

# Simpson

WORLD'S LARGEST MANUFACTURER  
OF ELECTRONIC TEST EQUIPMENT



## TEST EQUIPMENT

FOR INDUSTRIAL ELECTRONIC  
AND ELECTRICAL APPLICATIONS

INCLUDING RADIO AND TV SERVICING, AIR  
CONDITIONING, REFRIGERATION AND HEATING

**ELECTRONIC WHOLESALERS INC.**



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"Serving the entire Southeastern U.S."

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WESTERN DIVISION: SIMPSON INSTRUMENTS  
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# Simpson 260® The World's Best Selling VOM Family



## WORLD FAMOUS 260®\* AC/DC Volt-Ohm-Milliammeter

Now the world famous 260 Series 4 and 5P Volt-Ohm-Milliammeter is a better buy than ever before with these new features.

- New Self-Shielded Meter Movement.
- New Higher Accuracy  $\pm 2\%$  DC,  $\pm 3\%$  AC.
- New Ruggedness From Spring-Backed Jewels.
- Greater Repeatability.
- Increased Linearity and Stability.
- Input Protected with an internal 1 amp fuse.
- Mirror Scale (260-4M only).

Complete with test leads No. 7500 and operator's manual.

ROLL TOP VOMs	
260-4.....	\$48.95
260-4M.....	\$50.95
260-4RT.....	\$54.95
260-4MRT.....	\$56.95

### NEW PROTECTED 260 VOM

**Ranges and Features**—The 260-5P has the same ranges and takes the same accessories as Simpson's famous 260-4 VOM.

#### Combined Protection You Won't Find In Any Other VOM

1. Reset button pops out to indicate overload.
2. You cannot reset circuits while overload is present.
3. Protective circuit does *not* require massive overloads which can cause hidden damage to the instrument.
4. All ranges are protected except those not feasible in a portable instrument—1000 and 5000 volts DC and AC; 10 amp DC.

Complete with test leads No. 7500 and operator's manual.	260-5P.....	\$78.95
	260-5PRT.....	\$84.95

### HIGH ACCURACY 261\* and 270-2\* AC/DC Volt-Ohm-Milliammeters

Simpson's New Model 261 and improved 270 Series 2 VOMs blend the latest in VOM design with Simpson's strict manufacturing control. Their features include: 1. A new self-shielded hi-flux annular meter movement. 2. Spring backed jewels. 3. Special Calibration circuit that increases accuracy. 4. Diode overload protection (Prevents movement burnout even on 200,000% overload). 5. Mirror scale with knife edge pointer. 6. Input protected with an internal 1 amp fuse.

Complete with test leads No. 7500 and operator's manual.

ROLL TOP VOMs	
Model 261.....	\$59.95
270-2.....	\$64.95
Model 261-RT.....	\$65.95
Model 270-2RT.....	\$70.95

® Registered with U.S. Patent Office.



260-5P...\$78.95



Model 261...\$59.95



Roll Top  
260-4RT — \$54.95  
260-4MRT — 56.95  
260-5PRT — 84.95  
261-RT — 65.95  
270-2RT — 70.95



Ever-Redy Vinyl  
Carrying Case Only  
#4236—\$9.75



270...\$64.95

### VOMs

260-4; 260-4M; 261; 270-2  
20,000  $\Omega/V$  DC  
5,000  $\Omega/V$  AC

RANGES:	260-4, 260-4M	MODEL 261	270-2
DC VOLTS	0.25 V; 0-2.5 V; 0-10 V; 0-50 V; 0-250 V; 0-1000 V; 0-5000 V	0-2.5 V; 0-10 V; 0-50 V; 0-250 V; 0-1000 V; 0-5000 V	0-2.5 V; 0-10 V; 0-50 V; 0-250 V; 0-1000 V; 0-5000 V
AC VOLTS	0-2.5 V; 0-10 V; 0-50 V; 0-250 V; 0-1000 V; 0-5000 V	0-2.5 V; 0-10 V; 0-50 V; 0-250 V; 0-1000 V; 0-5000 V	0-2.5 V; 0-10 V; 0-50 V; 0-250 V; 0-1000 V; 0-5000 V
DC MICROAMPERES	0-50		
DC MILLIAMPERES	0-1; 0-10; 0-100; 0-500		
DC AMPERES	0-10		
DB SCALE (1MW-600 $\Omega$ )	-20 to +10; -8 to +22; +6 to +36; +20 to +50		
OUTPUT RANGES	0.1 mfd capacitor in series with all AC Voltage ranges through 250 Volts		
RESISTANCE RANGES	R $\times$ 1 0-2000 $\Omega$ (12 $\Omega$ center)	R $\times$ 100 0-200K $\Omega$ (1200 $\Omega$ center)	R $\times$ 10K 0-20 meg $\Omega$ (120K $\Omega$ center)
ACCURACIES:			
0-250 MV; 0-2.5 to 0-1000 V DC	$\pm 2\%$ F.S.	$\pm 1.5\%$ F.S.	$\pm 1.25\%$ F.S.
0-5000 V DC	$\pm 3\%$ F.S.	$\pm 2.5\%$ F.S.	$\pm 2.25\%$ F.S.
0-50 Microamperes	$\pm 1.5\%$ F.S.	$\pm 1.0\%$ F.S.	$\pm .75\%$ F.S.
0-1 Ma to 0-10 A DC	$\pm 2\%$ F.S.	$\pm 1.5\%$ F.S.	$\pm 1.25\%$ F.S.
R $\times$ 1	$\pm 2.5^\circ$ of Arc	$\pm 2.0^\circ$ of Arc	$\pm 1.5^\circ$ of Arc
R $\times$ 100, R $\times$ 10,000	$\pm 2.0^\circ$ of Arc	$\pm 1.5^\circ$ of Arc	$\pm 1.0^\circ$ of Arc
0-2.5 to 0-1000 V AC	$\pm 3\%$ F.S.	$\pm 3\%$ F.S.	$\pm 2.0\%$ F.S.
0-5000 V AC	$\pm 4\%$ F.S.	$\pm 4\%$ F.S.	$\pm 3\%$ F.S.
TEMPERATURE COMPENSATED	NO	NO	YES
MIRROR SCALE	NO YES	YES	YES
SCALE LENGTH	4.2 inches		
DIMENSIONS	5 $\frac{1}{4}$ " x 7" x 3 $\frac{3}{8}$ "		
NET WEIGHT	3 $\frac{3}{8}$ lbs.		

