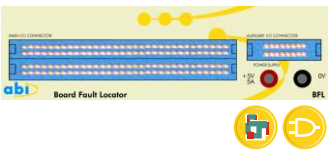
intelligent
innovative
visionary

The BoardMaster 8000 PLUS

The ABI BoardMaster 8000 PLUS Universal Diagnostic System is a uniquely versatile, self-contained and easy-to-use test system. It offers the most comprehensive set of test instruments for fault-finding on almost any kind of PCB. With the full range of instruments and a variety of test methods guaranteeing the best possible fault coverage, the BoardMaster 8000 PLUS provides the ultimate in diagnostic tools.

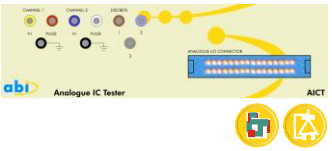
The BoardMaster 8000 PLUS is an integrated package of high specification instrumentation controlled by sophisticated but easy to use software. The hardware is installed in a rugged transportable case that also contains a high specification, MS Windows™ compatible PC. All the test connectors are at the front of the case, as is the high resolution colour LCD panel. The system includes a standard PC mouse and keyboard as well as the facility to connect an external monitor.

Board Fault Locator Module (*BFL*)



The BoardMaster 8000 PLUS is supplied with two *Board Fault Locator* modules giving 128 test channels for a variety of test methods. These provide comprehensive fault diagnosis capability and include functional testing of digital ICs (in-circuit / out-of-circuit), IC connections status and voltage acquisition together with a V-I Curve function which allows testing of components with no need to apply power to the board.

Analogue IC Tester Module (*AICT*)

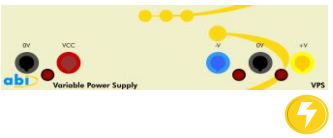


The *Analogue IC Tester* allows in-circuit functional testing of analogue ICs and discrete components. All common analogue devices can be tested as they are configured on the PCB, without programming or the need to refer to circuit diagrams. The AICT also includes a fully configurable V-I Tester for detection of faults on un-powered boards through clear and easy to understand graphical results.

Multiple Instrument Station Module (*MIS*)

The *Multiple Instrument Station* provides no less than 8 high specification test and measurement instruments in one compact module. Ideal for design, education or for general purpose workbench use, the MIS offers a Frequency Counter, Digital Storage Oscilloscope, Function Generator, Digital Floating Multimeter , Auxiliary PSU and Universal I/O. For optimised utilisation, standard instruments can be customised or new ones can be designed to suit applications.

Variable Power Supply Module (*VPS*)



The *Variable Power Supply* provides the necessary supply voltages to the unit under test. The three outputs are variable in both voltage and current making the VPS suitable for a wide variety of applications.

Measurements | Power Supply | PC required | In-circuit | Digital | Analogue

Digital IC Test
128 test channels (2 x 64 in live comparison mode). 8 bus disable outputs. 2 x 5V/5A power supplies. Truth table (functional), voltage, connections, thermal & V-I tests. Logic trace mode. EPROM verifier. IC Identifier. Adjustable logic thresholds. Auto clip positioning and circuit compensation.

Digital V-I Test
128 test channels (2 x 64 in live comparison mode). Variable voltage range. Optimised for digital components.

Analogue IC Test
24 channels plus 3 discrete. Library driven tests for op amps, comparators, optos, transistors, diodes and special function devices. Functional, connections and voltage tets. Auto clip positioning and circuit compensation.

Analogue V-I Test
24 channels plus 2 probes. Variable frequency, impedance, voltage and waveforms. 2 adjustable pulse outputs. Automatic calibration. V-I, V-T and I-T display.

Graphical Test Generator
128 channels. Graphically programmable sequences for inputs, outputs and bidirectional channels. Responses can be learnt, vectors can be saved, loaded and compared.

Matrix V-I
24 channels with rotating reference. Multi-plot display with single waveform zoom. Mean percentage comparison for each pin with audible and visual indication.

Floating Digital Multimeter
2 auto-ranging channels. DC and AC volts measurements up to 400V. DC and AC current measurements up to 2A. Resistance measurement up to 20M. Statistics for minimum, maximum and average readings. Calculator for data processing and logging.

Universal I/O
4 analogue channels and 4 digital channels. Analogue channels can output and measure voltages from -9V to +9V, as well as sinking and sourcing currents up to 20mA. Digital channels can output and read back TTL compatible logic levels.

Short Locator
3 resistance ranges. Audible and visual indication of proximity to short. Audible continuity checker.

Auxiliary Power Supply
5V output at 0.5A, +9V output at 100mA and -9V output at 100mA. Current monitoring on all three outputs.

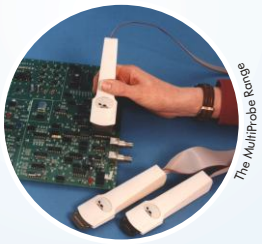
Variable Power Supply
2.5V to 6V variable logic supply with over voltage protection. Variable positive and negative supplies to 24V with variable current up to 1A.

Standard Accessories

The BoardMaster 8000 PLUS is supplied with a comprehensive range of test clips, test cables and probes for all the test instruments.

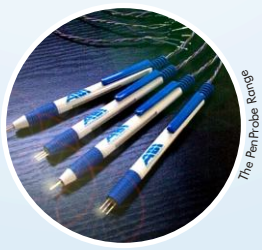
Board Fault Locator Cable Set
1 x 64 way test cable
1 x 64 way split test cable
1 x BDO cable assembly
1 x short locator cable assembly
1 x ground clip
1 x PSU lead set
1 x V-I probe assembly

Additional Board Fault Locator Cable Set
1 x 64 way test cable
1 x 64 way split test cable
1 x BDO cable assembly
1 x ground clip
1 x PSU lead set
1 x V-I probe assembly


The MultiProbe Range

Multiple Instrument Station Cable and Probe Set
2 x DSO probes
1 x yellow probe and cable
1 x blue probe and cable
1 x black probe and cable
1 x universal I/O cable (not terminated)

Analogue IC Test Cable Set
1 x 24 way test cable
1 x 24 pin test clip
1 x yellow probe and cable
1 x blue probe and cable
2 x pulse leads
2 x ground leads
3 x discrete leads
1 x SMT tweezer set and adapters.


The PenProbe Range

DIL Test Clips (0.3" gauge - 8, 16, 20, 24 pin, 0.6" gauge - 24, 40 pin)
Automatic out-of-circuit adapter
40 pin ZIF socket for out-of out-of circuit testing of ICs. SOIC and PLCC adapters available.

Optional Accessories


A full range of clips and cables are available

MultiProbe Range
0.050" pitch 10 pin (SOIC and PLCC) and 0.100" pitch 8 pin (DIL).
PenProbe 4-piece Set
Type 1 (3 pin transistors, SOT23 and similar), type 2 (3 pin transistors, TO72 and similar), type 3 (3 pin transistors, TO220 and similar), type 4 (3 pin transistors, TO92 and similar)
SOIC test clip and cable set
8,14,16 pin narrow and 20, 24, 28 pin wide
PLCC test clip and cable assemblies
20, 28, 44, 52, 68 and 84 pin
QFP test clip and cable assembly
100, 144, 160, 208 pin

The ultimate testing system

	Board Fault Locator	Analogue IC Tester	Multiple Instrument Station	Variable Power Supply
Channels per instrument (Analogue in brackets)	64 ‡	(24+24)	4 (4)	N/A
Power supplies	Fixed 5V		5V ±9V	2-7V ±24V
Discrete testing		●		
Analogue impedance test		●		
Digital impedance test	●			
Logic supplies	●		●	●
Measurement *			●	
Short locator	●			
Unknown IC search	●			
Out-of-circuit	○			
In-circuit	●	●	●	●
Analogue test		●		
Digital test	●			
IC functional test	●	●		

* DSO, Function Generator, Frequency Counter, Digital Floating Multimeter, Universal I/O
‡ 128 channels with BoardMaster 8000 PLUS. Upgrade options 128, 192, 256 channels.
○ With adapter included

SYSTEM 8 Premier Software

The software *SYSTEM 8 Premier* is designed for seamless interaction with the hardware whilst still providing state of the art test algorithms. Advanced control to the system is provided through intuitive windows including :

- User access manager
- TestFlow automatic test manager
- Instrument design manager
- Instrument menu manager
- Custom calculator functions
- Flexible data logger

At the heart of *SYSTEM 8 Premier* is the concept of *TestFlow*, an approach to testing and fault finding that not only speeds up operation and thus turnover but also allows the system to be used by semi-skilled operators.

TestFlow transforms fault finding into a methodical, step by step procedure that reduces the risk of inaccurate measurements by recording all the parameters of a test. Technicians can write a test procedure, or *TestFlow*, for a particular PCB by setting up each stage of the process and recording the results. They may also include their knowledge of the board through schematics, bitmap images or even notes and instructions to assist with the task. Semi-skilled operators need only follow the instructions on-screen to carry out an extensive test sequence on even the most complicated equipment.

The *TestFlow Automatic Test Manager* provides automatically documented fault-finding reports by comparing good and bad boards. Test points, test methods, operator instructions and a report generator with statistical functions are all available on-screen in an easy to follow format.
With *TestFlow*, knowledge and experience of a PCB does not belong to only one person; it can be accessed by anyone !

SYSTEM 8 PremierLink (*Optional*)

An optional PC based software package that allows users to add new devices to the library, select a variety of tests and create new functional tests to suit special applications. Test routines for devices included in the System8 built-in library can also be viewed (ASM).
New IC functional tests can be created using PremierLink IC Programming (PLIP), a high-level descriptive test programming language optimised for generation of both analogue and digital IC test programmes.

PremierLink includes :

- Library development manager for IC configuration and test selection
- PLIP programming for full generation of new IC functional tests
- Access to test routines for System8 built-in library devices
- Compiler, debugger and active help integrated

Who uses BoardMaster 8000 PLUS ?

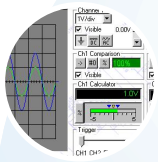
With customers ranging from a manufacturer of flight simulators to an aluminium company, including universities, technical colleges as well as repair centres, the BoardMaster 8000 PLUS, and its associated range SYSTEM 8, demonstrates its versatility everyday, in every technical field available and in every corner of the world.

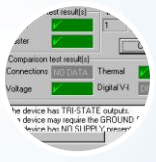
- The French railway uses the BoardMaster 8000 PLUS to heavily soak test PCBs used for on-board communications.
- The Turkish land forces use the BoardMaster 8000 PLUS to carry out field repair s of missiles, radars and other military apparatus.
- The quality assurance department of a leading electronics manufacturer in Japan uses SYSTEM 8 to work on failure analysis of both simple and complex digital ICs.

Across the board applications

Versatile stand alone unit

Cost-effective fault-finding





- **Analogue 'as wired' in-circuit testing**
- **Digital 'as wired' in-circuit testing**
- **Voltage and connections testing**
- **Live board comparison**
- **Manufacturing defects analysis**
- **Power-on and power-off testing**
- **Automatic signal comparison**
- **Large format display**
- **Custom instrument layouts**
- **Configurable menus and icons**
- **Save and compare analogue and digital components and waveforms**
- **Image based fault-finding routines**
- **QA reporting facilities**
- **Custom user preferences with supervisor control**
- **Embedded real-time control, calculation and logging facility**

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