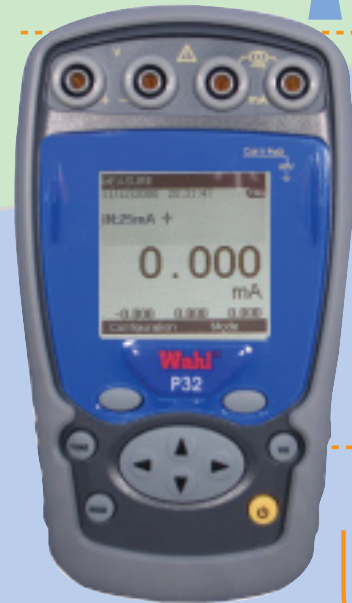


# Test and Calibration Instruments



- Pocket Calibrators
- Portable Calibrators
- Bench-Top Calibrators
- Process Signal Calibrator
- Micro-Ohmmeters
- Soldering Iron Tester

[www.palmerwahl.com](http://www.palmerwahl.com)

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## Pocket Calibrators TC621 • TC622



TC621



### Measurement and Generation

Rugged IP54 Construction for On Site Use

### Process Control Simulation

User friendly and robust, the New Wahl TC621 and TC622 Pocket Calibrators are designed to simplify temperature transmitters and probes maintenance and commissioning. They feature **0.02% Accuracy** and measure and simulate Thermocouples or RTD's. Resolution is programmable for better reading by user with up to 1mΩ or 1uV.

### FEATURES

- Well adapted for different process job procedures due to their wide choice of ranges and specific functions such as scaling and ramping
- High Accuracy: 0.02% of Reading
- Very low temperature coefficient: as low as 15 ppm / °C in thermocouples and 10 ppm / °C in resistance
- Accuracy is maintained even in harsh environmental conditions
- Measurement and Simulation of 14 Thermocouples and 12 RTD types

For a complete selection of probes please visit [www.palmerwahl.com](http://www.palmerwahl.com) and click: Hand Held Instruments > RTD Meters and Probes or Thermocouple Meters & Probes

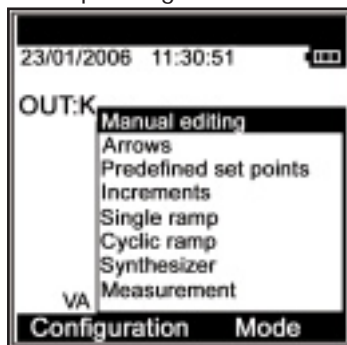
### GRAPHIC INTERFACE FOR PROGRAMMING

TC Series Pocket Calibrators use a graphic interface - making programming and reading easier.

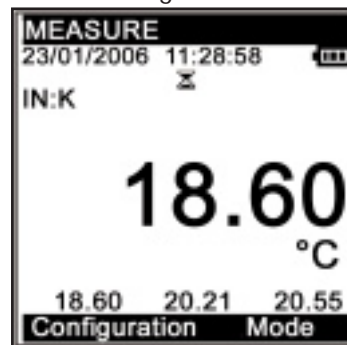
Function Menu



Operating Menu



Reading Menu



For complete specifications please visit [www.palmerwahl.com](http://www.palmerwahl.com) and click:  
Test & Calibration > Calibrators: Temperature > Pocket Calibrators

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it, Guaranteed \**

\* USA Customers only

## Portable Calibrators C50 • C75 • C100 • C150

Ergonomic design and embedded software make these on-site multifunction calibrators an easy to use high performance tool.



