



# ProCal & ProCal-Track Calibration Software Features In Depth

## ProCal & ProCal Track Calibration Software



Full versions of ProCal & ProCal-Track are available to evaluate from the Transmille CD. ProCal-Track runs for 30 days after installation ProCal runs only the first 5 tests of a procedure until a license number is entered

ProCal is a complete calibration software package to automate and simplify the calibration and certification of all types of instrumentation. Combined with ProCal-Track it forms a complete integrated job system for a calibration or service facility.



## ProCal software meet's the requirements of UKAS and ISO 17025

Written in house by our own people ProCal & ProCal-Track have been developed to be used in accredited laboratories, and is used in Transmille's own UKAS laboratory and many other accredited laboratories worldwide. The software meets the requirements of ISO17025, including traceability, certificate formats, environmental and security etc.

## ProCal covers the full workload of the laboratory supporting many reference standards

ProCal supports **all** the reference standards used for calibration, not just Transmille products. Transmille recognizes that calibration laboratories have a wide range of standards and instruments so for a software package to be used through out a laboratory it must support all makes and types of calibrators, DMMs, standard resistors, capacitors, inductors, dead weight testers, crimp testers, frequency counters etc, in fact every item used for calibration in the laboratory. This allows just about every type of instrument to be calibrated



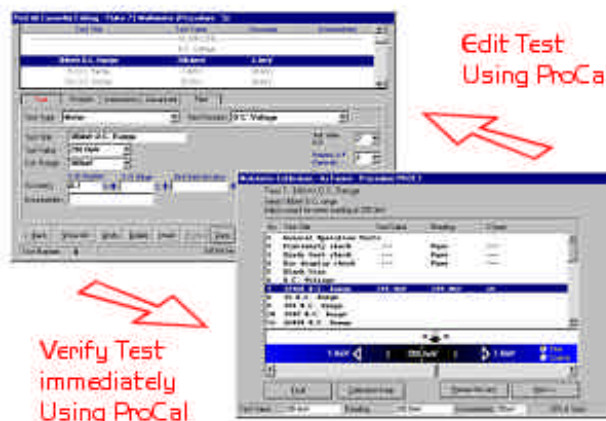
using just one software package, reducing learning time and sharing the investment cost in the software. If the instruments used have a computer interface then ProCal can control

the instruments using either the IEEE-488 or RS232 Interface to automate calibration. If a driver does not already exist then Transmille can write one for almost any instrument. (See list of currently supplied drivers)

## Procedures can be produced and tested quickly.

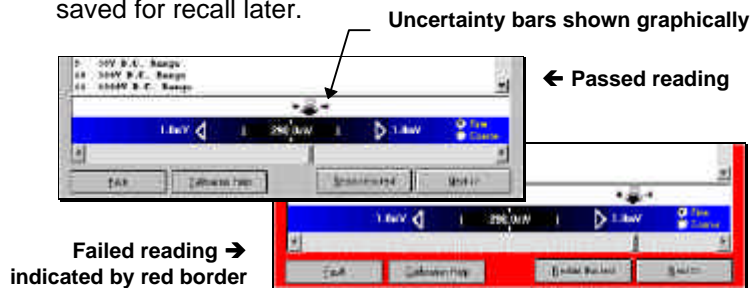
This is essential as every working laboratory knows there is always a large proportion of previously unseen equipment requiring new procedures. Wizards in ProEdit allow very fast creation of procedures based on generic type of instrument, e.g. DMM, Oscilloscope, RCD, Loop testers, pressure gauge Etc.

Instrument accuracy is automatically calculated from entering the specification which also saves time and reduces errors. One of the most important features is the ability to run a procedure using ProCal in one window and with ProEdit running in another window it is possible to correct errors in a procedure as it is run, the calibration of the instrument does not have to be aborted due to a mistake in the procedure.



## Intuitive to use - clear graphical user interface

Each test result is graphically represented as a measurement bar scaled to the specification of the instrument under test. Failed results are instantly highlighted by turning the screen border red. The test sequence shown in the list box indicates the test point reached in the procedure. Calibration procedures can be halted, then re-started with data entered up to that point saved for recall later.





## User Prompts - Help throughout a calibration

Text, pictures or even video file prompts can all be easily incorporated within a ProCal procedure to help guide a technician through a procedure. By clicking the technical help file button, the engineer can also record any information relevant to calibrating the instrument under test using ProCal's built in *technical help file* system. This can then be used as a lookup reference when calibrating this type of instrument in the future.

## Integrated System linking the calibration work directly with the job control and office.

For the system to be efficient it is essential to avoid duplication of effort. It is the same instrument that is booked in, calibrated, dispatched & hopefully it will even come back again next year after its recall letter has been sent.

## Virtual Job Card



Most paper work system have been based on a job sheet or card. Transmille in ProCal Track have kept this familiar format.

