

TEST RESULTS[®]

Building Smart Test Fixtures, start by using the right tools...

Presented by,
Overton Claborne Sr
(Oi) Founder & CEO

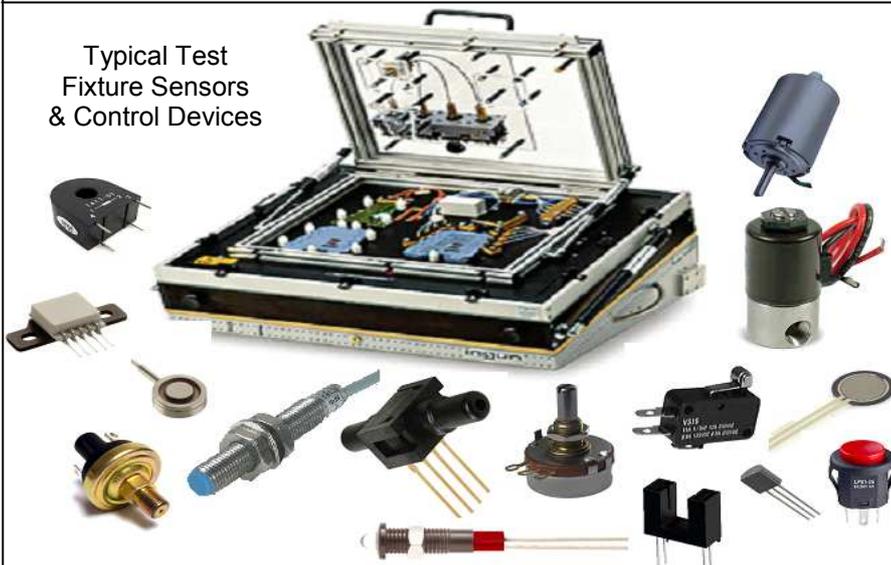


Because of the high-level of sophistication in today's Printed Circuit Boards, Test Engineers are pushed to limit, to build custom test fixtures that meet the challenge. In many instances, these test fixtures require pneumatic control, temperature measurement, sensor manipulation, voltage detection, current monitoring and much more. The diagram below shows a myriad of possible sensors and circuits that are used to support a typical fixture control process. In the end, the Test Engineer is left with the daunting task of figuring-out how to make it all work.

Fortunately, help is available. OVERTON INSTRUMENTS (Oi), has developed an innovative suite of low-cost test and measurement products called the ETS Series, **EMBEDDED TEST SOLUTIONS**. Like the name implies, the ETS Series' board-level instruments are designed for embedded operation, which includes direct installation into Mechanical Test Fixtures, build custom desk-top test equipment, or support larger ATE test systems. The ETS Series' offer a unique set of instrument modules that are ideally suited for test fixture control. The categories include Analog Conversion, Digital I/O and Relay Switching Solutions. The function of each group is presented in the table on the right. Each instrument is designed to be externally controlled by a special **EMBEDDED TEST CONTROLLER**, or from a standard PC (with an optional USB interface). Access to the hardware is provided by a combination of screw terminal blocks and box headers. All of the instruments share a common form-factor (2.5" x 2.75"). In addition, the mounting holes allow easy stacking as well. Programming is both simple and fast when using Visual BASIC, C/C++, Lab-View or any language that allows access to through a USB port. For embedded applications, programming is provided by a set of superb compilers (BASIC & 'C'), from MikroElektronika.

Most Test Engineers purchase the ETS Series' to build what we call "Smart Test Fixtures". Its easy, just select the Oi modules you need, install inside the test fixture, connect to a sensor, circuit or pogo pin, write a little code and that's it - you are up and running in no time. What could be simpler?

Typical Test Fixture Sensors & Control Devices



Test Results[®], is a company news periodical published by Overton Instruments (Oi), to highlight new products, special events and noteworthy Functional Test solutions. Customer names may be disguised for identity protection. 1/26/17

ANALOG CONVERSION MODULES

Check-MATE

Multifunction DAQ Module

DAQ-MATE

16-Ch Data Acquisition Module

QDM-MATE

Quad DAC Module



This group of test instruments cover a wide spectrum of general purpose A-to-D and D-to-A applications. You can monitor all of types of sensors including temperature, pressure, LED light probes, current-flow and much more.

DIGITAL I/O MODULES

DIO-MATE

24-Bit Digital I/O Module

OPTO-MATE

8-In/8-Out Isolated Module



Controlling logic circuits is a common requirement. The two modules above are easy to program, both at the 'bit' and 'byte' levels. The DIO-MATE supports standard TTL logic, while the OPTO-MATE uses photo-couplers to isolate inputs and outputs.

RELAY SWITCHING SOLUTIONS

Relay-MATE

8-DPDT Relay Module

Switch-MATE

8-SPST Relay Module

Switch-MATE/HC

4-SPST Relay Module/10A



Whether you are switching high current loads or routing control signals, it is likely the solution will involve some type of mechanical relay. The modules above are designed to support the broadest mix of control applications.



Peter Strobl
Mechanical Engineer
TEST ELECTONICS, INC

Since the early 1990's, Test Electronics have been supplying high-tech companies in the Silicon Valley, a constant stream of high quality test fixture solutions. Peter Strobl is the lead Mechanical Engineer, and was an early adopter of the ETS Series, Embedded Test Solutions. According to Peter, "from the first time Overton presented his Functional Test enhancement products, I was sold. His products are easy to use and program, and provide us with a far greater degree of flexibility". Peter can be reached at (831) 763-2000, or info@testelectronics.com.