Time Electronics
Calibration, Test and Measurement

Multifunction Calibrators
and
Digital Multimeters

Precision Calibration Instruments for Wide Workload Coverage

Multifunction Calibrators

Precision calibration for wide workload coverage

5025 Multifunction Calibrator

- **0 to 1050V AC/DC voltage**
- **0 to 22A AC/DC current**
- **1Ω to 1GΩ resistance**
- **Thermocouple simulation**
- **Digital frequency**
- **Oscilloscope calibration**
- **PT100 simulation**
- **Capacitance and inductance**
- **Power calibration**
- **Clamp meter calibration**
- **GPIB / RS-232 / USB Interfaces**

EasyCal

Calibrates

Digital/Analog Multimeters	Ohmmeters	Clamp Meters	Oscilloscopes
Handheld/Bench DMMs	AC/DC Millivoltmeters	Temperature Indicators	Resistance Boxes
Frequency Meters	Thermocouple Indicators	Timer Counters	Data Loggers

And more

Multi Instrument Calibration

The 5025 is a high performance multi-product calibrator that provides the foundation for cost-effective calibration. Designed for a wide workload the 5025 calibrates both traditional and new test equipment quickly and accurately. Standard features include AC/DC voltage and current, digital frequency, decade resistance, conductance, and thermocouple simulation. Further options include capacitance and inductance, wideband AC voltage, full range resistance (incorporating PT100 simulation), power calibration, and oscilloscope calibration. In addition external adaptors are available for clamp meter and optical tachometer calibration, and a power amplifier for demanding analogue instruments.

Simple Operation

Functions and ranges are easily accessed from the front panel. Increase and decrease keys per digit, are used to quickly set the output value. Deviation control then enables the user to finely adjust the output value as a percentage (+/-9.999%). All this information is shown on a clear, easy to read LED display.

Calibration Made Easy

Connect the 5025 to a PC/Laptop installed with Time Electronics' EasyCal software and automate the calibration process. Increase speed of calibration and consistency of results, produce calibration certificates and reports to industry quality standards.

5025 Specifications

Function	Range / Values	Best 1 year Specification
Voltage DC	0 to ± 1050V	± 15ppm of setting
Current DC	0 to ± 22A	± 80ppm of setting
Voltage AC	1mV to 1050V (10Hz to 20kHz, sine-wave)	± 300ppm of setting
Option 9771: Wideband AC Voltage	20 to 200mV/300kHz. 0.2 to 2V/1MHz. 2 to 20V/100kHz	± 0.05% of setting
Current AC	10µA to 22A (20Hz to 1kHz, sine-wave)	± 0.05% of setting
Option 9780: Clamp Meter Adaptor	AC/DC Current up to 1100A (DC, 45 to 90Hz)	± 0.5%
Option 9798: Capacitance	1nF, 10nF, 100nF, 1µF, 10µF, 100µF (100V max)	± 0.25% of setting
Option 9798: Inductance	1mH, 1.9mH, 5mH, 10mH, 19mH, 50mH, 100mH, 190mH, 500mH, 1H, 10H	± 0.1% of setting
Resistance	1Ω to 1GΩ (Fixed values, decade steps)	± 20ppm of setting
Option 9774: Simulated Resistance	10Ω to 40MΩ (variable)	±0.02% of setting
Option 9787: Full Range Resistance PT100 Simulation	1Ω to 120MΩ (variable) -180 to 850°C	± 100ppm of setting ± 0.2°C
Conductance	1s to 1ns (fixed values, decade steps)	± 20ppm of setting
Thermocouple Simulation	-270 to 1800°C. Type J, K, R, T, S, B, E, N	± 0.15°C
Digital Frequency/Period	0.1Hz to 10MHz / 100ns to 10s	± 20ppm of setting
Option 9770: Oscilloscope Calibration		
Amplitude	0mV to 200V and 0mV to 2V 50Ω (Square-wave or DC)	± 0.05%
Frequency/Period	0.1Hz to 100MHz / 100ns to 10s	± 20ppm (± 0.1ppm with option 9783)
Duty Cycle	3 frequencies: 100Hz, 1kHz, 10kHz, settable from 0 to 100%	–
Fast-Rise	< 850ps. Bandwidth checking up to 400MHz	–
Option 9769: 2.2GHz Sweep	100MHz to 2.2GHz levelled sine-wave (0.5, 1, 1.5V pk-pk)	Amplitude ± 1%, Frequency ± 20ppm
Option 9797: Power Calibration		
Power	22A, 1050V, 23kW, 45 to 400Hz	**ACV: 0.03%, DCV: 0.01%. ACI: 0.1%, DCI: 0.03%**
Phase/Power Factor	± 90°/ 0.00 to 1.00PF	**± 0.3°**
Duty Cycle	3 frequencies: 100Hz, 1kHz, 10kHz, settable from 0 to 100%	–
Fast-Rise	< 850ps. Bandwidth checking up to 400MHz	–

Options (specifications for 9771 / 9774 / 9780 / 9798 / 9787 / 9770 / 9769 / 9783 / 9797 shown above)

Internal Calibrator Options	9771: Wideband AC Voltage • 9774: Simulated Resistance • 9787: Full Range Resistance 9798: Capacitance and Inductance • 9770: Oscilloscope Calibration • 9797: Power Calibration
Oscilloscope Calibration Options (option 9770 must be fitted)	9769: Internal Scope 2.2GHz Levelled Sine Generator • 9783: Internal Oven-Controlled High Stability Frequency Reference 9762: External Rubidium High Stability Frequency Reference • 9764: External Current Probe Calibration Adaptor
External Adaptors/Instruments	9780: Clamp Meter Adaptor (1 & 50 turn coil) • 9773: Optical Tacho Adaptor • 9790: 100 Amp AC Current Transformer 9760: Power Amplifier (60V AC, 90V DC - 100mA) • 9766: Low Noise Attenuator (1000:1) • 9767: Low Noise Attenuator (100:1)
Accessories and Calibration Certificates	9085: Soft Carry Case • 9728: 19" Universal Rack Mount Kit • 9796: Premium Test Lead Set C159: Factory Certificate (NPL traceable) • C103: UKAS Certificate • C113: Extended UKAS Certificate
EasyCal Software	ECFLA: EasyCal Full License • 9777: Bar Code Reader • 9779: Job and Address Label Printer EC2FL/EC2CL/EC2WL: Additional User Licenses • EAD: EasyAdmin Add-On • EWC: WebCerts • CREP: Crystal Reports Software

General Specifications

Warm up	30 minutes to full accuracy
Settling Time	Less than 5 seconds
Temperature Performance	Operating: 5 to 45°C. Calibration: 15 to 28°C. Storage: -10 to 50°C
Operating Humidity / Altitude	< 80% non condensing. Altitude: 0 to 3km. Non operating: 3km to 12km
Line Power	100 to 230V AC 50/60Hz. 200W maximum
Interfaces	RS-232, USB, and GPIB
Dimensions / Weight	w455mm, H155mm, D480mm. Weight: 16.5kg

5051 Plus Multifunction Calibration System

- **Integral Calibrator, DMM, and PC**
- **Source up to 1050V AC/DC voltage**
- **Source up to 22A AC/DC current**
- **Source up to 1GΩ resistance**
- **Thermocouple simulate and measure**
- **PT100 simulate and measure**
- **Source capacitance and inductance**
- **Oscilloscope calibration**
- **Clamp meter adaptor included**
- **EasyCal calibration software included**

EasyCal

Calibrates

Digital/Analog Multimeters	R-C-L meters	Clamp Meters	Oscilloscopes
Transducers & Transmitters	Process Calibrators	Temperature Simulators	Decade Boxes
Frequency Meters	Temperature Indicators	Voltage & Current Sources	Data Loggers

And more

Calibrator / DMM / Touch Screen PC

The 5051 Plus Calibration System combines a high accuracy calibration source with a precision digital multimeter. Designed for a wide workload the 5051 calibrates both traditional and new test equipment quickly and accurately. The 5051 control software allows the operator to easily select the wide range of functions using mouse, keyboard, or touch screen.

Standard internal features include AC/DC voltage/current, resistance, frequency, thermocouple/PT100 simulation and measure, capacitance/inductance calibration, and oscilloscope calibration. Also supplied is a clamp meter adaptor for clamp calibration up to 1100A, and test lead set to provide the neccessary connections for nearly all applications.

Compact System For The Calibration Process

The 5051 Plus is an inclusive package with features to cover and optimise the entire calibration process. By integrating the calibrator, DMM and PC in one unit minimal bench space is used. This also makes the 5051 ideal for site work with carry case supplied as standard.

