

STARLITE

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



**G6OI
G6SRS**



ISSUE: MAY 2018



G4CVK

**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**

80TH ANNIVERSARY YEAR

[MARCH 2018 - MARCH 2019]

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

May 7 th	May Day Bank Holiday – No Meeting
May 14 th	On Air. Informal. Digi Modes Group.
May 21 st	Main Meeting – Subject tba.
May 28 th	Spring Bank Holiday – No Meeting
June 4 th	On Air. Informal. Digi Modes Group.
June 11 th	On Air. Informal. Digi Modes Group.
June 18 th	Main Meeting – Club BBQ @ The Sheepwalks?
June 25 th	On Air. Informal. Digi Modes Group.
July 2 nd	On Air. Informal. Digi Modes Group.
July 9 th	On Air. Informal. Digi Modes Group.
July 16 th	Main Meeting – Subject tba.
July 23 rd	On Air. Informal. Digi Modes Group.
August 6 th	On Air. Informal. Digi Modes Group. Committee Meeting?
August 13 th	On Air. Informal. Digi Modes Group.

Editor's Notepad

"The **PERSONAL** here is Dufus and **WE** are located in Glass Town. **WE** aren't playing radio this weekend as **WE** are doing this, that and the other instead."

How many times have you heard this form of introduction, especially on 2m? And does it aggravate you? To my mind, it makes the operator sound somewhat dense and in need of some basic tuition in standard operating practice. Perhaps the Foundation course should include a beginner's English language grammar element to help in this respect? I know it's only a minority who do this, but wouldn't you agree that it sounds bad? And when it comes to Netiquette, by crikey, I do despair sometimes!!

Let me know your thoughts and comments on this at robg4xom@outlook.com

.....

Correction

There appears to be a misconception within the Society that we have a Constructors' Cup. This is incorrect. It has always been, and always will be, the **Constructors' Trophy**. In my defence, I simply reported what was said at the AGM. So, I unreservedly apologise for any distress caused. *Editor.*

Addendum

I dropped a clanger, last month, when I omitted to mention that the photographs in the AGM report were taken by **James G7HEZ**. Sorry James. *Editor.*

.....

Here is a snippet from **Jim G4WAO** who says "We don't seem to have many CW people in the club. Interesting though."

British prisoner of War stitched hidden anti-Hitler message into Nazi quilt

See the full article here, which was in a recent edition of the Telegraph

<https://www.telegraph.co.uk/news/9009004/British-prisoner-of-War-stitched-hidden-anti-Hitler-message-into-Nazi-quilt.html>

The two inner borders contain messages in Morse Code.

I was keeping this item to go in the next issue of Starlite, but had half-a-page to fill! Editor.



April Main Meeting

This was an interesting presentation of **Test Equipment by John Bills G3KZG**, and was enjoyed by the members present.

John gave a brief description of each piece of equipment and its relative age, before saying that most [all?] of the items functions are all included in the box on the right side of the table.



John commented that he worked for Air Call, which brought to mind that I worked with a company [in the 1980s] selling the Air Call service, mainly for the voice message radio pagers.

Next came test equipment in action. Wayne M5LLT requested that his cheap-and-cheerful mobile radio be checked against the specifications shown in his operator manual. [See *photo* below] He was cock-a-hoop that the specs were better than those published. “*Not bad for £80*”, he said. Then a couple of hand-helds were checked with positive results.



Finally, John reminded me that he was the first one to sign my dad and me into StARS when we made our first visit.

Photos by Tim G7TAC

Round Robin Membership Questions from Ross M6RLZ

1 When and how did you first gain an interest in Amateur Radio?

Have been an early adopter in using Mobile Handsets having my first one on 1982. A Breeze Block with a Handset perched on top of it. I developed an interest in Amateur Radio about 3 years ago, when I discovered (realised) that Mobile Phone technology evolved from the Two Way Radios used by Taxi Drivers and Emergency Services during the 1940's and 50's.



