🇺. Our webmaster, Andrew, ZS5AND, then looked around and found us another server to host our website. Thank you for this Andrew. The old web pages were then transferred to the new site. Unfortunately Andrew cannot, due to pressure of work, spend much time mucking about keeping the web pages up to date, SO, we looked around for someone to do this for us, and found a young lady, who was prepared to do the web maintenance for us. She has offered to provide her web development skills to the ZARC, free, mahala and for niks. Thank you Chantel, you are a star!!!

It was decided, while we were updating all the data on the site, that we might as well revamp the site a bit, and add a few more bits and bobs of interest to the Ham fraternity. Although the website is still “Under Construction”, and this will be so for some time yet, you CAN go in and have a look around, just remember to wear your “Hard Hat”, as you will be entering a construction site!! 🇷🇺 Remember to “book mark” the web address that you see on the bottom of the first page of the news letter, and also appearing at the beginning of this article. If you have some ideas, let me have them, and I will pass them on to Chantel, to see if it is possible to implement them!

Packet

On the packet Mail-Drop scene. The TNC is beaconing out. The coax on this set-up still has to be renewed, and the antenna moved to the east side of the tower

APRS

Your path to any stations in RSA, (or anywhere in the world via the I-Gate on 144.625) will be **ZS5ZLB-2, RELAY4-4**. The I-Gate should be available between the hours of about **09:00** and **22:00**, WHEN I AM AT HOME. People in the Richards Bay/Empangeni area can get into the PMB I-Gate on 144.800.

For those of you Zululanders who have Internet, go and look on the **www.aprs.fi** web site, and put your call sign in the slot at the top of the column on the right, and press enter, and see if your station comes up on the map.

Repeaters

145.675: This repeater was replaced after the Xmas meeting & lunch, and the old Storno is working well.

145.700: This repeater is now a DEAD puppy, and needs LOTS of TLC. STILL waiting for ESKOM to open up for us to get into this site.

“SWAP SHOP”



If you have any items you want to get rid of, or if you are looking for something, Please let the Editor know and he will advertise it in the swap column for you.



Home Brewers Hoekie The New Carolina Windom By Len Carlson, K4IWL

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Taken and condensed from QRP EXPRESSIONS
Newsletter August 5, 2005
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As with all ham stations QRO or QRP, ten percent of a station's success in quality QSOs is the equipment and the operator. Ninety percent is the antenna. This is especially true in QRP since with very low power, by comparison to the Power Mongers, we need to get more ERP per watt out into the ether to be heard.

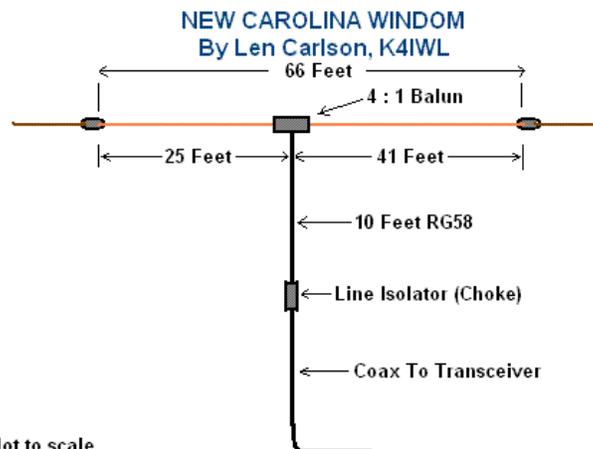
So when I got back into QRP a few years ago I found the fascinating world of antennas and RF radiators to be an exciting challenge and a means to find the *perfect* antenna which I call the.... *New Carolina Windom*..

I don't have room for an 80-meter dipole or long wire so I have to restrict the length to 100 feet or less. Besides my primary interests are working only CW on 40, 30, 20, and 15 meters.

Based upon these parameters, I have found what I consider to be the *perfect antenna*. The antenna I will show you how to build in this article evolved from a concept that had its beginning back in 1929 when Loren G. Windom described his invention in the September issue of QST, 1929, pages 19-22. Just do a search on [Google](#) for more on the "Windom".

