

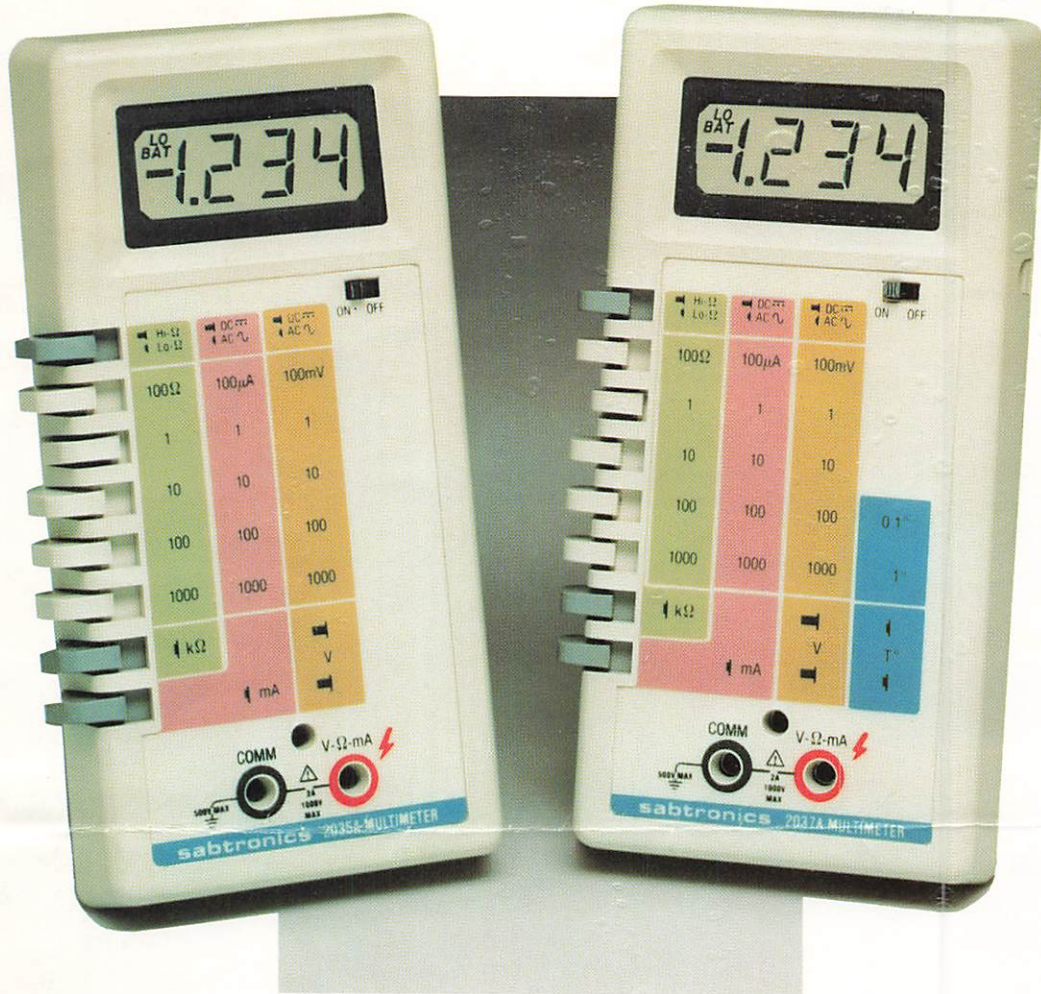
“making performance affordable”



sabtronics 



# Models 2035A & 2037A Handheld Multimeters



Accurate performance you can rely on, time after time. That's what you expect from a quality DMM. But don't expect to pay as much for it any more. Because now Sabtronics brings you top quality instruments with more features and better accuracy than other comparable units on the market today. And ours cost surprisingly less!

## We cut the price. Not the quality.

Sabtronics DMMs are precision crafted instruments that feature laser-trimmed divider networks and ultra-stable band-gap reference elements for better long-term accuracy. (All the features of expensive DMMs without the expensive price.) The 2035A gives you 32 measurement ranges and 6 functions. The 2037A has an additional temperature measurement function with 2 resolution ranges (0.1° & 1°) and is supplied complete with the sensor probe.

