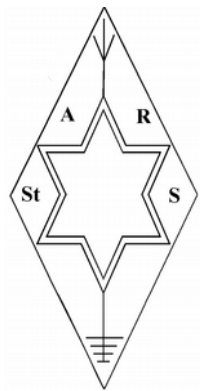


STARLITE

THE NEWSLETTER FOR THE STOURBRIDGE AND DISTRICT A.R.S.



**G601
G6SR5**



G4CVK

ISSUE NUMBER: DECEMBER 2017

**STOURBRIDGE & DISTRICT AMATEUR RADIO SOCIETY
INCORPORATING
OLD SWINFORD HOSPITAL SCHOOL RADIO CLUB**

MEETINGS HELD AT

**OLDSWINFORD HOSPITAL SCHOOL
HEATH LANE
STOURBRIDGE
[8:00 TO 10:00 PM]**

VISITORS ALWAYS WELCOME

**THE SOCIETY HOLDS ITS FULL MEETINGS
ON THE 1ST AND 3RD MONDAYS EACH MONTH**

FINAL ISSUE OF 2017

RSGB AFFILIATED SOCIETY

STARLITE

Telephone Enquiries to:-

Hon. Secretary
John Clarke M1EJG
[01562] 700513

Or by Email to:-
honsec@g6oi.org.uk

StARS Website URLs:-

www.g6oi.org.uk
<http://g6oi.ross-lewis.co.uk/index.html>

StARS Facebook Page:-

<https://www.facebook.com/groups/stourbridge.ars/>

All correspondence/enquiries should
be addressed to the Hon Secretary at:-

StARS
c/o The Mill House
21 Mill Lane
Blakedown
Kidderminster
DY10 3ND

Forthcoming Meetings

December 4 th	On Air. Informal. Digital Modes Group [Programming, etc.]
December 11 th	On Air. Informal. Digi Modes Group.
December 18 th	Main Meeting. Christmas Meal? <i>Final Meeting Of 2017.</i>
December 25 th	No Meeting On Christmas Day!
January 1 st 2018	No Meeting On New Year's Day! <i>StARS 80th Year Begins in March</i>
January 8 th 2018	On Air. Informal. Digi Modes Group.
January 15 th 2018	Main Meeting. <i>JT65 & FT8 Digital Modes by Wayne M5LLT</i>
January 22 nd 2018	On Air. Informal. Digi Modes Group.
January 29 th 2018	On Air. Informal. Digi Modes Group.
February 5 th 2018	On Air. Informal. Digi Modes Group.
February 12 th 2018	On Air. Informal. Digi Modes Group.
February 19 th 2018	Main Meeting – <i>Constructors' Competition</i>
February 26 th 2018	On Air. Informal. Digi Modes Group.

Editor's Snippets



Wintertime. We don't do much in the way of outdoor activity, so how about some indoor activity? We have radio equipment, which is vastly underused and is available for the “on air” meetings. I would be prepared to do a some on vhf for an hour or so, but how about you? Perhaps someone would operate some digital modes [PSK31, JT65, FT8, etc.], to show us what can be achieved with low power. I used to like RTTY, but I'm 20+ years out of practice, so I'll hang on for the time being!

[Photo is by G4XOM]

2017 was another relatively uneventful year, although there were a couple of main meeting presentations, an appearance at the OSH Open Day and the annual participation in SSB Field Day. I believe that SSB FD was not very successful, with activity being somewhat low and log-keeping errors losing us valuable points. Now the results have been released:- we claimed 17,056 points. After checking we were awarded 10,589 !!!!! Our error rate was very nearly 10%. I think this would be our worst score and placing ever ☹☹☹. Hope for better success in the next one! With this in mind, the Contest Team organisers may look at other avenues in Radiosport, for next season, and will report in due course.

2018 is StARS 80th Anniversary Year [beginning in March] and G6OI 90th year of its issue. This is an obvious milestone and we should commemorate it accordingly. I suggested that we operate some SES during the year in order to promote and raise interest in the Society, hopefully to attract new members. Have a word with a Committee member if you have any other ideas.

