

STARLITE

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



G6OI
G6SRS



ISSUE: APRIL 2020



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 MEETINGS
EVERY MONDAY (EXCLUDING BANK HOLIDAYS)

MEETINGS CANCELLED UNTIL ????

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>

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

April 6 th	On Air. Informal. Digi Modes Group.
April 13 th	Easter Bank Holiday – No Meeting
April 20 th	Main Meeting – Subject t.b.a.
April 27 th	On Air. Informal. Digi Modes Group.
May 4 th	On Air. Informal. Digi Modes Group.
May 11 th	On Air. Informal. Digi Modes Group.
May 18 th	Main Meeting – Subject t.b.a.
May 25 th	Bank Holiday – No Meeting
June 1 st	On Air. Informal. Digi Modes Group.
June 8 th	On Air. Informal. Digi Modes Group.
June 15 th	Main Meeting – Subject t.b.a.
June 22 nd	On Air. Informal. Digi Modes Group.
June 29 th	On Air. Informal. Digi Modes Group.
July 6 th	On Air. Informal. Digi Modes Group.

Editor's Comment

As you are aware, we are living in a worrying time and are advised to adopt *self-isolation* and *social distancing* to help control this coronavirus epidemic and to keep ourselves safer. Of course, we have no idea if this will work, but, hopefully, we will do our best to overcome this threat to life. I haven't been out much, but shopping still has to be done, so I've limited this to once a week for the big shop (if the pathetic, selfish, and greedy panic buyers have left anything!) and get other, less urgent, items locally.

I heard, recently, that in the Chinese province where this virus began, there is a "biological research facility", so draw your own conclusions to that!

Obviously, the situation means that our meetings have been cancelled for an undetermined future. I have assumed this and I would hope that our Committee will give us updates on the situation from time-to-time. Someone suggested that we hold the meetings on the air, but how conceivable is that? You could let me know your thoughts on this at g4xom@g6oi.org.uk , but I doubt anyone will respond.

There is a notification from Wayne M5LLT on the next page.

In the meantime, I hope that you all do your best to stay safe and healthy.

John G6GTB sent an item entitled *Corona Virus Precautions From A Pathology Professor*, which I hope you will find helpful in these worrying times.

Geoff G0KVK sent an item entitled *Time For Construction*, which could be read as an introduction to home construction. I'm sure you will find it of interest.

Due to technical problems with his internet provider, Ross 2E0RLX lost his "*alternative*" StARS website. It is now under re-construction and will be fully operational in due course. The new website link is shown on page 2.

I have included another bonus item, which you should receive alongside this issue. I am sending them this way, as I don't know how to include them within the pages of *Starlite* and, besides, it will allow you to print a hard copy if you wish to do this. This time it is *Antenna Book*, which I hope you find interesting.

I'm sure you will have forgotten, or placed aside, projects to occupy your time in isolation, but please remember that *Starlite* will still be produced, so perhaps you could spare a short time to write something for these pages. Please send your submission to:

g4xom@g6oi.org.uk

Thanks. Bob G4XOM (Editor)

The following was posted on Facebook by Wayne M5LLT:

As an ongoing situation unfolds, we recently took the decision to suspend all further meetings of the Radio Society until further notice. This is not taken lightly, as many of our members are in the "at risk" group. We have notified the School (OSH) of this decision and will resume meetings when it is advised safe to do so.

This is a milestone in the Society History, as the last time meetings ceased was during World War II.

The present Committee will continue until further notice and the Society will remain active by means of a **Radio Net meeting on 145.325 MHz every Monday evening at 8 pm.**

Things like this happen for a reason. It's reported that since lockdown the canals in Venice have never run so clear and dolphins have returned to the waters; the air pollution in New Delhi has been the lowest recorded in years, and let's hope that continues.

The Hobby was very much in decline, so maybe dust off that rig and join us on the Net on a Monday and please no chat about Corona virus . Non-members are most welcome to join in also.

