

# Philip McGaw

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Manchester - United Kingdom.

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## Profile

I am currently working as an EMC (Electro-Magnetic Compatibility) Test Engineer at a test house in Greater Manchester; Previously I have worked in a variety of Technical IT positions.

I am active in the local Makerspace Community, both as a member of Manchester Hackspace (Hac-Man), and as a participant in the Open Source Community where I work on both hardware and software projects, and feed my changes/innovations back to the communities.

I have an interest in industrial heritage, canals, photography, videography, and technology that I pursue in my free time.

## Certification

- University of Plymouth Certificate of Higher Education in Electrical Engineering.
- Technician Member of the Institution of Engineering and Technology (TMIET).
- 17th Edition - Level 3 Certificate in the requirements for Electrical Installations (BS EN 7671).
- Level One, and Level Two National School of Government Protecting Information.
- Queensland University of Technology - [Introducing Robotics](#)

## Software

- Operating systems
  - Debian and Ubuntu Linux.
  - Microsoft Windows.
  - macOS.
- Applications
  - Microsoft Office.
  - Deploy Studio.
  - Munki Munki.
  - Apache.
  - MySQL.
  - WordPress.
  - Git.
  - Autodesk Fusion360.
  - Autodesk Eagle.
- Programming and Scripting languages
  - Arduino.
  - Bash.

- Python.
- HTML & CSS.

## Work Experience

**2013 – Present**    **EMC Test and Compliance Engineer & IT Manager;** CASS Industries Ltd. (Manchester)

EMC is a branch of electrical engineering concerned with the unintentional generation, propagation and reception of electromagnetic energy which may cause unwanted effects such as electromagnetic interference (EMI) or even physical damage in operational equipment.

My main duties involve managing the testing of clients' electrical and electronic products for compliance with European Directives and appropriate test standards using RF measurement techniques and electronic test equipment such as Oscilloscopes, and Spectrum Analysers.

Other duties included:

- Writing test reports for both full testing and quick evaluation tests.
- Daily maintenance of the test facility and constant improvement of the processes within the test laboratory.
- Ensuring all equipment is calibrated including cables and test equipment.
- Helping clients gain compliance by ensuring the correct standards are used during testing.
- On failure to meet the requirements of EMC, offering advice on cost affective fixes, ranging from decoupling on the main board to correct track and board layout.
- Development of test plans and procedures in line with manufacturing and design requirements.
- Test of complex electronic equipment.
- Evaluation of Technical problems in order to develop proposals for investigations and corrective actions, including process improvements.
- Looking after the internal network, desktop computers, and servers (Microsoft Office on Windows 7 and 10).

I also assisted in researching new measurement techniques and designing custom electronic instrumentation and physical parts in order to facilitate testing and provide a more streamlined customer service.

Typical EMC standards used within the test facility would be EN55032, EN50130-4, and the EN61000 series of standards.

**2006 – Present**    **Freelance Geek and CTO;** [SquashedFly.eu](http://SquashedFly.eu).

Website design and hosting for a number of clients, including pro-bono work for charities. Squashed-Fly's servers are Debian and Ubuntu Linux, managed via SSH, sites being built using WordPress as a CMS.

**2011 - 2013**    **IT Contractor;**

A number of long and short terms IT contracts covering First, Second and Third Tier support, Dev Ops and Administration roles, for companies and organisations including:

- McCann Erickson.
- Secure Borders & Communities (SERCO).

- UK Borders Agency.
- Allegro Networks.
- Foundation for Art and Creative Technology.
- Pennant Training Systems Ltd.
- Department for Work and Pension.
- Ministry of Justice.

Experience:

- Supporting and managing more than 500 Windows 7 and Mac OS X users, in high pressure production environments.
- Working within the Official Secrets Act, and International Traffic in Arms Regulations, Holding Security Vetting.
- Lone and out of hours working.
- Looking after the day to day running of the IT and Technical resources.
- Ensuring Service Level Agreements (SLAs) are met at all times.
- Deploying bare metal images to Mac and Windows computers.

**2009 – 2011      Technical Clerk;** Culham Centre for Fusion Energy (Culham, Oxfordshire).

Working as part of a group of scientists and engineers on components for ITER.

I was actively involved in the preparation and maintenance of office records, quality plans, document reviews and reports. An attention to detail and accuracy of all work produced was essential at all times.

I was accountable to the various Project Managers for:

- Collation, integrity checking and interpretation of statistical data, interpreting trends and anomalies and presenting my findings in a logical form.
- Administration of the document control and management system.
- Maintaining and updating the configuration management baseline, the Technical Queries database, and Monitoring change control and incorporating changes.

I was involved with the adoption and implementation of Microsoft SharePoint 2010 Foundation as a way to manage the projects controlled documents and revision control.

**2008 – 2009      Structures Clerk and Outside Parties Technical Clerk;** Network Rail (Swindon).

**2007 – 2008      Assistant Engineer;** Kembrey Wiring (Swindon).

Working on Nimrod and Typhon Aircraft wiring loom and cable harness projects.

**2006 – 2007      Year in Industry Student;** Scott Wilson Railways (Swindon).

- Site Surveying for the East London Line, and GSM-R Projects.
- Production of CAD drawings and schematics using Bentley MicroStation and Hevacomp design software. Designing 11 kV, 650 V, 415 V, 230 V power and signalling power distribution circuits, Tunnel and Station Lighting arrangements. Production of Technical Reports.

**2005 – 2006**      **Assembly, Testing and Quality Technician;** Bombardier Rail Control Systems (Plymouth).

- Production Engineer/Test Engineer.
- Populating PCBs and building them up by hand within a jig.
- Test and re-work safety critical PCBs and Control Systems for automatic train braking systems and signalling systems for domestic and international customers.

**2003 – 2004**      **Database and Network Engineer;** Golf Tech (Swindon).

- Design and implementation of a database to keep track of golf machine serial numbers.
- Installation, set-up and maintenance of the network; provision of ICT support and training.

## Voluntary roles

- **Part Time Volunteer Driver – Driver for Disabled People;** Swindon Dial-a-Ride and Haydon Wick Parish Council (Swindon).
- **Steward;** Greenbelt Christian Arts Festival.

## Education

**2004-2007**      **Certificate of Higher Education in Electrical Engineering;** University of Plymouth

**2003-2004**      Swindon College

- OND Level 2 modules
- Foundation of Advanced Mathematics

**2000-2003**      New College (Swindon)

- A Levels in Computing, Electronics and Physics

**1995-2000**      The Commonweal School (Swindon)

- 8 GCSEs A\*-C Including English, Science and Mathematics.
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