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| **Kevin Handcock P. Tech (Eng.)** | **Electronics Technologist** |
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**Career Profile**

With 18 years of experience in electronics and electrical design I have the experience and versatility to do all elements of design, validation, and investigation. I am driven to continuous learning and improvement in my career and personal life.

**Core Skills**

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| Safety Conscious  Process & Data Oriented  Dynamic | Attention to Detail  Problem Solving  Goal oriented | Effective communicator  Curious  Process Improvement | Critical Thinking  Remote or on-site work  Transformational Leader |

**Career Highlights**

* Managed the installation of two 750KW dyno systems including managing multiple trades on time, and cost effectively
* PCB design, validation, and release of power electronic boards and assemblies for a hazardous location (quad certified) TEG.
* Saved a $2M contract by performing root cause analysis and design fix for catastrophic field failure
* Commissioning of $9M Radar Test Bench Automated Test Equipment
* $1M contract from sparing analysis of the APG-73 Airborne Radar (CF-18)

**Technical Skills**

**Administrative**

* Hired, supervised, mentored, and evaluated a team diversely skilled technologists
* Scheduled highly sought after equipment between multiple departments according to company priorities
* Managed calibration of over 200 electronic and mechanical test instruments

**Design**

* 12 years experience in New Product Development
* Worked with multi-disciplinary team to complete design 4 major products from concept to release
* Performed schematic capture, part selection, and PCB design of power, analog, and low-speed digital designs
* Produce Bill of Materials for everything from small 4 component boards up to $2.2M dyno test systems
* Work within standards including IECex/CSA/UL (Hazardous location design), IPC (PCB Design, Soldering, Harnesses)
* Failure Mode and Effects Analysis (FMEA) of designs and processes
* Manage Engineering Chances (ECs) and product release documentation
* Designed the power and data cable harnesses to connect a 350KW automotive inverter to 2 different motors
* PCB Design for 6 boards inside Global Power Technologies S1100 TEG, all needed to be enclosed within an explosion proof enclosure and required special attention to thermal management.
* Designed the AC and DC distribution for Exro’s 2 “Big Dynos”, each dyno had three 144KW/800V/600A regenerative power supplies.
* Specified all peripheral equipment, build BOMS for a total of 4 Dynos at Exro

**Validation/testing**

* Development of test plans that validate operation of board, subassembly, and full systems
* Analyze schematics to build test specifications for both validation and production testing
* Root cause analysis of failures using multiple techniques and methodologies
* Test for multiple environmental conditions, and perform accelerated aging tests
* Design test fixtures for development, production, and long term testing
* Developed test process to validate commercial samples on dyno equipment for Exro Technologies
* Developed and executed test plan for six circuit boards and integrated assembly for Global Power Technologies S1100 TEG

**Build**

* IPC-A-610 Certification (expired) for soldering and inspection of Soldered assemblies including life critical systems
* Cable harness design and build, from 24 AWG to 4/0 AWG cable system carrying up 1800ADC
* Prototype building, including PCB modification & cut and jumpers
* Basic metal and wood fabrication for building test beds, or jigs
* Reading schematics, drawings, and military specifications
* Use of a 3D printer and CO2 laser to assist with rapid prototyping
* Built from the ground up the “small” (15KW) dyno system at Exro Technologies

**Software**

* 10 years’ experience in Altium Designer
* Embedded C, familiar with STM32 line of microcontrollers and Keil uVision IDE
* Fusion 360 3D modeling
* Basic Python programming
* Learning PLC program through online sources and experimentation with a Divelbliss VB-2200

**Employment History**

**Dyno Supervisor,** Exro Technologies Jul 2023 – Apr 2024

* Supervised a team of 4 and coordinate testing on Exro’s dynamometer (dyno) systems

**Dyno Test Technician,** Exro Technologies Sept 2021 – Jul 2023

* Operated, maintained, and continuously improved 3 Dynos up to 750KW to validate electric vehicle inverters and motors

**Electronics Technologist,**  Global Power Technologies Jul 2011 – Sept 2021

* Designed, validated, and supported remote thermoelectric generators (TEG)

**Phalanx Electronics Technician**, Raytheon Canada Limited Oct 2007 – Jul 2011

* Tested, troubleshooted, and repaired circuit cards and Automated Test Equipment for the Phalanx Close in Weapon System

**Obsolescence Management Specialist** Raytheon Canada Limited Nov 2006 – Oct 2007

* Tracked sources of supply and compatibility of a database of over 7000 components and 4 product lines

**Education, Volunteer work, Hobbies**

**Education**

* Bachelor of Science in Electronics Engineering Technology, DeVry Institute of Technology, Calgary, AB, 2006
* ASET P. Tech (Eng.) Designation, 2020
* IPC Certified interconnect Designer (PCB design) 2016
* 8 Disciplines of Problem Solving (8D) training, 2023
* Coursera Certificate of Learning Googles “Crash Course on Python” 2024
* Up to date first aid, fork lift operator’s license, fall protection, and High voltage/arc flash training

**Volunteer work:**

* Loose Moose Theatre: Lighting design, lighting operation, and prop design, 2011 - present
* Fallcon: Worked with friends to design board game inspired escape rooms 2017, 2018, 2019

**Hobbies**

* Dungeons and Dragons (D&D) and table-top gaming
* 3D printing, CO2 laser
* Wood Turning and resin casting
* Concrete casting and mold making
* Electronics tinkering