Wayne M5LLT
On behalf of the Committee

TIME FOR CONSTRUCTION

By Geoff Cooper G0KVK

Being one of the old school, I loved using valves in anything I constructed, (which was nice because the heat from the valves kept the shack warm). So a quick bit of valve theory. A simple valve consisted of a heater and around this heater was placed a metal cylinder, called an anode. These were placed into a glass cylinder and the air was removed to produce a vacuum. The top was then sealed. Voltage was applied to the heater, which started to glow. This produced a lot of electrons, which gathered around the heater, (this was called a space cloud). If you then applied a positive charge to the anode, with respect to the heater, then the anode would attract the electrons and a current would flow.

It was found that if you coated a thin metal tube with a chemical called Barium and placed the heater inside, once it got hot it produced more free electrons. This tube became known as the cathode. This was a valve in its simplest form and was known as a diode invented by John Fleming in 1904, Current can only flow in one direction from cathode to anode. By adding a wire mesh between the cathode and anode it allowed the current flowing to the anode to be controlled, (this was known as the control grid). This now had three electrodes so was known as a triode. Another grid were added between the signal grid and the anode, this became known as a screen grid. This made the valve into a tetrode. Another grid was added between the screen grid and the anode and this was called the suppressor grid to make the valve into a pentode. You could have a mixture of two valves in one envelope, for example, two triodes, or a triode pentode. When the valve is made at the top of the envelope, where it is sealed, there is like a silver coating inside the envelope this is due to a little ring of magnesium being fired by passing the valve through a R.F. coil to burn off any air that is still left inside. Whatever you build using valves you will need a transformer to supply the low heater voltage and, also, the high voltage for the anodes. These are getting more rare to find at a reasonable cost. (There are some manufacturers still building valve amps, so if you want one you need to take a mortgage out before buying one), even if they sound better than transistors.

So, if you would like to try building something, then start with a simple transistor circuit, as it is nice to build and get it to work at first switch on. As you have now mastered how to solder, you can build it one of two ways, one using a piece of copper plated board fixing the large components (like transistors, Integrated circuits, etc., onto it upside down with glue), but remember the pin connections will be different. You will also need an island cutting tool, which gives you an insulated pad, which to solder other components to, or you can cut small squares of some spare circuit board and glue them to the board. This is called dead bug style of construction, as the components have their legs in the air. But I find by using "veroboard" or strip board is the easiest to use. Veroboard consists of an insulated board with rows of holes joined together by a strip of copper. I use 0.1 inch board, as this allows the legs of I.C.s to fit okay.

So, before I cut it to size, I place the biggest components into the board with the copper track running parallel to the longest side. This allows you to move them around and fit them in the best place, also allowing room to fit jumper wires, then mark the spots. Next, n remove them and cut the board, allowing enough room to drill holes in the board for the fixing bolts to go. I use two tracks where the fixing holes are, and I connect both these

tracks together to make the earth or negative connection. Then I use the track at the other end of the board for the positive connection. Once you are happy how things are you can solder them in place. Do one thing at a time and if you have to cut the tracks, such as when fitting an IC, do it now as it will save you forgetting to do it later. To cut the track, you can use a proper strip board cutter or small sharp drill bit twisted in your fingers. Just make sure that all the copper track is removed

Before powering up, give the board a good check over with a magnifying glass to make sure there are no shorts between tracks. Tracks are cut, electrolytic capacitors, zener diodes are correctly polarized. If everything looks okay power it up and if you have followed the circuit correctly and it works, there nothing like building something yourself. If it does not work first time do not panic, as it is something like you have missed a wire link out or not fully cut a track. So, now that the radio rallies have started it is the best place to find bits and pieces to make something, even if it is something simple, there nothing like the feeling of when it fires up and works.