The internal PC is preloaded with the EasyCal software suite, enabling automatic calibration to increase speed and efficiency of work. In addition EasyCal has features to manage and administrate both inventory and quality control. As a complete workstation the 5051 Plus is supplied with printer and connectivity kit for producing certificates and reports.

5051Plus Specifications

Function	Range / Values	Best 1 year Specification
Calibrator (source)		
Voltage DC	0 to ± 1050V	± 15ppm of setting
Current DC	0 to ± 22A	± 80ppm of setting
Voltage AC – Wideband AC Voltage	1mV to 1050V (10Hz to 20kHz, sine-wave) 20 to 200mV/300kHz. 0.2 to 2V/1MHz. 2 to 20V/100kHz	± 300ppm of setting ± 0.05%
Current AC	10μA to 22A (20Hz to 1kHz, sine-wave)	± 0.05%
Clamp Meter Adaptor x50 turn	AC/DC Current up to 1100A (DC, 45 to 90Hz)	± 0.5%
Capacitance	1nF, 10nF, 100nF, 1μF, 10μF, 100μF (100V Max)	± 0.25%
Inductance	1mH, 1.9mH, 5mH, 10mH, 19mH, 50mH, 100mH, 190mH, 500mH, 1H, 10H	± 0.1%
Resistance	1Ω to 120MΩ Variable (plus 1GΩ fixed value)	± 100ppm of setting
Conductance	1s to 1ns (fixed values, decade steps)	± 20ppm of setting
Thermocouple Simulation	-270 to 1800°C (type J, K, R, T, S, B, E, N)	± 0.15°C
PT100 Simulation	-180 to 850°C	± 0.2°C
Oscilloscope Calibration		
Amplitude	0mV to 200V and 0mV to 2V 50Ω (Square-wave or DC)	± 0.05%
Frequency/Period	0.1Hz to 100MHz / 100ns to 10s	± 20ppm (± 0.1ppm with option 9783)
Duty Cycle	3 frequencies: 100Hz, 1kHz, 10kHz, settable from 0 to 100%	–
Fast-Rise	< 850ps. Bandwidth checking up to 400MHz	–
Option 9769: 2.2GHz Sweep	100MHz to 2.2GHz levelled sine-wave (0.5, 1, 1.5V pk-pk)	Amplitude ± 1%, Frequency ± 20ppm

6.5 Digit DMM (measure)

Function	Range / Values	Best 1 year Specification
Voltage DC	0 to 1000V	35ppm of rdg + 6ppm of rng
Current DC	0 to 3A	500ppm of rdg + 50ppm of rng
Voltage AC	0 to 750V	0.06% of rdg + 0.04% of rng
Current AC	0 to 3A	0.1% of rdg + 0.04% of rng
Resistance	0 to 100MΩ	100ppm of rdg + 50ppm of rng
Frequency	3Hz to 300kHz	0.01% of rdg
Thermocouple	-270 to 1800°C (Type J, K, R, T, S, B, E, N)	± 0.5°C
PT100	-180 to 850°C	± 0.08°C

PC Specifications/Details

Processor	2GHz
RAM	512MB
Hard Drive	60GB solid state
Ports	4 x USB, 1 x Fast Ethernet
Display	10.5" Touch Screen LCD
Operating System	Windows XP Embedded
Included Software Programs	Calibrator and DMM control programs, EasyCal calibration software suite
Supplied Hardware/Accessories	USB keyboard, Inkjet Printer, Cal and ID Label Printer, DVD-RW, 4 port USB hub, Numeric key pad, USB memory stick

Options

Oscilloscope Calibration Options	9769: Internal Scope 2.2GHz Levelled Sine Generator • 9783: Internal Oven-Controlled High Stability Frequency Reference 9762: External Rubidium High Stability Frequency Reference • 9764: External Current Probe Calibration Adaptor
External Adaptors/Instruments	9773: Optical Tacho Adaptor • 9790: 100 Amp AC Current Transformer • 9760: Power Amplifier (60V AC, 90V DC - 100mA) 7042: Remote Pressure Module (Vac to 20 bar versions) • 5077: Power Calibrator • 7070/7071/7072: Dry Block Calibrators
EasyCal Software Accessories and Calibration Certificates	9777: Bar Code Reader • 9779: Job and Address Label Printer • EC2FL/EC2CL/EC2WL: Additional User Licenses for separate PCs EAD: EasyAdmin Add-On • EWC: WebCerts Add-On • CREP: Crystal Reports Software • C134: UKAS Calibration Certificate

General Specifications

Supplied Items	5051PLUS Calibration System • Clamp Meter Adaptor • Premium Test lead Set • Soft Carry Case • Printer and Connectivity Kit Cal and ID Label Printer • 5051 Manual Control Software • EasyCal Calibration Software • Factory Calibration Certificate (NPL)
Warm up	30 minutes to full accuracy
Settling Time	Less than 5 seconds
Temperature Performance	Operating: 5 to 45°C. Calibration: 15 to 28°C. Storage: -10 to 50°C
Operating Humidity / Altitude	< 80% non condensing. Altitude: 0 to 3km. Non operating: 3km to 12km
Line Power	100 to 230V AC 50/60Hz. 200W maximum
Dimensions / Weight	w430mm, H202mm, D538mm. Weight: 23kg
Supplied Test Lead Set	High voltage (pair). High current (pair). Low thermal (pair). Shielded 4 wire. BNC test lead. BNC/thermocouple/spade adaptors. Test clips/couplers (pair). Wall mount lead holder. Carry case.

5011 Resistance/Temperature Calibrator

A versatile, high accuracy calibrator that is primarily a programmable resistance/RTD source. Internal options such as DC voltage and thermocouple simulation, DC current, and 10MHz frequency can be added to increase capabilities.

- 1Ω to 120MΩ, 100ppm basic accuracy
- RTD simulation
- Optional thermocouple simulation
- 0 to 22V DC voltage option
- 0 to 220mA DC current option
- 10MHz frequency option
- RS-232, GPIB, and USB interfaces
- Front panel operation
- PC/laptop control via EasyCal software
- Rack mount kit option
- W451 x H152 x D272mm, weight 7kg

5018 Programmable DC-AC V-I Calibrator

A high precision calibration instrument that can be configured as a simple benchtop DC voltage calibrator or advanced AC/DC voltage and current source controlled via PC, performing any number of tasks as part of a complex ATE test rig.

- 15ppm accuracy, 0.5ppm resolution
- 1999999 full scale +10% over-range
- 20mV-200mV-2V-20V DC voltage
- Deviation control -9.999% to +9.999%
- Ramping feature
- RS-232, GPIB, and USB interfaces
- Ideal for ATE applications
- Front panel operation
- PC/laptop control via EasyCal software
- Rack mount kit option
- W451 x H152 x D272mm, weight 8.2kg

5045 Oscilloscope Calibrator

A high performance benchtop instrument for calibrating a wide range of oscilloscopes and frequency meters. It provides outputs for amplitude, frequency, period, duty cycle, and bandwidth. Frequencies are generated from an internal 0.1ppm temperature controlled oscillator.

- 10mV to 220V square wave/DC
- Frequency 0.1Hz to 100MHz
- Time marker/period 15s to 10ns
- Fast rise <300ps
- Bandwidth check up to 600MHz
- Optional 2.2GHz levelled sweep
- Rubidium frequency reference option
- Front panel operation
- Virtual PC calibrator control software supplied as standard
- PC/laptop control via EasyCal software
- W451 x H152 x D272mm, weight 8.2kg

5077 Power Calibrator

A high accuracy power calibrator suitable for calibrating watt-meters, power meters, and kW-Hr meters. Supplied with "Virtual Front Panel" software the user can control the 5077 remotely via laptop or PC.

- Phase angle ± 90°, power factor 0.00 to 1.00
- 1mV to 1050V AC/DC
- 0.02 to 22A AC/DC
- 0 to 22kVA or 0 to 22kW
- 100A AC current transformer option
- 45 to 400Hz in 0.1Hz steps
- Clamp meter adaptor option
- RS-232, GPIB, and USB interfaces
- Virtual PC calibrator control software supplied as standard
- W455 x H155 x D480mm, weight 16.5kg

5065 Bench Digital Multimeter

A versatile 6½ digit bench multimeter with 19 measurement functions. Low cost, easy to use, stability, and high accuracy make the 5065 an ideal DMM for a variety of applications. With a comprehensive range of features the 5065 is suitable for test engineers, R&D, service, and calibration technicians.

