



Laboratory Design and Supply

World class turnkey calibration
laboratories and industrial workshops

Introduction to Lab Design and Supply
Scope of Supply
Work Benches
Bench Fittings, Drawers and Cabinets
Mobile Benches and Cabinets
Storage Solutions
Additional Furniture and Options





Laboratory Design and Supply

Turnkey laboratories and workshops for industrial calibration



The Turnkey Solution to Calibration and Maintenance

Time Electronics provide a turnkey design and supply service for customers requiring an efficient and ergonomic on-site calibration laboratory. Each solution is configured and created virtually, then supplied complete including all specified test instruments, tools, and furniture. CalBenches typically feature as the primary workstations of the laboratory or workshop, for the main testing and verification workload, R&M and service applications.

The process starts by understanding end user requirements and applications. From this information the design team will firstly configure the suitable CalBench package including supporting instruments for customer specific needs. Once the technical details are finalised we look at the optimal layout for performing the required workload. We consider all aspects, including workflow, types of applications, number of engineers, and storage requirements.

Following this we take the workspace dimensions and the virtual design stage begins. Using custom software we create a detailed overview of the laboratory or workshop. This includes the necessary calibration equipment, work benches, storage units, and extras. We then generate 3D images and videos to allow the end users to visualise the concept and experience their new working environment.

Each facility we design has a core focus on optimising the calibration process. This is accomplished by a dual approach using hardware and software. CalBench modules and accompanying test instruments provide the functions to perform calibration, whilst EasyCal software is the controlling platform for all work and management.

Software is a critical aspect of each lab because it enables operators to schedule workload, organise jobs, maintain instrument and procedure databases, and print & store information. It also provides users with the capability to automate calibration work. This brings key benefits to a company or plant, because faster turnarounds mean minimal downtime of instrumentation and test tools.

Steps to a World Class Calibration Facility

Consultancy

We will consult on projects from early stage development and planning, to workshop renovations and upgrades. We guide and educate customers on all available technical solutions, as well as optimal layouts for various applications.

Technical Assessment and Specifications

A review of the workload requirements. We assess the calibration coverage plus other applications to be performed. From this we establish the systems to incorporate in the design, from modules in CalBenches to equipment required for use in the field.

Workflow Optimisation

We look at how the facility will be used, to configure the most efficient and ergonomic layout and maximum functionality.

The Design

We create a comprehensive design to enable end users to visualise the lab, with 3D concepts and scaled drawings.

Project Information and Scope of Supply

A complete technical proposal is issued to each customer, showing the design and detailed specifications for all items in the package.

Implementation

After supply we support customers with our worldwide travel team that perform on-site installations, commissioning and training.



Workshops and Laboratories

State-of-the-art, premium grade instrument and electrical workshops for industrial plants and facilities. Design layouts are fully customised to end user requirements and incorporate high performance CalBenches for calibration, testing, R&M and other applications. Each workshop is designed to be a durable, long lasting solution, built to withstand arduous use in demanding environments.

- Instrument and electrical workshops for industrial plants
- CalBenches provide the focal point for test and measurement
- Turnkey design to optimise workflow and streamline applications
- Heavy duty solutions and workshop furniture, built to last
- Fully customisable based on end user requirements
- Incorporate task specific furniture, tools and machinery
- Smart storage solutions for tools and equipment
- Versatile and flexible for various applications
- Installation, commissioning and training available



Classrooms and Training Institutes

Time Electronics work with educational institutes worldwide to provide multi purpose calibration benches and classrooms for engineer training. CalBenches are the optimal solution for teaching environments where students can learn about calibration methods and principles. They are also utilised in schools and universities for electronics and electrical engineering.