ACCESSORIES for 260-4/4M/261/270	Cat. No.	Price		Cat. No.	Price
10,000v High voltage probe.....	0507	\$10.20	Banana plugs and test prods.	7538	\$ 2.50
25,000v High voltage probe.....	0508	11.50	Leather Carrying Case.....	1818	8.50
50,000v High voltage probe.....	0509	12.50	Ever-Redy Carrying Case.....	4236	9.75
Banana plugs and alligator clip.....	7500	2.10	Roll top safety case only.....	0249	9.95

\*EXCLUSIVE SIMPSON ADJUST-A-VUE HANDLE.

# POPULAR 7" VOLT-OHM-MILLIAMMETERS AVAILABLE FOR IM



Model 262-2...\$69.95



Model 263...\$78.95

## MODEL 262-2 DC/AC Volt-Ohm-Milliammeter

Model 262-2 Volt-Ohm-Milliammeter is very compact with 33 ranges on a large, easy to read 7" scale that makes accurate repetitive readings easy to attain. One control selects range and function. Self-shielded meter movement incorporates spring backed jewels which eliminates damage to the meter pivots that could result from shock and vibration. Dependability and longer life are ensured. Use the chart below to compare Simpson's wide range of VOM's. Select the VOM best suited for your needs.

Complete with test leads No. 8463 and operator's manual.

Model 262-2.....\$69.95

## MODEL 263—New Dual Sensitivity VOM DC/AC Volt-Ohm-Milliammeter

Dual sensitivity Volt-Ohm-Milliammeter with accuracies of  $\pm 1\frac{1}{2}\%$  DC and  $\pm 3\%$  AC F.S. Overlapping range offers greater accuracy expressed as a percentage of reading. Diode overload protection (Prevents movement burnout even on 200,000% overload). External battery compartment makes battery replacement easier. Uses  $1\frac{1}{2}$  vol alkaline battery, insures greater stability on low ohm scale.

Complete with test leads No. 0115 and operator's manual....\$78.95

	MODEL 262-2 20,000 $\Omega/V$ DC 5,000 $\Omega/V$ AC			NEW MODEL 263 20,000 $\Omega/V$ DC • 10,000 $\Omega/V$ DC 10,000 $\Omega/V$ AC • 5,000 $\Omega/V$ AC		
<b>RANGES:</b>	MODEL 262-2			MODEL 263		
DC VOLTS	0-1.6/0-8/0-40/0-160/0-400/0-1600/0-4000			0-0.15/0-.75/0-3/0-7.5/0-30/0-75/0-300/0-750/0-3000 @ 20K $\Omega/V$ 0-0.3/0-1.5/0-6/0-15/0-60/0-150/0-600/0-1500/0-6000 @ 10K $\Omega/V$		
AC VOLTS	0-3/0-8/0-40/0-160/0-800			0-2.5/0-7.5/0-30/0-150/0-750 @ 10K $\Omega/V$ 0-5/0-15/0-60/0-300/0-1500 @ 5K $\Omega/V$		
DC MICROAMPERES	0-80/0-160			0-75 @ 150 MV; 0-150 @ 300 MV		
DC MILLIAMPERES	0-1.6/0-16/0-160			0-0.75/0-7.5/0-75/0-750 @ 150 MV; 0-1.5/0-15/0-150 @ 300 MV		
DC AMPERES	0-1.6/0-16			0-7.5 @ 150 MV; 0-1.5/0-15 @ 300 MV		
DB SCALE (LIMW-600)	-12 to +45.5 db in four ranges			-20 to +75.5 db in 10 ranges		
OUTPUT RANGES	0.1 mfd capacitor in series with all AC Voltage ranges through 160 Volts			0.1 mfd capacitor in series with all AC Voltage ranges through 300 Volts		
RESISTANCE RANGES	R $\times$ 1	R $\times$ 10	R $\times$ 100	R $\times$ 1	R $\times$ 10	R $\times$ 100
	0-500 $\Omega$	0-5000 $\Omega$	0-50K $\Omega$	0-500 $\Omega$	0-5000 $\Omega$	0-50K $\Omega$
	R $\times$ 1K	R $\times$ 10K	R $\times$ 100K	R $\times$ 1K	R $\times$ 10K	R $\times$ 100K
	0-500K $\Omega$	0-5 meg $\Omega$	0-50 meg $\Omega$	0-500K $\Omega$	0-5 meg $\Omega$	0-50 meg $\Omega$
	(4.5 $\Omega$ center)			(4.5 $\Omega$ center)		
<b>ACCURACIES:</b>						
DC VOLTS	$\pm 3\%$			0-0.15 to 1500 $\pm 1\frac{1}{2}\%$ ; 0-3000 to 6000 $\pm 2\frac{1}{2}\%$		
AC VOLTS	$\pm 5\%$			$\pm 3\%$		
DC CURRENT	$\pm 3\%$			$\pm 1\frac{1}{2}\%$		
R $\times$ 1	$\pm 3^\circ$ of Arc			$\pm 3^\circ$ of Arc		
R $\times$ 10-R $\times$ 100K	$\pm 2\frac{1}{2}^\circ$ of Arc			$\pm 2\frac{1}{2}^\circ$ of Arc		
SCALE LENGTH	6.2 inches					
DIMENSIONS	6" x 7 $\frac{1}{4}$ " x 3"					
NET WEIGHT	4 lbs.					
<b>ACCESSORIES</b>		Cat. No.	Price		Cat. No.	Price
	16KVDC	0172	\$11.95	30KV @ 10K $\Omega/V$	0141	\$11.95
	40KVDC	0180	12.50	15KV @ 20K $\Omega/V$		
	Ever-Redy Vinyl Carrying Case	5262	\$ 9.95	Ever-Redy Vinyl Carrying Case	5262	\$ 9.95

