

Functional Test Development

Technical Information



Complete Functional Test Solutions

Abtest offers complete Functional Test Solutions designed for:

- Quality
- Reliability
- Serviceability
- Safety

All our Functional Test Projects are professionally managed, with the aim of meeting three main goals:

- To provide our customers with the highest quality service.
- To ensure project completion on, or ahead of time.
- To ensure that the solution meets or surpasses customer expectations.

Software Options

Provides functional test software developed using the following environments

- LabVIEW
- LabWindow/CVI
- Visual Basic

We can also integrate test software into Test Executives such as TestStand. All test software is developed in a manner that allows operational variables to be modified with minimum programming knowledge.

Hardware Options

Functional test solutions based on the following interface methods

- Mechanically
- Vacuum
- Pneumatic

All are manufactured to the highest standards.

Experience

Abtest have provided functional test solutions to many industries including:

- Electronic production
- Automotive
- Telecommunications
- Medical

Functional testing is a quality control used to check that electronic products meet their performance specifications. Functional test equipment is as varied as the tested product, and requires custom designs. The equipment must be robust, and the tests must be reliable. Abtest offers turnkey solutions to functional test needs.



A subsidiary of TT electronics plc



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Abtest and National Instruments

The company recognises the need to use quality, well developed and well supported modules within its Functional Test Solutions, therefore whenever required Abtest use National Instruments products. Abtest are members of the National Instruments Alliance Programme, and as such, our Test Development Engineers are National Instrument trained in all aspects of software development and hardware implementation.

Documentation

The documentation will contain: block diagrams to indicate the structure of the system; top level schematics showing the interconnections between sub-systems; circuit diagrams of each sub-system; bills of materials, including suppliers and order codes; fixture interface design and wiring lists. The documentation also includes: a description of the system; operating instructions; maintenance recommendations and information; troubleshooting notes where appropriate; risk assessment of hazards identified, and control steps taken to minimise these hazards.

User Interface

The test hardware and software are designed to provide an intuitive and simple-to-use user interface. User inputs and decisions are minimised wherever possible. A "go-nogo" result indication is preferred, and test results can be printed and logged as required.

Hardware

The hardware is custom designed for each application. Fixturing allows connection by bed-of-nails if appropriate, or manual connection. Fixtures may be pneumatic or vacuum operated under the control of the test software, or may be mechanically operated by the operator. Loads may be simulated, or a substitution method may be used.

Diagnostics and Maintenance

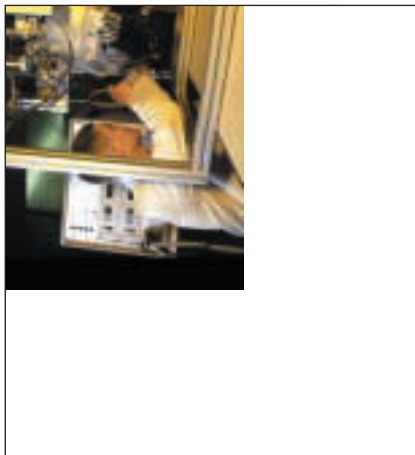
Hardware and software are designed to facilitate proper maintenance of the test equipment, and diagnostic tools are incorporated to aid with housekeeping and troubleshooting. Self-test diagnostics are included where appropriate, and maintenance scheduling may be incorporated into the test Software.

Endurance Testing

Functional test equipment can be built for the endurance testing of systems or components. The equipment may be fitted inside an environmental chamber in order to test under a wide range of climatic and dynamic conditions. This can all be carried out at Abtest to UKAS accredited standards.

Model Shop/Tool Room

This facility with Computer Numerical Control (CNC) and graphic enhanced machine tools is also available. We design and manufacture a wide range of products. General tool room work can also be offered with fast delivery turnaround.



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