Last month, I asked for your most memorable contact and **Nick G6DQN** wrote:

“My most memorable contact was 2 days after being licensed in 1980. It was a 2 meter contact, using an HB9CV mounted on a rotary clothes line, to Sweden on 5 watts FM from a Kenwood handheld. Never did beat that one!!!”

This brings back a couple of memories from my past. I began short-wave listening in the mid-1970s, with a Realistic DX-160 receiver [*pictured right*], purchased from Tandy in Dudley. It wasn't anywhere close to being a high specification radio, but it suited my use; and my aerial was, simply, a random length of wire wrapped around the inside of my attic roof space. Originally, used for listening to broadcast bands, I eventually discovered the amateur radio bands.



This brings me to my most memorable amateur radio station heard, in 1979, on SSB, on the 20 metre band. It was at a Belgian research station on Antarctica and I do have the QSL card somewhere at home. Not bad for a deaf[ish] receiver and a bit of wire!

My second memory was in the late-1980s, when I spent a long weekend at Eastnor Castle deer park, together with my father [Den G0KZM], brother [Dave G0BHR], and the rest of the family, in their two caravans and my motorhome. It happened to coincide with the first weekend in September, so we decided to give a few points away on SSB Field Day.



Firstly, we threw a half-size G5RV between a couple of trees and connected it to my HF equipment of that time, which I still have today [pictured right]. During the weekend, we operated no more than 10 hours and I took the decision to send in a contest entry. When the results were announced, we were so pleased to learn that, with no real effort on our part, we had achieved 11th place amongst some *serious* Club station entries. Pretty good, eh?

Wayne M5LLT wrote of his most memorable contact:

“One of mine was chance reply on 2m to a CQ call from N5WQC. When I asked his location, it turned out to be The Space Shuttle Atlantis. I had a 10 minute chat with one of the astronauts on board. Best one in the log!!”

Now, I would like to feature some of your stories/memories, etc.

This space left intentionally blank for your contribution.

The Editor is waiting patiently for some input and has even resorted to reading sports magazines to fill the time!

Memories, photos, projects, general chit-chat, etc., would all be very welcome.

Send input to: rob4xom@outlook.com



Wayne's Radio Review

A must have mobile for the money: QYT KT8900D.

This radio is absolutely superb, the quality is fantastic. The reports I have received with this transceiver have been some of the best. It is so versatile having 4 frequency monitoring on both 2 and 70, fully programmable via the supplied USB cable and using Chirp software to do it is easy.

The radio is very sensitive, while being very selective too. Other radios I have tried in my car have proved poor compared to this one. The radio is tiny, but packs a punch, minimum of 25 w on 2 and 20w on 70.

The manual provided is very good, but there are some print issues; the numbering of the face plate buttons, etc., is out compared to the text, but that is only a minor point. Good description of the menu items and their function is there too. All of the menu items and buttons are accessible from the microphone, as well as on the radio front. While on the subject of the mic, there are 2 types of mic that could be shipped with the radio both work very well and give good voice over the air. The newer mic is just a bit smaller and lighter, but has all the same functions, my preference was for the newer one.

The mic keypad is fully lit and you can key in frequency to one of the VFO's at any time. You can programme up to 200 memories with a choice of text or frequency labelling. All the usual CTCSS on TX and RX, along with DTMF functions as well. There are also several other functions that help to cut out spurious openings of the squelch and hide the tail end of repeater squelch too, but you need to use these with care as you can lose the first part of transmissions with over aggressive settings.

The radio has a very clear colour screen and the colours can be changed to suit, from the menu or via Chirp. There is only one thing that is odd, but the information regarding the microphone always refers to it as a speaker mic. It is not, nor can it be, as there is no audio available on the mic plug, nor is there a speaker in the mic. This is of no consequence as the audio from the built in speaker is very good even in the car. I have been using this radio now for about 2 weeks and every time I cannot praise it enough.



