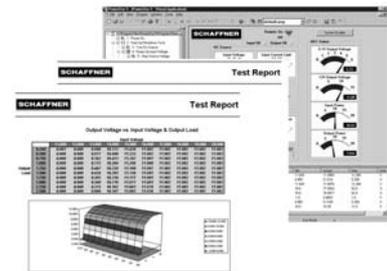# PowerStar 5 Test Executive

- **Customised Reporting and Flexible Test Result Processing**

- **Microsoft® Access® Database Support**

- **Fully Integrated Visual Basic™**

- **Family Testing**

The PowerStar 5 test environment is a Windows-based integrated software system for ATE control and test development. With a built-in library of more than 100 standard tests, drag and drop program generation and the option to generate new tests, PowerStar 5 enables the development of complete functional test programs in a fraction of the time normally taken to build and debug test routines. Maximum portability and upgradability of test programs are guaranteed through the hardware server to provide independence between the hardware and software layers.

Features of PowerStar 5 include:
- Tests and drivers compatible with Powerstar IV
- Ability to run on new, old or mixed systems
- Supports ActiveX and OLE automation for easy integration of third party applications like LabView™
- Easy to develop graphical user interfaces for virtual instrument control

Figure 1: PowerStar 5 Test Index

Program building
Programs are created quickly and easily, by selecting from PowerStar 5's comprehensive standard test library and dragging and dropping them in a user-defined sequence.

Tests are easily configured using intuitive screens, which prompt the user for the appropriate test data. Measurements need only be taken once and can be stored as variables, these values may be recalled and used in evaluation expressions later in the program. Limits and ranges may be changed dynamically depending on other measurements.
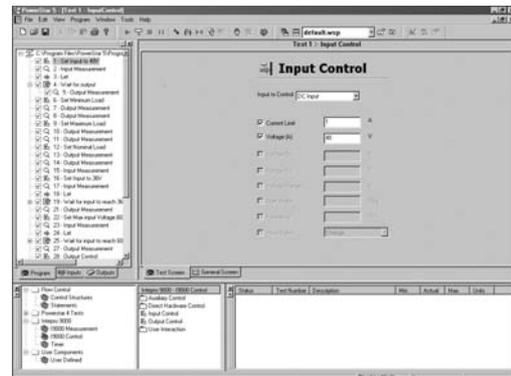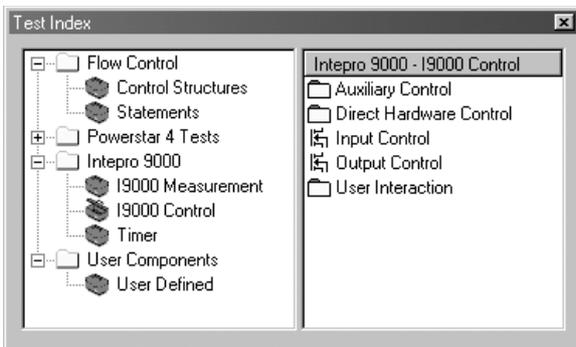

Figure 2: PowerStar 5 Program building

Family Testing
Family testing is a method of using a common test program across multiple UUT's that require a similar test sequence. This removes the requirement to create a dedicated program for UUT's which differ only on test limits and set-up-levels. Family testing is accomplished by storing individual UUT specifications in a database from which the test program automatically extracts the information for the particular UUT being tested at the time.

Variable	Model A	Model B	Model C
V-in	24	12	48
I-in Limit	1	0.5	2.5
I-out	1	0.6	2
I-out Max	4	1.2	5
V-out	5	3.3	12

Family Variable Table

Industry Standard Open Architecture

The flexible nature of PowerStar 5 allows Intepro 9000 systems to address the most complex testing needs in the broader power electronics test arena. ActiveX and OLE Automation technologies allow easy integration of third party hardware and applications such as Labview™, Labwindows™ and Agilent VEE.

VXI and C-PCI support are also available as optional extras.