2 What was taking your course and exam like?

In a word. "Scary" as a new recruit to StARS. However, I enjoyed the experience and that I was helped to learn by Club Members at StARS, who have now become friends to me and all StARS colleagues have continued to broaden my Amateur Radio knowledge in our regular Monday meetings. I would like to plan Intermediate Level in the near future. Maybe at StARS if I am lucky.

3 What has been your most interesting work or job?

It would be the one I have now. I have worked in Ventilation for the past 5 years and Filtration for the past 25 years. Indoor and outdoor Air Quality has become increasingly of interest indicated by the smoking ban in public places some years ago and more recently in the increased Taxation and restriction of Diesel Vehicles in certain places. The recognition of numerous occupational respiratory diseases is now a sharp focus for HSE and Employers alike due to claims for negligence by those unfortunate souls affected by Occupational Asthma, Chronic Obstructive Pulmonary Disease (COPD), Mesothelioma, Fibrosis and Cancer, among other serious complaints.

Working in this industry is to me fascinating and each job / application is different.

4 Most memorable radio contact?

This is sad, but so far I have no memorable contacts. I am still trying to get a HF Rig. I recently sold an old Yaesu 2m FT290 which I managed to get a few locals on. This brings me to my need to install a proper mast on my Gable End. I will hopefully get some memorable contacts soon and will report my first one when it has happened.

5 The most frustrating electronic piece of equipment you have owned or operated?

[No answer to this question. Editor.]

6 What other hobbies?

Playing Bass Guitar in a local Band, Shooting (Target), Fishing (Trout, Carp, Pike + all other River Species).

7 What is the next piece of amateur equipment you would buy?

HF Rig with appropriate Antennas. Probably the Yaesu FT-817ND or similar.

8 What event/activity/talk/visit from your membership of STARS is most memorable?

Doughnut of Death.

9 Which member of STARS (past or present) has been the most influential in your amateur radio life?

This is a difficult one because every club member at one time or other has helped me.

10 What has been your most useful tool/test equipment you own?

I regard all things as tools (including my Car). However, in terms of relevant tools, my soldering iron. Outside of this, I would say that the tool that I find myself using most of all these days is my Mobile Handset (Communications Tool). Besides this, from a traditional perspective (not mentioning Hammers and Screwdrivers), the most useful tool I have is my Swiss Army Knife. It has dismantled anything from Hedges to Electronic Covers and terminals.

As far as test equipment goes, I have used various test boxes the most interesting of which was a Servo-Valve Test Box. There were two available. The more basic Analogue device could only be used in open loop (my eyes and hands being the only way to close it). This would be properly used to test a Servo Valve using mechanical feed-back technology. There was also a closed loop device that provided required feedback for testing Servo Valves requiring an Electrical feedback loop.



I would like to nominate **Mr John Tracey G6GTB** as the next Round Robin respondent.

73 de Ross M6RLZ

DX NEWS *[An occasional feature]*

CT9ABN - Porto Moniz - Madeira

Tibor Ferenec, OM3RM will be active as CT9ABN, from Porto Moniz, Madeira Island, IOTA AF - 014, 19 - 29 May 2018.

He will operate on 80 - 10m.

QSL via OM2VL.

Address for direct QSL:

Vegh Laszlo, Zitnoostrovska 1317/33, 929 01,
Dunajska Streda, Slovak Republic



Couldn't think of anything to put here!!!!

Here is one from regular contributor, **Jim G4WAO**, who wrote: *“Philip Leong is a new member to the Oz club. He gave a lecture to the club recently and John, lecture coordinator, put a few details of Philip on the club reflector. I’ve said before what a technical bunch they are there, but how about this guy who has just got his full licence.”*

VK2MB Lecture 21st March 2018

Dr Philip Leong is Professor of Computer Systems in the School of Electrical and Information Engineering at the University of Sydney, Visiting Professor at Imperial College, Visiting Professor at Harbin Institute of Technology, and Chief Technology Advisor to ClusterTech.