- 6½ digit resolution
- Accuracy 0.005% DC voltage
- RS-232 and USB interfaces
- Optional GPIB interface
- Temperature measurements
- SCPI command set
- High sample rate
- 10 channel scanner card option
- PC/laptop control via EasyCal software
- W210 x H85 x D350mm, weight 4.4kg

5075 Precision Digital Multimeter

A benchtop digital multimeter that combines high performance with simple operation. The 5075 easily measures from nanovolts to 10kV, from picoamps to 30 amps, from micro-ohms up to 1GΩ, from picofarads to 300μF, with up to 7½ digit accuracy.

- 7 digit resolution
- 10nV to 10kV, 10pA to 30A
- Resistance, capacitance, frequency
- 18ppm accuracy/best 1 year
- 10 channel low thermal emf scanner option
- PC/laptop control via EasyCal software
- GPIB interface (USB adaptor available)
- Rack mount kit option
- W423 x H89 x D415mm, weight 8.5kg

EasyCal Calibration Software

The comprehensive solution to calibration work and management

Manage, Automate and Optimise the Calibration Process
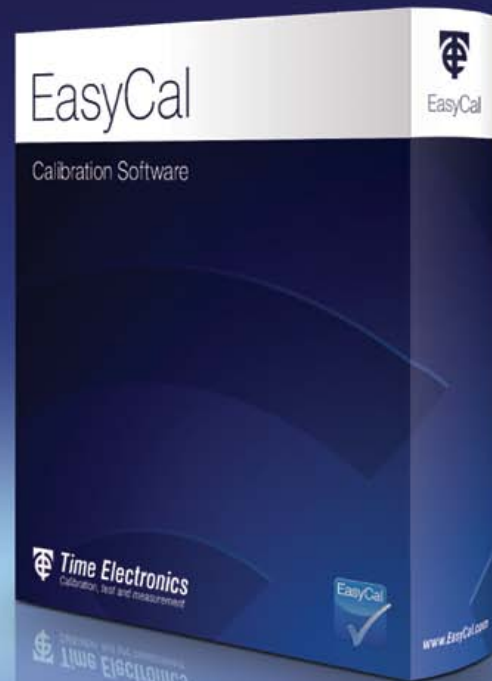
About Easycal

EasyCal is a complete software package with features covering all aspects of calibration work and management. It is designed to reduce workload, improve efficiency, and provide the essential platform for companies looking to create and sustain an effective calibration program. The comprehensive features simplify the administration process from reminder reports through to despatch. With a familiar and intuitive user interface all operators can quickly learn and navigate through the applications. This allows fast, straightforward implementation and integration of the software.

Communication and Control

EasyCal automates calibration runs by allowing the user to remotely control and communicate with compatible calibrators and DMMs. User friendly features and controls aid the process to further decrease calibration times. EasyCal can also read back values and data from compatible Time Electronics pressure and process instruments, and can be used with external instruments such as dry block calibrators.

For Multiple Industries and Disciplines

EasyCal is a versatile solution to multi-device calibration with the comprehensive functionality that is required across industries. It is globally used as the principal software in both calibration businesses and companies with on-site test facilities.

EasyCal is also designed for universal testing applications and can cover a wide range of disciplines. Users can calibrate and verify various instruments and devices: electrical and electronic; level, pressure, and flow; temperature and loop; mechanical and dimensional.
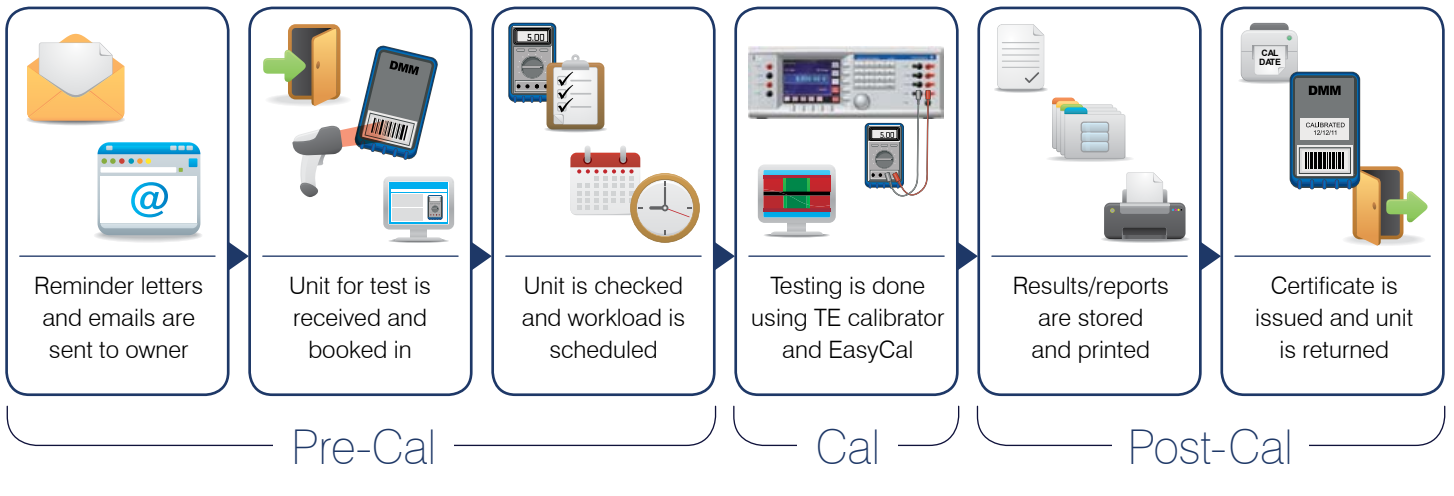
Features

- Communicate with calibrators, DMMs, bench modules
- Automated planning and scheduling
- For use with multiple devices and instruments
- Print/email/store certificates and reports
- Network compatible
- Produce calibration labels
- Quickly generate procedures using templates
- 1200+ pre-written test procedures included
- Calibration due reminder system
- E-mail reminder letters and lists
- Customise reports and certificates
- Create PDF reports and certificates (PDF engine)
- Print and read bar codes
- Universal instrument control
- HART and Foundation Fieldbus communication
- Secure user log in and electronic signatures
- Create uncertainty tables for laboratory & site
- WebCert feature for online certificates

Automating the Calibration Process with EasyCal

Reminder letters and emails are sent to owner	Unit for test is received and booked in	Unit is checked and workload is scheduled	Testing is done using TE calibrator and EasyCal	Results/reports are stored and printed	Certificate is issued and unit is returned

Pre-Cal — **Cal** — **Post-Cal**

EasyCal: For the Calibration Process

Automating the calibration process brings important benefits and provides increased speed of calibration and consistency of results.

Pre-Calibration: The calibration management features of EasyCal make the planning and organisation of instrumentation calibration simple. A recall/reminder system informs the user of upcoming jobs, and search functions allow the user to quickly identify a unit for test.

Calibration: EasyCal controlled calibration significantly decreases testing times, meaning less instrument downtime and faster turnaround. This improves throughput meaning greater return on investment. EasyCal optimises the process by allowing the user to create procedures quickly and easily with the help of the included design wizards and pre-written templates.

Post Calibration: Easily produce calibration certificates and reports to ISO 9001, ISO 17025, and other quality standards. These can be printed, stored, or emailed as PDFs. EasyCal has a selection of preformatted certificate templates suitable for displaying typical calibration results.

The Core Benefits of using EasyCal

Achieve compliance with quality standards

- Automated document control ensures conformity and quality
- Establish procedures to maintain repeatability and monitor quality
- Schedule and maintain calibration intervals.
- Evidence of traceability to national standards
- Record calibration environmental conditions
- Produce calibration labels, maintain calibration history
- Reduce possibilities for errors or omissions
- Electronic record retention ensures integrity for successful audits

Create an efficient control and management system

- Reduce testing times
- Eliminate continual outsourcing calibration costs
- Full control over the calibration process
- Improve turnaround
- Quick and easy solution to instrument analysis when needed
- Internal scheduling for calibrations. No external factors
- Centralised document management
- On demand networked review of certificates and reports

EasyCal Calibration Software

Overview of applications and features
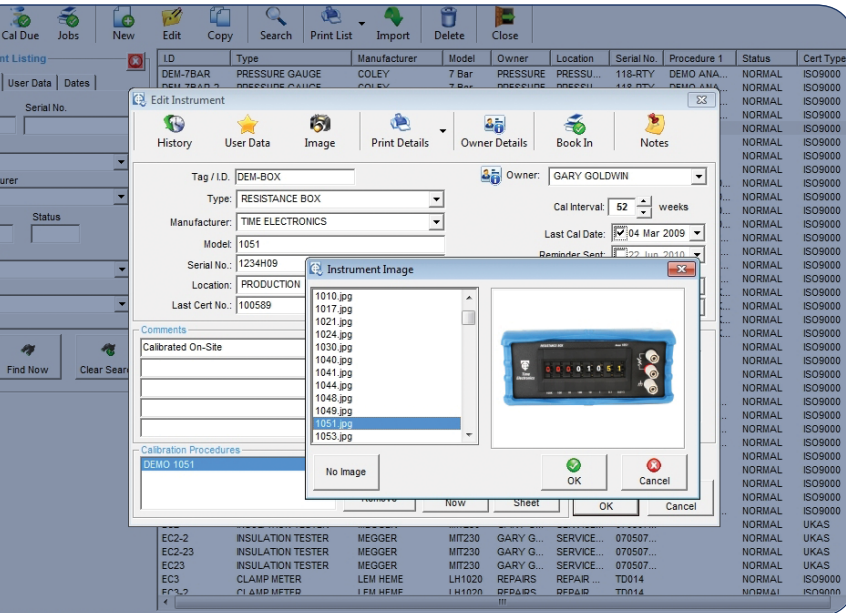
Inventory, Reminders, And Jobs

A comprehensive inventory database can be created and customised to company requirements. For internal calibration and quality management, departments and users can be specified. Alternatively EasyCal can be used as the controlling system for a calibration business based around customers and owners.