As work is booked in a Job Number is automatically allocated a Job Card started to keep all details, even the accessories received to do with this job.

The great advantage of the computerized Job card is of course it can be viewed by anyone anywhere at any time with access to the system, even after the instrument has been returned, and the virtual card doesn't need to be filled away either. As ProCal learns the instruments it builds up a History which can be printed as a report (Service Log) if required.

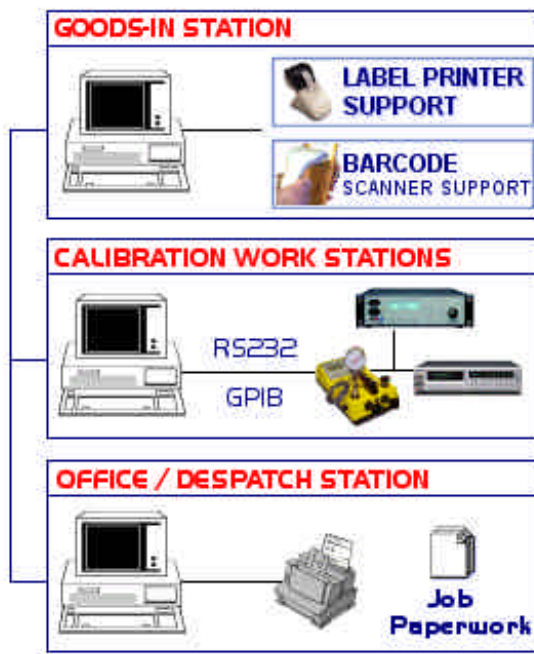
## ProCal-Track Handle's History, Repairs and Sub-contracted work

All lab's and service centers have to deal with this and ProCal Track handle's this as an integrated part of the job. Full job details engineers report, costs, part used etc can all be entered on to the virtual Job Card.

## Expandable system to grow from single stations to networked set ups with information available throughout the company

When the software was first started in 1997 windows support for network systems was becoming well established and relatively inexpensive to install. Large hard disks were now also available so at last (in 1996) the computing hardware is there to achieve the perfect solution for a calibration service, allowing an initial small installation of even just one PC in the lab, to grow into a full network system comprising of many calibration stations, goods in, office etc.

Many uses of ProCal software who have grown with the system have found the upgradeable solutions available from Transmille have offered an affordable route in their expansion from the smallest user to a large laboratory. By starting with ProCal ME and expandable through ProCal lite, ProCal professional, and finally ProCal network. Laboratory management software ProCal Track which will link seamlessly with all ProCal (except ProCal ME) is also available from single user to network site



## Software that can be used by technicians and office staff

All companies need to minimise the skill and training evolved for their staff to use any system, we are not all programmers and we need software to make our jobs easier. Good software we can all use enables us to do our jobs better, which gives us a sense of satisfaction and also makes more money too.





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## Standard and Custom Reports

Both ProCal & ProCal-Track come with many built in custom reports - See Example Print outs, in addition a custom report can be designed using Crystal Reports to meet every requirement.

## Label Printing

Label printing using the Seiko label printer produces several label types including the cal due sticker, Job Label etc, most of which also contain are bar coded. See technical data for full details



## Automated Input using barcode Scanner

The software supports the use of bar coding which can greatly reduce manual entry of data such as serial numbers etc. the scanner can be used on any workstation, and is particularly suitable for the goods-inwards station.



## Company Logos

Company logos can be printed on certificates, calibration labels and other reports simply by adding a bitmapped image file of your company logo to the system.

## Procedures available from Web site



Low cost instant access to 100's of procedures covering a wide range of instrument types. Check

our web site for the latest to view the latest procedure available. There are even 50 free procedures available. Procedures can be purchased either individually by purchasing credits from us, a small DMM procedure = 1 credit or purchasing 1 year access. Visit [www.transmille.com](http://www.transmille.com) for full details.

## Multi Language

A simple look up translation table which can be edited with access allows nearly all ProCal & ProCal Track screens to be translated into any language. Some language translation tables can be downloaded from the web. See technical data for full details - visit the support section on [www.transmille.com](http://www.transmille.com)

## Using formulas and 'Dual Units'

The formula function provides a powerful yet simple method to convert and scale or compare measurements. This allows one reading to be subtracted from another, removing zero offsets. Combining the formula and dual units functions allows, for example, measuring a voltage across a current shunt, then dividing by the value of the shunt, and reporting the value returned in amps.

## Controlling Instruments

ProCal has built in drivers for a wide range of DMMs and Calibrators and other references. This allows ProCal to translate a test value (e.g. 10V) or range (e.g. 100R) in a procedure into the commands required to set or read from an instrument.

Additional instruments can be controlling (including the UUT) by entering commands in the list boxes under the instrument tab (two list boxes allow commands to be sent either before a test or after).

