

Timothy V. Kane  
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**Woods Hole Oceanographic Institution – Woods Hole, MA**

**December 2009 – present**

**Sr. Engineer Assistant I - Geology & Geophysics Dept.**

- Sr. Engineering Assistant I in the OBS (Ocean Bottom Seismograph) group. Technical lead on cruises. Deploy and recover both short period and broadband ocean bottom seismographs at sea. Design, build, test, troubleshoot and maintain the electronics and mechanical assemblies used in these instruments.
- Perform wiring and rebuild of REMUS 100 and 600 vehicles.
- Designed a Fresh Water Release device for use with an acoustic release system on WHOI short period seismographs. This release system was successfully used in Yellowstone Lake in 2016 which lead to the deployment of a larger array of instruments in 2017.
- Designed an automated tester that tests both primary lithium battery packs and alkaline battery packs used in the OBS group.
- Designed an automated the DPG (Differential Pressure Gauge) tester that reduced test time from hours to minutes.
- Use OrCad schematic capture for board re-design and layout of Lander PCB, design and fabrication of electronic test boxes, interfacing with outside consultants, purchasing parts, fork truck operation, sea duty.
- Testing and troubleshooting and repair of 3T Guralp sensors, Geospace geophones, perform slab huddle testing on geophone sensors, opening and sealing of glass and aluminum spheres used in both OBS and D2 instruments, replacement of batteries within a seismometer in the lab or at sea.
- Testing, troubleshooting, repair of gimbal systems used for 3T sensors in WHOI OBS pressure cases.
- Experienced with EdgeTech Acoustic Command Ranging Transceiver used for deployment and recovery of seismometers at sea. Perform acoustic surveys of ocean bottom seismometers using WHOI script or Work Boat software.
- Completed WHOI small boat operator course

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**Smiths Medical North America – Rockland, MA Sept. 2008–Dec. 2008  
Contract Engineering Services**

- Working for Smiths Medical R&D Critical Care in the Thermal Management group performing schematic capture using OrCad, review of new designs, PCB layout, parts procurement for prototype build, prototype testing, design, and building of a test fixture to be used in a manufacturing environment to test PCBs. Generate documentation of new designs such as timing diagrams and test Protocols.

**Haemonetics Corporation, Braintree, MA 1990 – 2008  
Electrical Engineer ~ Haemonetics R&D 2003 – 2008**

- Electrical Engineer working in an R&D new products development group. Worked on multiple blood apheresis projects with a collaborative team of mechanical, software and disposables engineers.
- Analog and digital circuit design including prototype test, board layout, system integration, and production release.
- Designed pneumatics pressure regulation PCB (2" X 4" board) to maintain system pressure +/- 2 psi in a 28 psi system for pinch valves, pneumatic locks and latches.
- Designed and developed patient connected Cuff PCB to control blood flow in a vein at an operator specified pressure during a procedure.
- Designed interface PCB's to pass an array of sensors including: brushless DC motors, hall sensors and more to backplane. This included design of spill detector circuit for safety.
- Developed test requirements specifications for board level and system level test. Participated in and held design reviews. Write Test Protocols and reports.
- Provided technical support to Manufacturing Engineering. Vendor interface and specifying vendor components as well as obtaining contract services such as PCB layout, fab and assembly houses, and purchase of lab equipment.

**Associate Engineer R&D ~ Haemonetics 1998 – 2003**

- In R&D, worked closely with engineers to design test fixtures, schematic capture, execute test protocols and write test reports. Transitioned surgical device platform to Manufacturing provided hands on training of assemblers and technicians during pilot build of 150 systems. Supporting Manufacturing Engineering and training Manufacturing technicians in the assembly and test of new devices.

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- Performed testing of experimental blood level sensing device in surgical theater during a series of twelve open heart surgeries at New England Medical Center. Also have extensive blood lab experience at the Naval Blood Research Lab in Boston, performing human blood wash-out studies for the development of the Haemonetics Cell Saver 5.

#### **Technical Specialist R&D ~ Haemonetics 1990 – 1998**

- Component level testing and troubleshooting of prototype devices. Build prototype devices. Testing with bagged human blood.

#### **Honeywell Information Systems 1979-1990**

##### **Associate Engineer**

- Environmental & Safety Engineering - Radiated & conducted emissions testing for FCC certification.

##### **Test Technician-A**

- Troubleshooting to the component level high speed disk controllers and peripherals for Honeywell's Level 6 mid size computers
- Advanced Manufacturing – Transition of new products to MFG Test including training of technicians. Security clearance to work on **General Purpose Interface** boards for military use at Kennedy Space Center. Cost reduction award for Video Instruction Processor board. Reduced manufacturing cost by \$35k/year.

##### **Education:**

Blue Hills Regional Technical Institute – 1977 to 1979

Received degree: Associates Degree in Applied Science Electronics Technology.