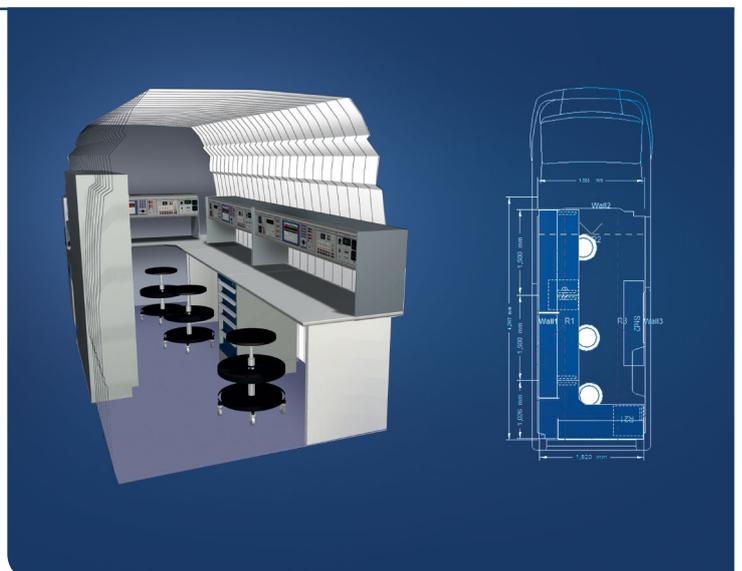
- Design and supply of classrooms for engineer training
- Integration of technical and educational solutions
- Multi CalBench layouts, custom consoles and work benches
- CalBenches for process training, electrical engineering & more
- Teach the practicals and principles of calibration
- Teach the importance of calibration, quality control & management
- Practice different methods of calibration such as manual and software driven
- Teach the processes involved in both lab and field calibration
- CalBench modules provide a simple user interface, with easy to use controls and functions



Mobile Calibration Solutions

Time Electronics provide innovative solutions for mobile calibration. The concept is a turnkey approach that enables users to perform on-site calibration services in a fully equipped mobile laboratory, featuring automated master calibration systems. The interior of each vehicle is designed as a comprehensive workspace, utilising custom built consoles, accompanying instruments and smart storage units.

- Mobile calibration in vans and expanding trailers
- Complete design and supply of vehicles, or interior solutions supplied for customer fitting
- Full in-vehicle calibration capabilities for electrical, temperature, pressure, torque etc
- Custom consoles for van fitting with reinforcement features and fixings for transport
- Large scale expanding trailers with up to eight 2m CalBenches
- Vehicles fully equipped, including professional storage solutions





Work Benches

The various styles of work benches in the range



Framework Benches

Heavy duty, robust steel braced framework benches suitable for industrial workshops and laboratories. Supplied with a high quality worktop each bench is suitable for a range of applications including mechanical and electrical work, R&M, manufacturing, calibration, and general purpose use.

- TL15 Bench: W1500 x D800 x H855mm
- TL16 Bench: W2000 x D800 x H855mm
- Hard wearing light grey laminate worktop with shock proof edging
- Reinforced, steel section framework for heavy load bearing (up to 800kg U.D.L. capacity)
- Bench frame finished with RAL7035 light grey
- Optional drawers and cabinets for under-bench fitting, tabletop power ducts and shelves
- Other bench sizes available upon request



TL20 Multi Purpose Corner Bench

A multi-purpose industrial grade corner bench with mounted rear frame section, providing an ergonomic workspace and storage area in workshops and laboratories. The unit has been specifically designed for use in TE labs where engineers utilise dedicated areas for their respective applications.

- Corner bench for suitable for bridging two workstations or CalBenches
- 1200 x 1200mm with 800mm side edges, 530mm front edge
- Heavy duty steel section legs and one rear reinforcement leg
- Hard wearing light grey laminate worktop with shock proof edging
- Benchtop rear mounting frame with perforated panels and two shelves
- Table mounted sloping steel power duct with 8 sockets (UK type or other upon request)
- 20 piece tool hook kit for perfo panels supplied
- Bench frame finished with RAL7035 light grey



Pedestal Work Benches

Pedestal benches are combination units that utilise floor standing cabinets and drawers as part of the framework. Versions are available with two cabinets at each end of the bench, or as a single cabinet with end frame leg (as shown).

- Pedestal benches with dual cabinets/drawers at each end
- Pedestal benches with cabinets/drawers plus heavy duty end frame leg (as shown)
- Available in different widths and sizes, typically designed to meet space requirements
- Variety of floor standing cabinet and drawer units to choose from
- Hard wearing light grey laminate worktop with shock proof edging
- Cabinets and drawers have RAL7035 light grey housing and RAL5010 blue door fronts
- Bench end frame legs finished with RAL7035 light grey



TL250 Hexagonal Communal Workstation

A heavy duty workstation with stainless steel top, four fixed vices, and six under bench multi-drawer/cabinet units. A suitable unit for teamwork applications, heavy engineering such as overhauling or inspection and maintenance of large control valves.