LECTURE: FPGAs – EPIC Benefits

Abstract: A field-programmable gate array (FPGA) is an integrated circuit in which the logic and interconnections can be defined by downloading a bitstream to its memory. Since their introduction in the 1980’s, these devices have dramatically increased in capacity and functionality, with the recent Xilinx ZU29DR FPGA integrating a 1.5 GHz Quad-core ARM Cortex-A53 processor; Dual-core ARM Cortex-R5; 16x 14-bit, 6.6 GSPS digital-to-analog converters; 16x 12-bit, 2.1 GSPS analog-to-digital converters; 4K DSP slices and 930K system logic gates on a single device. This presentation will first provide an overview of FPGA architectures and describe their Energy, Parallelism, Interface and Customisation (EPIC) benefits over other technologies such as microprocessors, digital signal processors and graphics processing units (GPUs). This will be followed with examples of interesting FPGA-based computing applications in radio and other domains, including my own research in the Computer Engineering Lab at the University of Sydney.

See the video presentation, here: <https://www.youtube.com/watch?v=H4GPhPGGQ68>

Philip's Biography

Philip Leong received the B.Sc., B.E. and Ph.D. degrees from the University of Sydney. In 1993 he was a consultant to ST Microelectronics in Milan, Italy working on advanced flash memory-based integrated circuit design. From 1997-2009 he was with the Chinese University of Hong Kong. He is currently Professor of Computer Systems in the School of Electrical and Information Engineering at the University of Sydney, Visiting Professor at Imperial College, Visiting Professor at Harbin Institute of Technology, and Chief Technology Advisor to ClusterTech.

Dr Leong was co-founder and program co-chair of the International Conference on Field Programmable Technology (FPT); program co-chair of the International Conference on Field Programmable Logic and Applications (FPL); Steering Committee Member for IEEE Transactions on Multi-Scale Computing Systems; Senior Associate Editor for ACM Transactions on Reconfigurable Technology and Systems (TRETs) and Associate Editor for IEEE Transactions on Computer Aided Design (TCAD). The author of 200 technical papers and 5 patents, he was the recipient of the 2005 FPT conference Best Paper as well as the 2007 and 2008 FPL conference Stamatis Vassiliadis Outstanding Paper awards. His research interests include FPGA architectures and applications, computer architecture and machine learning.

DAB Radio – Where everybody gets what nobody wants?

Foreword

There is loads of information on the Internet about Digital Audio Broadcasting (DAB) , so one would have thought it would be easy to pick out a few nuggets to produce a reasonable article for a *Starlite* article. Although there is a lot of information, much of it is written at different times and in a fast changing world much of the information is outdated.

So what was the probable plan for DAB adoption and switch-off of FM Broadcasting?

- Consult with all parties involved
- Pick a Technology
- Set criteria to trigger switch off broadcast FM radio
- Monitor progress
- Switch off broadcast FM radio

DAB was developed over 20 years ago and uses technologies that are now (1Q2018) outdated, particularly with respect to audio compression techniques and forward error correction. DAB+ is capable of three times the capacity of DAB. DAB+ gives the opportunity to provide higher sampling rates to more radio stations which in turn leads to better audio quality. DAB has tended to reduce sampling rates such that most radio stations produce lower audio quality than its FM broadcast counterparts. With DAB Radio signals are combined into Ensembles or Multiplex groups. A listener will see one National Ensemble and one or two local Ensembles. An ensemble is divided like a pie. Allocations are finite and the slices of the pie can be divided up dynamically. For example pop-up stations like Radio Five Live Sports Extra take bandwidth from other programs when they come on-air.

Initial take-up of DAB was slower than predicted. This was and is a problem for radio content providers as they would be obliged to provide both a presence on DAB as well as FM broadcast radio. Clearly it would be better if we had adopted DAB+ although listeners who had bought DAB radios would be displeased as DAB is not forward compatible with DAB+, which means that DAB-only receivers are not able to receive DAB+ broadcasts.

Knowing what we know today Digital Internet Radio could be considered to be a more attractive option than DAB and DAB+. DAB is capable of producing CD like audio quality, but the way it is presently implemented quality has been sacrificed for quantity.