FOR IMMEDIATE DELIVERY FROM STOCK..



Model 267...\$54.95



Model 268...\$54.95



Model 269-2...\$89.95

**Accuracy VOM**

meter with accuracies  
Overlapping ranges  
percentage of read-  
ings movement burn-  
tional battery com-  
easier. Uses 1 1/2 volt  
bility on low ohms

operator's manual...\$78.95

**MODEL 267 and MODEL 268  
DC/AC Volt-Ohm-Milliammeter**

Companions to the World Famous 260, these instruments are ideal for TV and Radio Service work, General laboratory work, and production line testing where accurate repetitive readings are required. Simpson's 7" meter provides for expansion of all the meter scales making it easier to obtain closer repetitive readings. One major switch in the instrument selects range position and function at the same time which saves time in operation and also acts as a protection to the tester circuit. Input protected with an internal 1 amp fuse.

Complete with test leads No. 7500 and operator's manual.

Model 267...\$54.95

Model 268...\$54.95

**MODEL 269-2—New Improved 100,000 Ω/V  
Volt-Ohm-Microammeter**

Improved Model 269-2 incorporates Simpson's self-shielded meter movement with spring backed jewels. Damage to the meter pivots that could result from shock and vibration is eliminated. Improved Model 269-2 includes two new ranges, 400 V. AC and 800 V. DC. The ampere range coverage has been changed from a 16 ampere range to an 8 ampere range, and the Ohm Center Scale is changed to a 12 ohm center for better coverage. Accuracies are now ±2% DC and ±3% AC of full scale. External battery compartment makes battery replacement easier. Input protected with an internal 1.5 amp fuse.

Complete with test leads No. 0115, 4000V DC probe extension and operator's manual...\$89.95

V DC V AC	MODEL 267	MODEL 268	MODEL 269-2
	20,000 Ω/V DC 5,000 Ω/V AC		100,000 Ω/V DC 5,000 Ω/V AC
100 @ 20KΩ/V 100 @ 10KΩ/V	0-25/0-2.5/0-10/0-50/0-250 0-500/0-1000	0-3/0-12/0-60/0-300 0-600/0-1200	0-1.6/0-8/0-40/0-160/0-400/0-800/0-1600/0-4000
100 100	0-2.5/0-10/0-50/0-250 0-500/0-1000	0-3/0-12/0-60/0-300 0-600/0-1200	0-3/0-8/0-40/0-160/0-400/0-800
150 @ 300 MV 1V	0-1/0-10/0-100/0-500 0-10	0-1.2/0-12/0-120 0-12	0-16/0-160 0-1.6/0-16/0-160 0-1.6/0-8
	-20 to +10; -8 to +22 +6 to +36; +20 to +50	-12 to +11; -1 to +22 +13 to +36; +27 to +50	-12 to +45.5 db in four ranges
	0.1 mfd capacitor in series with all AC Voltage ranges through 300 Volts		0.1 mfd capacitor in series with all AC Voltage ranges through 160 Volts
R×100 0-50KΩ	R×1 0-2000Ω	R×100 0-200KΩ (12Ω center)	R×1 0-200Ω
R×100K 0-50 megΩ		R×10K 0-20 megΩ	R×10 0-20KΩ
			R×100 0-200KΩ
			R×10K 0-20 megΩ (12Ω center)
			R×100K 0-200 megΩ
±2 1/2%		±3% ±5% ±3%; DC MIC ±2% ±3° of Arc ±2 1/2° of Arc	0-1.6 to 1600 ±2%; 0-4000 ±3% 0-3 to 800 ±3% ±2% ±3° of Arc ±2 1/2° of Arc

6.2 inches  
6" x 7 1/4" x 3"  
4 lbs.