A few years ago, three hams, *Jim Wilkie (WY4R)*, *Edgar Lambert (WA4LVB)*, and *Joe Wright (W4UEB)*, came up with an idea for an off-center fed dipole that carried Windom's single feed line antenna to the next level. It has since become known as the Carolina Windom. I will call this the Traditional Carolina Windom since it was the first attempt at creating this specific type of multi-band antenna based loosely on Windom's original concept. The differences between the New Carolina Windom antenna and Windom's original is that the Original Windom is not a dipole.

Enter the New Carolina Windom



NEW Carolina Windom Not to scale

shown cut for 40, 20, 15 and 10 meters. It will operate on 80, 30, and 17 meters but will require a tuner for these bands.

This more recent, New Carolina Windom, version has some very interesting characteristics as seen in the drawing above.

For one, the 4:1 Balun has been moved to the antenna radiator and is built into the center insulator. The other interesting feature is that the 10 feet of coax from the Balun is terminated in a choke or line isolator. I have fitted the 10 foot stub with PL-259 UHF connectors on each end. This allows the coax vertical radiator to be easily removed if desired. *It is designed to hang vertically which is one reason why this antenna is so effective. The radiation pattern when using the vertical radiator combines both horizontal and vertical radiation components and lowers the effective angle of radiation getting more of your signal near the horizon.*

This antenna is in use the world over by DX'ers and DX'peditions. In one Navassa DX'pedition, of the 33,000 QSOs made, more than 27,000 were accomplished with this antenna. The DX'pedition team also had a beam and verticals, but the *New Carolina Windom* was the antenna they used. Its reputation for excellent performance is so good that it served as one of the antennas in setting two 40 meter "mile-per-watt" world records of nearly 4,000,000 miles-per watt.

The antenna can be used without the vertical radiator but the radiation pattern will lose the low angle component and may make the antenna less effective. If the vertical radiator is removed then you should move the line isolator to the bottom of the balun.

NOTE: This antenna should not need a tuner on the 40, 20, 15, and 10 meter bands although you may use one if you feel the need to. It will operate on 80, 30, and 17 meters but will require a tuner for these bands.

Here is the math for designing the New Carolina Windom cut for your lowest band operation:

Holding true to the original Windom formulas, we use a ratio of 37.8% for one side and a ratio of 62.2% for the longest side after determining the half wave length at the lowest operating frequency....

EXAMPLES:

Using 7.1mhz as lowest frequency of operation we use:

$468 / 7.1\text{mhz} = 65.9$ feet (round to 66 feet) for total half wave length.

Short side length = $.378$ (37.8%) X 66 = 24.9 feet = 25 feet rounded

Long side length = $.622$ (62.2%) X 66 = 41.05 feet = 41 feet rounded

So we have the short length of 25 feet, and

long side of 41 feet using the formula.

Vertical length for RG58 from balun to choke = 4 to 1 ratio (meter band / 4)

40 meters / 4 = 10 feet

Using 3.9mhz (80/75 Meters)

$468 / 3.9\text{mhz} = 120$ feet for total half wave length.

Short side length = $.378$ (37.8%) X 120 = 45.36 feet

Longest side length = $.622$ (62.2%) X 120 = 74.64 feet

Vertical length 4 to 1 ratio = $80 / 4 = 20$ feet

Editors note: The New Windom can be designed for 160, 80/75, or any fundamental frequency you desire as the lowest band of operation and it should perform better on that fundamental frequency and still resonates on the harmonically related bands without a tuner. Just keep the original ratios (37.8% and 62.2%) the same by using the formula.

You will have to adjust the balun to choke length of RG58 in the same ratio by doubling the length from 10 feet at 40 meters to 20 feet at 80 meters and 40 feet at 160 meters. The ratio is meters / 4 = length of vertical feeder.

If you are a perfectionist, then you may want to trim ends for best SWR. According to all who have build the New Windom using these formulas, they work great! Get is up as high as possible and have fun!

For the complete article and plans for a homebrew balun and choke, check out Len's full article here at the Dallas ARC web site!

If you would like to contribute to your Club newsletter, or to contact me for any reason, please use the address / Phone numbers below.

Jo Snyders ZS5PO
PO Box 98
Mandini 4490

Telephone 032-456 2301

Mobile (Cell) 083-666 0709

Email jodawn@telkomsa.net

