



***Time Electronics***  
*Calibration, Test and Measurement*

# Portable Voltage and Current Test Instruments

---

Calibrators • Simulators • Sources

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



# Voltage and Current Test Equipment

Handheld and transportable Calibrators, Simulators, and Sources



## 1006 DC Millivolt Source 1007 DC Millivolt Potentiometer and Calibrator

High accuracy handheld millivolt sources primarily used for voltage injection or potentiometric voltage measurement (1007). Applications include thermocouple simulation and calibration of A/D converters and chart recorders.

- 3 ranges up to 1V
- Accuracy 0.02%
- 20mA output current
- Best resolution 1 $\mu$ V
- Short circuit and overload protected
- LED null measuring facility (1007)
- Safety terminals
- Removable protective boot
- Powered by 6 x AA batteries
- 100 hours typical battery life
- Optional carry case
- H215 x W100 x D120mm, weight 1.2kg



## 1010 DC Voltage Calibrator

A highly stable and accurate calibrator designed for applications requiring a precision voltage source of low internal resistance. Suitable for calibration, linearity, and gains stability measurements on DC amplifiers, voltmeters, data loggers, and chart recorders.

- 0.01 $\mu$ V to 10V in 5 ranges
- Accuracy 0.02%
- 10ppm/hr stability
- 30mA output current
- Safety terminals
- Battery or mains operation
- 40 hours typical use between charges
- Battery level indicator
- Optional carry case
- W217 x H160 x D193mm, weight 3.3kg



## 1024 DC Current Calibrator

A portable benchtop DC current source for calibration and test applications from nanoamp levels to 100mA. Applications include current transducer testing and calibration and linearity tests on digital and electronic current meters.

- 0 to 100mA output in 5 ranges
- Accuracy 0.02%
- 10ppm/hr stability
- 30ppm/ $^{\circ}$ C temperature coefficient
- Up to 15V output drive
- Null meter measures to 1 $\mu$ A resolution
- Safety terminals
- Battery or mains operation
- 12 hours typical use between charges
- Battery level indicator
- Optional carry case
- W217 x H160 x D193mm, weight 3.3kg



## 1021 Milliamp Source with Null Indicator

A precision DC current source suitable for calibration and test applications from micro-amp levels up to 100mA. The 1021 is used to calibrate current sensitive transducers and their associated indicating and recording instruments.

- 0 to 100mA output in 3 ranges
- Accuracy 0.02%
- 25ppm/hr stability
- Up to 40V output drive
- LED null measuring facility
- Short circuit overload protected
- Safety terminals
- Removable protective boot
- 10 hours typical use between charges
- Battery charger supplied
- Optional carry case
- H215 x W100 x D120mm, weight 1.4kg



# Voltage and Current Test Equipment

Handheld and transportable Calibrators, Simulators, and Sources



## 1077 Milliamp Transducer Simulator

A multi-purpose handheld test instrument that can be used as an adjustable current load, adjustable power supply, or precision current source. The 1077 is commonly used for the testing and simulation of milliamp transducer systems.

- 3 operating modes
- Accuracy 0.02%
- 100mA source and load
- 24V line mode
- Variable drive source 14 to 40V
- Short circuit and overload protected
- Safety terminals
- Removable protective boot
- 10 hours typical use between charges
- Battery charger supplied
- Optional carry case
- H215 x w100 x D120mm, weight 1.5kg



## 1017 Voltage/Current/Resistance Calibrator

A portable multifunction calibrator with voltage, current, and resistance ranges. The 1017 is suitable for calibrating a wide range of instruments including thermocouples, transducers, transmitters, and platinum resistance thermometers.

- DC Voltage 10nV to 100V
- DC Current 100nA to 100mA
- Resistance 10mΩ to 10kΩ
- Accuracy 0.005% (50ppm)
- 1ppm setting resolution
- Noise <2ppm (0.1 to 1Hz)
- Stability <5ppm/day, <25ppm/yr
- Residual resistance <200mΩ
- Deviation control – Voltage and Current
- Battery or mains operation
- 12 hours typical use between charges
- W250x H119 x D314mm, weight 2.4kg



## 1030 Voltage/Current Source

A simple operation pocket-sized calibrator suitable for voltage and current loop signal simulation as well as thermocouple simulation. A cost-effective and popular instrument used in various applications across industries.

- 10mV, 100mV, 1V ranges
- 10mA, 100mA ranges
- Accuracy 0.1%
- Linearity 0.15%
- Up to 8V output (using 1kΩ resistor)
- Precision 10-turn dial
- 1kΩ resistor supplied
- Battery level indicator
- Battery powered 9V PP3
- 60 hours typical battery life
- Supplied with carry case
- H115 x w62 x D55mm, weight 0.24kg



## 1044 Voltage/Current Calibrator

A precision handheld calibrator that can be used as a general purpose current and voltage source. High performance and ease of use make it suitable for test engineers, R&D, service, and calibration technicians.