Search

A powerful search feature enables the user to enter specific criteria to quickly find the required data. When adding details the user is aided by drop-down lists, which automatically update when new information is added.

Input Fields

Used to add details such as ID and serial number, manufacturer and model, instrument status and service notes. In addition custom fields can be created to integrate with a company system. Images can be uploaded to provide further reference.
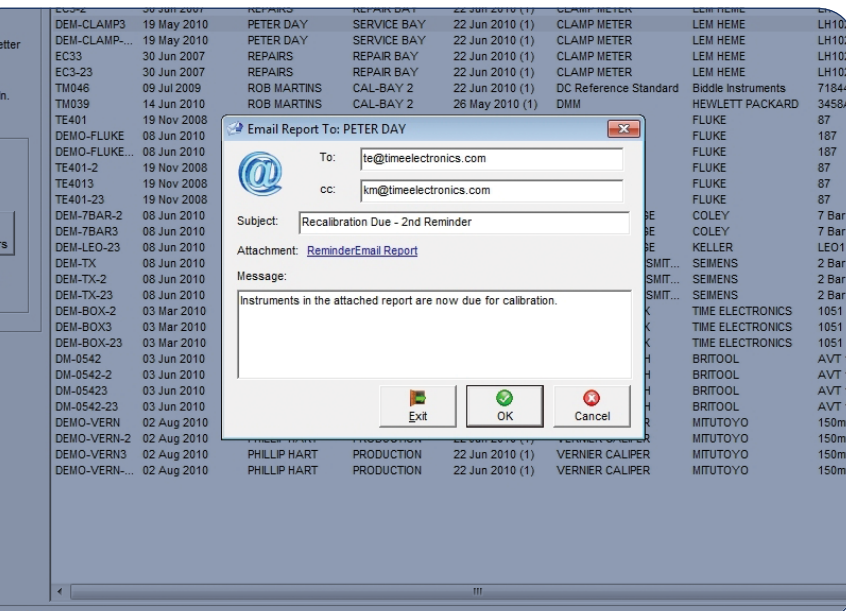
Instrument Recall and Reminder System

Instruments which are due for calibration are listed on screen. Reminder letters and lists can be printed or emailed directly to the customer or department. An advanced notice period can be set to bring forward the recall date allowing for response time.

Job Management

When a unit for test is booked in the job process starts. Specific information about the job is entered; such as 'service required', 'sub contracted' and 'accessories supplied'. A job sheet and label can be produced at this stage to accompany the instrument. As the job is put through the system these parameters can be updated, for example 'quote price', 'job status' and 'invoiced'.
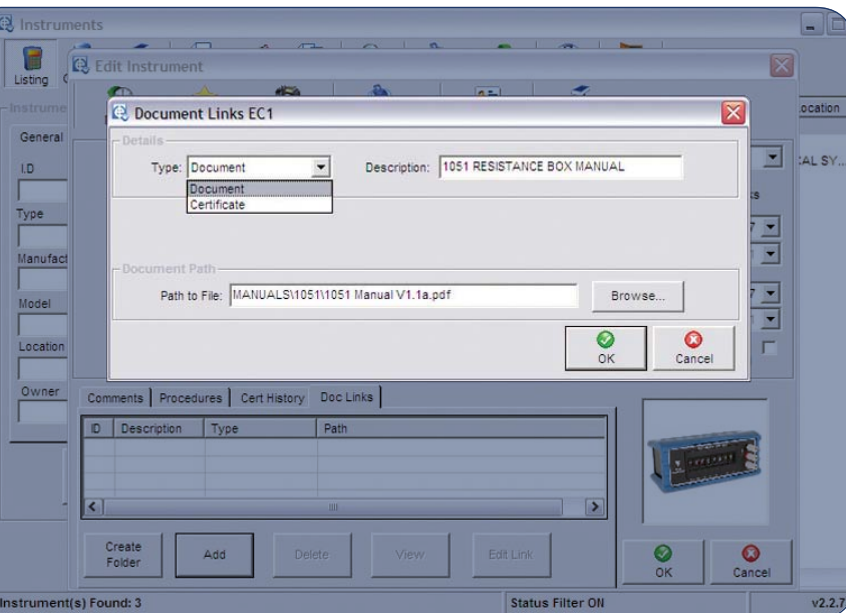
Document Links

Create links to technical files, specifications, web pages, word documents, videos, and more. These can be set to automatically display prior to the calibration run.

Devices and Standards used for Calibration

Traceability information for instruments and standards that perform the calibration work is stored and maintained by EasyCal.

Uncertainties

Uncertainty tables for laboratory and site can be created for each calibrating instrument. These are then automatically processed and applied to certificates as required.
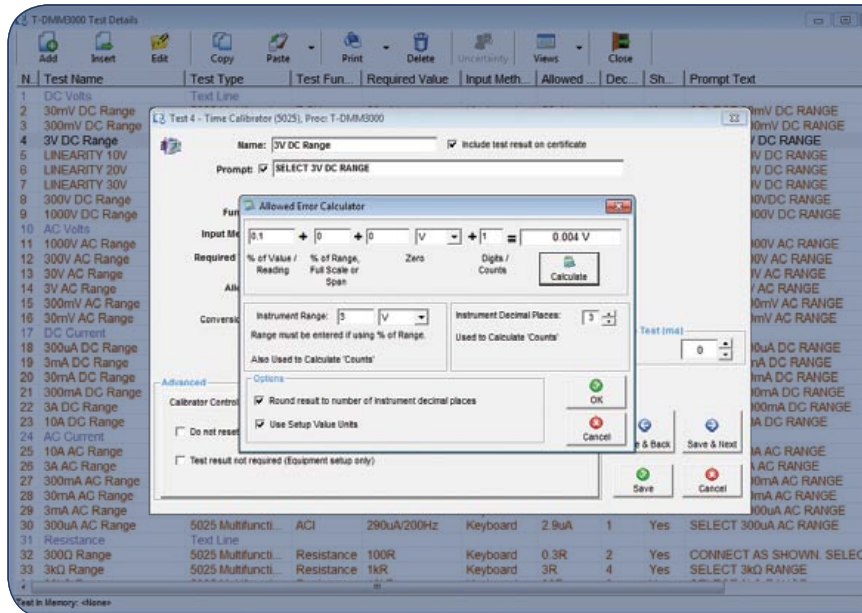
Procedure Writing and Editing

Creating and editing test procedures is made simple with an intuitive, user-friendly interface. Editing test information can be done by adding, inserting, or copy and pasting. EasyCal keeps track of each time a procedure is edited.

Procedure Library
A calibration library comprising of over 1200 procedures covering a wide variety of instruments and devices is included as standard.

Procedure Templates
Procedure templates for multimeters, clamp meters, decade boxes, insulation testers, and more can be used for creating any new procedures as required.


Fast Procedure Creation and Editing
Copy and paste multiple tests. Globally edit a group of tests. Colour coded listing helps sort and identify different test types.

Procedure Simulation
The Calibration Run Simulator enables a procedure to be tested without the need for a controlling instrument. To further assist with development of procedures a test can also be edited during the actual calibration run.