So what is driving the move to DAB/DAB+?

The main drivers for the adoption of DAB are broadcasting costs and the ability to allow more local and community based radio stations. It should however be noted that the drive to DAB is not consumer led and an Ofcom survey showed that 91% of FM listeners are satisfied with current situation and only 3% dissatisfied.

Follow the money

Radio content providers such as the BBC pay other companies to broadcast their DAB radio programmes. As noted previously one of the advantages of moving to DAB is that it

will reduce broadcasting costs. The saving of moving from FM to DAB is put at between £5 million and £15 million depending on which source you want to quote from. The total cost to the public of moving from FM to DAB is put at around £7 billion. The cost per household includes replacement of existing mains, portable and car radios. So the British public spend £7 Billion to save £15 million, but we get DAB in the process. Does this sound like a bargain?

So who decides that DAB adoption has reached the point that we can switch off FM

The short answer is RAJAR - Radio Joint Audience Research. RAJAR produces a large number of reports on radio listening surveys and market research. The British government has yet to decide on a date to switch over from FM to digital radio completely. Before it does, the coverage of national digital radio has to match that of FM, so local digital radio has to reach 90% of the UK population before a switchover can be considered. Official market research body RAJAR suggest we are nearing that, with the percentage put at 48.7% in the second quarter of 2017. Most new cars come with DAB radios as standard, so that should speed up digital radio adoption. It would be a brave man who converts the switch off criteria to a hard date. Numerous past predictions have been made only to prove incorrect. The current best guess is 2020 (current time of writing is 1Q2018).

Norway has made the switchover from broadcast FM radio to DAB

The first country in the world to switch off its FM radio network is Norway. The country moved to a digital-only broadcasting system. On January 11, 2017, the city of Bodø, in the northern county of Nordland, was the first to have its FM Radio signal switched off, with the rest of the nation's signal being closed down by the end of 2017. The country was split into six regions for the turn-off. In comparison to the British Isles Norway would have been a more difficult country to cover from a radio reception viewpoint. This would have been made more difficult as the higher frequency (225 MHz) DAB use is less able to penetrate buildings and has higher rates of signal attenuation than FM between 87.5 MHz - 108 MHz.

According to Radio Norway

The number of weekly listeners is almost the same as before the switch off. However, the number of daily listeners is down by 463,000, according to listening figures just published for January 2018. Head of Digital Radio Norway, Ole Jørgen Torvmark thinks that fewer radios in Norwegian households, and consequently listening in fewer places than before, explains the (listener) drop.

"Listeners have been loyal but some need a little more time to replace all their household radios, particularly in Norway's most populous regions that switched off only two months ago. While some will have replaced their kitchen radio, others may still need to upgrade the car radio or the one in the bedroom. Thus, they end up listening less often than what they used to", says Torvmark. "Our experience from the early switch off regions has shown that the listening figures drop at first, and they then start to rise again when consumers have had time to replace their FM radios". The number of radio devices that can receive national radio stations has been reduced by almost 50% after the FM-switch off, according to the Digital Radio Survey. (Kantar Media). According to the PPM survey (Kantar Media) almost 3.7 million Norwegians listened weekly to radio in January 2018. That is only

44,000 less than in 2017. 2.6 million Norwegians listened to radio every day in January 2018, and that is 463,000 fewer daily listeners compared to 2017.

Summary

The first mention I heard of “Where everybody gets what nobody wants” was in the “*Auf Wiedersehen Pet*” British comedy-drama television programme about seven English migrant construction workers. In the first series, the men live and work on a building site in Düsseldorf. To cut a long story short, in one episode the building hut occupants were voting to decide what colour to paint their hut. The hut 'philosopher' decided the hut occupants should hold an election using Proportional Representation. The ballot was held and the winning colour was one for which nobody voted as first choice.

It is also tempting to see parallels in adoption of DAB and the story of 'wise fool' who when asked which was the way to Dublin, replied “If I was going to Dublin, I wouldn't start from here”.

