

Pipette and Device Calibration Software

Automated Pipette Calibration in a Regulated Environment with SpeedCal and MCP Multi-Channel Balance Interface Support

Regular performance testing and calibration of liquid handling devices such as pipettes as well as other devices is essential to ensure they're operating correctly. Potential problems must be identified and corrected before they impact the integrity of data. Implementing an automated system for scheduling, conducting and documenting performance testing and calibration ensures that these devices are performing according to specifications.

For regulated laboratories that want to automate pipette performance and calibration testing with the SpeedCal or MCP multi-channel balance systems, Pipette Tracker Pro+ is the only choice.

Pipette Tracker Pro+ is an enhanced edition of the Pipette Tracker Pro software that enables the use of multi-channel balances such as the 12-channel SpeedCal balance from Sartorius, up to 5 Mettler MCPs as well as interface with multiple instruments simultaneously.

When used with multi-channel balances, a 12-channel, 3-volume calibration can be completed in less than 15 minutes!

Pipette Tracker Pro+ - schedules calibrations, automates data collection during calibration, performs all calculations and corrections and can produce all required reports. It is suitable for single and multi-channel pipettes and liquid dispensers of fixed or variable volume, as well as volumetric glassware, and other devices that require calibration checks on a routine basis.

Pipette Tracker Pro+ Key Features

- Meets ISO/EN 17025, ISO/EN 8655, ASTM E1154, 21 CFR Part 11 and GLP requirements
- Automatically schedules pipettes, instruments and devices for calibration testing including devices that are calibrated externally
- Automatically collects calibration and environmental data from any instruments RS232 or TCP/IP Ethernet interface
- Automatically collects calibration data from Sartorius SpeedCal or up to 5 Mettler MCP multi-channel balances
- Includes a database of manufacturers calibration specifications for over 1100 pipettes
- Maintains a complete calibration history for all pipettes and devices
- Corrects for environmental conditions and cubic expansion factors during pipette calibrations
- Calculates and includes the Expanded Uncertainty for each mean value with calibration data.
- Real-time interactive graphing of data to quickly identify when samples fall outside accuracy limits
- Notification when maintenance tasks fall outside their recommended action limits and records maintenance performed
- Complete traceability of calibration results including the details of the standards used for each calibration
- Support for Oracle and SQL Server databases
- Comprehensive Audit trail, Electronic signatures and Security systems
- Integrate security system with Windows security

- Automatically lock the workstation after a defined period of inactivity
- Email notification when devices become due for calibration
- Allows the user to validate and assign a version number to methods or test plans
- Prevents user from running any methods and test plans that are not validated
- Archives validated methods for historical reference

Fully Conforms to International Standards and Procedures

Pipette Tracker Pro+ meets GLP and ISO/EN requirements and conforms to the procedures recognized by ISO/EN 8655, 17025, ASTM E1154 and allows labs to meet their accreditation requirements such as AL2A or ANSI. Custom protocols, based on a laboratory's internal SOPs, can also be configured and saved.

Meet 21 CFR Part 11 Compliance Requirements

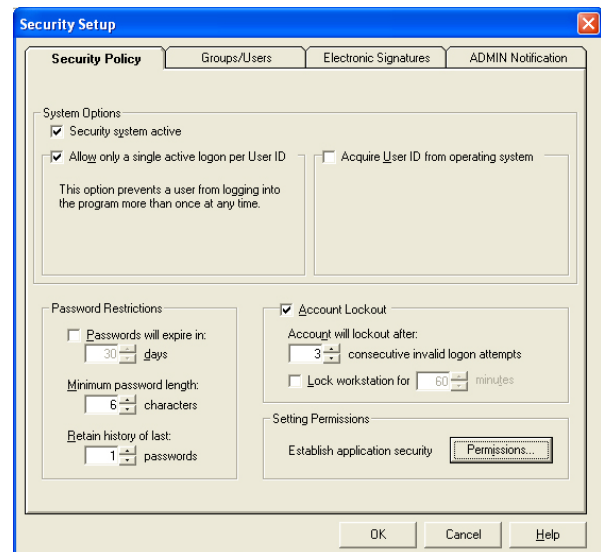
Pipette Tracker Pro+ includes the functionality required to meet with 21 CFR Part 11 compliance requirements:

- User ID and Passwords control access to all areas of the software, assigning appropriate security access levels to each individual user.
- Electronic Signature challenges can require the user to confirm their identity before carrying out critical functions.
- The audit trail function logs all system activity and changes, using date and time stamping. All changes are recorded along with who made the change and why the change was made.
- A workstation can be automatically locked out if left inactive for a specified period of time, preventing undocumented access to an unattended workstation.

