



## Electronics Test System for Radiation Rich Environments

**Track Code:** CRANE-103034

**Categories:**

- Aeronautics
- NSWC Crane

**Keywords:**

- Aeronautics
- Crane
- Electrical Engineering
- Electronic Equipment Testing
- Radiation
- Testing

The U.S. Navy seeks a partner for licensing and collaboration on a miniature digital programmable system for use in performing functional tests on digital electronics such as memories, microprocessors, integrated circuits, and analog to digital converters while fitting into a standard 48 pin DIP package footprint.

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The testing of digital components is currently performed with large, heavy machines that are not easily transported. Electronics that will be operated in harsh environments, such as radiation rich settings, need to be tested while exposed to real-life operating conditions. It is necessary to test the devices while exposed to these conditions, but it is also imperative that the testing equipment not be exposed which could lead to failure of the test system's components. The smaller the test system, the easier it is to shield and protect. Likewise, testers need to be portable so they can be shipped to environmental testing facilities.

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NSWC Crane has developed and patented a compact electronics test system with a programmable interface and on-board functions available for different types of environments. The test system can perform functional tests on digital electronics with 48-pin DIP footprint. The design of the device is inexpensive compared to currently available test system. The small size allows for the device to be shielded from the effects of the environment it is testing as well as makes the device portable.

**People:**

- Duncan, Adam (Project leader)
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**Intellectual Property:**

**Application Date:** (None)

**Type:** Utility Patent

**Country of Filing:** United States

**Patent Number:** 9,594,117

**Issue Date:** March 14, 2017

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