- Communal work station for mechanical and heavy engineering
- Hexagonal 304 stainless steel, ultra heavy duty worktop
- Top supplied in two pieces, with rolled edges, corners welded & polished
- Six drawer/cabinet units: 2 x H75mm. 1 x H125mm drawer, 1 x H375mm cupboard
- 4 cast iron vices mounted ergonomically - 2 x 100mm (4"), 2 x 150mm (6") jaw widths
- Vices have swivel bases, chrome plated to resist corrosion, roll formed screw threads
- 80mm diameter central reinforcement leg
- Dimensions: 2500 x 2165 x 790mm



CalBench Style Perfo and Shelf Option

A shelving and perforated panel option that uses the CalBench console mounting arms. The arms fix to the rear of a 2000mm or 1500mm wide framework bench and a 450mm deep reinforced shelf runs across the top section.

- Combination kits with perforated panel, mounting arms and shelf
- Kits that fit to either 2000mm or 1500mm wide work benches
- Shelf (D450mm x H27mm) mounted on support arms, at 400mm above the worktop
- Hard wearing light grey laminate shelf with shock proof edging
- Two reinforced steel braces running inside the shelving to stop bowing
- Suitable for customers planning to add CalBench consoles in future
- Shelf can hold 7060 mini consoles, and large test instruments
- Custom shelf type available upon request (stainless steel, beech, lino etc)



Tabletop Shelves and Power Ducts

Benchtop units that are typically fitted together as convenient shelf and power distribution solution. The shelf is 300mm deep, adjustable height and suitable for placing instruments and devices used in the workshop. The power ducts position centrally under the shelves when supplied, and can be fixed into the worktop or free standing with rubber feet.

- TL37: Adjustable height rear shelf, table mounted (W2000 x D300 x H230 - 345mm)
- TL38: Adjustable height rear shelf, table mounted (W1500 x D300 x H230 - 345mm)
- Robust steel shelf, 40mm upstand to the sides and rear, inlaid rubber mat
- Angled steel power ducts, H95 x D95mm - 4, 6, 8 and 10 socket versions
- TL26: 8 sockets - W762mm / TL27: 6 sockets - W586mm / TL28: 4 sockets - W410mm
- Power ducts feature shrouded mains on/off switch and grounding cable
- Light grey RAL7035 paint finish on shelves and power ducts, matching benches



Suspended Drawers, Cabinets and Holders

A selection of drawers, cabinets and holders are available for under bench fitting. These units are the same as shown in the CalBench fittings section, and fix to the TE Lab industrial framework benches in the same style.

- 7120: Cabinet with 1 door and 1 x shelf (W500 x D550 x H600mm)
- 7121: 2 drawer Unit (W500 x D550 x H250mm)
- 7122: 3 drawer Unit (W500 x D550 x H450mm)
- 7131: Combination 1 drawer + Cabinet Unit (W500 x D550 x H600mm)
- 7132: 5 drawer Unit (W500 x D550 x H600mm)
- 7123: CPU/Dry Block Calibrator Holder (W220 x D580 x H460mm)
- Units made from reinforced, welded steel housing
- Finished with RAL7035 light grey housing, drawers have RAL5010 blue fronts
- Central locking system on cabinets and drawer units



Floor Standing Drawers and Cabinets

A range of floor standing cabinets and drawers that can be used with pedestal benches, stand alone or as bridging units between two workstations. Each model is a robust steel design with a base plinth to enable easy access to bottom drawers or cupboards. These units are designed to match the height of CalBenches and TE Lab work benches.

- Range of models - 500, 750 and 1000mm wide / Depth 550mm / Height 815mm
- Cabinets with 5 or 7 drawers, full cupboards, or combination drawer/cupboard units
- Industrial grade reinforced, welded steel housing
- Finished with RAL7035 light grey housing / RAL5010 blue drawer fronts
- Central locking systems
- Each drawer has recessed handles for flush finish, with a trigger lock mechanism
- Each drawer comes lined with rubber matting as standard
- Supplied with 65mm base plinth to enable flush under bench fixing





Mobile Benches and Cabinets

Solutions for mobile storage and workstations



TL14 Mobile Workbench with Worktop

A mobile workbench of durable steel construction enabling heavy duty workload in labs and workshops. Well suited to mobile applications and transportation of bulky equipment, or situating large test instruments and benchtop consoles like the 7060 mini bench.