Cat. No.	Price	Cat. No.	Price	Cat. No.	Price	Cat. No.	Price
0141	\$11.95	10KVDC ... 0507	\$10.20	12KVDC ... 0510	\$10.95	16KVDC ... 0119	\$11.95
		25KVDC ... 0508	11.50	30KVDC ... 0511	10.95	40KVDC ... 0120	12.50
		50KVDC ... 0509	12.50				
		<b>MULTIPLIERS</b>		<b>MULTIPLIERS</b>		Ever-Redy Vinyl	
5262	\$ 9.95	2500VDC ... 8568	\$ 3.60	3000VDC ... 8572	\$ 3.60	Carrying Case ... 5262	\$ 9.95
		2500VAC ... 8570	3.60	3000VAC ... 8574	3.60		
		5000VDC ... 8569	3.60	6000VDC ... 8573	3.60		
		5000VAC ... 8571	3.60	6000VAC ... 0004	3.60		

**MODEL 355 MIDGETESTER®  
AC/DC Volt-Ohmmeter  
10,000 Ohms per Volt AC-DC**



Model 355 Midgetester incorporates Simpson's 100 micro-amp, self shielded core meter movement. It has built-in ruggedness and accuracy. The core magnet movement permits the midgetester to be used any place without interference from metals or strong magnetic fields.

**VOLTAGE RANGES**  
DC: 3v; 12v; 60v; 300v; 1200v.  
AC: 3v; 12v; 60v; 300v; 1200v.

**RESISTANCE RANGES**  
0-10KΩ (120Ω center); 0-100KΩ (1200Ω center); 0-1 megΩ (12KΩ center); 0-10 megΩ (120KΩ center).

**FREQUENCY RESPONSE**  
Essentially flat to 10 kc.

**ACCURACY**  
DC: ±3%; AC: ±5%; Ohms: ±3°.

Size: 2 3/4" x 4 1/2" x 1".... Net Wt.: 8 ounces  
Complete with test leads and operator's manual...\$34.95

	<b>Cat. No.</b>	<b>Price</b>
Ever-Redy Carrying Case...	6355	\$3.95
Test prods.....	8600	1.85

# Simpson

## ADD-A-TESTER ADAPTERS EXPAND SIMPSON FAMILY GROUP OF 260° VOM TEST APPLICATIONS



Before you buy any VOM consider your future test needs. Will it be a transistor tester . . . a DC VTVM . . . possibly a temperature tester . . . or maybe an AC ammeter? If so, you can use Simpson's World Famous 260, the Model 261 or high accuracy Model 270-2 VOM as the basis for these, as well as a whole "test bench" of high quality instruments. All you do is plug in

"Add-A-Tester Adapters".

As each new test need arises, you buy only an adapter; you save the cost of duplicate meters and circuitry necessary for single-purpose testers. Note: All Simpson 260 Adapters provide for normal usage without disconnecting the adapter.

Add-A-Testers cannot be used with roll top model.

ADD-A-TESTER ADAPTER DESCRIPTION	RANGES	ACCURACY
 <b>TRANSISTOR TESTER, Model 650</b> . . . \$29.95 Checks low and medium power transistors of the junction type. Checks Beta and ICO with an accuracy heretofore found only in laboratory type instruments. Test Lead . . . #7545 \$1.20	<b>Beta:</b> 0-10, 0-50, 0-250, (F.S.) <b>ICO:</b> 0-100 $\mu$ a	<b>Beta:</b> $\pm 3\%$ ; with 260 $\pm 5\%$ ; with 261 and 270 $\pm 4\%$ <b>ICO:</b> $\pm 1\%$ ; with 260 $\pm 3\%$ F.S.; with 261 and 270 $\pm 2\%$ F.S.
 <b>DC VTVM, Model 651</b> . . . \$39.95 Ideal for general VTVM applications and transistorized circuitry. (Design and servicing) High sensitivity with laboratory type DC Coverage (10 ranges) offers higher accuracy of reading. Ground Lead . . . #7547 \$1.20	<b>Voltage:</b> 0-.5/0-1.0/0-2.5/0-5.0/0-10/0-25/0-50/0-100/0-250/0-500 <b>Input Impedance:</b> Greater than 10 meg $\Omega$ all ranges	$\pm 1\%$ ; with 260 $\pm 3\%$ F.S.; with 261 and 270 $\pm 2\%$ F.S.
 <b>TEMP. TESTER, Model 652</b> . . . \$39.95 Three lead hook-up. Ideal for production and engineering spot temperature measurements, servicing of heating and refrigeration devices, and for general type measurements. Normally supplied with $^{\circ}$ F scale; can be supplied with $^{\circ}$ C scale for \$1.95 additional.	$-50^{\circ}$ F to $+100^{\circ}$ F; $+100^{\circ}$ F to $+250^{\circ}$ F Three lead positions provided <b>Sensing Element:</b> Thermistor	$\pm 2^{\circ}$ with 260, 261 and 270
 <b>AC AMMETER, Model 653</b> . . . \$19.95 Ideal for government engineering and testing, Commercial engineering and testing, Industrial applications, general servicing, electrical installations and servicing.	0-0.25/0-1/0-2.5/0-12.5/0-25 amps <b>Frequency Range:</b> 50 to 3000 cycles	$\pm 2\%$ ; with 260, 261, 270 $\pm 3\%$ F.S.
 <b>AUDIO WATTMETER, Model 654</b> . . . \$19.95 Ideal for service and installation of high fidelity and general type audio systems, telephone and intercoms and public address systems. Can also be used as a dummy load in some DC systems.	<b>Load Ranges:</b> 4, 8, 16, 600 ohms <b>Wattage:</b> Continuous 25 watts (8, 600 $\Omega$ ); 50 watts (4, 16 $\Omega$ ); Intermittent 50 watts (8, 600 $\Omega$ ), 100 Watts (4, 16 $\Omega$ )	$\pm 5\%$ ; with 260 $\pm 10\%$ ; with 261 and 270 $\pm 7\%$ Direct reading scale from 17 microwatts to 100 watts.
 <b>MICROVOLT ATTEN., Model 655</b> . . . \$19.95 Applications: Audio circuitry (choppers, low level DC systems) design and servicing; and industrial control systems.	2.5 microvolts to 250,000 microvolts continuously variable in decade steps. <b>Frequency:</b> DC to 20 KC	$\pm \frac{1}{2}$ db; with 260, 261, or 270 $\pm 1$ db
 <b>BATTERY TESTER, Model 656</b> . . . \$19.95 Checks all radio and hearing aid batteries up to 90 volts at the manufacturer's recommended load, or any external load.	Up to 90 volts	$\pm 1\%$ ; with 260 $\pm 3\%$ F.S.; with 261 or 270 $\pm 2\%$ F.S.
 <b>MILLIOHM METER, Model 657</b> . . . \$44.95 Measures resistance values as low as .001 ohm. Ideal for accurate measurements of low resistance windings in meters, generators, and transformers; accurate measurement of ammeter and milliammeter shunts; and accurate measurement of contact resistance in switches and relays.	0-.1/0-.25/0-.5/0-1 ohm	$\pm \frac{1}{2}\%$ ; with 260 $\pm 2\%$ F.S.; with 261 or 270 $\pm 1\frac{1}{2}\%$ F.S.
 <b>DC AMMETER, Model 661</b> . . . \$19.95 Multi-range, excellent accuracy of reading. Applications: automotive accessories (servicing), automotive electrical system, DC supplies, industrial (DC control systems—welding, heavy current rectifiers, etc.).	0-1/0-2.5/0-5/0-10/0-25 Amperes DC	$\pm .5\%$ ; with 260 $\pm 2\%$ F.S.; with 261 or 270 $\pm 1.5\%$ F.S.