It does everything and more that you want. For the money you can't go wrong and with space a premium in modern cars it is a winner.

The supplier, ITALKIE-UK, was the most helpful and understanding supplier I have come across, answering any questions before I purchased, and the after sales care second to none. I would definitely recommend this radio kt8900d and the supplier, ITALKIE-UK, to anyone. I enquired with this supplier about the new style mic. They replied immediately and offered to ship the new mic to me free of charge if the Amazon stock was the older type, which they did, and it came just over a week direct from China. Can't fault that for service. Ultimately I purchased from italkie-uk through a friend's Amazon Prime account to receive the radio next day, which it did, and I am using the radio and very pleased.

There is only one defect as I see it so far and it is not a major one, but if you turn the frequency encoder knob too quickly, it can skip or even go back a position. This seems to be a common fault, as I have seen others comment about this. Used slowly it is fine and if need be the up and down arrows on the mic work just as well without any bother.

The power out on 2m should be 25W, mine measured 28W, but that could be meter calibration. The radio only draws 6A on high power, so the supplied car DC plug can more than cope. The low power setting drops it down to 10W, so ideal for foundation licence holders. There is a dedicated socket on the back for the programming cable and a headphone/extension speaker socket. There would appear to be 3 connections to this, as not only is there audio, but PTT on there, too. So you can't just put a 2 pin 3.5 mm plug in or the ptt locks on, it has to be a stereo wired plug to work. Like said, though, the audio is fine with the built in one.

All-in-all a very good radio for the £79 purchase price.

Wayne M5LLT

Annual Surplus Sale

We had the usual auction sale, with 15 members and 3 visitors in attendance. Nick G6DQN acted as auctioneer, assisted by John G8UAE. The items for sale were varied, but the only amateur radio-related item I remember was a Datong Morse Tutor. *[I had many [sometimes aggravating] weeks of fun, using a Datong, when I was learning the code in the early-1980s.]* Many items were sold, raising some funds for the seller and the Society.

Jim G4WAO sent me another item from his usual source [@ VK2MB]. It's nothing to do with amateur radio, but interesting due to the recent hurricane, which devastated Puerto Rico. The subject is to do with Project Loon and emergency comms. Some real smarts going on to keep untethered balloons where you want them. I found it to be interesting reading; you may, too.
Editor.

Balloon navigation breakthrough helps extend cell service in Puerto Rico



One of Puerto Ricans' most basic needs in the wake of Hurricane Maria is communication with the outside world. Cell phone companies on the island are still working to repair infrastructure after the hurricane took 95 percent of the island's cell phone towers out of service.

So X, Alphabet's company devoted to technological "moonshots," is sending a fleet of balloons to serve as cell phone towers in the sky. "We are now collaborating with AT&T to deliver emergency Internet service to the hardest hit parts of the island," writes Alastair Westgarth, who leads the company's balloon-

based Internet efforts.

The idea of providing Internet service via balloons sounds crazy - indeed it has sounded crazy since Google first announced the effort, dubbed Project Loon, in 2013. But Google - now X - is deadly serious about making balloon-powered Internet access a real thing.

Westgarth acknowledges that "Project Loon is still an experimental technology and we're not quite sure how well it will work." But the company has been making steady progress over the last four years. The company can keep its balloons in the air for more than three months at a time, powered by solar energy. It has figured out how to efficiently steer flocks of balloons to keep them over an area that needs service.

How Project Loon works

Fundamentally, the balloons are a way to extend the range of an existing cellular network. A terrestrial cell phone tower communicates with a balloon soaring as much as 20 kilometers overhead. At that height, a balloon has a clear line of sight to a large area of the ground below. A single balloon can serve an area the size of Rhode Island. Phones on the ground communicate with the balloon the same way they would communicate with any other cell phone tower. X says that one balloon can serve thousands of customers simultaneously.