Wide backlit Screen - Protected by a Polycarbonate Membrane

### C SERIES FEATURES FOR ALL MODELS

- Simultaneous Measurement and Generation
- Rugged IP54 Construction for On-Site Use
- Quick Connect Terminals
- Measure and Generate Voltage, Current and Resistance Signals
- Temperature by Resistive Probes and Thermocouples
- Frequency for Frequency Signals and for Dry Contacts

### C75 FEATURES

- Pressure Measurements when used with optional External Pressure Module for Absolute or Relative Pressure

### C100 ADDITIONAL FEATURES

- Pressure Measurements when used with optional External Pressure Module for Absolute or Relative Pressure
- Laboratory Grade Accuracy

For complete specifications please visit  
[www.palmerwahl.com](http://www.palmerwahl.com) and click: Test & Calibration >  
Calibrators: Temperature > Portable Calibrators

The new Wahl C50, C75 and C100 Calibrators integrate all the necessary functions for calibration and maintenance of processes.

Their ergonomic design and embedded software make them easy to use, high performance calibrators.

IP 54 rated, and fully protected by an anti-shock boot, with integrated quick connect terminals and a high-contrast backlit display, they are comfortable to use in all conditions.

C Series Calibrators are supplied with 6 testing leads with crocodile clips, quick battery charging system, neck strap, and stand for desktop use, User Manual on CD Rom, attache style professional carrying case, and NIST Calibration Certificate.

**Buy it; you'll like  
it, Guaranteed \***

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### C150 - COMING IN 2007!

- Pressure Measurements when used with optional External Pressure Module for Absolute or Relative Pressure
- 0.005% Accuracy over 1 year
- Software, HART Compatible
- Measurement and Simulation of Thermistances
- Dual Input Thermometer: IN and OUT or IN/IN

Calibration Services Available

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## Test & Calibration Bench-Top Calibrator

# Bench-Top Calibrator/Tester PJ6301

The PJ6301 calibrator/tester is a high-accuracy instrument:  $\pm 0.005\%$  with 600,000 measuring counts on voltage and current ranges;  $0.05^\circ\text{C}$  for thermocouple and  $0.005^\circ\text{C}$  for RTD measurement resolution.

- 50 ppm Accuracy
- Simultaneous Input and Output
- DC Voltage, Current, Resistance Temperature Sensors (RTD & T/C)
- RS232/IEEE488-2 Programmable
- Menu-Driven Design for Easy Use

The model **PJ6301** calibrator/tester measures and simulates process signals. Its design incorporates outstanding performance with either manual configuration or computer operation for automatic test application.



**Comprehensive:** PJ6301 measures and generates or simulates process signals such as DC voltages and currents, resistance, and temperature signals from thermocouple or RTD sensors. Separated circuits allow simultaneous and independent measurement and sourcing.

Its graphic display is divided into two areas for simultaneous indication of measured and emitted values. Other functions, such as data processing, customized signal linearization, recorder analog output, transmitter function, ramp and step function, relative measurements etc. provide a wide and versatile application range.

**Ease of Use:** PJ6301 is offered in a compact housing for use on site, and may be bench top or panel mounted. The graphic display design allows for simplified keyboard functions. On-line help messages are available at any time when additional information for displayed options is required.

**Programmable:** PJ6301 is fully programmable via its RS232 and IEEE488-2 interfaces. With rack mounting accessory, it is ideal in test bench and automatic test equipment applications. In addition, the battery and memory storage capacity make the PJ6301 portable and suitable for on-site use.

### FEATURES AND APPLICATIONS

- Accurate measurement for calibration of signal generators: such as sensors, voltage and current sources, resistance, and for checking process control instruments.
- Temperature simulation, voltage and current sourcing, resistance simulation for calibration of measuring equipment: such as chart recorders, logic controllers, PLC analog inputs.
- Test of signal conditioners or transmitters, using PJ6301 simultaneous sensor simulation and output signal measurement capability.

Applications include:

- Engineering departments
- Quality-Control departments
- Research and Development Laboratories, also suitable for Instrument Maintenance and Approval companies
- Energy (Electrical, Gas, Oil, etc)
- Heavy Industry (Steel Work, Metallurgy, Chemical, Glass, Cement, etc)
- Textile, Paper, Wood, Rubber Industries
- Food Industry
- Pharmaceutical Industry
- Advanced Technology Industry (Aerospace, Military, Transportation, etc) • Scientific Research

For complete specifications please visit  
[www.palmerwahl.com](http://www.palmerwahl.com) and click: Test & Calibration >  
Calibrators: Temperature > Bench Top Calibrators



# Process Signal Pocket Calibrator P32

## Test & Calibration Process Signal Pocket Calibrator

Simple and robust, this instrument is designed to simplify maintenance operations and commissioning of sensors and transmitters using process signals such as 4-20 mA or 0-10V.