## Closed Loop Calibration & External Program Control

Fully automated calibration can be achieved by using external programs (.exe's) to use information passed by ProCal and pass information back if required. This extremely powerful feature can allow ProCal to be used for any purpose. Several exe's for popular instruments are available - see software technical information for further details.

## User Levels & Security

Transmille software incorporates a password protected login system, allowing users to be set up with passwords if required and specific permissions, e.g. Administrator, Engineer etc.





## Software Support



Transmille encourage all our software users to subscribe to our software support scheme. We are very proud of this service which gives you one to one telephone help with your questions and updates via the web.

## Uncertainty calculation or statements

ProCal can present uncertainties in 3 different ways detailed below. Note that if a procedure uses method 1 then standard uncertainty statements (method 2) will not be printed:

### 1. A value printed next to the measurement result for each test.

The uncertainty value is entered for each test when creating or editing the procedure with ProEdit. The value can be either be manually calculated and entered or automatically calculated by ProCal to M3003. This is achieved by combining values obtained from the system uncertainties table and the performance of the unit under test (estimated as a percentage of the unit under test's specifications - known as the uncertainty multiplier).

If the uncertainty value is in the same units as the result then uncertainty bars are displayed when the test is run in ProCal

### 2. Up to 10 Standard one line Statements covering a range of a parameter of results.

The procedure can reference / call up to 10 standard 1 line uncertainty statements from an unlimited predefined list which can be edited created at any time. The statements called will be transferred to the certificate at the time of running the procedure.

An example would be a procedure calls for the DC Voltage uncertainty statement which may read '0 to 1000 Volts: 0.001% + 2uV'. As the procedure itself does not contain the statement, only a reference to it, enables uncertainty statements to be altered without changing every procedure.

### 3. Placing uncertainty Statements within the body of a certificate.

Under special conditions it may be felt necessary to put uncertainties at for example the end of a block of measurements. This can be done by inserting then as a comment using a print format type test.

Laboratories can chose which method they prefer, although for UKAS certificates method 1 is generally chosen, while method 2 is almost always used for standard certificates.

## Technical Details

<b>Operating System</b>	Windows® 95/98/NT/2000/XP
<b>Database Engine</b>	Microsoft Access • 1Gb Max.
<b>PC Spec</b>	Pentium • Disc 40Mb • 120Mb RAM

## Ordering / License Information

<b>ProCal Lite</b>	Single station software for use only with Transmille calibrators. Network support <u>not</u> available
<b>ProCal</b>	Initial network / single station license Full reference support (see driver list) Network Support Available
<b>ProCal N</b>	Additional network license
<b>ProCal-Track</b>	Initial network / single station license Full laboratory management system
<b>ProCal-Track N</b>	Additional network license

**For larger site licenses please contact sales office**

## Software Support 1 Year Telephone & Web Updates

**ProCal Single User Support  
ProCal Network Support**

**ProCal-Track Single User Support  
ProCal Network Support**

**Procedure Credits (20)**





## ProCal Driver List

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### Calibrators

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#### TRANSMILLE

2006A Precision Multi-Product Calibrator  
2041A Precision Multi-Product Calibrator  
2050 Precision Multi-Product Calibrator

#### DATRON / WAVETEK

4700 Multifunction Calibrator  
4705 Multifunction Calibrator  
4707 Multifunction Calibrator  
4708 Multifunction Calibrator  
9100 Calibration System

#### FLUKE

5100 Multifunction Calibrator  
5130 Multifunction Calibrator  
5500 Multifunction Calibrator

#### TIME ELECTRONICS

9821 Multifunction Calibrator  
9822 Multifunction Calibrator  
9823 Multifunction Calibrator  
5051 Calibration System

### Multimeters

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#### HP / AGILENT

3458A Multimeter  
34401A Multimeter

#### FLUKE

8840A Multimeter

#### KEITHLEY

2001 Multimeter  
2700 Multimeter / Data Acquisition System  
6517A Electrometer Meter

#### RACAL-DANA

1992 Universal Counter

#### DATRON / WAVETEK

1271 Multimeter  
1281 Multimeter  
1061 Multimeter

#### BLACK STAR

4503 Intelligent Multimeter

#### TIME ELECTRONICS

5075 Precision Multimeter  
5051 Calibration System

#### TTI

1905 Computing Multimeter

## Oscilloscope Calibrators

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#### TRANSMILLE

2000 Oscilloscope Calibration Module

#### TIME ELECTRONICS

9803 Oscilloscope Calibrator  
5051 Calibration System

#### FLUKE

5500 Oscilloscope Calibration Module

## Electrical Test Equipment Calibrators

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#### TRANSMILLE

2100 Electrical Test Calibrator

## LCR Bridges

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#### WAYNE KERR

B905 Automatic Precision Bridge

## Pressure Calibrators

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#### DRUCK

DPI 515 Digital Pressure Controller

## Pressure Meters

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#### DRUCK

DPI 515 Digital Pressure Controller