Pipette Tracker Pro+ also includes a validation function that allows the user to validate and assign a version number to methods or test plans. If a valid

method or test plan is edited, the valid status will be removed until the edited version has been re-validated. As new versions are created and validated, previous versions are archived for easy reference. Pipette Tracker Pro+ prevents users from using non-validated methods or test plans.

Pipette Tracker Pro+ includes the components required to meet with 21 CFR Part 11 compliance requirements.



Security Setup - Security Policy tab. This includes settings that define the basic policy used for security, as well as the security levels for groups/users.

Full Support for Oracle and SQL Server Databases

Pipette Tracker Pro+ fully supports Oracle and SQL Server databases for maintaining a history of pipette calibration and scheduling calibration testing. Companies using Oracle or SQL Server can implement Pipette Tracker Pro+ on these platforms ensuring that the application fully meets the requirements and standards of their IT structure.

Improves Organization and Access to Pipette and Device Calibration Data

Information including the serial number, manufacturer, device name and device location is permanently recorded into the database for each device. For calibration service companies and large

enterprises, where large numbers of pipettes and devices need to be monitored, multiple databases can be used to organize and track pipettes and devices by owner, by site, by individual labs, etc

Pipette Tracker Pro+ can also track and store information about the pipette tips used for a calibration. If a specific type of tip is specified as part of the Calibration Method, the user will be notified of that at run-time and asked to enter the actual batch number of the tip that is used.

All test results are saved for each device providing a full calibration history for each pipette and device in the system, which can be accessed at any time.



Maintaining a full and secure electronic record of calibration testing results and scheduling eliminates the need for maintenance of paper-based records.

Easy Implementation

Pipette Tracker Pro+ is an easy-to-install application that is compatible with the most current and popular Windows Operating Systems.

A key feature of Pipette Tracker Pro+ is its ability to automatically collect data directly from any RS232-or TCP/IP Ethernet compatible interface, eliminating manual data recording and transcription errors. In order to communicate with the instrument, an interface needs to be established between the software and the instrument.

Pipette Tracker Pro+ includes the Labtronics Instrument Library, a database containing setup information for all of the major balances as well as many other instruments. The Instrument Library simplifies configuring communication between Pipette Tracker Pro+ and the instrument. Interfacing

an instrument with Pipette Tracker Pro+ is as easy as selecting the appropriate device from the listing in the Instrument Library and identifying the COM port or IP address that it is connected to.

For users who do not have RS232 or TCP/IP-compatible instruments, all of the features of Pipette Tracker Pro+ are still available by manually entering sample results.

Pipette Tracker Pro+ also includes a manufacturer's database that lists pipette calibration specifications for over 1100 pipettes. If a laboratory is using a pipette that is not included in the database they can easily add it in. These specifications can be imported into a calibration test plan and used to establish testing criteria. This can be a valuable aid in setting up test protocols for different pipettes or groups of pipettes.

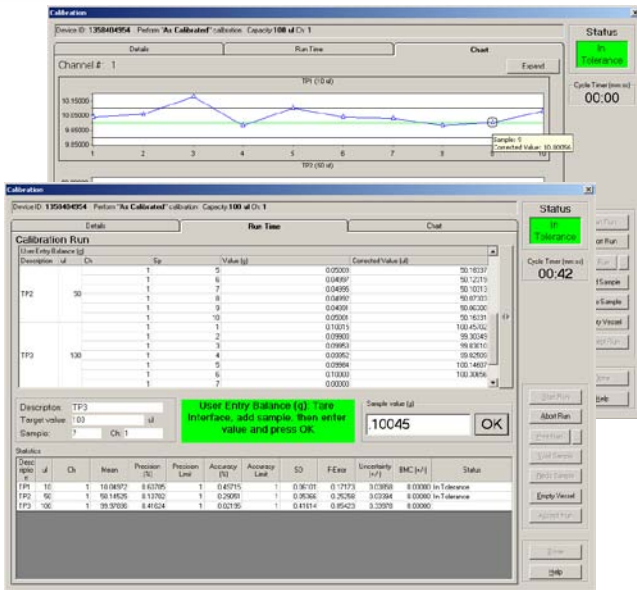


Control the Instrument from the Software

Pipette Tracker Pro+'s bi-directional command feature can send any command to the instrument that it is capable of receiving and responding to. This feature can be used to prompt the instrument to send a sample value, zero or tare the instrument or even open motorized doors. Commands are sent directly to the instrument from Pipette Tracker Pro+'s Calibration screen.