Format Certificates
Colour code and add borders to test group titles. Add column headers where a change of layout is required. A preview feature allows the user to check the certificate layout to determine if formatting is correct.
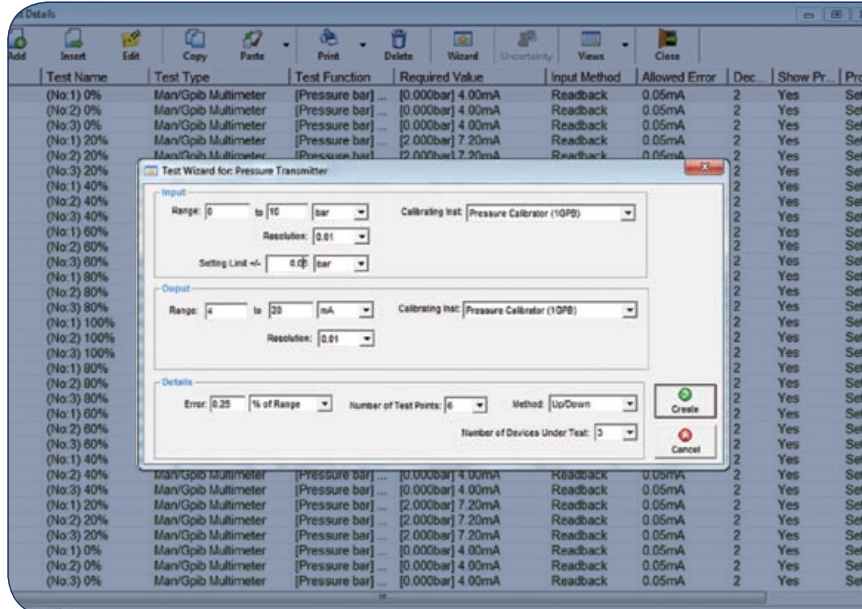

Conversion Tables
Conversion tables for thermocouples, RTDs, current transformers, and clamp meter adaptors are included. Alternatively user-defined tables can be created.

Remote Commands
For more complex instrument control, commands can be sent on a test-by-test basis or run as a script. Closed loop calibration is also achievable using the universal readback feature.
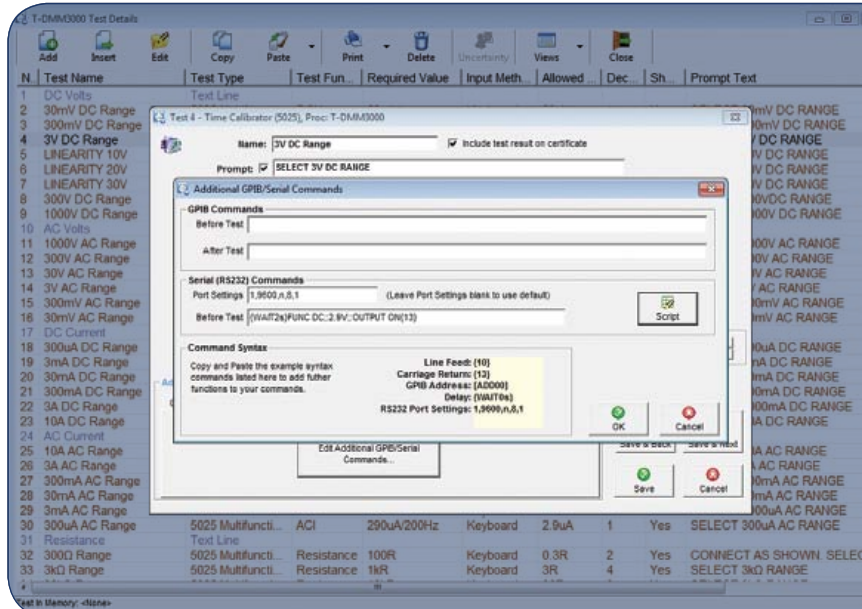
EasyCal Calibration Software

Overview of applications and features

## Instrument and Device Calibration

Automated calibration run provides fast and accurate collection of data, whether using direct instrument control or manual entry. EasyCal guides the operator through the procedure using graphical test screens and user prompts.

Search

Selection of the device under test is quick and easy. With the use of a barcode scanner this selection becomes automatic.

Calibration Prompts

Text and graphical prompts aid the user with instrument range selection and connection. So even the most complex calibrations can be performed with relative ease.
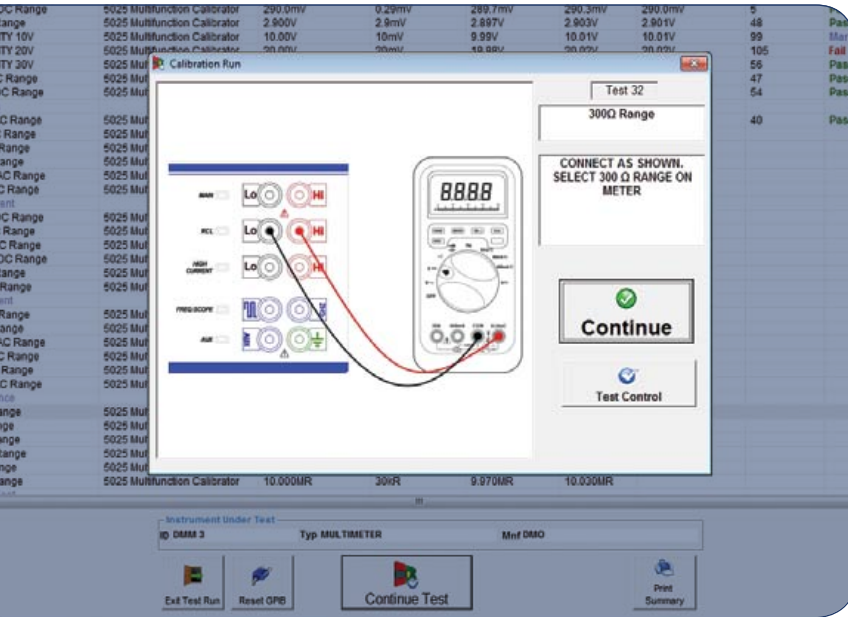
Graphical Test Screen

The calibration run is made simple and efficient by a graphical user-interface, which increases speed of data entry. The colour coded indication bar displays the test limits. This allows the operator to easily identify out of tolerance results.

Test Control

At any stage during the calibration run a summary can be displayed, this includes both completed and remaining tests. Colour coding indicates tests passed or failed. The operator is able to move forward or backward through the procedure as required.
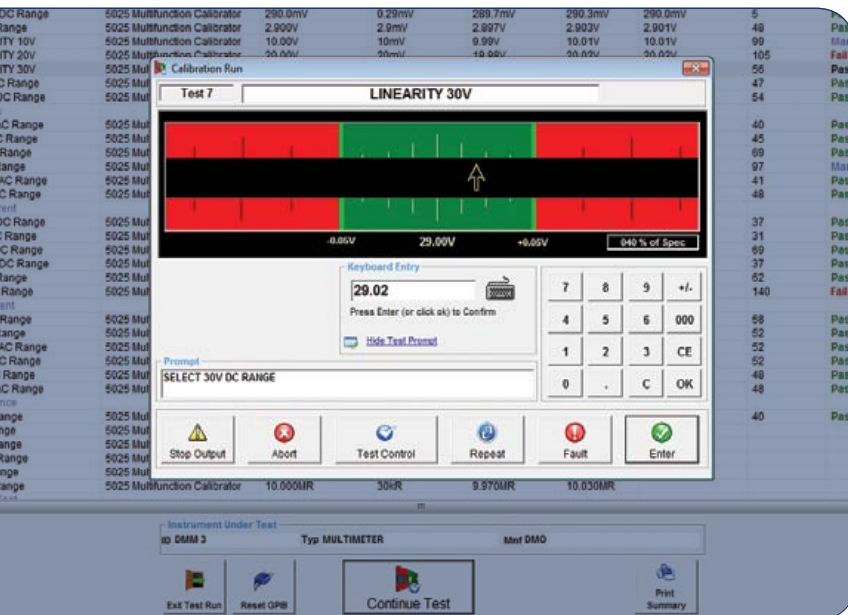
End of Calibration Run

Data for every test is stored, including a snap shot of the procedure used. If required calibration comments and service history can be updated. The operator is able to print the certificate, produce a calibration label and/or store the results to be issued as required.

Recovery Mode

If for any reason a calibration run is interrupted, recovery mode allows the user resume from the point of termination.