It seems to be cynical, but I think the above sums up the current situation as at the first quarter of 2018 concerning the switching off of 87.5MHz to 108MHz FM broadcasting and the adoption of DAB.

Comparing the Probable Plan and what really happened

Digital Internet Radio may have been discounted too soon and DAB and DAB+ were seen as the only solutions. Adoption of DAB+ over DAB would have been a choice. DAB adoption was more protracted and optimistic than was expected.

Adrian Bryan G0NLA - As usual any errors are mine.

This space left intentionally blank for your contribution.

The Editor is working furiously to get the next issue ready for distribution.

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



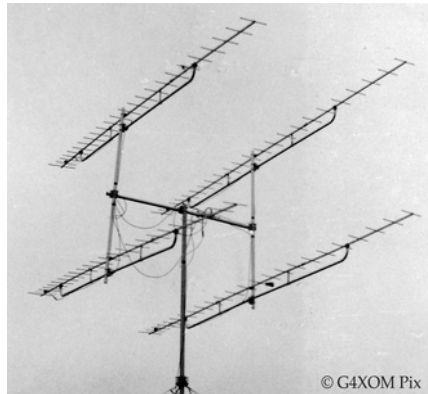
Send input to: robq4xom@outlook.com

Deadline for June issue is 23rd May

MEMORIES FROM THE PAST

Still being short of inspiration for something to write about, I return to the olden times of the 1980s, when I would operate /P from various locations.

At that time I was fortunate enough to be very interested in VHF/UHF operations and purchased four 24-element Long Yagi beams for 70cms. A single one had a forward gain of 14dBd, so the 4 stacked and bayed would have been considerably more [but NOT 56dBd!!]. The front to back rejection was superb, but the beamwidth, horizontally and vertically, was very narrow. The first two photos show a close view of the array and the setup on site. I went, with Keith G4WBM, to the Clee Hills. I can never remember which one is which, but go through the quarry right to the summit



Some time later, after I got my first motor camper, Clive G4IEB, Julian G7BVV and I went to another high spot [memory fails here] with two of the 70cms beams and a 2m 4-element quad.

Again memory is not so good after 30 years, but I guess we would have had some worthwhile contacts during this adventure.

I guess we would have used G4CVK/P as the callsign. If not, we enjoyed some good weather conditions during our time there.

The final picture shows a simple setup for a personal /P operation using only one of the 70cm beams.

I guess that I would have gone with my father, Den G0KZM and [possibly] my brother, Dave G0BHR for this day out.

I hope you found this short article of some small interest. If so, perhaps you have something in a similar vein to share.

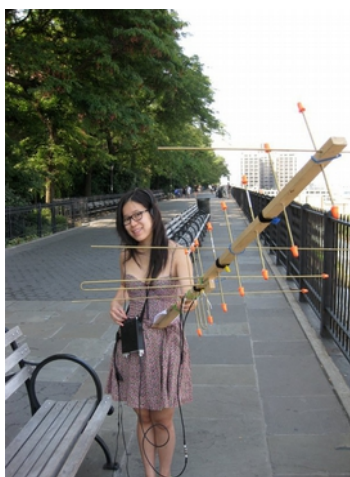


Bob G4XOM. *Starlite* Editor-in-Chief.

robg4xom@outlook.com

Catching Satellites on Ham Radio

By Diana Eng KC2UHB



My favorite ham activity is making contacts via satellites. Not only is there the romantic notion of sending messages into outer space, but you have to trace the orbit of the satellite with your antenna while tuning the radio, to compensate for the Doppler effect.

The satellites AO-51, SO-50, and AO-27 orbit the Earth acting as repeaters. Repeaters are automated relay stations that allow hams to send signals over a greater distance using low-power hand held transceivers. The satellites allow hams to relay messages from Earth to space and back to other hams somewhere on the planet. The International Space Station (ISS) also has a repeater, but occasionally, if you're lucky, the astronauts turn on their radios to make contact directly with hams on the ground.