For powerful results handling all test results can be saved to a Microsoft® Access database for extended analysis, reporting and graphical representation.
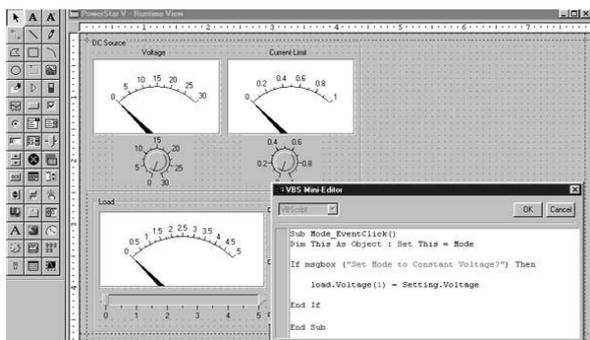

Figure 3: Virtual Application creation using VBA

Virtual Applications

Acting as an operator interface to PowerStar 5, virtual applications can be configured for any desired level of operator from simple Start/Stop buttons for production operatives to comprehensive virtual instrument control for development or service engineers. Virtual applications are created by the in-built Visual Basic™ editor and supplied library of standard controls. Further ActiveX and third party controls can be added at any time. The virtual application may be an auto-test view showing a graphical indication of a test sequence's progress, a real time debug view, or a combination of both. An unlimited number of virtual applications may be created and recalled at will by the user, or can be programmed to automatically load with a particular test program.

Virtual applications can be completely customised and programmed by the user to allow full access to all system hardware, data structures, data logging as well as integration of any third party ActiveX controls. They can also be configured as virtual instruments, allowing direct control of system hardware. Figure 5 is an

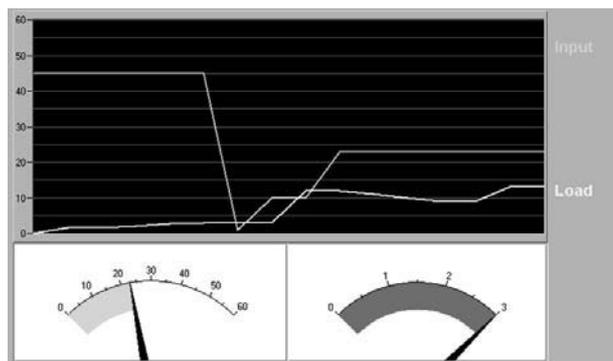example of a debug virtual application with its virtual instrument control facility.

Figure 4: Graphical Virtual Application

The use of Visual Basic™ ensures that virtual applications can be created quickly and easily with less requirement for specially qualified software experts, and the Windows™ based intuitive operator interface means test station staff require minimal training.
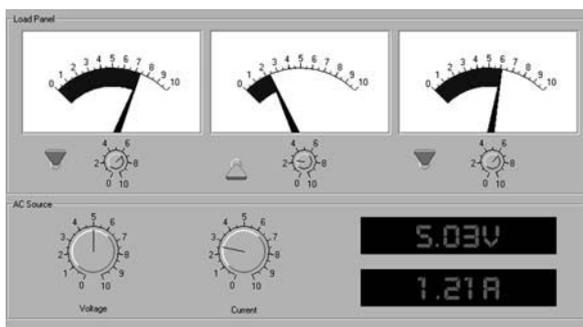

Figure 5: Virtual Instrument Interface

Test Results and Reporting

Test results are automatically logged by PowerStar 5 and written into an Access™ database either locally, or via LAN/WAN for extended analysis and reporting. The results can be analysed using standard software such as Microsoft® Excel. For reporting, you can use the customisable Access™ report template which is already supplied.

Life-cycle testing support

Optimisation of product quality and reliability depends on an effective life-cycle test strategy. Such is the flexibility and capability of PowerStar 5's test environment, it readily provides test support throughout the product life-cycle, from design

characterisation to volume production testing, maintenance, fault finding and repair. Test routines developed at the design stage can be optimised for production testing. Detailed characterisation test documentation can be called on for maintenance and repair support.

Security

To prevent unauthorised access to test program routines, set-up conditions and high-level applications, the User Access Manager (UAM) provides a security service to PowerStar 5 and all Powersuite applications used with the software. The UAM contains a user-interface for editing and assigning user rights, it validates access requests made by applications when user identity needs to be verified. The user access database can reside on a network server for company-wide user access control.