# Simpson VACUUM TUBE VOLT-OHMMETERS



AC/DC VTVM  
Model 303 . . . \$73.95



AC/DC VTVM  
Model 311 . . . \$69.95



AC VTVM  
Model 715 . . . \$69.95

## MODEL 311

## AC/DC VTVM

Model 311 is the most advanced vacuum tube volt-ohmmeter in its field which features: High DC input impedance (22.0 megohm). This reduces circuit loading and permits measurements in high impedance circuits. Direct readout of RMS and peak to peak values. Excellent accuracy for low DC voltage measurements in transistorized circuitry.

### LINE VOLTAGE

105/125 v, 50/60 cycles.

Size: 7½" x 5⅝" x 4½" . . . Net Wt.: 5 lbs.

Model 311 with DC/AC-Ohms probe No. 0734, ground lead No. 0733 and operator's manual . . . \$69.95  
Dual Voltage Model, 220/110 v, 50/60 cycles . . . \$74.95  
High Frequency Probe . . . Cat. No. 0731 . . . \$11.50  
High Voltage Probe . . . Cat. No. 0732 . . . \$11.75

### VOLTAGE RANGES

**DC:** 0-1.5v; 5v; 15v; 50v; 150v; 500v; 1500v. (22 megΩ input impedance)  
**AC:** 0-1.5v; 5v; 15v; 50v; 150v; 500v; 1500v. (RMS) (Min. 2.2 megΩ input impedance)  
**PP:** 0-4v; 14v; 40v; 140v; 400v; 1400v; 4000v. (Min. 2.2 megΩ input impedance)  
**AF:** 0-1.5v; 5v; 15v; 50v; 150v; 500v; 1500v. (30 cycles to 100Kc ±5%)  
**RF:** 1.5v; 5v; 15v; 50v; 150v. with probe (50 cycles to 100mc, 0-150 VRMS)

### RESISTANCE RANGES

1KΩ (10Ω center); 10KΩ (100Ω center); 100KΩ (1KΩ center); 1 megΩ (10KΩ center); 10 megΩ (100KΩ center); 100 megΩ (1 megΩ center); 1000 megΩ (10 megΩ center).

### FREQUENCY RESPONSE

±5% to 100 kc (with RF probe, usable to 250 mc)

### ACCURACY

**DC VOLTS:**  
±3% of full scale.  
**AC VOLTS:**  
±5% of full scale.  
**DC RESISTANCE:**  
±3° of linear arc.

## MODEL 303

## AC/DC VTVM

Model 303 is a worthy companion to the World Famous 260 volt-ohm-milliammeter. Model 303, a ruggedly built instrument with high accuracy, features low current consumption, wide voltage and resistance ranges, and a large, easy-to-read 4½ inch scale.

### LINE VOLTAGE

105/125 v, 50/60 cycles.

Size: 7" x 5¼" x 3⅞" . . . Net Wt.: 4 lbs.