The Wahl P32 Process Signal Pocket Calibrator has been designed with increased performance in order to meet the demands of today's higher accuracy transmitters and process sensors. Accuracy of 0.015% of reading allows the P32 to be used as a standard for on site operations. The P32 features adjustable display resolution to simplify measurements with maximum resolutions of 1  $\mu$ A and 1mV.

### FEATURES

- Measurement and Simulation
- Rugged IP54 Construction for On-Site Use
- Quick Connect Terminals with 4mm Banana Plugs
- User Selectable Ranges and Scaling Provide Versatility for All Your Process Measurement Tasks
- High Precision: 150 ppm of Reading
- Low Temperature Coefficients: 15 ppm rdg/°C for Voltage, 20 ppm rdg/°C for Current
- Accuracy is Preserved Even in Difficult Operating Conditions
- Measurement up to 50V
- Simulation up to 15V
- Measurement and Emission up to 25mA



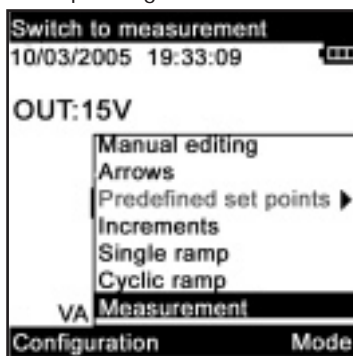
P32



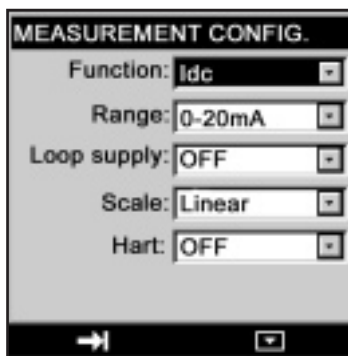
### GRAPHIC INTERFACE FOR PROGRAMMING

The P32 offers a graphic interface - making programming and reading easier

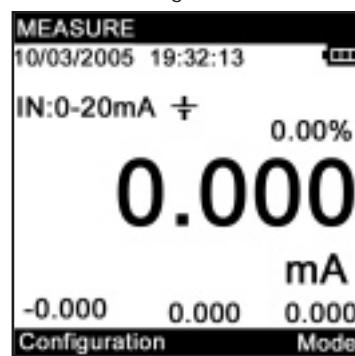
Operating Mode Screen



Function Screen



Reading Screen



For complete specifications please visit [www.palmerwahl.com](http://www.palmerwahl.com) and click:  
Test & Calibration > Calibrators: Process Signal

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## Micro-Ohmmeters RM116 • OM21 • OM22



RM116

### PORTABLE MICRO-OHMMETER

- Low resistance value measurement in 4-wire configuration (0.1 $\mu\Omega$  to 2500 $\Omega$ )
- Measuring current adaptable to the measuring range from 10A to 100mA
- Inductive resistance measurement (coils, motors and transformers)
- Non-inductive resistance measurement of earth bonding, coating, contact resistances

RM116 Micro-Ohmmeter is designed for outdoor or indoor use. Easy to use, it performs measurements on inductive and non-inductive resistances with a DC current. Its large interactive display informs the operator in real time about the type of measurement, range, calculation conditions (resistance calculated according to a reference temperature), thresholds status and values. Designed for harsh environments, it is encased in a Pelicase® type carrying case and features washable plastic keyboard and key-locked measurement plugs.