When used with the Sartorius SpeedCal, Pipette Tracker Pro+ communicates with the 12-channel balance to automatically tare, activate and light up the channels to dispense the next sample into. When the balance is ready, the software prompts the user to add the sample then select OK to retrieve all channel weight values at the same time. For example, running a 12-channel pipette calibration, all 12 channels are dispensed at the same time into the 12 channels on the balance. When the OK button is pressed at calibration run time, all 12 weight readings are obtained at the same time.

When used with Mettler MCPs, the software collects the data that is automatically output from up to 5 balances without sending any commands. As each weight value is sent from each balance, the software adds the results to appropriate balance column then prompts the user to add the next sample to the next available balance and start its weighing process.



Calibration screen - Run Time and Chart tab. The display messages prompt the analyst through every stage of a calibration, showing the required target value and sample value received from the instrument in large text, to make it easily visible.

Automatic Calibration

This feature allows users to setup an automated schedule for calibration checks with up to three different intervals and complete those calibrations in Pipette Tracker Pro+.

Manual Calibration

This feature allows users to calibrate devices without scheduling them for future calibrations. All of the device information and calibration results are still stored in the database. This is ideal in situations such as at a calibration service provider, where some pipettes or devices may not be calibrated on a regularly scheduled basis.

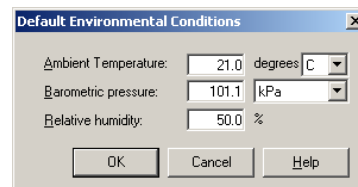
External Calibration

This feature allows users to schedule devices for calibration and alert them when they are about to become due. Once this calibration is completed, users can run the calibration and manually assign the calibration date, status and attach an external calibration certificate in electronic format.

Cycle Timer

ISO 8655 identifies uneven rhythm and timing as a potential source of error when pipetting. The standard further recommends that, when testing a pipette, the test cycle time be kept to a minimum and be kept as regular as possible.

Pipette Tracker Pro+ supports the standard by including a Cycle Timer that provides an audible prompt that helps the analyst to pipette at regular intervals. Because it is an audible prompt, the analyst can work accurately and precisely without having to be located right at the computer. The use of the Cycle Timer to promote consistent cycle times increases the accuracy of the calibration process.



Default Environmental Conditions. Pipette Tracker Pro+ automatically corrects for environmental conditions including temperature, barometric pressure and humidity.

Full Automation of Calculations

Pipette Tracker Pro+ performs all pipette calibration calculations in accordance with the requirements as defined in ISO 8655, 20461 and ASTM E1154.



Environmental variables that are often responsible for adversely affecting gravimetric test results are automatically taken into account. During calibration runs, evaporation, temperature, barometric pressure and relative humidity are immediately factored into mass-to-volume calculations as sample results arrive at the computer from the balance.

Pipette Tracker Pro+ is unique in that environmental data can be entered into the system three different ways.

- Where conditions are controlled and consistent, a fixed value can be entered into the software for any

of the parameters. This value is then used for calculations with every calibration.

- The operator can enter a new value for any of the environmental conditions at run time, ensuring that the calculations reflect the current conditions.
- Automatically collect the environmental data directly from any measuring devices that are equipped with RS232 or TCP/IP Ethernet ports. This eliminates the need for the operator to enter the values and ensures that accurate environmental data is automatically added to the calibration run each and every time.

After each calibration run, Pipette Tracker Pro+ automatically calculates all of the statistical results for pipette calibrations using formulae and tables provided in ISO 8655-6. Users have the option to set the statistical range that is used to define the pass or fail criteria of their pipettes and devices as well as the required number of samples for As Found and As Left calibrations. Based on the results of these calculations, pipette results are immediately evaluated and issued an 'In Tolerance' or 'Out of Tolerance' status. Once the 'Accept' button is pressed, Pipette Tracker Pro+ can prompt the user if the status of some data changes after taking the expanded uncertainty of the mean into account before assigning a 'Pass' or 'Fail' status.