- Measure voltage and current
- Source voltage and current
- 3 voltage ranges 0 to 20V
- 3 current ranges 0 to 20mA
- Accuracy 0.05%
- 4.5 digit LCD display
- Battery powered 9V PP3
- 28 hours typical battery life
- Optional mains power supply
- Supplied with carry case
- H142 x w78 x D50mm, weight 0.30kg
- Voltage/Current/Loop version 1048





# Time Electronics

## Portable V & I Instruments Ordering Information

<b>1006</b> .....	<b>DC MILLIVOLT SOURCE - 0.02% ACCURACY</b>
9027.....	Carrying Case
9529.....	Rechargeable Battery Pack (8 Cells + 230V Mains Charger)
9528.....	Rechargeable Battery Pack (8 Cells + 110V Mains Charger)
C150.....	Factory Calibration Certificate (NPL traceable)
C100.....	UKAS Calibration Certificate (ISO 17025)
<b>1007</b> .....	<b>DC MILLIVOLT POTENTIOMETER AND CALIBRATOR - 0.02% ACCURACY</b>
9027.....	Carrying Case
9529.....	Rechargeable Battery Pack (8 Cells + 230V Mains Charger)
9528.....	Rechargeable Battery Pack (8 Cells + 110V Mains Charger)
C150.....	Factory Calibration Certificate (NPL traceable)
C101.....	UKAS Calibration Certificate (ISO 17025)
<b>1010</b> .....	<b>DC VOLTAGE CALIBRATOR - 0.02% ACCURACY</b>
9021.....	Carrying Case
C151.....	Factory Calibration Certificate (NPL traceable)
C102.....	UKAS Calibration Certificate (ISO 17025)
<b>1017</b> .....	<b>DC MULTIFUNCTION V/I/R CALIBRATOR - 0.005% ACCURACY</b>
C152.....	Factory Calibration Certificate (NPL traceable)
C109.....	UKAS Calibration Certificate (ISO 17025)
<b>1021</b> .....	<b>DC CURRENT SOURCE WITH NULL METER - 0.02% ACCURACY</b>
9027.....	Carrying Case
9529.....	Rechargeable Battery Pack (8 Cells + 230V Mains Charger)
9528.....	Rechargeable Battery Pack (8 Cells + 110V Mains Charger)
C153.....	Factory Calibration Certificate (NPL traceable)
C105.....	UKAS Calibration Certificate (ISO 17025)
<b>1024</b> .....	<b>DC CURRENT CALIBRATOR WITH NULL MEASURING - 0.02% ACCURACY</b>
9021.....	Carrying Case
C154.....	Factory Calibration Certificate (NPL traceable)
C106.....	UKAS Calibration Certificate (ISO 17025)
<b>1030</b> .....	<b>COMBINED VOLTAGE AND CURRENT SOURCE (MICROCAL) - 0.1% ACCURACY</b>
1031.....	Rechargeable Battery Pack (Battery + 230V Mains Charger)
1032.....	Rechargeable Battery Pack (Battery + 110V Mains Charger)
C155.....	Factory Calibration Certificate (NPL traceable)
C110.....	UKAS Calibration Certificate (ISO 17025)
<b>1044</b> .....	<b>DC VOLTAGE AND CURRENT CALIBRATOR - 0.05% ACCURACY</b>
7643.....	230V Mains Power Supply (not charger)
7652.....	110V Mains Power Supply (not charger)
C156.....	Factory Calibration Certificate (NPL traceable)
C133.....	UKAS Calibration Certificate (ISO 17025)
<b>1048</b> .....	<b>VOLTAGE / CURRENT / LOOP CALIBRATOR - 0.02% ACCURACY</b>
7643.....	230V Mains Power Supply (not charger)
7652.....	110V Mains Power Supply (not charger)
C176.....	Factory Calibration Certificate (NPL traceable)
C138.....	UKAS Calibration Certificate (ISO 17025)
<b>1077</b> .....	<b>MILLIAMPER TRANSDUCER SIMULATOR (TRANSIM) - 0.02% ACCURACY</b>
9027.....	Carrying Case
9529.....	Rechargeable Battery Pack (8 Cells + 230V Mains Charger)
9528.....	Rechargeable Battery Pack (8 Cells + 110V Mains Charger)
C158.....	Factory Calibration Certificate (NPL traceable)
C108.....	UKAS Calibration Certificate (ISO 17025)

Time Electronics Ltd., Unit 11 Sovereign Way,  
Botany Industrial Estate, Tonbridge, Kent, TN9 1RH. United Kingdom.

T: +44 (0) 1732 355993 F: +44 (0) 1732 770312 E: [mail@timeelectronics.co.uk](mailto:mail@timeelectronics.co.uk)

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