

# MERG West Midlands Area Group (WMAG)

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currently being updated.

Please note this section is

## January 2020

### So what is Arduino



David Roberts gave a presentation to introduce the Arduino in terms of the hardware most commonly used by the Railway Modeller and the Integrated Development Environment (IDE). A look at Shields and other peripherals is included along with a very brief review of the standard interfaces.

David's presentation can be found here

[https://merg.org.uk/merg\\_wiki/lib/exe/fetch.php?media=helpsystem:so\\_what\\_is\\_arduino.pdf](https://merg.org.uk/merg_wiki/lib/exe/fetch.php?media=helpsystem:so_what_is_arduino.pdf)

### My MERG Journey

John Fletcher talked about his experiences since joining MERG

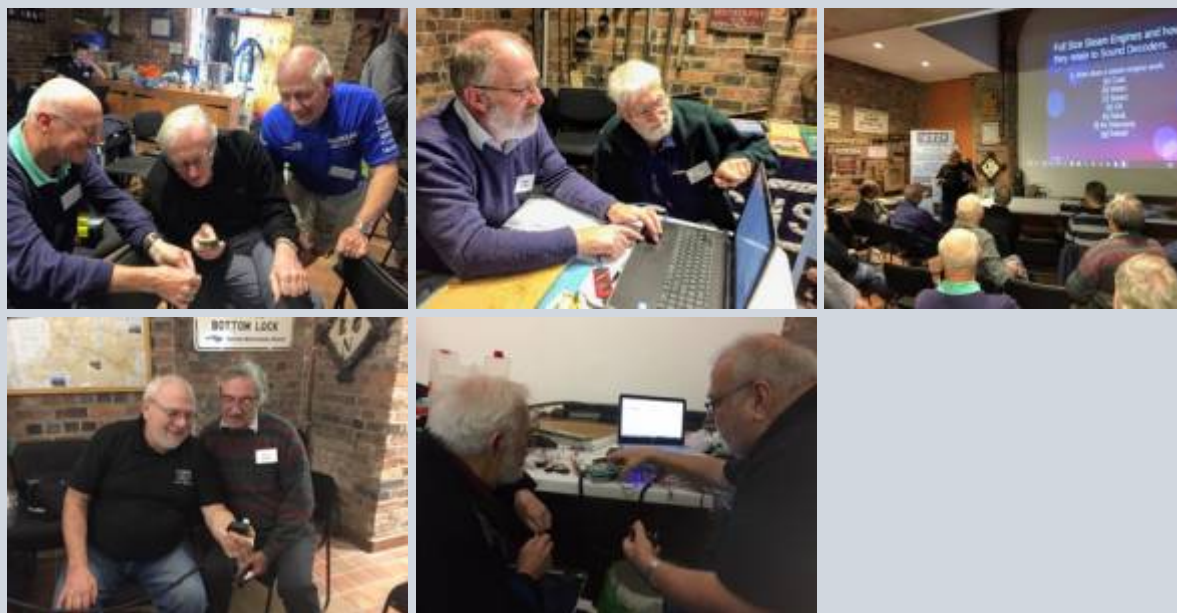
## October 2019



John Gowers gave a presentation about the mechanics of a steam engine. How to capture real sounds and applying them to your model railway

He also showed us how to inserting sound chips into a loco. This was followed by how you configure the captured sounds to the locos movements and actions.

Here are some of the photos from the day.



## July 2019

### Electrostatic Discharge: What it is and Why it is Important

David Roberts gave a talk on what Electrostatic Discharge is, how it is caused and the damage that it can cause to modern electronic devices and systems. Simple and affordable measures to mitigate the problems will also be described.

### The Theory and Practice of a Simple MERG Kit

Some of us assemble kits without knowing very little about the types of components used and why they are important. David's presentation considers a simple MERG kit – the CANACT – looking at the components used and explain why they are chosen and how it all comes together to work.



Here are some images of the day.



## April 2019

What is Arduino and what can it do for railway modellers

David Thomas presented 'A CBUS Sound Player' in which he explained how the project has been inspired by Davy Dick's sound player (See March 2017 journal and the subsequent threads on the Forum). The set up uses three main components: an MP3 player, an Arduino and a MCP2515 CAN Bus. Using Alan Turners pcb (See PCB section of the knowledgebase) he then went on to explain how he configured the various sounds using FCU and also demonstrated how the whole thing connected together as a CBUS module. Those interested in reading David's article can find it in Junes 2019 Journal here [https://www.merg.org.uk/merg\\_journal/](https://www.merg.org.uk/merg_journal/) .



Tony Jackson gave the second talk entitled 'A Magnetic Identity' in which he introduced the use of magnets to obtain the identity of a loco or vehicle (rather than only detecting its presence) to facilitate effective decisions regarding automating aspects of layout operation. Tony explained that by attaching magnets to the base of a loco or vehicle and passing in turn over a linear Hall sensor represented a code that could be configured as a specific identifier. I.e. 6 magnets giving a SSNSNS. Tony then explained how he configured individual locos to establish which is North and then using an Arduino sketch to process the results and display the correct loco or vehicle identifier.

Tony's article can be found in the June Journal (as above)

## October 2018

### 'Wiring and Power supplies for the Railway Modeller'

David Roberts gave two talks in the morning.

The first one, focused on **wiring for the railway modeller** and included

- Theoretical aspects of electrical wiring
- Design & Implementation of electrical wiring
- Examples of wires, tools and terminations



His second talk was **Power Supplies** and explored:

- History
- Direct Current (DC) Supplies
- Linear Mode Supplies
- Switch - mode Supplies
- Sources of Power Supplies
- Commercial Devices
- Surplus Computer Supplies





## July 2018

Howard Watkins as our keynote speaker.



The theme of our meeting was 'Back to Basics'

*AM - Two talks given by Howard included*

- Theory and practise of Soldering. - Tools and Supplies - Component recognition - Using LEDs

*PM - Practical 'HANDS ON' session to include an opportunity to build a track tester,*

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