Calibration Test Forms

Alternatively 'calibration test forms' for hand written results are available. This data is then entered manually into EasyCal at a later date.
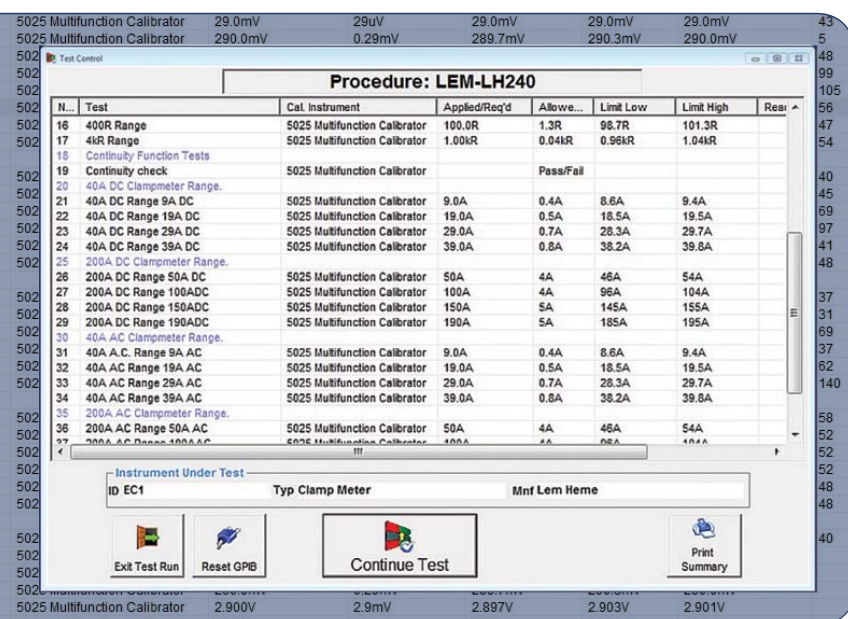
Certificates/Reports/Data Management

Produce, print, and store calibration certificates, reports, and labels. Simple search facilities enable the user to locate any data on demand. Keeping track of instrument history and servicing is made easy.

Certificate Templates
A range of pre-formatted templates are available for immediate use. A company logo can be added without the need for 3rd party software.

Electronic Signatures
Password protected electronic signatures allow management to approve certificates. In addition a scanned image of the signature can automatically be inserted, eliminating the need to print certificates.
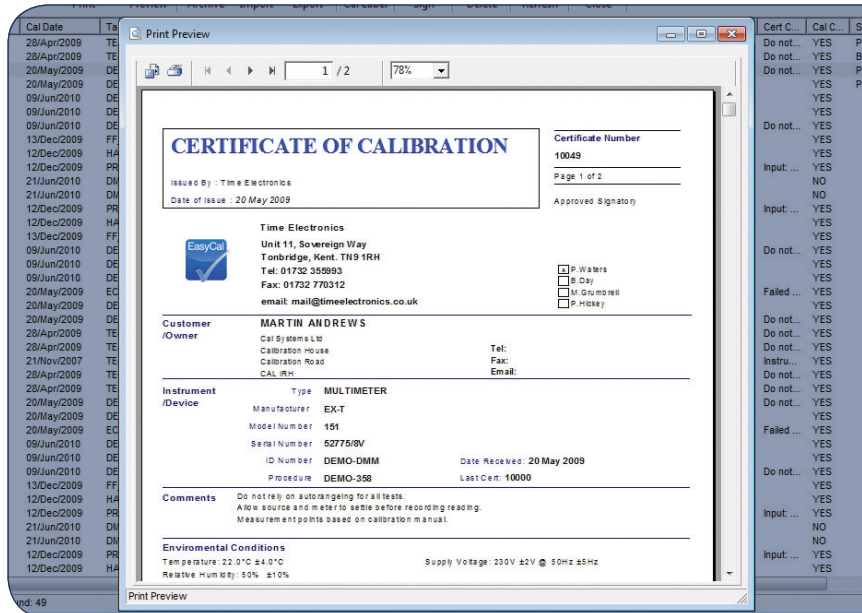
Built-in PDF Engine
Generate PDF reports and certificates ready for emailing and universal review.

Calibration Reports
Documented traceability provides a recorded audit trail. Reports showing calibration duration times can assist with costing and assessments.

Archive
The results database can be streamlined by using the archive feature. This improves data organisation and management. Archives are quickly retrieved, giving instant access to historical certificate data.
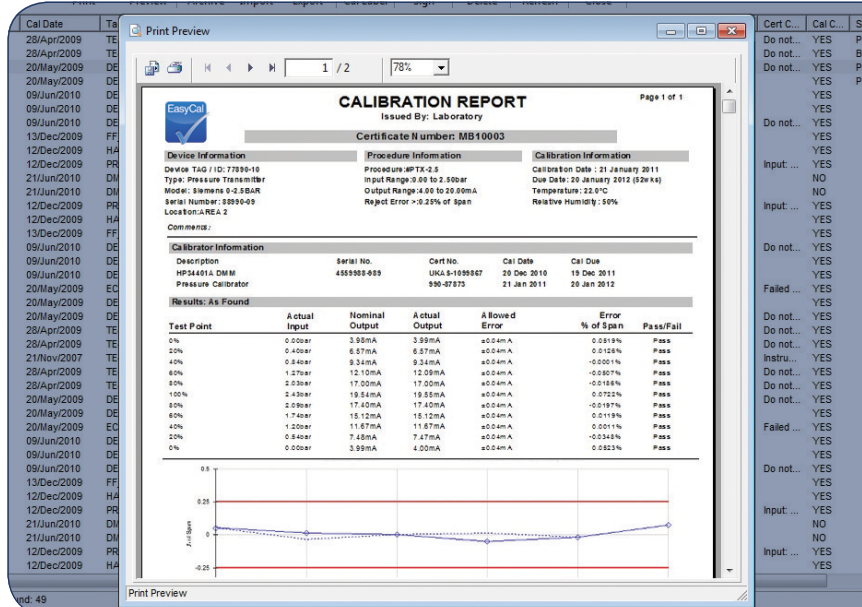
Import and Export
Exchange data from one system to another using the import/export feature. This method is ideal for site and field calibration work, where data is recorded externally then uploaded to the main database upon return.

Customise
Crystal Reports (optional) allows full modification of certificate, label, and report layouts. Design custom reports using queries, formulas, and running totals.
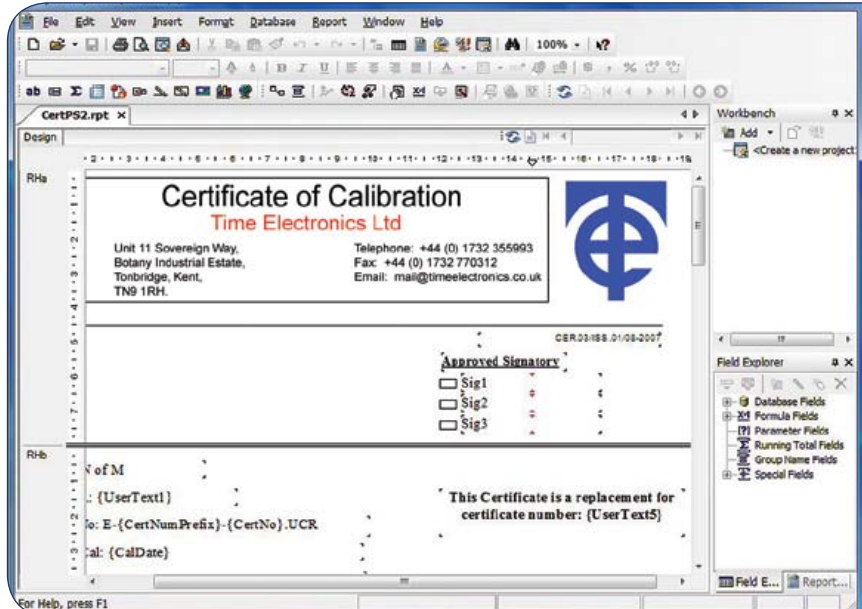
EasyCal Add-Ons and Accessories

Optional enhancements and extras for increased functionality
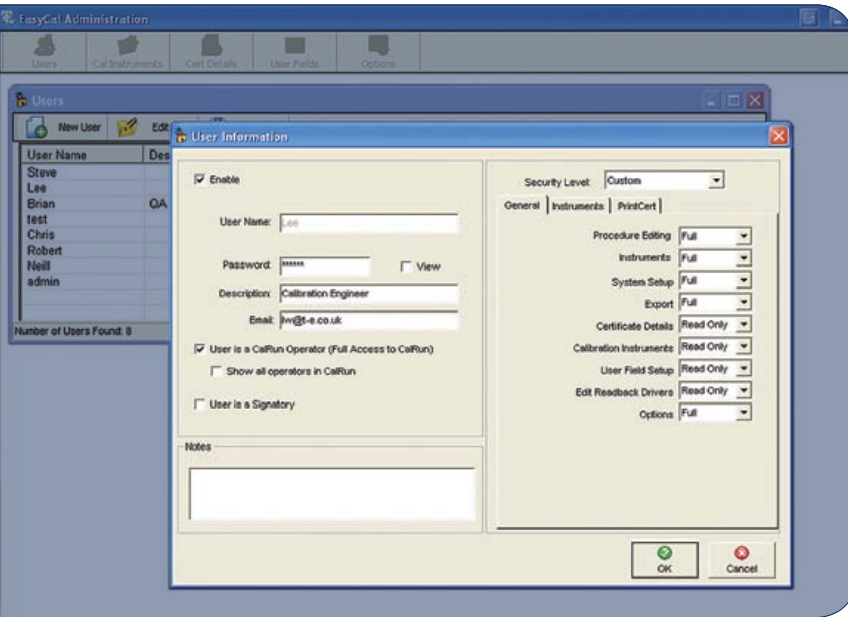
EasyAdmin

EasyAdmin is an add-on that provides increased security for EasyCal and it's users.