The following instructions will get you started listening to birds (satellites) on FM, which can be done with a simple VHF/UHF FM radio with a whip antenna, without the need of a ham license. For better coverage, you can use a Yagi antenna (like the one pictured above) connected to a mutli-mode radio and a license (if you want to transmit). A Yagi antenna can also be used to improve the signal of your hand held radio.

Materials

All you need is a VHF/UHF FM receiver (like a police scanner) or a VHF/UHF transceiver (like a Yaesu VX-7) and an antenna.

1. Specifying your location

Start by visiting Heavens-Above.com to check the orbit of the satellite you want to listen to and specify your location.

2. Specifying a satellite

Check the passes of your specific satellite or the ISS. AO-51, SO-50, AO-27, ISS. Make sure that the passes are shown for your correct location.

AO-Echo - All Passes

[Home](#) | [Info](#) | [Orbit](#) | [Prev](#)

Search Period Start: 00:00 Wednesday, 22 July, 2009
Search Period End: 00:00 Saturday, 01 August, 2009
Observer's Location: NYC Resistor (40.6925°N, 73.9859°W)
Local Time: Eastern Daylight Time (GMT - 4:00)
Orbit: 695 x 817 km, 98.1° (Epoch 22 Jul)

Click on the date to get a ground track plot.

Date	Starts			Max. Altitude			Ends		
	Time	Alt.	Az.	Time	Alt.	Az.	Time	Alt.	Az.
22 Jul	05:52:34	10	ENE	05:54:39	12	E	05:56:45	10	ESE
22 Jul	07:28:51	10	N	07:33:59	77	WNW	07:39:14	10	SSW
22 Jul	17:06:05	10	E	17:08:39	15	ENE	17:11:13	10	NNE
22 Jul	18:42:18	10	S	18:46:54	62	WSW	18:51:42	10	NNW
23 Jul	06:49:40	10	NNE	06:54:37	45	E	06:59:39	10	S
23 Jul	08:29:13	10	NNW	08:33:09	23	WNW	08:37:09	10	WSW
23 Jul	18:03:04	10	SSE	18:07:38	53	ENE	18:12:18	10	N
23 Jul	19:44:05	10	SW	19:46:50	15	W	19:49:38	10	NW

3. Reading the chart

This pass chart shows the Start (when/where the satellite enters on the horizon), the Max. Altitude (when/where the satellite is at its highest point in the sky), and the End (when/where the satellite finishes its pass). Alt. is the **altitude**, the angle of the satellite from the observer's horizon. 0 degrees is exactly on the horizon, and 90 degrees is directly above the observer. Az. is the **Azimuth**, the cardinal direction of the satellite from the observer's point of view.

4. Picking a good pass

Satellites orbit the Earth at all sorts of angles, some that are very close to the horizon and some that are directly overhead. It is much easier to hear a satellite that passes directly overhead. To find a good sat pass, check the Max. Altitude Alt. for a pass that is 45 or higher (the higher the better). In our example, the second pass at 7:28 looks like a good one since the Max. Altitude Alt. is 77. The first pass at 5:52 has a Max. Altitude Alt. of only 12 which is very close to the horizon and difficult to pick up.

5. Finding the frequency

Satellite repeaters work with two different frequencies, an uplink and a downlink. You will listen to signals received on the downlink. If you wish to transmit, you'll need to program in the uplink frequency as well. Follow the corresponding links to find the FM repeater frequencies of the satellites. The frequencies often change, so be sure to check the websites for the latest updates. AO-51, SO-50, AO-27, ISS. Tune your radio to the downlink frequency and you're ready to go outside and listen (example: 435.300 MHz FM).



6. Aiming a whip antenna

If you're using a whip antenna, you will not aim the antenna directly at the satellite. Instead, you'll keep it perpendicular to the satellite. You can rotate the antenna by rotating your wrist to try and get a clearer signal.