Hardware

PowerStar 5 is a full 32-bit Windows™ based package supporting a wide range of hardware including VXI, IEEE488, CAN bus and custom configurations. LabView™/LabWindow™ drivers, plus Visual Basic™/ Visual C™ are easily imported for the development of new drivers and tests.
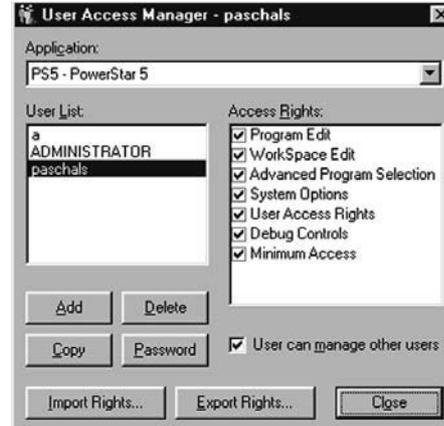

Fig 6: User Access Manager Window

PowerStar 5 empowers engineers and production management with full control of the test process. Standard programming is now easier than ever as the software also facilitates the ability to calculate and pass values between individual test steps. Powerful results management keeps production management fully informed of process yields and problems. An impressive range of support packages developed as stand-alone Windows™ applications, enables users to create a complete, flexible, expandable test control environment which meets their needs.


Order Information

Part number	Description
592-0141	PowerStar 5 Software

Minimum PC Software and Hardware requirements for PowerStar 5

An IBM compatible PC with a Pentium or equivalent processor running at 200MHz or higher.

(233MHz recommended)

- A hard drive with at least 100 megabytes(MB) of free disk space

- Pointing device

- A SVGA or higher resolution monitor. Minimum 800 by 600 resolution. (recommended resolution 1024 by 768)

- Microsoft® Windows® 95, 98, ME, 2000, NT & XP

- At least 32 megabytes(MB) of RAM

Note: ActiveX controls shown in figures 3, 4, & 5 are not supplied with PowerStar 5.
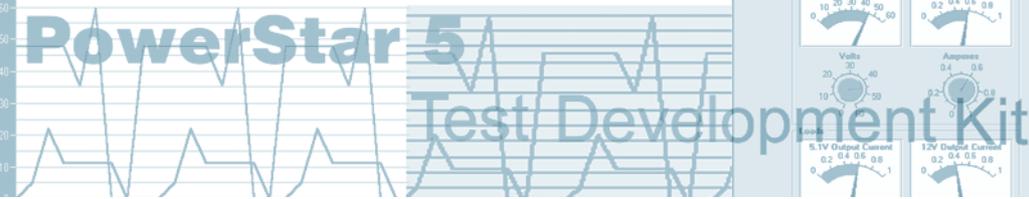
PowerStar 5 TDK Option - Test Development Kit

? Facilitates custom test creation eliminating the need for external compiling or linking

? Fully integrated Visual Basic™

? Optimal design environment for quick and easy test generation

The Test Development Kit (TDK) is a built-in test environment for PowerStar 5's ATE control and test development software, providing a powerful means for creating custom data driven tests within PowerStar 5.

PowerStar 5's integrated Visual Basic™ engine, eliminates the requirement for external compiling or linking, thereby reducing test development times dramatically. Because Visual Basic™ is one of the most widely used operator interfaces world-wide, it subsequently reduces the need for specially qualified software experts and minimises the requirement for special training.

Tests are easily generated via a test generation wizard. The wizard guides operators through the test generation process, using intuitive test screens and prompting the user with step by step instructions.

A comprehensive range of new features are available with TDK, including ActiveX control and OLE automation. When for example, creating tests with Visual Basic™, you may call on any dynamic link library (dll), acquire a dll. of any language and import it into the test process. You may also call on any OLE Automation server, such as, Excel™, Word™,

Access™ and Labwindows™. Existing code from such applications e.g. Visual C++™ and Visual Basic™ may be taken from these applications and integrated into your custom test via the OLE Automated server or linking to a dll.

Once your test screen is created all you need to do is save and load the test data. To execute this task you simply assign descriptive names to the controls you wish to save and assign a code to each of the controls.

For custom test creation TDK is an essential component of PowerStar 5. It facilitates quick and easy test generation for complex test routines, minimising expenditure on the need for software specialists and comprehensive training. Test development times are also reduced significantly through the use of a test generation wizard.

For more information please contact you local representative.

Part number
590-2343

Description
PowerStar 5 Test Development Kit (Optional Feature)