User Rights: A master user sets the user rights for the relative staff and defines log in criteria.

Access Levels: Setting access levels within EasyCal to limit secondary users can be done, safe guarding sensitive information.

Administration: EasyAdmin provides an administration point for calibration instruments, certificate information and user fields.

Predefined Pick-Up Lists: For instrument manufacturers, sub contractors, customer details and other information. These can be created to make EasyCal data entry quick, easy and uniformed.
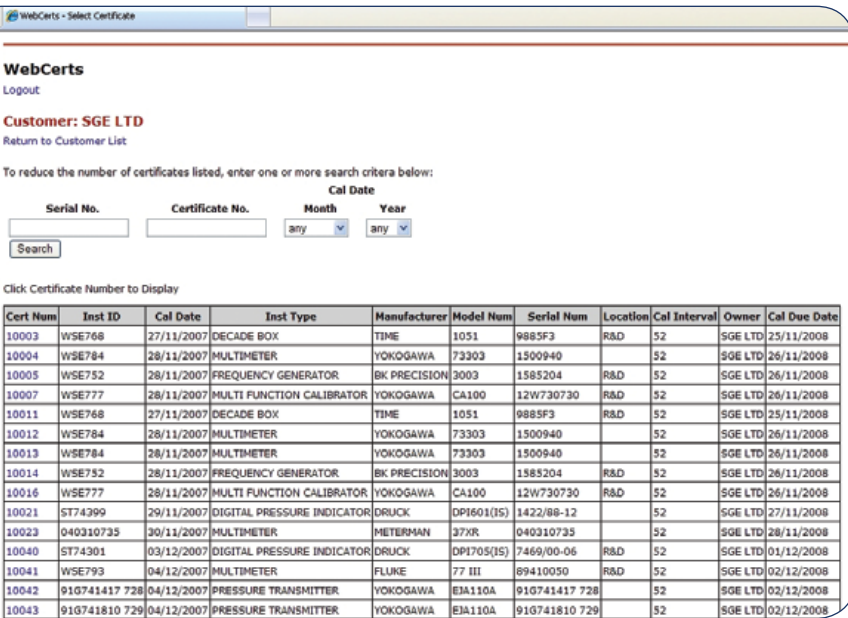
WebCerts

WebCerts is a web based application that enables EasyCal users to upload and retrieve certificates and reports online.

Simple Upload/Download: Uploading is incorporated into EasyCal by allowing the user to quickly and directly upload to their WebCert folders via FTP.

Secure User Log In: Allows access the user's private folder with their relevant documentation. Ideal for companies with different sites or locations.

Search and Filter: Users can easily locate required data by using the filter tabs or the straightforward search fields.

Hosted Package: Time Electronics also offer a hosted WebCerts package where data is uploaded, stored and retrieved by one of our designated WebCert servers.
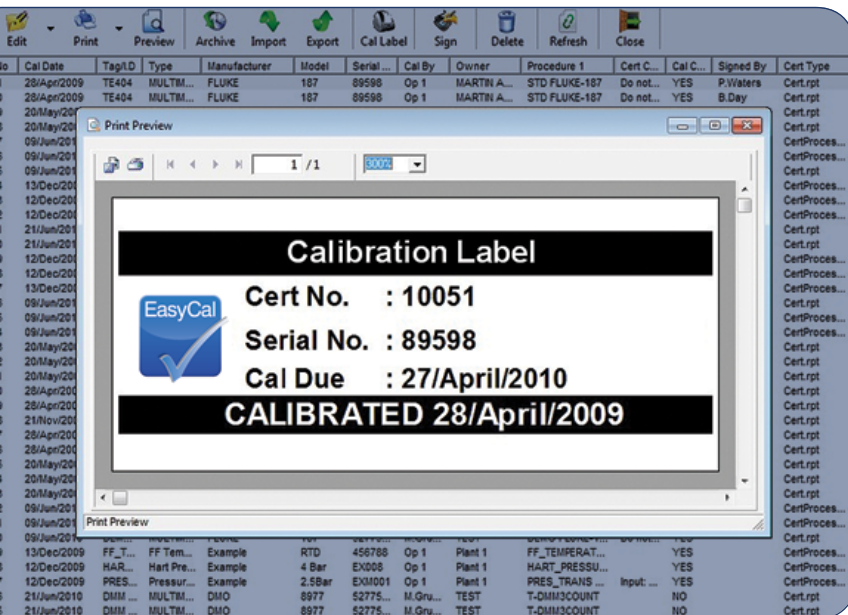
EasyCal Accessories

To complement and further optimise the calibration process Time Electronics offer a range of external options.

Printer and Connectivity Kit: Inkjet printer for calibration certificates and reports. Also includes a DVD-RW, 4 port USB hub, numeric key pad and USB memory stick.

Calibration and ID Label Printer: For printing labels to be placed on calibrated units. EasyCal has different layouts for required information to be shown.

Job and Address Label Printer: For printing information that accompanies a unit under test through the calibration process. Also for user tagging instruments.

Bar Code Reader: Enables fast identification of devices in the pre-calibration stage.

EasyCal to PC Communication Options: Interface cables and adaptors providing PC connectivity to Time Electronics calibrators or external instruments.

EasyCal Networking

With networking capabilities a multi-user system can be implemented

Networking with EasyCal

For multi-user systems EasyCal can be implemented as the universal software for administration, management, and control. With designated features for use in different workstations, EasyCal can provide a solution to calibration businesses with customers as well calibration departments within industrial plants.

Data can be shared and accessed on a central server, creating a organised and efficient networking set-up. EasyCal's pre-calibration features enable automated scheduling and also speed up the booking in process with quick instrument indentification.

Calibration runs can be automated by using a compatible Time Electronics calibrator with EasyCal. Once calibration has been performed the data can be made available on the server to the necessary parties. Hard copy certificates and reports can be issued by authorised staff.

Enhanced security features can be added for increased protection, allowing a master user to control access rights to data and applications. Also available is an online application enabling users to upload and retrieve certificates
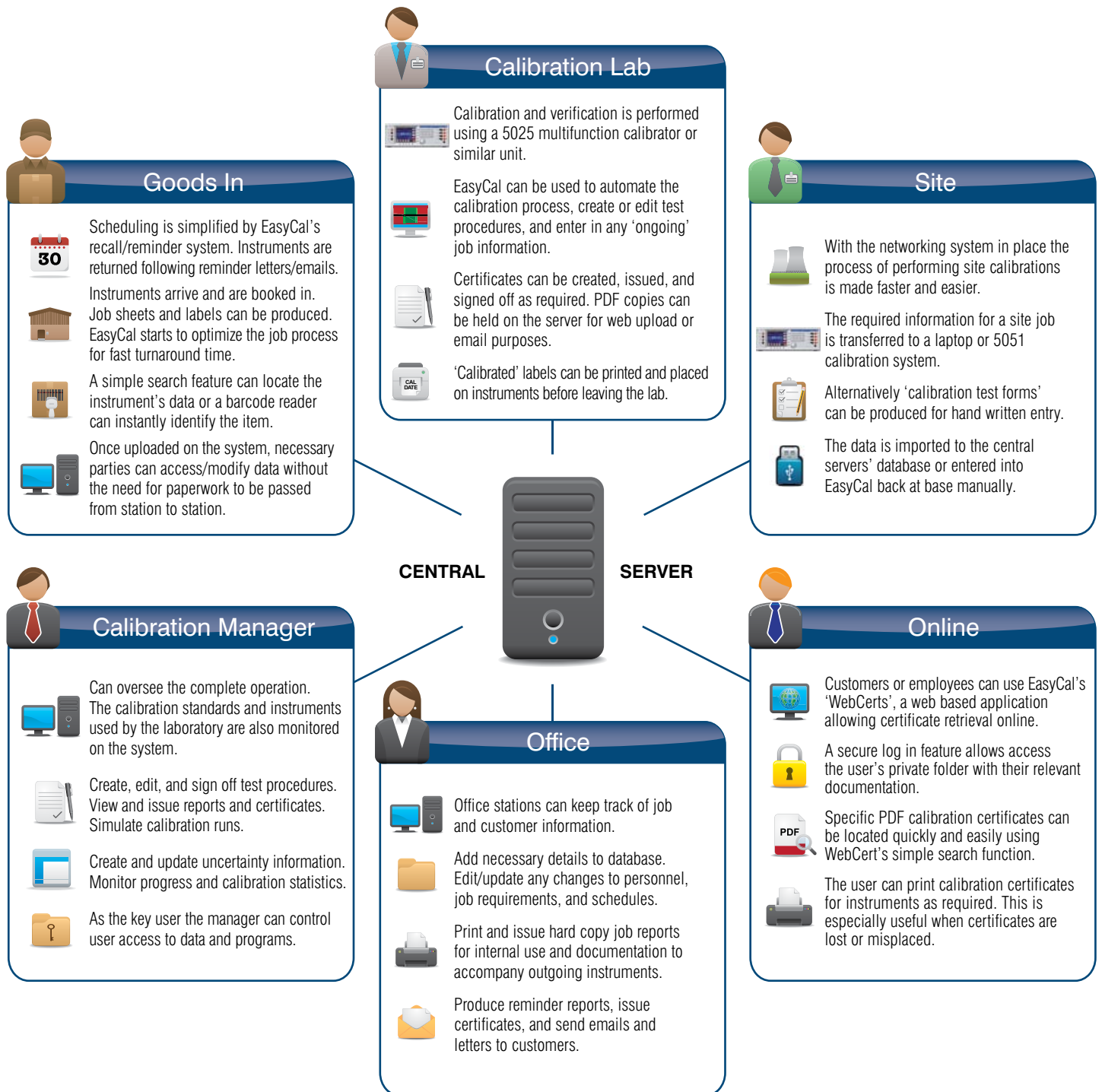
Calibration Lab