## First in features. First in price.

Both models feature Touch & Hold capability with the optional THP-20 Probe, two-terminal input for *all* measurement functions (this eliminates unplugging and replugging test leads), and push button switches for easy, one hand operation. Other features include hi and lo ohms on all resistance ranges, 0.1% VDC accuracy and 200 hour battery life. Before you buy any handheld DMM, compare these Sabtronics price/performance values!

## SPECIFICATIONS:

Function	# Ranges	Measurements	Basic Accuracy
DC Volts	5	100 $\mu$ V - 1000V	$\pm 0.1\%$ + 1 digit
AC Volts	5	100 $\mu$ V - 1000V	$\pm 0.3\%$ + 2 digits
DC Current	5	0.1 $\mu$ A - 2A	$\pm 0.3\%$ + 1 digit
AC Current	5	0.1 $\mu$ A - 2A	$\pm 0.5\%$ + 1 digit
Lo-Ohms	6	0.1 $\Omega$ - 20 M $\Omega$	$\pm 0.25\%$ + 1 digit
Hi-Ohms	6	0.1 $\Omega$ - 20 M $\Omega$	$\pm 0.25\%$ + 2 digits
Temperature*	2*	-50°C - +150°C	$\pm 2.5^\circ$ + 1 digit

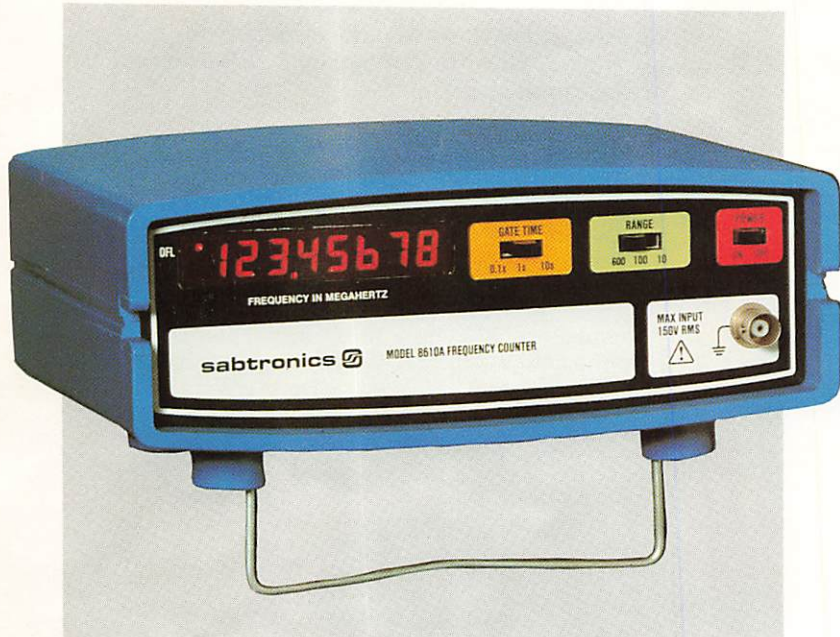
\*Temperature function on Model 2037A only (2 resolution ranges — 0.1° and 1°).

**GENERAL — Display:** 3½-digit 0.5" LCD with automatic decimal point, Low Battery indicator and (-) minus sign. **Input Impedance:** 10 M $\Omega$ /10 pF on all voltage ranges. **Overload Protection:** 1000V (DC + AC peak) on all voltage ranges; 250V (DC + AC peak) on all resistance ranges; 250V/2A fused on all current ranges. **Power Requirement:** One 9V transistor battery. **Dimensions:** 3.5"W x 6.6"L x 1.6"H (89 x 168 x 41 mm). **Weight:** 11 oz. (310 g) without battery. **Available in easy-to-build kit or factory assembled and tested.**



# 8-digit Frequency Counters

## 8110A: 100 MHz — 8610A: 600 MHz



- Convenient single input for entire range
- Big easy-to-read 8-digit display
- Excellent sensitivity
- 10 MHz Crystal controlled time base
- Battery operated for portability
- 3 Switch-selectable gate times
- Leading zero suppression