There's a big, obvious challenge, of course: wind. If you send a balloon up 20 kilometers in the air, it will quickly blow away from the desired coverage zone. Past balloon-based transmission schemes have tethered balloons with a cable, but that limits how high the balloons can go, and it increases the cost and complexity of the system.

At high altitudes, the winds mostly move in one direction, so the company's original plan was to just release a steady stream of balloons and have them slowly float around the world. As one balloon floated out of range for any given customer, there would be another one behind it. With enough balloons, people at certain latitudes would be within range of at least one balloon at all times.

But as X experimented with its balloons, the company realized that it could actually use wind to steer them north, south, east, and west. The balloons have on-board pumps that allow them to move up and down.

“From our millions of kilometers of test flights, we’ve been able to develop sophisticated models that allow us to more accurately predict the wind patterns at different altitudes,” a Project Loon post said in 2016. “Using this data, our software algorithms are able to determine which altitude has a wind pattern that gives us the best chance of keeping our balloons close to the areas where we want them.”

“We figured out how to cluster balloons in teams, dancing in small loops on the stratospheric winds, over a particular region,” wrote X CEO Astro Teller.

In one 2016 test, a balloon took 12 days to travel from Puerto Rico to Peru and then spent 14 weeks hovering in Peruvian airspace.



The technique wasn't perfect; the balloon would occasionally get blown out over the Pacific Ocean before being steered back over Peru.

The Peruvian experiment proved useful earlier this year when the country suffered from serious flooding. Because X had already done work in the country, X was able to quickly get its balloons aloft and provide connectivity to thousands of Peruvians who had been cut off from conventional communications infrastructure.

The company has developed other technologies to make this whole system practical. For example, an early challenge was that balloons would get blown away before they had been fully prepped for release. The team designed a balloon launchpad, depicted at the top of this article. The launchpad rotates so its open side is always pointed downwind, shielding the balloon from direct wind as it's prepared for release.

Bringing balloon Internet to Puerto Rico

X has solved a number of thorny technical problems for getting balloon Internet technology working. But using that technology to quickly provide service to ordinary Puerto Ricans was still a big challenge.

First and foremost, X needed on-the-ground partners. Project Loon's technology is fundamentally a way to extend the range of an existing cellular network, so X needed to partner with an existing Puerto Rican cellular provider. That local provider needed to modify some of its towers to communicate with the Project Loon balloons and correctly route customer traffic that came back from them. AT&T agreed to partner with X on the project.

X also needed approval from the Federal Communications Commission to operate in the area, which it got earlier this month. X says it also worked with the Federal Aviation Administration - presumably to get the rights to operate in the airspace above Puerto Rico.

"Project Loon is now supporting basic communication and Internet activities like sending text messages and accessing information online for some people with LTE enabled phones," Loon reported in a Friday blog post.

Puerto Rico is about three times as large as Rhode Island, so (in principle) you should be able to cover most of the island with three balloons. In practice, of course, X needs more than that since steering the balloons with air currents is far from an exact science. At any given time, some balloons will be drifting off-course or working to get back on-course. More balloons will be needed to provide reasonable levels of reliability.

These two photographs come from the QTH of Andrew Jellyman G8MKK, who was a long-time member of the Society, and were forwarded to me by John G8UAE

The first is of Malcolm Davies G8JTL, who was another long-time member of the Society and who is, sadly, no longer with us.



The second is of a /P site Pen-Y-Gelly in Wales.

Andy G8MKK wrote:

"On the subject of StARS, I saw Rob, G4DST recently and he gave me some old photo's including the ones shown here. They were taken at Pen-Y-Gwelly just over the Welsh border near to Oswestry during a UHF

contest organised by G3ZUL who provided the kit. We (Rob, Malcolm and myself) all travelled up the night before and stayed in his cottage sleeping on the lounge floor. The contest was a daytime only one and quite civilised. I think it was 1000 to 1600, but I could be wrong. I provided an 88-element multi-beam and mast. The beam travelled fully assembled attached to a roof-rack on my car and at almost 5M in length attracted some bemused looks from other motorists."