### BENCH-TOP MICRO-OHMMETERS

- Programmable
- Four-wire resistance measurement of very low values
- Resolution of 0.1 $\mu\Omega$  to 20k $\Omega$
- Accuracy of 0.03% and a display over 26,000 counts
- Display of the measured resistance value reduced to 20°C
- Mains supply or rechargeable batteries

OM21 Micro-Ohmmeter can be used for measurement of thermistors and heat-sensitive components. It can be powered from mains or from rechargeable batteries. The instrument is calibrated electronically, with no internal adjustment needed.

OM22 Micro-Ohmmeter is specifically designed for industrial test and pre-configured for each user, making its principal characteristic simplicity of operation. User selects one of 6 test programs (Factory Presets or User Programmable) to find the desired configuration. The instrument is calibrated electronically, with no internal adjustment needed. RS232/IEEE-488 programmable.



OM21



OM22

PC software allows programming of the OM21 or OM22 from a compatible PC. Menu-driven, completely guided by a question and answer system. Second function of the software is to manipulate the stored readings; transfer into the PC memory or onto a disk in a file which can be used for spreadsheets, tables or graphs.

For complete specifications please visit  
[www.palmerwahl.com](http://www.palmerwahl.com) and click:  
Test & Calibration > Micro-Ohmmeters

## Soldering Iron Tester ST2200

### Precise Thermocouple Sensors Simulate Actual Solder Joints - Verifies Soldering Iron Integrity

ST2200 Soldering Iron Tester gives you a choice of interchangeable sensors designed for utmost accuracy. Includes WST-02B Sensor, Type K Wire Probe, User Manual and Sensor Cleaning Brush. Specify model numbers below.

ST2200F-110 - 50°F to 1300°F, 110V AC ST2200F-220 - 50°F to 1300°F, 220V AC

ST2200C-110 - 10°C to 700°C, 110V AC ST2200C-220 - 10°C to 700°C, 220V AC

- Output to recorder: 1 mV°F, 100 mV/mV, 100 mV/ohm
- Transient voltage spike detector detects transients over 100 mV and 1µs pulse width.
- MIL-SPEC pass/fail warning light for voltage and resistance test. User selectable 5 or 2 ohms
- Function selection switch for fast tests without moving the iron tip
- Wrist strap tester verifies strap integrity
- Auxiliary AC convenience outlet powers iron under test and insures common ground with the tester
- Built-in thermocouple connector for Type K probes. Wire probe included
- Comprehensive Operators Handbook with calibration instructions and troubleshooting guide
- ESD safe construction



Specifications	
Temperature Range	50°F to 1300°F (10°C to 700°C)
Temperature Accuracy Resolution	Accuracy: $\pm 0.1\%$ of reading $\pm 1$ digit Resolution: 0.1°F or 1°F
Tip Ohms Range	0-99.9 $\Omega$
Tip Ohms to Ground Accuracy Resolution	Accuracy: 0-20 $\Omega$ $\pm 0.1$ $\Omega$ 20-100 $\pm 0.5\%$ of reading Resolution: 0.01 and 0.1 $\Omega$
Tip mV to Ground Range	0 - 30mV
Tip mV to Ground Accuracy Resolution	Accuracy: 0-20mV $\pm 0.1$ mV Resolution: 0.01mV and 0.1mV

Visit [www.palmerwahl.com](http://www.palmerwahl.com) and click:  
Test & Calibration > Test Tools



ST220F-110

### REPLACEMENT SENSORS AND KITS

**KST2200 Kit:** includes ST2200 Soldering Iron Tester, 2 - WST-02B Thermocouple Solder Bead Sensors, TC801P Solder Pot Probe, Carry Case, User Manual and Sensor Cleaning Brush. Specify °F/°C, 110/220VAC.

**KST2203 Kit:** Same as KST2200 but substitute WST-03 Elevated Wire Sensor.

**WST-02 Thermocouple Solder Bead Sensor:** Simulates a solder joint. Measures tip temperature of most small (<1/8") conical, chisel and screwdriver type soldering tips. It provides excellent thermal transfer when the solder is melted by the iron and gives a good representation of effective working tip temperature. Heavy duty sensor. Small to medium tips 0.2gram mass.