7. Following the pass with the antenna

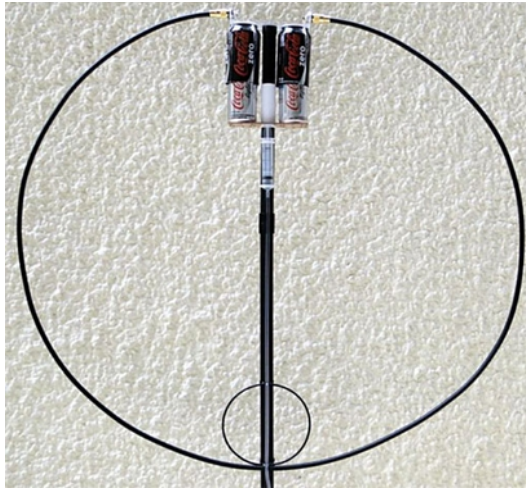
You will trace the path of the satellite orbit with the antenna using the Heavens-Above pass chart as a guide. At the Start Time, start with the antenna perpendicular to the Az. direction at the given Alt. For example, at 7:28, aim the antenna perpendicular to north at 10 degrees above the horizon. Trace the path of the satellite so that at the Max. Altitude Time the antenna is pointed in the corresponding location. For example, at 7:33, the antenna should be perpendicular to west northwest at 77 degrees above the horizon. Finish tracing the path of the satellite so that at the End Time the antenna is perpendicular to the corresponding location. For example at 7:39, the antenna will be perpendicular to south southwest at 10 degrees above the horizon. It can be very difficult trying to catch the satellites and you may spend a lot of time not hearing anything. As you trace the general path of the satellite with the antenna, move the antenna around in small side to side and up and down motions until you hear a bit of audio. Adjust the antenna to make the audio clearer.

8. Tuning the radio for the Doppler effect

The Doppler effect makes the frequency vary by .010 MHz. As you trace the path of the satellite with the antenna, you will also need to tune the radio back and forth plus or minus .010 MHz until you hear a good signal. Early in the pass, you will add .010 MHz, for example, if you're listening on 435.300 MHz, you'll need to tune the radio back and forth between 435.300 MHz and 435.310 MHz. Later in the pass, you will subtract .010 MHz, for example, you will tune the radio back and forth between 435.300 MHz and 435.290 MHz.

[Here is an audio clip](#) from my first satellite contacts. The contacts seem to be going pretty slowly, but while I was making them, I remember everything happening very quickly. It was a lot to tune the radio and manoeuvre the antenna while trying to write down the call signs of the contacts.

THE COKE LOOP



The Coke Loop is a Small Magnetic Loop Antenna tuned by a trombone-style variable capacitor made with standard soda cans.

In Brazil we have the Coca Zero and the Coca Light versions of Coke. The Coca-Cola Zero can is shorter and wider and the Coca-Cola Light can is longer and thinner.



The loop ends are connected to the fixed Coca Zero (larger) cans. The moving trombone variable capacitor portion is made with Coca-Cola Light cans screwed to a piece of double-sided PC board.

The PC board is also screwed to the moving part of an injection syringe that is connected to another injection syringe by a plastic flexible tube filled with water. This makes a hydraulic remote tuning system to adjust the antenna resonance point.

The loop is made with a section of 112 inches of standard coaxial cable with PL-259 connectors on the ends that attach to the tuning system unit.

The excited loop is made from a 22.4-inch section of solid electric copper wire that is connected to a 2.5 meter section of coaxial cable for connection to the transceiver. The Coke Loop covers 12 meters, 15 meters, 17 meters, and 40 meters.

To make the loop work on 40 meters, I use a 150 pf fixed capacitor with alligator clips in parallel to the trombone variable capacitor.

COKE-LOOP CONSTRUCTION DETAILS



See these two videos accompanying the article

https://www.youtube.com/watch?feature=player_embedded&v=gaJlrN3cElo

https://www.youtube.com/watch?feature=player_embedded&v=ry1h2d4Styk

PY1AHD ALEX (Alexandre Grimberg)

Email: py1ahd@ig.com.br

Coming next month: Half-Wave Flower Pot Antenna

Couldn't think of anything to put here, either!!!!

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