



Mid Sussex Amateur Radio Society

NEWSLETTER

Oct 2020

Mid Sussex Matters



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Meetings are held on Friday evenings starting 7.45pm at the rear of Cyprus Hall, Millfield Suite, Cyprus Road, Burgess Hill,

West Sussex

Visitors are always Welcome

Please note that Cyprus Hall is currently closed due to the Pandemic



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From the Chairman

Things don't get much better for us this year, just when things were looking up, and there was a glimmer of hope we might be able to return to Cyprus Hall.

We had received a list of conditions that would have to be met, if we wished to resume meetings. And as you can imagine, these would make it impossible to hold any sort of meeting with such restricted numbers. Then came further restrictions of only 6 persons to meet for the foreseeable future, and appears this may be applied for some time.

I have asked the committee to consider we cancel any hopes for this year, and hope things will be better in 2021.

We had some sad news that Sue G6YPY has decided to leave these shores for a new life across the channel and re-locate to France.

Sue has been a stalwart of the Society for many years not just as a member, but holding positions on the committee as:

Chairman, Secretary, Treasurer, Programme Secretary and Committee member.

Sue was also the Lead invigilator and Exam Secretary for the Exams that the Society runs.

Sue also organised many of the Social events that we hold.

She is also a keen operator with our outside events. Who can remember her wrapped up, sitting in a draffee tent on the south downs for VHF NFD up at Keymer post, cooking breakfast for all the hungry and tired souls?

Luckily we have had a willing volunteer to take over her role as Treasure until the next AGM. More news regarding that soon.

I know you will join me in wishing her all the best for the future - We will very much miss you Sue.

Sue has told me that she will continue as a member and will stay in touch.

I have mentioned in previous newsletters, that I have heard members mention on various nets, that they are going on holiday.

However be aware you never know who is listening. Please refrain from doing this. If you feel you need to let somebody know, please let the Net Controller know.

Hope that all our members and their families are staying safe, and not getting to down with all the restrictions that we have to put up with.

Till next time
Russell M Nelson G7TMR
Hon Chairman
MSARS



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Circuit Protection

In electrical circuit engineering, the main target is to provide the desired functionality of the product being developed. All engineers take good care of side affects generated by the used elements themselves, such as heat problems are eliminated by good heat dissipation management, high frequency radiation like EMI or RFI, possible harmonic distortions are limited.

However, there are external affects that can significantly influence the lifetime of the electric circuit, such as overcurrent or overvoltage of the driving lines. Almost all electric boards should contain some elements, which - in normal circumstances - should be “invisible”, but being able to protect the circuit in case of unexpected events like high voltage transients. These transients are mainly caused by sudden load changes of connected circuits, power source fluctuations, electronic disturbances of coupled cables, switching events, lightning or ESD. This abstract is about discussing the possible circuit protections to suppress transient over-voltage with cost optimized solutions.



Lithium-ion is one of the most popular rechargeable battery technology, providing energy for today’s consumer applications. Its perfect energy density, not remarkable memory-effect, slow loss of charge in standby mode, and the light weight makes Li-ion battery to be used for energy storage for many electric vehicles, especially to provide alternative solution for heavy lead acid batteries. In order to preserve the long cycle life, the very sensitive lithium cells should be protected against overcurrent, and overtemperature conditions, that may be caused by short circuit of terminals, abusive charging or changing circuit failures.

More information go to: www.electronics-articals.com/index-en.html



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Radio Waves

Radio waves are a type of magnetic radiation with wavelengths in the electromagnetic spectrum, longer than infrared light. Radio waves have frequencies as high as 300 gigahertz (GHz) to as low as 30 hertz (Hz).

At 300 GHz, the corresponding wavelength is 1 mm (shorter than a grain of rice); at 30 Hz the corresponding wavelength is 10,000 km (longer than the radius of the Earth).

Like all other electromagnetic waves, radio waves travel at the speed of light in a vacuum and close to the speed of light in the Earth's atmosphere, which acts as the transmission media for the vast majority of terrestrial use. Radio waves are generated by charged particles undergoing acceleration, such as time-varying electric currents. Naturally occurring radio waves are emitted by lightning and astronomical objects.

Radio waves are generated artificially by transmitters and received by radio receivers, using antennas. Radio waves are very widely used in modern technology for fixed and mobile radio communication, broadcasting, radar and radio navigation systems, communications satellites, wireless computer networks and many other applications.

Different frequencies of radio waves have different propagation characteristics in the Earth's atmosphere; long waves can diffract around obstacles like mountains and follow the contour of the earth (ground waves), shorter waves can reflect off the ionosphere and return to earth beyond the horizon (skywaves), while much shorter wavelengths bend or diffract very little and travel on a line of sight, so their propagation distances are limited to the visual horizon.

To prevent interference between different users, the artificial generation and use of radio waves is strictly regulated by law, coordinated by an international body called the International Telecommunications Union (ITU), which defines radio waves as "electromagnetic waves of frequencies arbitrarily lower than 3 000 GHz, propagated in space without artificial guide". The radio spectrum is divided into a number of radio bands on the basis of frequency, allocated to different uses.



Acknowledgments: Wikipedia



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Are We Alone?

SETI Institute Scientists are working to find out.



The Number of potentially habitable planets in our galaxy is close to one hundred to one hundred billion.

Most are far away, but other worlds that could have life are even closer. Mars and several of Jupiter's and Saturn's moons have environments that could support biology.

Beyond our solar system, there are so many planets, it's reasonable to imagine that at least some are populated by intelligent beings.

SETI Institute researchers look for both microscopic life using a variety of instruments and strategies: Rovers, orbiters, field expeditions, and radio telescopes are just a few.

Understanding where biology may gain a foothold, and detecting its presence is the goal of these scientists, and they hope to establish whether life is commonplace or rare.



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WANTED

INFORMATON

DO YOU KNOW THESE 3 PEOPLE ?



IF YOU KNOW THEM LET THE EDITOR KNOW

NAMES

OCCASION

WHEN & WHERE



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That's the way to travel



Switch to Southern ITV The station that serves the South.

More on the Buses next Month.

It is with great sadness that I have to mention the loss of a few local businesses in Shrewsbury as a result of COVID-19. A local bra manufacturer has gone bust, a submarine company has gone under, a manufacturer of food blenders has gone into liquidation, a dog kennel has had to call in the retrievers and a company supplying paper for origami enthusiasts has folded. Interflora is pruning its business and Dynorod has gone down the drain. The saddest one though is the ice cream van man found dead covered in nuts and raspberry sauce. He couldn't take it any more and topped himself.



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Newsletter Articles Required.

Dear Members,

I think you will agree that we have had many excellent Article's in the Newsletter this year.

However to keep the club Newsletter alive, we are now in need of more copy from you.

The article can be a short piece, or a multi page one if you wish. I do hope you will be able to help.

My Contact details are as follows:

E mail: tonyfinch5@outlook.com

Tel 01444 254511 or 07519 374 575

Many Thanks

Tony G3XQM

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Home of the Mid Sussex Amateur Radio Society

All contributions of copy for the newsletter please contact:

Tony Finch Tel: 01444 254511

Mob: 07519 374 575

Details of club events etc go to:-

[MSARS Web Site](#)

General enquires about The Mid Sussex Amateur Radio Society Tel Sue 01273 845103