All approved results are recorded in the database, where they provide an on-going history of pipette and device calibrations.



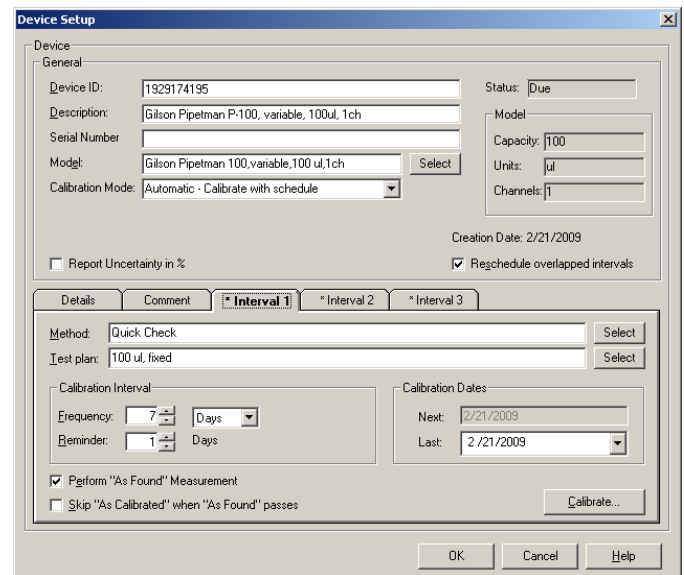
Automated Scheduling

Pipette Tracker Pro+ automatically schedules calibration testing for all pipettes and devices in the database by automatically checking each record against the current date to determine if testing is due.

If a device is due to be tested, it appears on the work list screen for immediate reference. Devices can be set up to appear on the work list ahead of the testing date to ensure that the pipette is available for testing at the appropriate time.

If a pipette or device needs to be calibrated outside of its regular schedule (e.g. if it is dropped), the user will be prompted as to whether the next calibration should remain as scheduled or if the schedule should be adjusted to reflect the new calibration.

Automated scheduling ensures that regular testing takes place without incurring the cost of having to manually monitor device testing intervals.



Device Setup window - Interval 1 tab. Up to three calibration intervals may be defined for each device.

Automated Reporting

Pipette Tracker Pro+ includes an extensive range of standard reports including work lists, inventory lists, summary and detail calibration reports, device calibration history reports, test plan and method documentation, etc. These reports can be modified to suit specific requirements.

Reports can also be exported in a variety of output formats including Word, Excel, PDF, HTML and TIF. Providing reports in these formats makes Pipette Tracker Pro+ compatible with virtually any reporting, archiving or document management application.

Reports can be also be created by Pipette Tracker Pro+ in an ASCII file format and exported to any spreadsheet or SPC application program, for additional reporting and analysis.

New in Version 3.3

- Includes Expanded Uncertainty and BMC value with calibration data for ISO 17025 and Accreditation requirements
- Connect multi-channel pipette calibration balances like Sartorius SpeedCal or up to 5 Mettler MCPs.
- Manual status override option after automatically taking the calculated uncertainty or BMC value into account
- Performs preventative maintenance limit checking and adds maintenance performed data to calibrations
- Interactive run-time chart of sample data allows users to work right off the graph to enter sample data or select any point to re-do or void
- Select any sample during a calibration to re-do if needed
- Windows security integration
- External calibration mode to maintain a devices calibration schedule and history of certificates when performed by another company
- Allows for different number samples for an As Found and As Left calibration

- Supports scheduling and calibration tests of other devices like balances, calipers, and more.
- SQL Server Express default database for improved speed/response time
- Expanded library of Report (Certificate) templates including barcode and labels, trend analysis graphs, due date management, and more.

Professional Services

The Pipette Tracker Pro+ software is designed with user setup and ease of use in mind; however, Labtronics understands that not everyone has the time to set up and learn any new software no matter how easy it may be to configure and use.

Contact Labtronics about the services available to help bring your system on-line quickly through our expertise.

Our Guarantee

All Labtronics software products are provided with a 30-day evaluation guarantee. If within 30 days you are not satisfied with our software, you may return it to us for a refund. Shipping charges and professional services are non-refundable.

System Requirements

- Windows XP® or Windows Vista®
- Pentium III 500 MHz (XP®) 800 MHz (Vista®) or better processor
- RAM: Minimum 256 MB (XP®) 512 MB (Vista®)