Model 303 with DCV probe No. 0067, ACV-ohm probe No. 0068, ground lead No. 0069 and operator's manual . . . \$73.95  
Model 303RT (in roll top safety case) . . . \$82.95  
Part No. 0073 . . . R.F. Probe . . . \$ 8.75  
Dual Voltage Model 303, 220/110 volts, 50/60 cycles . . . \$78.95  
Dual Voltage Model 303RT, 220/110 volts, 50/60 cycles . . . \$87.95

### VOLTAGE RANGES

**AC-DC:** 1.2v; 12v; 60v; 300v; 1200v.  
**AF:** 1.2v; 12v; 60v.  
**RF:** 20 volts maximum. (With RF Probe)  
**DB:** -20 to +63 db in five ranges.

### RESISTANCE RANGES

1KΩ (10Ω center); 100KΩ (1000Ω center); 1 megΩ (10KΩ center); 10 megΩ (100KΩ center); 1000 megΩ (10 megΩ center).

### INPUT IMPEDANCE

10 megohms (all ranges) on DCV; 275K ohms shunted by 210 uuf on ACV.

### FREQUENCY RESPONSE

**AF:** Flat to 100 Kc on the three low AC ranges  
**RF:** 20 Kc to 100 Mc (with RF probe)

**DC VOLTS:**  
±3% of full scale.  
**AC VOLTS:**  
±5% of full scale.  
**DC RESISTANCE:**  
±3° of linear arc.

## MODEL 715

## AC VTVM

High input impedance, multi-voltage ranges and wide frequency response offers a greater versatility for general purpose applications. Ideal for hi-fi and general low level audio work such as hum and ripple measurements, IF gain and vibration analyzing. Model 715 features a specially designed meter scale that provides DB markings on both the voltage range positions and the meter scale.

### INPUT POWER REQUIREMENTS:

110 to 125 VRMS, 50/60 cps @ 10 watts

SIZE: 7½" W, 5½" H, 3" D

NET WEIGHT: 3 lbs. 12 oz.

Complete with operator's manual and shielded input cable . . . \$69.95

**Volts:** 0-.01/.03/.1/3/1/3/10/30/100/300 rms

**Decibels:** Total Range -52 to +52 DBM

**Zero DBM:** 1 milliwatt in 600 ohms

**Scale Markings:** -12 to +2 DB

**TESTER SENSITIVITY:** 10 millivolts full scale on lowest range

**INPUT IMPEDANCE:** Minimum 1 meg @ 1 KC shunted by 25 uuf

**INTERNAL MULTIPLIERS:**

±1% precision resistors

**FREQUENCY RESPONSE:**

10 cps to 400 KC ±1 DB

±5% of full scale.

# Simpson TEMPERATURE MEASURING INSTRUMENTS



**Model 385-3L**...\$35.95  
For Three Probes



**Model 388**...\$62.95  
For One Probe

**Model 388-3L**...\$67.95  
For Three Probes



**Model 389-3L**...\$62.95  
For Three Probes



**Model 387**...\$29.95  
Appliance Tester

## MODEL 385-3L TEMPERATURE METER

Model 385-3L is ideal for those fast, accurate temperature checks from  $-50^{\circ}\text{F}$  to  $+70^{\circ}\text{F}$ . Light weight, portable, fits easily in your hand. Three lead model. Takes temperature readings in three different locations with a simple flick of the selector knob. Standard Model has Fahrenheit scale. Supplied with one No. 0010, 15 ft. thermistor lead and operator's manual.

**Size:** 3" x 5 $\frac{1}{8}$ " x 2 $\frac{1}{2}$ ". **Weight:** 1 $\frac{1}{2}$  lbs. \$35.95

## MODELS 388, 388-3L THERM-O-METER®

Simpson's popular wide range Therm-O-Meter tester measures the temperature of practically anything within  $-50^{\circ}\text{F}$  to  $+1000^{\circ}\text{F}$ . Standard models have combination  $^{\circ}\text{C}$  and  $^{\circ}\text{F}$  scale. Sensing Element: Thermocouple (Iron-Constantan). Two models, each supplied with internal battery and one 8' general purpose probe No. 0190 and operator's manual. Order additional probes as required.

**Size:** 7-15/16" x 6" x 2-15/16" **Weight:** 4 lbs.

**Model 388** for one probe...\$62.95

**Model 388-3L** for three probes...\$67.95

## MODEL 389-3L

### DUAL RANGE THERM-O-METER®

Model 389-3L temperature tester, using three leads, makes temperature readings in three different locations at the same time; i.e., in a refrigerator, one lead could be connected to the evaporator plate, another to the wall of the food compartment and the third in the center of the food compartment. Readings are made quickly in 15 to 30 seconds depending on the medium being checked. Supplied with  $^{\circ}\text{C}$  and  $^{\circ}\text{F}$  scale.

Supplied with one general purpose thermistor lead No. 0010 and operator's manual. Order additional leads as required.

**Size:** 7-15/16" x 6" x 2-15/16". **Weight:** 4 lbs. \$62.95

## APPLIANCE TESTER

### MODEL 387 MILLIVOLTMETER

Make gas unit servicing faster, more accurate. Use Simpson's Millivoltmeter. Simply place the probe across the thermocouple terminals and test for the correct value. Checks Safety Thermocouples on Gas-Fired Units.