- Robust mobile workbench (L1500 x D800 x H940mm)
- 1500mm durable grey laminate worktop
- Reinforced, steel section framework for heavy load bearing
- Finished with RAL7035 light grey
- Base shelf section for storage
- Rubber tyred castors with swivel and brake mechanisms
- Suitable for use with 7060 mini console mounted on top for mobile calibration



TL10 Mobile Trolley with Shelf

An industrial trolley built for practical and easy mobility of equipment in the workshop. The unit is made of welded steel with a top and middle section lined with a hard laminate mat. The base shelf provides additional storage. A robust and simple solution for workshops and labs.

- Heavy duty mobile trolley (W650 x D650 x H780mm)
- 2 swivel castors and 2 fixed castors, 1 brake
- 2 push-pull handles
- Robust mild steel construction, industrial grade
- Light grey RAL7035 paint finish
- Hard laminate industrial inlaid mat and anti roll-off, formed edges on top of unit



TL11, TL12 and TL13 Mobile Cabinets with Drawers

Mobile cabinets made from reinforced, welded steel housing for long service life in tough industrial environments. An ideal solution for moving tools and equipment around the workshop for required applications.

- Mobile cabinets with drawers, various sizes for use in the workshop
- TL11: W500 x D550 x H750 mm, with 3 x 175mm drawers, top tray and mat
- TL12: W750 x D550 x H925mm, 4 x 175mm drawers, top tray and rubber mat
- TL13: W1000 x D550 x H925mm, 4 x 175mm drawers, top tray and rubber mat
- Made from welded steel with RAL7035 light grey housing / RAL5010 blue drawer fronts
- Central locking system
- Drawers have recessed handles for flush finish, rubber lining and trigger lock mechanism
- Rubber tyred castors with swivel and brake mechanisms - 200kg total weight capacity



Additional Mobile Units

In addition to the standard models shown above, various other mobile units are available. These include cabinets, benches, maintenance trolleys and mobile perfo panel racks. Custom units can be built to house line pressure solutions like pumps and compressors, and consoles can be mounted to create mobile calibration systems.

- Maintenance trolleys featuring drawers, cabinets and worktops
- Cupboard trolley versions for large equipment storage and mobility
- 1500mm and 2000mm wide storage benches with multi drawer and cupboards
- Perfo panel trolleys for mobile quick access tool storage
- Mobile louvre panel racks that house storage bins for components and parts
- Fully bespoke solutions with integrated systems for calibration and line pressure
- TL09 CalBench extension trolley with clamping mechanism (see CalBench fittings)



Storage Cupboards

Heavy duty cupboards for storing equipment and tools in the workshop. Made of robust steel with RAL7035 light grey housing and RAL5010 blue fronts. Internal galvanised shelves are durable and scuff resistant, with 50kg U.D.L. capacity, adjustable on a 25mm pitch.

- TL56: W1000 x D550 x H2000mm, with 4 shelves
- TL57: W1000 x D550 x H2000mm, with 6 shelves and 21 x No. 5 storage bins
- TL58: W1000 x D550 x H2000mm, with 4 shelves and 3 drawers (1x75, 1x125, 1x175mm)
- Reinforced, welded steel housing
- Finished with RAL7035 light grey housing / RAL5010 blue drawer fronts
- Internal galvanised shelves are durable & scuff resistant, with 50kg U.D.L. capacity
- Shelf positioning adjustable on a 25mm pitch for different heights of storage
- Central locking: Zinc plated locking bars and cam provide secure three point locking
- Cupboards of different sizes and shelf/drawer layout available upon request



Industrial Racking

Time Electronics offer a range of heavy duty racking for workshops, stores and warehouses. Various widths and depths are available, and each unit features five melamine shelves as standard. The framework is made from 2mm thick premium quality steel, finished in a hard wearing blue powder coating.

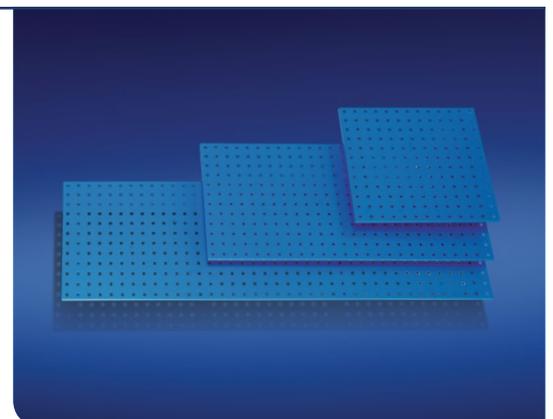
- Premium quality racking, 1980mm high units with various widths and depths
- 915 / 1220 / 1525 / 1830 / 2134 / 2440mm widths available
- 380 / 455 / 610 / 760 / 915 / 1220mm depths available
- 2mm thick European structural quality steel, hard wearing blue powder coated finish
- 5 white melamine shelves (galvanized steel panels available upon request)
- Ideal for workshop, stores room, warehouse, archive and factory
- Simple to construct with assembly tools supplied
- Complete with rubber feet and top caps for protection