**WST-02KIT Rebuilding Kit:** includes WST-02 Sensor, Screw, & Plugs.

**WST-02B Thermocouple Solder Bead Sensor:** Measures tip temperature of most small (<1/8") conical, chisel and screwdriver type soldering tips. (shown on tester) Has a "bonnet" or position stop to guide iron tips for repeatable measurements. Heavy duty sensor. Small to medium tips 0.2gram mass.

**WST-02BKIT Rebuilding Kit:** includes WST-02B Sensor, Screw, & Plugs.

**WST-03 Elevated Wire Sensor:** May be used on larger tips. Lets the operator measure temperature at an exact point on the iron tip. For all tip sizes.

**WST-03KIT Rebuilding Kit:** includes WST-03 Sensor, Screw, & Plugs.

**12423-01:** Attache style Carrying Case

**TC867:** Sensor Assembly for direct temperature measurement only, from a Heat Prober® Thermocouple Meter.



WST-02



WST-02B



WST-03

Calibration Services Available

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Temperature, Pressure, Humidity, Test and Calibration Instruments

### CALIBRATION SERVICES

Two levels of calibration services to choose from to meet your quality system requirements.

**STANDARD CERTIFICATION:** Unit is calibrated to factory specifications using NIST traceable equipment. Unit is provided with:

**Certificate of Conformance\*** - Statement that our product meets published specifications. Included when you buy a new product.

**Calibration Sticker\*** - (or tag) Advising you of the date your instrument(s) was/were calibrated, and the suggested date for its next calibration. This is provided when you buy a new product and when you return a product for calibration. (\*Most Products)

**NIST TRACEABLE TEST REPORT:** Unit is calibrated to factory specifications using NIST Traceable equipment. Unit is provided with:

**NIST Traceable Test Report** - Our quality Management system is certified to conform to ISO9001:2000. We maintain a calibration system in conformance with ANSI/NCCL Z-540 and MIL-STD-45662A.

**"Before" and "After" Data** with Out of Tolerance conditions noted.

**Calibration Sticker** (see above).

Palmer Wahl offers repair services on most products we sell. The customer will be faxed a written estimate for approval before proceeding with work. Repair pricing includes Standard Certification as listed above.

### REPAIR AND OTHER SERVICES

**Detailed Repair Report** - Available upon request, this report provides details of evaluation and repairs made.

**Reminders** - To keep your QC Program in compliance, choose between our eMinder, Mail, Fax or Phone alerts. Just complete and return the Calibration Registration Card included when you purchased your new product, or use our Calibration eMinder Form under Service on our website.

**Custom Points** - Palmer Wahl will calibrate your instruments at your specified temperatures.

**Special Requests** - When calibrating your instrument, our experienced personnel will help you to achieve the level of quality that you need in your facility.

Note: Before returning your product to us please call Customer Service at 1-800-421-2853 or go to [www.palmerwahl.com](http://www.palmerwahl.com) and click on Service/Product Return Request.



### Why you need a Wahl Calibrator for your business

- Increase customer satisfaction with consistent products.
- To comply with quality standards.
- Improve product quality.
- Ensure traceability throughout your entire manufacturing process.
- Integrates all the necessary functions for adjustment and maintenance of your process.
- Our products are easy to use and Palmer Wahl is there to help, every step of the way.

Wahl Test & Calibration products are distributed by:



### Palmer Wahl Warranty

Manufacturer warrants all products listed in this catalog to be free from defects in material or workmanship under normal use and service. The Manufacturer agrees to repair or replace any product which upon examination is revealed to have been defective due to faulty workmanship or material if returned to our factory, transportation charges prepaid, within the product specific warranty period stated in the catalog by the manufacturer. This warranty is in lieu of all other warranties, expressed or implied and of all obligations or liabilities on its part for damages including but not limited to consequential damages, following the use or misuse of instruments sold by the Manufacturer. No agent is authorized to assume for manufacturer any liability except as set forth above.

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