Here is another interesting photo from years past, again from G8MKK.. **John G8UAE** wrote:

"This is of our presence at Stourbridge Carnival at Wollaston Rec. Malcolm G8JTL John G8UAE, [possibly] Clive G4IEB and I are on it. We think that it is the time Malcolm decided to take down the mast on his own and nearly impaled you [G4XOM] on the other side of the tent."



Happy times.

If you have something in a similar vein, please send the information to the Editor at rob4xom@outlook.com

DX News

RI50ANO Bellingshausen Station South Shetland Islands

Alexander, UA1OJL will be active as RI50ANO from Bellingshausen Station, South Shetland Islands, IOTA AN - 010, 1 January - 31 March 2018.

RI50ANO is special call for 50 year anniversary of Bellingshausen Station.

QTH - King George Island.

He will operate on HF Bands.

QSL via RN1ON, LOTW, ClubLog OQRS.

Address for direct QSL:

Alexei V. Kuz'menko, P.O. Box 599, 163000, Arkhangelsk, Russia.



7Q7EI Malawi

Radio Amateurs members of EIDX Group will be active as 7Q7EI from Malawi 21 March - 3 April 2018.

They will operate on 160 - 10m CW, SSB, RTTY including activity in CQ WW WPX SSB Contest.

More information soon. Keep an eye on <https://dxnews.com/7q7ei/>



More DX Snippets

To follow on from the previous page, I decided to give you a few items, which are ongoing for the next few weeks. Whether successful or not, I intend to listen for these stations and hope to work at least one of them with my QRP setup.

7S1GRK and SK70BL: Gotland Island (EU-020)

SM – The Gotlands Radioklubb (SK1BL) on Gotland Island (EU-020) will use special callsigns 7S1GRK and SK70BL until 31 December to celebrate its 70th anniversary. See <http://sk1bl.hamlogs.net/> for the award programme. All QSOs will be confirmed automatically via the bureau.

9A57AX and 9A1957AA: special callsigns

9A – Both Josip, 9A5AX and Tom, 9A2AA begun their adventure in amateur radio sixty years ago, in 1957. Look for them to be signing 9A57AX and 9A1957AA until 31 December to celebrate their 'Diamond Jubilee'.

CF, CG, CH, CI: special prefixes (Canada)

VE – Celebrating the 150th anniversary of Canada's Confederation. Canadian radio amateurs can replace their normal prefix until 31 December: VA stations can use CF, VE stations can use CG, VO stations can use CH and VY stations can use CI.

EI11WAW, EI22WAW, EI33WAW, EI44WAW, EI55WAW, EI66WAW, EI77WAW, EI88WAW, EI99WAW: special callsigns