- Furnaces
- Hot Water Heaters
- Boilers
- Dryers
- Heaters
- Refrigerators

**Size:** 3" x 5 $\frac{1}{8}$ " x 2 $\frac{1}{2}$ ". **Weight:** 1 $\frac{1}{2}$  lbs. \$29.95

## PROBES, LEADS AND CARRYING CASES

Description	Cat. No.	Price
Surface Temperature Probe	0790	\$ 5.95
Free Air Temperature Probe	0789	7.45
Additional Thermistor Lead	0010	5.50
30 Ft. Thermistor Lead	0216	6.45
50 Ft. Thermistor Lead	0415	7.60
100 Ft. Thermistor Lead	0416	10.40
150 Ft. Thermistor Lead	0417	12.90
Ever-Redy Leather Carrying Case	8073	8.75

## RANGE & ACCURACY

$-50^{\circ}\text{F}$ . to  $+70^{\circ}\text{F}$ .  
 $\pm 1^{\circ}\text{F}$ . @ Center Scale  
 $\pm 2^{\circ}\text{F}$ . @ Either End

General Purpose Type	0190	\$ 4.95
Surface Temperature Probe Type (1000° F. Max.)	0187	8.90
Rugged Service Lead (8 ft.)	0496	5.25
Ever-Redy Vinyl Carrying Case	5262	9.95

$-50^{\circ}\text{F}$ . to  $+1000^{\circ}\text{F}$ .  
 $\pm 1\frac{1}{2}$  Scale Divisions

Surface Temperature Probe	0790	\$ 5.95
Free Air Temperature Probe	0789	7.45
Additional Thermistor Lead	0010	5.50
30 Ft. Thermistor Lead	0216	6.45
50 Ft. Thermistor Lead	0415	7.60
100 Ft. Thermistor Lead	0416	10.40
150 Ft. Thermistor Lead	0417	12.90
Ever-Redy Vinyl Carrying Case	5262	9.95

$-50^{\circ}\text{F}$ . to  $+100^{\circ}\text{F}$ .  
 $+100^{\circ}\text{F}$ . to  $+250^{\circ}\text{F}$ .  
Within  $\pm 2^{\circ}\text{F}$ .

Test Prods and Spade Terminals	8379	\$ 2.50
Alligator Clips and Spade Terminals	8376	1.75
Ever-Redy Vinyl Carrying Case	8073	8.75

0-10, 0-30, 0-100,  
0-300, 0-1000 Millivolts  
 $\pm 3\%$  of Full Scale

# Simpson GENERAL PURPOSE MICRO-TESTERS\*...GET IMMEDIATE



Model 230  
Net \$33.95

Model 240  
Net \$34.95

Model 362  
Net \$26.95

Model 370  
Net \$24.95

Model 371  
Net \$24.95

Model 372  
Net \$29.95

Model 373  
Net \$23.95

Model 374  
Net \$26.95

Model 374  
Net \$26.95

## MODEL 230—AC/DC Volt-Ohm-Milliammeter

Simpson's Model 230 is one of the smallest AC and DC service instruments on the market, yet it contains a sufficient number of ranges to enable the experienced technician to do a complete servicing job. Specifically designed for telephone, teletype and marine use. Also excellent trouble shooter for industrial maintenance departments. The entire case, including the front panel, is molded of black phenolic for complete protection against high voltages.

1,000 Ohms per Volt DC

400 Ohms per Volt AC

### VOLTAGE RANGES

DC: 10v; 50v; 250v; 1,000v.

AC: 10v; 250v; 1,000v.

### CURRENT RANGES

DC: 10ma; 50ma; 250ma.

### RESISTANCE RANGES

0-1,000Ω, 0-100KΩ

**ACCURACIES:** DC volts ±3% F.S.; AC volts ±5% F.S.; DC resistance ±3° of linear arc from absolute value of resistance measured.

**\$33.95**

## MODEL 371—AC Voltmeter

Designed primarily for testing line voltages applied to motors, heating equipment and many other industrial applications.

**RANGES:** 0-150, 0-300, 0-600 volts.

**ACCURACY:** ±3% of full scale.

**\$24.95**

## MODEL 376—AC Voltmeter

Rectifier type, 1000 ohms per volt. Useful in circuits where a limited amount of current is present. Makes an excellent output meter when used with the proper condenser.

**RANGES:** 0-5, 10, 25, 50, 100, 250, 500, 1000 AC volts.

**ACCURACY:** ±5% of full scale.

**\$23.95**

## MODEL 377—DC Voltmeter

Resistance, 1000 ohms per volt. Useful in radio servicing and industrial applications.

**RANGES:** 0-1, 2.5, 5, 10, 25, 50, 100, 250, 500, 1000 DC volts.

**ACCURACY:** ±3% of full scale.

**\$24.95**

## MODEL 240—AC/DC Volt-Ohm-Milliammeter

Popularly called the "Hammer", this multipurpose instrument was specially designed for general application around the laboratory, class room, ham shack and other similar applications.

With the maximum voltage ranges of 3000 volts AC or DC it was the first self contained pocket instrument built expressly to check high voltage on all the component parts of transmitters and receivers.

1,000 Ohms per Volt AC-DC

### VOLTAGE RANGES

DC: 15v; 75v; 300v; 750v; 3,000v.

AC: 15v; 150v; 750v; 3,000v.

### CURRENT RANGES

DC: 15ma; 150ma; 750ma.

### RESISTANCE RANGES

0-3,000Ω (30Ω center); 0-300KΩ (3KΩ center).

**ACCURACIES:** DC volts ±3% F.S.; AC volts ±5% F.S.; DC resistance ±3° of linear arc from absolute value of resistance measured.