Wall Mounted Perfo Panels

Wall mountable perforated panels for use with a range of fixing accessories. They enable easy positioning and storage of hand tools and consumables. Standard units are supplied as kits including hook sets for quick access mounting of tools and extras.

- Industrial grade steel perforated panels with rear reinforcement strips for rigidity
- TL59: 2 perfo wall panels (H457 x W495 mm each) and 15 piece tool hook kit
- TL60: 2 perfo wall panels (H457 x W990 mm each) and 20 piece tool hook kit
- TL61: 4 perfo wall panels (H457 x W990 mm each) and 40 piece tool hook kit
- TL86: 4 perfo wall panels (H457 x W1486mm each) and 60 piece tool hook kit
- TL79: 1 perfo wall panel (H457 x W1981 mm each) and 40 piece tool hook kit
- RAL5010 blue powdercoat finish
- Additional extras include shelves, bin rails, holders, magnet sets & monitor mounts



Wall Mounted Louvre Panels and Storage Bins

Wall mountable louvre panels supplied with plastic bins to hold small tools and parts used in the workshop. These kits provide a convenient, organised solution with the hook-on bins ideal for high capacity component storage.

- Industrial grade steel louvre panels with rear reinforcement strips for rigidity
- TL62: 2 louvre wall panels (H457 x W495mm each) with bins
32 x No.2 storage bins (W103 x D165 x H83 mm each / 1 litre capacity)
- TL63: 2 louvre wall panels (H457 x W990mm each) with bins
18 x No.3 storage bins (W145 x D240 x H125 mm each / 3.5 litre capacity)
8 x No.4 storage bins (W207 x D345 x H165 mm each / 10 litre capacity)
- Louvre panels with RAL5010 blue powdercoat finish
- Other panels and bin sizes available





Additional Furniture and Options

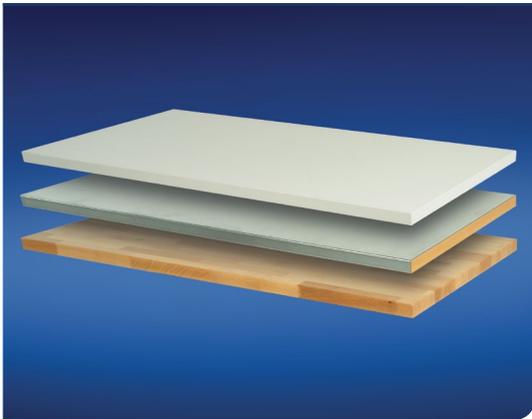
Seating options, worktops, and tool chests



Tool Chests

A range of steel tool chests are available. They are heavy duty construction to deal with the rigours of on-site use. In addition to the standard range shown, aluminium transit cases and fully equipped multi purpose tool sets can be supplied.

- Industrial steel tool chests of varying sizes, capacity and weight
- Phosphated sheet steel construction with wrap over, shower resistant lid
- Hasp and staple clasps, padlockable for security
- Removable parts tray for smaller items
- Double grab handles
- Hardboard lined to prevent damage to tool chest
- Durable epoxy powder coat finish, RAL5010 blue only
- Tools and equipment supplied separately, combination kits available upon request



Worktop Options

A variety of worktop options are available for the TE Lab range. Standard tops are quality hard wearing light grey laminate with shock proof edging and chipboard core. Each top offers high load bearing and surface resistance to water, oils and chemicals.

- Standard worktops: Light grey laminate with 2mm grey PVC shock proof edging
- Standard top thickness of 38mm with chipboard core
- ESD laminate versions or integrated ESD resin bonded mat version
- Multiplex option: Resin bonded, hardwood beech ply with cross laminated construction
- Phenol option: Hardwood core impregnated with phenol resin and edges in hardwood
- Stainless Steel option: Particle board core with 1.2mm zinc coated steel cladding
- Beech option: Solid beech with polyurethane varnished surface
- Custom worktops available upon request



Seating Options

For TE Lab the seating options include the standard CalBench operator chairs, fabric and vinyl work chairs and stools. Each chair or stool is robust and heavy duty, suitable for engineering or office work.