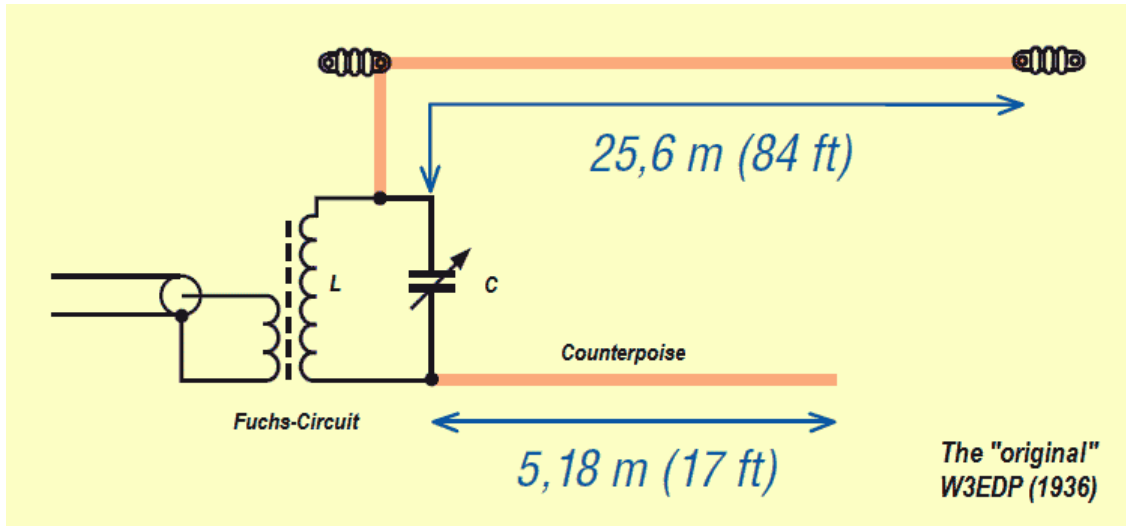
EI – Until 31 December 2017 nine special callsigns (EI11WAW, EI22WAW, EI33WAW, EI44WAW, EI55WAW, EI66WAW, EI77WAW, EI88WAW and EI99WAW) will be active to celebrate the Wild Atlantic Way, a tourism route on the west coast of Ireland that runs for 2,500 km passing through nine Counties and three provinces. Each special callsign will be associated with one of those Counties. QSLs via EI6AL; OQRS on Club Log. A certificate will be made available for download to any station that works all nine calls, on any band or mode; apply by email to EI6AL giving your name and callsign.

II4GV: special callsign

I – ARI Parma will be active as II4GV between 10 October and 27 January 2018 (<http://www.ariparma.it/temporanei/II4GV-en.html>) The special callsign commemorates Giuseppe Verdi, who was born on 10 October 1813 and died on 27 January 1901. QSL via Club Log's OQRS or via the bureau.

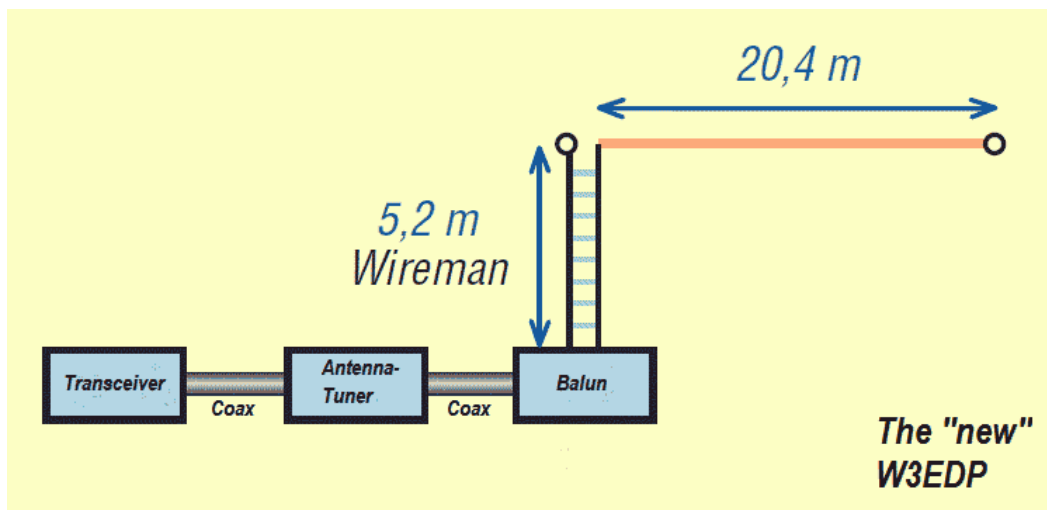
The 5 items, above, were gleaned from 425 DX News. For more information regarding upcoming DXpeditions, etc., you can find them at <http://www.425dxn.org/>