Corona Virus Precautions From A Pathology Professor

Subject: What I am doing for the upcoming COVID-19 (coronavirus) pandemic

Dear Colleagues, as some of you may recall, when I was a professor of pathology at the University of California San Diego, I was one of the first molecular virologists in the world to work on coronaviruses (the 1970s). I was the first to demonstrate the number of genes the virus contained. Since then, I have kept up with the coronavirus field and its multiple clinical transfers into the human population (e.g., SARS, MERS), from different animal sources.

The current projections for its expansion in the US are only probable, due to continued insufficient worldwide data, but it is most likely to be widespread in the US by mid to late March and April.

Here is what I have done and the precautions that I take and will take. These are the same precautions I currently use during our influenza seasons, except for the mask and gloves.:

- 1) NO HANDSHAKING! Use a fist bump, slight bow, elbow bump, etc.
- 2) Use ONLY your knuckle to touch light switches, elevator buttons, etc.. Lift the gasoline dispenser with a paper towel or use a disposable glove.
- 3) Open doors with your closed fist or hip - do not grasp the handle with your hand, unless there is no other way to open the door. Especially important on bathroom and post office/commercial doors.
- 4) Use disinfectant wipes at the stores when they are available, including wiping the handle and child seat in grocery carts.
- 5) Wash your hands with soap for 10-20 seconds and/or use a greater than 60% alcohol-based hand sanitizer whenever you return home from ANY activity that involves locations where other people have been.
- 6) Keep a bottle of sanitizer available at each of your home's entrances. AND in your car for use after getting gas or touching other contaminated objects when you can't immediately wash your hands.
- 7) If possible, cough or sneeze into a disposable tissue and discard. Use your elbow only if you have to. The clothing on your elbow will contain infectious virus that can be passed on for up to a week or more!

What I have stocked in preparation for the pandemic spread to the US:

- 1) Latex or nitrile latex disposable gloves for use when going shopping, using the gasoline pump, and all other outside activity when you come in contact with contaminated areas.

Note: This virus is spread in large droplets by coughing and sneezing. This means that the air will not infect you! BUT all the surfaces where these droplets land are infectious for about a week on average - everything that is associated with infected people will be contaminated and potentially infectious. The virus is on surfaces and you will not be infected unless your unprotected face is directly coughed or sneezed upon. This virus only has cell receptors for lung cells (it only infects your lungs) The only way for the virus to infect you is through your nose or mouth via your hands or an infected cough or sneeze onto or into your nose or mouth.

2) Stock up now with disposable surgical masks and use them to prevent you from touching your nose and/or mouth (We touch our nose/mouth 90X/day without knowing it!). This is the only way this virus can infect you - it is lung-specific. The mask will not prevent the virus in a direct sneeze from getting into your nose or mouth - it is only to keep you from touching your nose or mouth.

3) Stock up now with hand sanitizers and latex/nitrile gloves (get the appropriate sizes for your family). The hand sanitizers must be alcohol-based and greater than 60% alcohol to be effective.

4) Stock up now with zinc lozenges. These lozenges have been proven to be effective in blocking coronavirus (and most other viruses) from multiplying in your throat and nasopharynx. Use as directed several times each day when you begin to feel ANY "cold-like" symptoms beginning. It is best to lie down and let the lozenge dissolve in the back of your throat and nasopharynx. Cold-Eeze lozenges is one brand available, but there are other brands available.

I, as many others do, hope that this pandemic will be reasonably contained, BUT I personally do not think it will be. Humans have never seen this snake-associated virus before and have no internal defense against it. Tremendous worldwide efforts are being made to understand the molecular and clinical virology of this virus. Unbelievable molecular knowledge about the genomics, structure, and virulence of this virus has already been achieved. BUT, there will be NO drugs or vaccines available this year to protect us or limit the infection within us. Only symptomatic support is available.

I hope these personal thoughts will be helpful during this potentially catastrophic pandemic. You are welcome to share this email. Good luck to all of us! Jim

James Robb, MD FCAP"

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