### SPECIFICATIONS

**FREQUENCY RANGE:** Model 8110A: 20Hz - 100 MHz in 2 ranges. Model 8610A: 20Hz - 600 MHz in 3 ranges.  
**DISPLAY:** 8-digit 0.4" (10 mm) LED with overflow indicator and automatic decimal point which doubles as the gate activity indicator.  
**RESOLUTION:** 10 MHz range: 0.1 Hz with 10s gate time. 100 MHz range: 1Hz with 10s gate time. 600 MHz range (Model 8610A), PSC range (Model 8110A): 10Hz with 10s gate time.  
**SENSITIVITY:** <10 mV rms, 20Hz - 100 MHz; 70 mV rms, 100-450 MHz; 150 mV rms, 450-600 MHz.  
**INPUT IMPEDANCE:** 10 MHz & 100 MHz ranges: 1M $\Omega$ /100 pF. 600 MHz range (Model 8610A): 50 $\Omega$  nominal.  
**TIME BASE:** Frequency: 10 MHz.  
**Setability:**  $\pm 2$  ppm. **Temperature Stability:**  $\pm 1$  ppm from 0 to 40°C.  
**GATE TIME (Switch selectable):** 0.1 second, 1 second, 10 seconds.  
**CONTROLS:** Power switch, gate time switch, frequency range switch.  
**POWER REQUIREMENT:** 4.8-6.5VDC (4 "C" cells) or line voltage via optional AC Adaptor.  
**WEIGHT:** 1.2 lbs. (540 g) without batteries. See page 5 for optional accessories.

## Model 5020A Function Generator.

- Wide 1Hz to 200 kHz frequency range
- Sine, square, triangle and separate TTL square wave output
- Continuously variable output to 10V P-P
- Frequency sweepable over 100:1 range
- Short-circuit proof outputs
- Venier frequency dial with fine adjustment control

A sweeping statement about our new Function Generator: It provides a clean signal at a carefree price.

### SPECIFICATIONS:

**FREQUENCY RANGE:** 1Hz to 200 kHz in five overlapping decade ranges. **WAVEFORMS:** Sine wave: Distortion <1% from 1Hz to 100 kHz; <3% from 100 kHz to 200 kHz. Square wave: Rise/fall time <250 nsec. Symmetry >98%. Triangle wave: Non-linearity <1% to 100 kHz. **OUTPUT:** Impedance: 600 $\Omega$  short-circuit proof. **Amplitude (continuously variable):** 10V P-P open circuit; 5V P-P into 600 $\Omega$  max. **Low Level:** -40 dB of high output. **TTL square wave:** >10 std. TTL loads. **SWEEP INPUT:** Impedance: 27k $\Omega$ . **Range:** >100:1. **Input Voltage:** Up to  $\pm 10$ V.  
**CONTROLS:** Vernier frequency dial with concentric fine adjustment knob, variable DC Offset, variable amplitude, 9 push-button switches: 5 range selection, 3 waveform selection, 1 power. **POWER REQUIREMENT:** 12VAC, 300 mA via supplied wall-plug adaptor. **WEIGHT:** 1.6 lbs. (740 g) excluding AC adaptor.



Products shown on this page available in easy-to-build kit form or factory assembled and tested.

Dimensions of units shown above:  
 8" wide x 6.5" deep x 3" high (203 x 165 x 76 mm)



# Model PSC-65 600 MHz Prescaler



- Accurately extends any 60 MHz Counter up to 600 MHz and above
- Compact, rugged all solid-state circuit
- BNC Input and Output Connectors
- Switch for either prescaler ( $\div 10$ ) or direct (straight-thru) operation

## SPECIFICATIONS:

**Frequency Range:** 10 MHz to 600 MHz guaranteed (700 MHz typical). **Sensitivity:** 20 mV rms, 10-100 MHz; 50 mV rms, 100-450 MHz; 150 mV rms 450-600 MHz. **Input & Output Impedance:** 50 $\Omega$  nominal. **Modes:**  $\div 10$  provides decade prescaler function, divides input frequency by ten at output. Direct-shunts input directly to output; does not process signal. **Controls:** Direct/ $\div 10$  slide switch. **Connectors:** BNC input; BNC output; External DC. **Power requirement:** 7.5-12VDC, 120 mA max. **Dimensions:** 3.2"L x 2"W x 1.7"H (81 x 51 x 43 mm.). **Weight:** 5 oz (140 g).

## Multimeter and Frequency Counter Accessories

Increase the versatility of your Sabtronics Multimeter and Frequency Counter with these useful accessories.

**THP-20 Touch & Hold Probe:** For use with Models 2010A, 2015A, 2035A and 2037A DMMs. Permits a reading to be held in the display. Ideal for use in hazardous, difficult or hard-to-reach places where you have to give the probe tip your undivided attention instead of turning your head to read the display.

**HVP-30 High Voltage Probe:** Extend the DC voltage range any 10 M $\Omega$  impedance DVM to 30,000V. Accuracy within  $\pm 2\%$ .

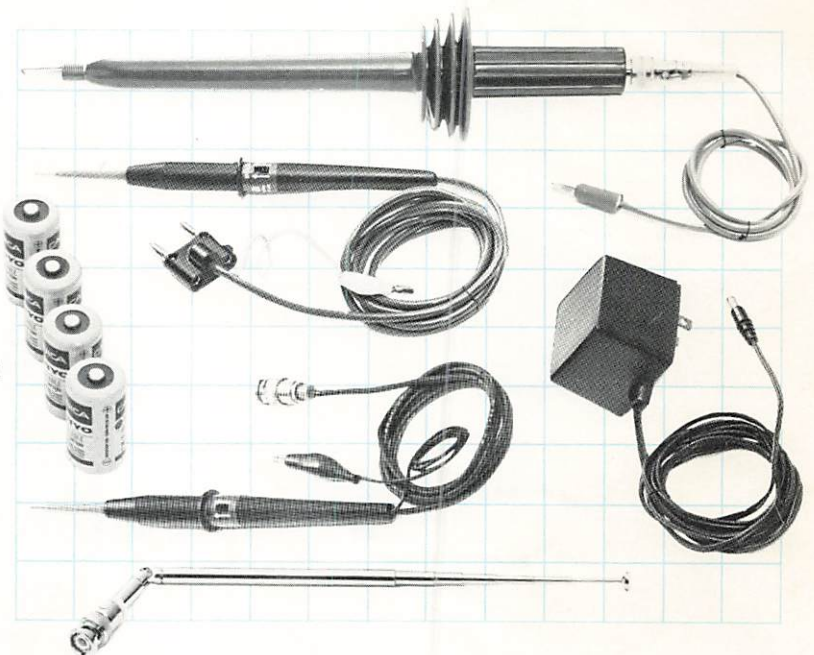
**AC-110 Battery Eliminator:** Permits AC line operation of Models 2035A and 2037A DMMs. For 110-120V 60Hz line\*.

**AC-120 AC adapter/charger:** Permits AC line operation of all Sabtronics Bench/Portable DMMs and Frequency Counters. Also recharges the NB-120 NiCd batteries (if installed) whether the instrument is powered on or off. For 110-120V 60Hz line\*.

**NB-120 NiCd Batteries:** Set of 4 "C" size NiCd batteries for use with all Sabtronics Bench/Portable DMMs and Frequency Counters. Provide 8-12 hours continuous use.

**LFP-10 Audio Frequency Probe:** For use with Sabtronics and other Frequency Counters. The LFP-10 effectively attenuates RF noise from low frequency (DC-100 kHz) signals. A switch on the probe allows bypassing the filter for normal RF (.1-100 MHz) measurements.

**RFA-10 Telescopic RF pick-up Antenna:** For use with all BNC input connector type Frequency Counters. Enables RF measurements without direct connection between signal source and counter's input.



\*Customers outside U.S.A.: 220/240V, 50Hz input AC Adapters available; consult your local Sabtronics distributor.



# Models 2010A & 2015A Multimeters



- Battery operated for portability
- Touch & Hold Capability\*
- Current measurements up to 10 amps
- Hi power and Lo power Ohms
- 31 Ranges and 6 Functions

The Sabtronics 2010A & 2015A Bench/Portable Multimeters give you features and performance you will find hard to match at twice their price!

\*With optional THP-20 Touch & Hold Probe.

## SPECIFICATIONS:

Function	#Ranges	Measurements	Basic Accuracy
DC Volts	5	100 $\mu$ V - 1000V	$\pm 0.1\%$ + 1 digit
AC Volts	5	100 $\mu$ V - 1000V	$\pm 0.5\%$ + 1 digit
DC Current	6	0.1 $\mu$ A - 10A	$\pm 0.3\%$ + 3 digits
AC Current	6	0.1 $\mu$ A - 10A	$\pm 0.5\%$ + 1 digit
Ohms	6	0.1 $\Omega$ - 20 M $\Omega$	$\pm 0.1\%$ + 1 digit
Diode Test	3	0.1 $\mu$ A, 10 $\mu$ A, 1 mA	

**GENERAL** — Display (Model 2010A): 3½-digit 0.4" (10 mm) LED with automatic decimal and minus (-) sign. Display (Model 2015A): 3½-digit 0.5" (13 mm) LCD with automatic decimal, polarity indicator (+ and -) and low battery (Lo Bat) indicator. **Input Impedance:** 10 M $\Omega$ /100 pF on all voltage ranges. **ACV Frequency Response:** 40Hz - 40 kHz on 200 mV, 2V and 20V ranges. **Overload Protection:** 1200V (DC + AC peak) on all voltage ranges; 250V/250 mA fused on current ranges up to 200 mA; 15A unfused on 10A range; 250V/250 mA fused on all resistance ranges. **Power Requirement:** 4.4 - 6.5VDC (4 "C" cells) or line voltage via optional AC Adaptor. **WEIGHT:** 1.5 lbs. (680 g) without batteries. See page 5 for optional accessories.

# 9-digit Frequency Counters

## 8000B: 1 GHz — 8610B: 600 MHz

- 9-digit Resolution for more precise readings
- Excellent 30mV sensitivity up to 1 GHz
- 3 Switch selectable gate times
- 10 MHz Crystal controlled time base for greater accuracy
- 2 Separate inputs for added versatility
- Front panel sensitivity control

Our frequency counters also achieve the high standards our multimeters are world famous for.

## SPECIFICATIONS:

**FREQUENCY RANGE:** Model 8000B: 10Hz - 1 GHz in 3 ranges. Model 8610B: 10Hz - 600 MHz in 3 ranges. **DISPLAY:** 9-digit 0.4" (10 mm) LED with automatic decimal point; separate LED gate activity indicator. **RESOLUTION:** 10 MHz range: 0.1Hz with 10s gate time. 100 MHz range: 1Hz with 10s gate time. 600 MHz/1 GHz range: 10Hz with 10s gate time. **SENSITIVITY:** <20 mV rms, 10Hz - 100 MHz; <30 mV rms, 100-600 MHz; <35 mV rms, 600 MHz - 1 GHz. **INPUT IMPEDANCE:** Input A — 1M $\Omega$ /100 pF. Input B — 50 $\Omega$  nominal. **TIME BASE:** Frequency: 10 MHz. **Stability:**  $\pm 2$  ppm. **Temperature Stability:**  $\pm 1$  ppm from 0 to 40°C. **GATE TIME:** 0.1 second, 1 second, 10 seconds switch selectable. **CONTROLS:** Power switch, gate time switch, frequency range switch, sensitivity control. **POWER REQUIREMENT:** Line voltage via AC Adaptor. **WEIGHT:** 1.3 lbs. (590g) without batteries. See page 5 for optional accessories.



Products shown on this page available in easy-to-build kit form or factory assembled and tested.

Dimensions of units shown above:

8" wide x 6.5" deep x 3" high (203 x 165 x 76 mm)





## SHORT FORM CATALOG #811

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