The W3EDP Antenna



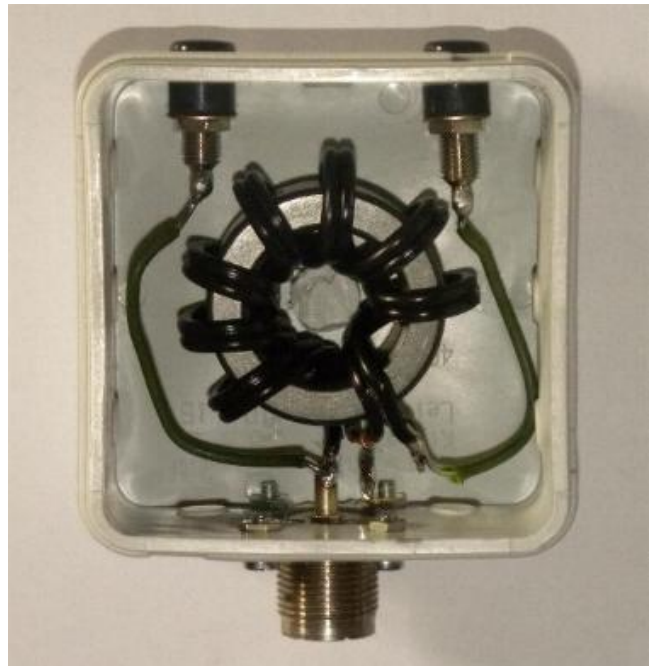
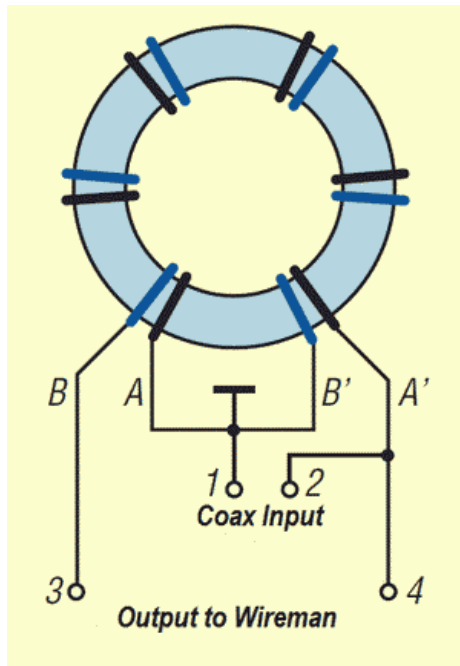
The original EDP antenna was an end end-fed wire matched with a parallel LC circuit ("Fuchs-Circuit") and a counterpoise wire.. The description [1] was in the QST 1936.

[1] Beers, Y. (W3AWH): *An Unorthodox Antenna*, QST (1936), Heft 3, S. 32-33

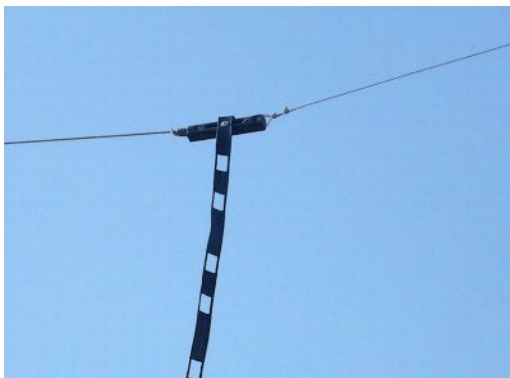


The picture above shows the "new W3EDP antenna" which has an unsymmetrical wireman-feed ("Zepp") and a balun 1:4. At the end of the twin lead feeder a feed-point impedance in the range of 200-500 Ohm with some complex part $\pm j X$ Ohm. The Balun 1:4 gives impedances, which can be matched by the built-in ATUs of the most transceivers. I have tested the antenna from 6 m to 80 m with a coax length of 12 m H-155 and the IC-7400, the TS-590 and the TS-480SAT. The losses are negligible and the antenna is working quite well in the praxis.

If you have matching problems you can change the length of the coax cable and try it again.