- 7128 and 7129 CalBench operator chairs
- Gas lift adjustable height models
- Fixed position stools and chairs, or with castors for mobility
- Fabric chairs have cushioned blue seat and backrest for good all round comfort
- Durable vinyl chairs have contoured seat and back squabs increasing comfort
- Backrest tilt, height and angle adjustments, locking features
- Under bench footrests also available upon request



Colours and Customisation

Time Electronics can provide fully customised solutions for premium workshops and laboratories. We work with our customers to create tailored and specific workspaces, built for end user applications. Colour schemes, branding and custom furniture configurations provide a professional appearance, suitable for centres of excellence and high level training centres.

- Custom configurations for drawer units, cabinets, cupboards, work benches etc
- Company branded furniture for labs and workshops
- Colour options for drawers, cabinets and cupboards
- Logo printed flooring, mats and tiles
- Integration of existing equipment and tools into new build workshops
- Branded whiteboards, notice boards - suitable for workshops and classrooms



On-Site Services

Installation, Commissioning, Training

A travelling engineer will visit the customer's facility to install and commission the CalBench, supporting instruments, and laboratory furniture. Our team can perform site visits worldwide and are qualified to work on offshore platforms, power and processing plants, and refineries.

Training is most often included with the CalBench or lab installation, or can be scheduled for a later date. A qualified CalBench engineer will educate users on how to set up their system, to operate modules and additional test instruments. They will also simulate the calibration process by demonstrating tests on actual devices at the site, as well as consulting on best practice calibration.

Calibration and Maintenance

A technician can visit the test facility annually to perform calibration of the CalBench and additional test equipment. This can be scheduled before or after installation and can include additional training if required.



Factory Acceptance Testing & Training in UK

Factory Acceptance Testing

Factory acceptance testing can be undertaken by the end user or their designated inspection company. A full program is provided to cover the visual and functional checks of the CalBench and other equipment for supply.

UK Based Training

Customers can visit Time Electronics UK and receive training on their ordered system prior to shipment. We will schedule and arrange all aspects of the visit, including local transport and accommodation. The factory is based in Tonbridge, situated in the south east of England, approximately thirty miles from London.



Remote Training and Support

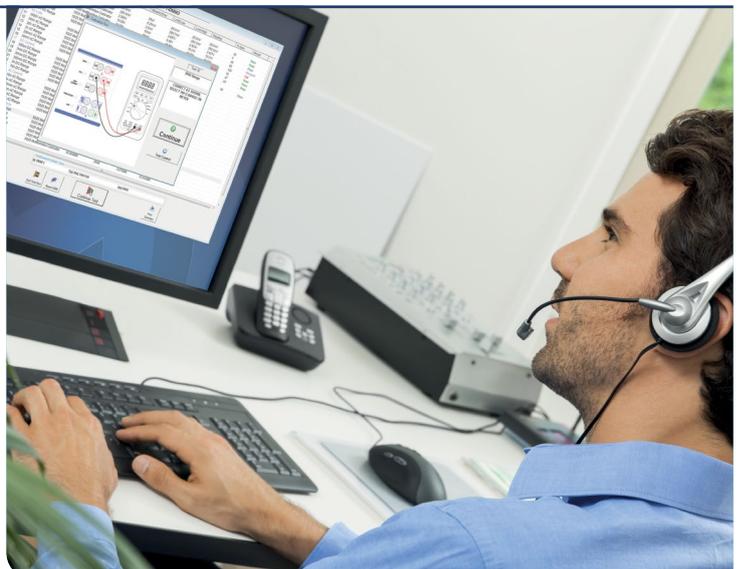
Online EasyCal Training

Using remote desktop sharing we can help customers understand and utilise EasyCal software for calibration work and management. We can provide basic tutorials or troubleshoot specific applications relative to end user requirements.

EasySupport for CalBench

CalBenches that features a control centre modules come supplied with the Time Electronics EasySupport program. This application enables users to communicate directly with the factory, allowing the CalBench technical support team to log in and control the customer's system remotely.

This is an extremely useful tool for both support and training. The UK based team can run diagnostics and functional checks as required, and help customers resolve software issues. Customers can contact the support team by phone or via the Time Electronics website to schedule sessions.





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