Calibration and verification is performed using a 5025 multifunction calibrator or similar unit.

EasyCal can be used to automate the calibration process, create or edit test procedures, and enter in any 'ongoing' job information.

Certificates can be created, issued, and signed off as required. PDF copies can be held on the server for web upload or email purposes.

'Calibrated' labels can be printed and placed on instruments before leaving the lab.

Goods In

Scheduling is simplified by EasyCal's recall/reminder system. Instruments are returned following reminder letters/emails.

Instruments arrive and are booked in. Job sheets and labels can be produced. EasyCal starts to optimize the job process for fast turnaround time.

A simple search feature can locate the instrument's data or a barcode reader can instantly identify the item.

Once uploaded on the system, necessary parties can access/modify data without the need for paperwork to be passed from station to station.

Site

With the networking system in place the process of performing site calibrations is made faster and easier.

The required information for a site job is transferred to a laptop or 5051 calibration system.

Alternatively 'calibration test forms' can be produced for hand written entry.

The data is imported to the central servers' database or entered into EasyCal back at base manually.

CENTRAL SERVER

Calibration Manager

Can oversee the complete operation. The calibration standards and instruments used by the laboratory are also monitored on the system.

Create, edit, and sign off test procedures. View and issue reports and certificates. Simulate calibration runs.

Create and update uncertainty information. Monitor progress and calibration statistics.

As the key user the manager can control user access to data and programs.

Office

Office stations can keep track of job and customer information.

Add necessary details to database. Edit/update any changes to personnel, job requirements, and schedules.

Print and issue hard copy job reports for internal use and documentation to accompany outgoing instruments.

Produce reminder reports, issue certificates, and send emails and letters to customers.

Online

Customers or employees can use EasyCal's 'WebCerts', a web based application allowing certificate retrieval online.

A secure log in feature allows access the user's private folder with their relevant documentation.

Specific PDF calibration certificates can be located quickly and easily using WebCert's simple search function.

The user can print calibration certificates for instruments as required. This is especially useful when certificates are lost or misplaced.

Digital Multimeters

		Factory Calibration Certificate (NPL)	UKAS Calibration Certificate	9713 Carry Case	9728 Rack Mount Kit	ECFLA EasyCal Software	9714 10 Ch Scanner card	9726 10 Ch Scanner card	9715 GPIB Interface	9717 RTD Probe Adaptor
5065	6.5 Digit Bench Multimeter	C173	C117	o	–	o	o	–	o	o
5075	Precision Digital Multimeter	C162	C130	–	o	o	–	o	–	–

ATE / Bench Calibrators

		Factory Calibration Certificate (NPL)	UKAS Calibration Certificate (ISO 17025)	9728 Rack Mount Kit	Test Leads Order code by product	ECFLA EasyCal Software	9733 Rear Terminals	9711 DCV / Thermocouple Option	9718 Current Option (220mA max)	9729 Frequency Option (10MHz digital)	9719 AC Option (22V max)	9721 200V DC Option	9724 30V DC Option	9720 1KV DC Option (includes 9721)	9790 100 Amp AC Current Transformer	9780 Clamp Meter Adaptor	9769 2.2GHz Levelled Sine Generator	9762 Rubidium Frequency Reference	9764 Current Probe Calibration Adaptor
5011	Resistance/Temperature Calibrator	C171	C115	o	o	o	o	o	o	o	–	–	–	–	–	–	–	–	–
5018	DC/AC Voltage/Current Calibrator	C142	C104	o	o	o	o	–	o	–	o	o	o	o	o	–	–	–	–
5045	Oscilloscope Calibrator	C147	C128	o	o	o	–	–	–	–	–	–	–	–	–	–	o	o	o
5077	Power Calibrator	C160	C124	–	o	o	–	–	–	–	–	–	–	–	o	o	–	–	–

Multifunction Calibrators
(main options listed)

		Factory Calibration Certificate (NPL)	UKAS Calibration Certificate (ISO 17025)	9085 Carry Case (9082 for 5051)	9728 Rack Mount Kit	9796 Test Leads	ECFLA EasyCal Software	9798 Capacitance and Inductance	9787 Full Range Resistance	9771 Wideband AC V	9797 Power Calibration	9770 Oscilloscope Calibration	9769 Scope 2.2GHz Levelled Sine Generator	9783 Oven-Controlled Frequency Reference	9762 Rubidium Frequency Reference	9764 Current Probe Calibration Adaptor	9790 100 Amp AC Current Transformer	9760 Power Amplifier	9780 Clamp Meter Adaptor	9773 Optical Tacho Adaptor
5025	Multifunction Calibrator	C159	C103	o	o	o	o	o	o	o	o	o	o	o	o	o	o	o	o	o
5051+	Multifunction Calibration System	✓	C134	✓	–	✓	✓	✓	✓	✓	–	✓	o	o	o	o	o	o	✓	o

Instrument to PC Communication Accessories

		5011 RS232/GPIB	5018 RS232/GPIB	5025 RS232/GPIB	5030 RS232	5045 RS232/GPIB	5051+ USB/LAN	5065 RS232/USB	5075 GPIB	5077 RS232/GPIB
9588	RS-232 Cable	✓	✓	✓	✓	✓	–	✓	–	✓
9597	GPIB Cable	✓	✓	✓	–	✓	–	–	✓	✓
9794	GPIB to USB Interface Adaptor	o	o	o	–	o	–	o	o	o
9765	RS-232 to USB Interface Adaptor	✓	✓	✓	✓	✓	–	–	–	✓
9763	USB to 4x RS232 Interface Adaptor	o	o	o	o	o	–	o	–	o
9743	PCI to GPIB Interface Card for PC	o	o	o	o	o	–	o	o	o

EasyCal Licenses, Add-Ons, and Accessories

Primary Licenses	
ECFL	EasyCal Full License (stand alone, when purchased individually)
ECFLA	EasyCal Full License (when purchased with compatible calibrator/DMM)
Secondary Licenses	
EC2FL	EasyCal Additional Full License (secondary user)
EC2CL	EasyCal Calibration Station License (limited work station features)
EC2WL	EasyCal Work Station License (full management/scheduling, no calibration run)
EasyCal Add-Ons	
EAD2	EasyAdmin - 2 Users: Security add-on that enables setting of user rights, access levels, and more.
EAD5	EasyAdmin - 5 Users: Security add-on that enables setting of user rights, access levels, and more.
EAD10	EasyAdmin - 10 Users: Security add-on that enables setting of user rights, access levels, and more.
EWC	WebCerts: Online application enabling upload and retrieval of certificates and reports
EWCTE	WebCerts - Hosted by Time Electronics: Online application enabling upload and retrieval of certificates and reports.
CREP	Crystal Reports Sofware: Edit and format certificate styles
EasyCal Accessories	
9795	Printer and Connectivity Kit
9777	Bar Code Reader
9778	Cal and ID Label Printer
9779	Job and Address Label Printer

Time Electronics
Calibration, Test and Measurement

For more information please contact your local Time Electronics representative: