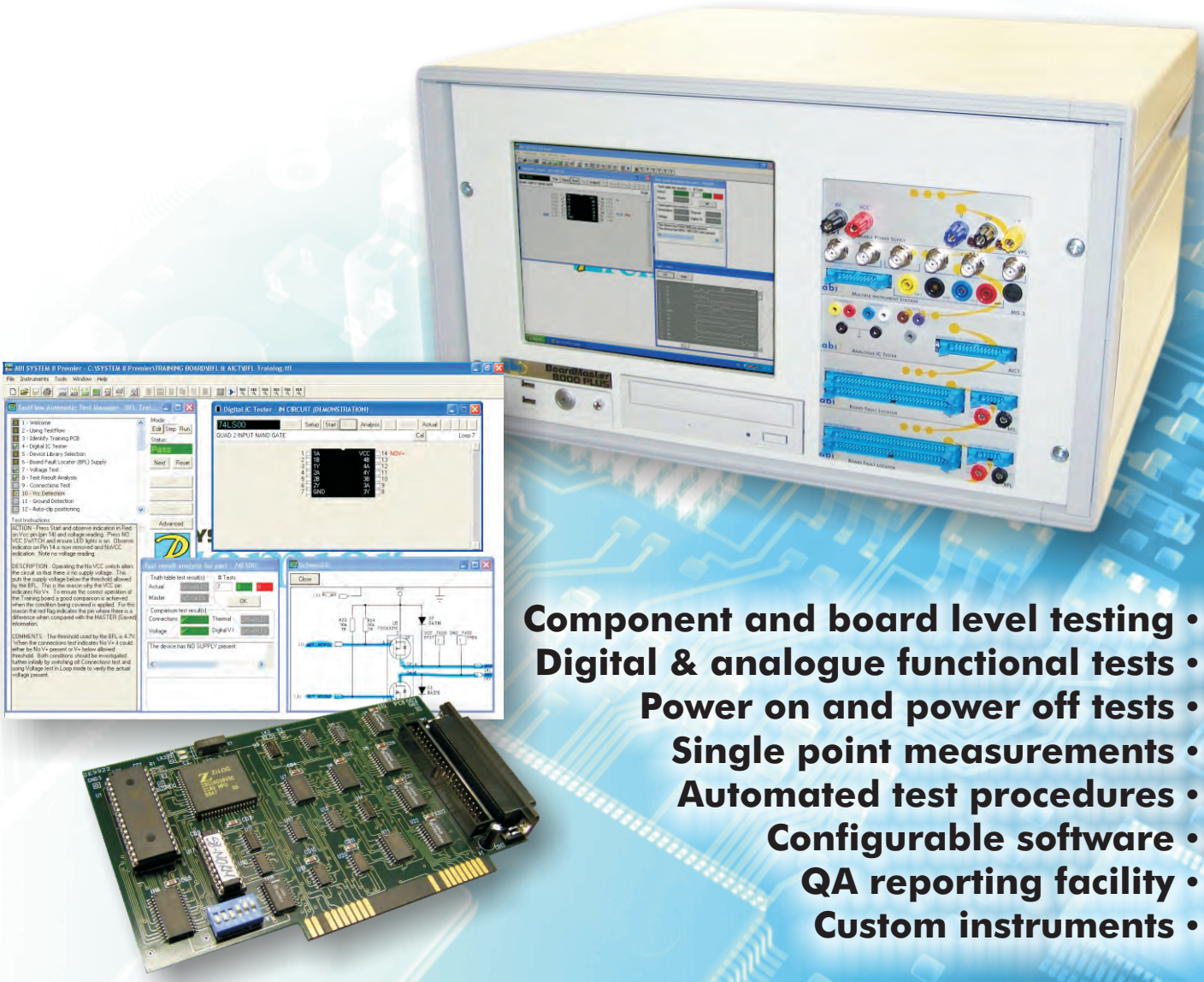
THE ULTIMATE IN DIAGNOSTICS TOOLS



Component and board level testing •
Digital & analogue functional tests •
Power on and power off tests •
Single point measurements •
Automated test procedures •
Configurable software •
QA reporting facility •
Custom instruments •

BoardMaster 8000 PLUS

Universal Diagnostic System

The ABI BoardMaster 8000 PLUS 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.

Whether your task is design verification, production test, semiconductor device testing, production repair or general maintenance, and whether your boards are analogue, digital or both, the BoardMaster 8000 PLUS provides the ultimate in diagnostic tools.

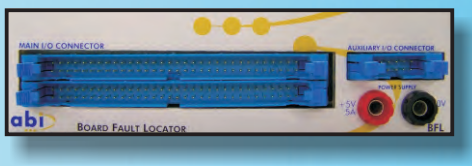
www.abielectronics.co.uk

The perfect solution for all your test requirements...

Today's rapidly changing, dynamic and progressive electronics industry presents multiple problems to engineers, whether they are working in design, production, test or fault-finding. Electronic circuits are becoming faster, smaller, cheaper and more complex. Cost-effective test and repair is also becoming more difficult to achieve. As a result, you are making ever increasing demands on your test equipment to keep pace with the challenges presented by this explosion of technology. If you recognise the problems, you are half way to finding the solution.
Even though technology marches relentlessly on, the basic nature of faults remains the same. ICs still fail, diodes still become open circuit, capacitors still become short circuit. A solder bridge today is the same as a solder bridge 10 years ago. But today we must find these faults quicker. "*Beyond economical repair*" does not mean that the board cannot be repaired, only that it will take too long.

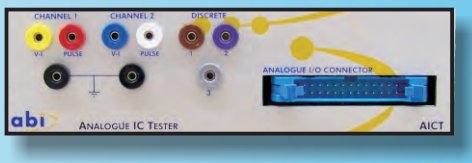
The economics of repair also includes the cost of test equipment. The BoardMaster 8000 PLUS offers cost-effective fault-finding across a wide range of applications. It is an integrated package of high specification instrumentation controlled by sophisticated but easy to use software. The hardware is installed in a rugged transportable case that also contains a high specification, MS Windows™ compatible PC. The BoardMaster 8000 PLUS is a modular system and can therefore be customised for specific applications. The standard configuration offers :

Board Fault Locator Module (BFL)



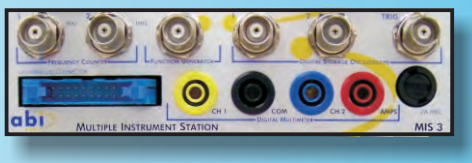
The BoardMaster 8000 PLUS is supplied with two Board Fault Locator modules giving 128 test channels for a variety of test methods. These provide comprehensive fault diagnosis capability and include functional testing of digital ICs (in-circuit / out-of-circuit), IC connections status and voltage acquisition 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)



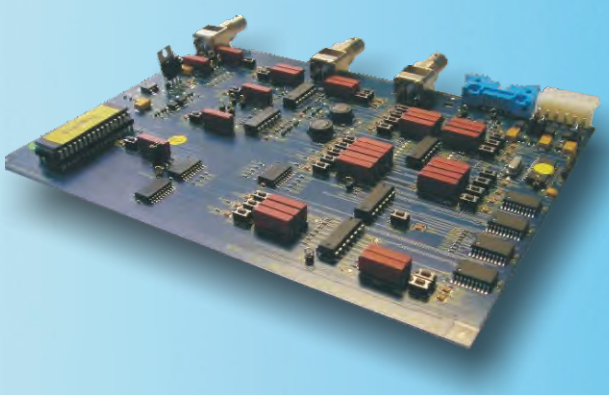
The Multiple Instrument Station provides no less than 8 high specification test and measurement instruments in one compact module. Ideal for design, education or for general purpose workbench use, the MIS offers a Frequency Counter, Digital Storage Oscilloscope, Function Generator, Digital Floating Multimeter, 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 voltage and offer over voltage protection or current

Training Package

It is common knowledge that a trained operator works more efficiently than a novice. At ABI Electronics, we also understand that, in order to get the best out of your equipment, it is crucial to be aware of all its capabilities. With that attitude in mind, ABI Electronics has developed a complete training package for new and advanced users.
A training PCB was specially designed as a platform for the BoardMaster 8000 PLUS. Through PIC-controlled fault conditions, operators approach digital and analogue electronics principles and gain knowledge of repair techniques. A complete guide is also provided in the form of a TestFlow with detailed instructions and explanations.



The training package is widely used in the industry as it allows new users to train on their own and at their own pace, thus freeing advanced users for other tasks. It is also part of many educational

Standard Accessories

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

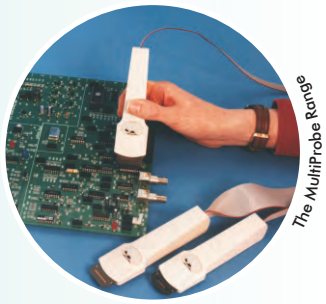
Board Fault Locator Cable Set
1 x 64 way test cable
1 x 64 way split test cable
1 x BDO cable assembly
1 x short locator cable assembly
1 x ground clip
1 x PSU lead set
1 x V-I probe assembly

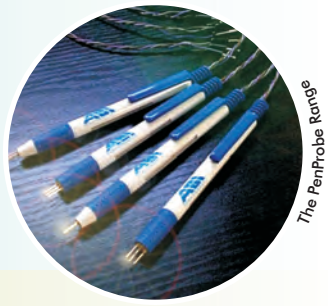
Additional Board Fault Locator Cable Set
1 x 64 way test cable
1 x 64 way split test cable
1 x BDO cable assembly
1 x ground clip
1 x PSU lead set
1 x V-I probe assembly

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.

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 circuit testing of ICs. SOIC and PLCC adapters available.


The MultiProbe Range


The PenProbe Range

Optional Accessories

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 assembly
20, 28, 44, 52, 68 and 84 pin
QFP test clip and cable assembly
100, 144, 160, 208 pin


A full range of clips and cables are available

Premier Software

	Board Fault Locator	Analogue IC Tester	Analogue Test Station	Multiple Instrument Station	Variable Power Supply
Channels per instrument (analogue in brackets)	64[1]	(24)	(24)	4+(4)	N/A
Power supplies	5V			5V ±9V	2-7V ±24V
Discrete testing		●			
Analogue impedance test		●	●		
Digital impedance test	●				
Logic supplies	●			●	●
Measurement [2]				●	
Short locator	●				
Unknown IC search	●				
Out-of-circuit	●[3]				
In-circuit	●	●	●	●	●
Analogue test		●	●		
Digital test	●				
IC functional test	●	●			
Test Generator	●				
PremierLink Software	●	●			

(1) 128 channels with BoardMaster8000+. Upgrade options : 128, 192, 256
(2) DSO, Function Generator, Frequency Counter, Digital Floating Multimeter, Universal I/O

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.

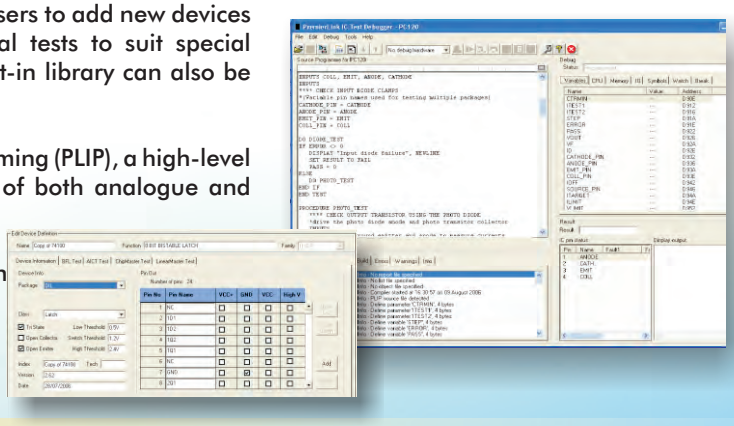
TestFlow transforms fault finding into a methodical, step by step procedure that reduces the risk of inaccurate measurements by recording all the parameters of a test. Technicians can write a test procedure, or TestFlow, for a particular PCB by setting up each stage of the process and recording the results. 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 reported results 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

PremierLink Software (Optional)

PremierLink is 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.



- 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

Applications: who uses the BoardMaster 8000 PLUS?

With customers ranging from a manufacturer of flight simulators to an aluminium company, from an IC manufacturer to universities and technical colleges, 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. Many repair centres are equipped with the BoardMaster to offer the best fault coverage and maintenance capabilities to their wide range of customers including telecommunications, transportation and even consumer goods. Thanks to a strong network of partners, the BoardMaster is also the instrument of choice for many land forces, air force and navy organisations around the globe.

Advanced applications : high volume and end-of-line testing

The BoardMaster 8000 PLUS is also an excellent solution to set up customised rigs and test stations which aim are to ensure the quality of a large number of PCBs through a test protocol. Some setups, for instance, use the Multiple Instrument Station (MIS) module to acquire a variety of measurements whilst the Board Fault Locator (BFL) module is used to control the multiplexing of test points. Test time is kept to a minimum thanks to the automated test sequences (TestFlows) which are also able to log results for reporting. Contact ABI Electronics to

Specifications for BoardMaster 8000 PLUS

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.

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.

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

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. Optional out-of-circuit adapter available.

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.

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.

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

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.

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