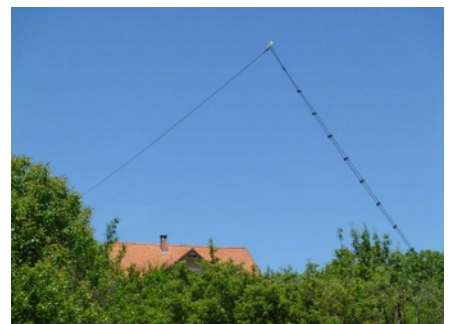
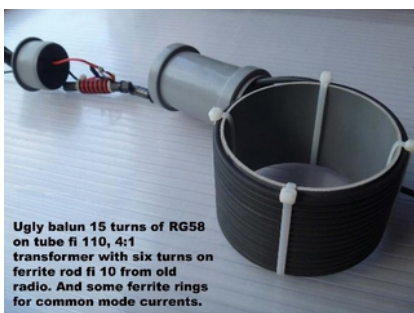
The construction of the 1:4-balun. 7 turns bifilar wound on FT140-43 core, for high power use FT240-43 (Amidon) or Fair-Rite RG43 (part number 5943003801) core.



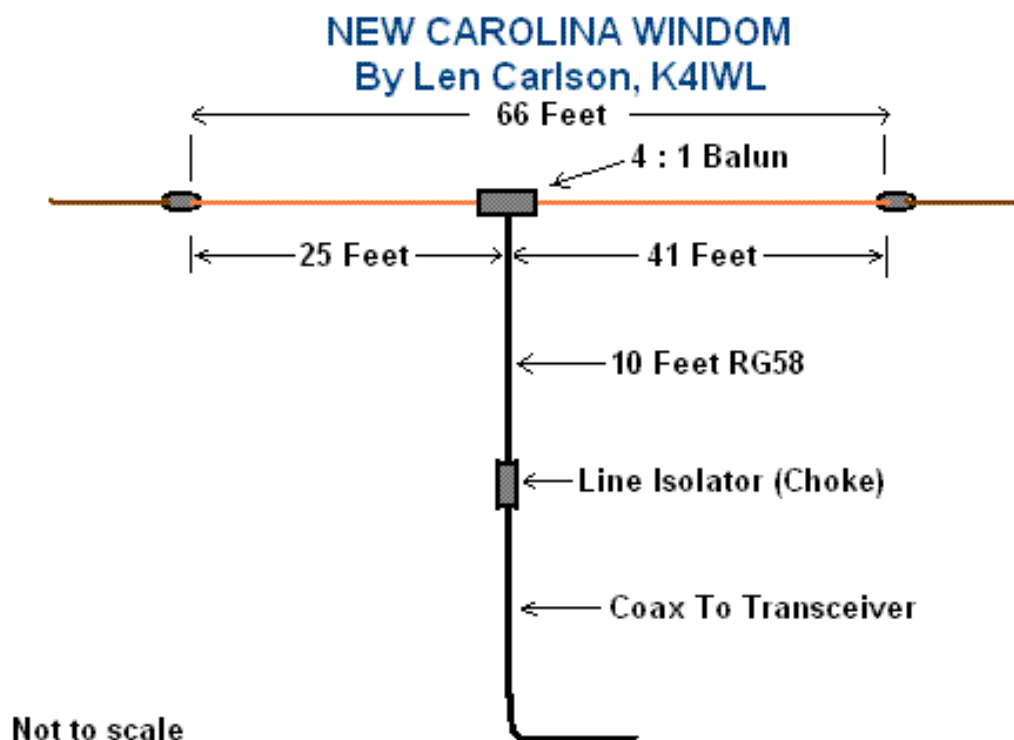
The insulator at the feed side of the W3EDP antenna.

Left is a non-conducting rope for mounting, right is the antenna wire.

Here are some pictures of Bojan, YT2SMS, with home-made feedline and another Balun type:



The “New Carolina Windom” By Len Carlson, K4IWL



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”.

READ FULL ARTICLE AT <http://www.hamuniverse.com/k4iwlnewwindom.html>

Coming Next Month: The End of Ham Radio? by VA3BD

And Finally



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