Complete with test leads and operator's manual. . . . . **\$34.95**

## MODEL 362—Low-Ohmmeter

**RESISTANCE RANGES:** 0-5Ω, 0-25Ω

The two ranges of the Low-Ohmmeter permit highly accurate readings between 0.1 and 25 ohms. Ideal for checking motor armatures and fields; switch and relay contact resistances; shorts between generator windings and grounds; shorts in TV and radio chassis wiring; electrical equipment in industrial plants; plus many other uses. Accuracy is within ±3° of linear arc from absolute value of resistance measured.

Complete with calibrated test leads . . . . . **\$26.95**

## MODEL 372—Ohmmeter

Provides a wide range of resistance measurements in a small package. .2 ohm to 500 megohms. Ideal for use in schools, on test benches or at incoming inspection facilities.

**RANGES:** 0-500, 0-5,000, 0-50,000, 0-500,000 ohms; 0-5, 0-50 megohms.

**CENTER SCALE:** 5, 50, 500, 5,000, 50,000, 500,000 ohms.

**ACCURACY:** ±3° of linear arc length.

Complete with test leads and operator's manual. . . . . **\$29.95**

\* SIZE: 3"x 5 1/4" x 2 1/4". . . Net Weight 1 1/2 lbs.

Ever-Ready Carrying Case, Part No. 4299 . . \$7.50—for all Micro Testers except Models 391 & 392.  
Models 391 & 392 Carrying Case, Part No. 3413 . . \$5.95.

# DIATE DELIVERY FROM YOUR ELECTRONIC DISTRIBUTOR



Model 374 Net \$26.95    Model 375 Net \$23.95    Model 376 Net \$23.95    Model 377 Net \$24.95    Model 378 Net \$26.95    Model 379 Net \$29.95    Model 390 Net \$54.95    Model 391 Net \$47.95    Model 392 Net \$49.95

### MODEL 375—DC Ammeter

Provides a complete range from a fraction of an amp to 25 amps without the necessity of using auxiliary external shunts. Ideal unit for use with unmetereed power supplies generally present in radio and TV shops.

**RANGES:** 0-1, 2.5, 5, 10, 25 amperes.  
**ACCURACY:**  $\pm 3\%$  of full scale. **\$23.95**

### MODEL 370—AC Ammeter

Ideal for checking small motors, line loads and other applications where AC current measurements are required. 60 cycle application. Self contained current transformer.

**RANGES:** 0-1, 0-2.5, 0-5, 0-10, 0-25 amperes.  
**ACCURACY:**  $\pm 5\%$  of full scale. **\$24.95**

### MODEL 373—DC Milliammeter

General purpose tester. Valuable in a number of applications such as plate and screen grid measurements on vacuum tubes. Provides for DC grid current measurements from .02 to 1000 ma.

**RANGES:** 0-1, 5, 10, 25, 50, 100, 250, 0-1,000 ma.  
**ACCURACY:**  $\pm 3\%$  of full scale. **\$23.95**

### MODEL 378—AC Milliammeter

Five separate ranges make it suitable for a wide variety of testing applications. Typical industrial applications are transformer tests or vacuum tube inspection. Contains a current transformer and an indicating instrument in one case.

**RANGES:** 0-5, 25, 100, 250, 1,000 ma.  
**ACCURACY:**  $\pm 5\%$  of full scale. **\$26.95**

### MODEL 379—Battery Tester

Provides accurate indications of the condition of all standard flashlight, hearing aid (mercury cells), transistor and portable radio batteries.

**RANGES:** 0-1.5, 4.5, 6.0, 7.5, 9.0, 15.0, 22.5, 30.0, 45.0, 67.5, 90.0 V  
 Complete with test leads and operator's manual. **\$29.95**

### MODEL 374—DC Microammeter

Basic movement sensitivity 50 microamperes with self contained shunts for all other ranges. This tester can be used with external resistors or multipliers as a high sensitivity voltmeter at 20,000 ohms per volt. Can be shunted out of circuit by use of selector knob.

**RANGES:** 0-50, 100, 250, 500, 1000 microamperes.  
**ACCURACY:**  $\pm 3\%$  of full scale.  
 Net..... **\$26.95**

### MODEL 390—AC Volt-Amp-Wattmeter

The most popular tester in the field for measuring AC/DC volts, AC amps, and AC watts with one meter. Ruggedly built... useful in servicing practically any appliance because of wide coverage offered with four wattage ranges.

**Volts:** 0-150, 300.  
**Amps:** 0-3, 15.  
**Watts:** 0-300, 600, 1,500, 3,000.  
**ACCURACY:**  $\pm 5\%$  or better of full scale.  
 Complete with break-in plug and lead assembly, and operator's manual. **\$54.95**

### MODEL 391—AC-DC Volt-Wattmeters

Simultaneous readings of volts and watts. Has two separate 3" square meters, built-in cord and plug for connection to the line outlet... and separate toggle switches for range selection.

**3,000 Watts Maximum AC or DC Range**  
**Volts:** 0-130, 0-260  
**Watts:** 0-1,500, 0-3,000  
**ACCURACY:**  $\pm 5\%$  or better of full scale.  
 Supplied with cord, plug, and operator's manual. **\$47.95**  
**Leatherette Carrying Case... Part No. 3413... \$5.95**

### MODEL 392—AC-DC Volt-Wattmeters

Simultaneous readings of volts and watts. Has two separate 3" square meters, built-in cord and plug for connection to the line outlet... and separate toggle switches for range selection.

**5,000 Watts Maximum AC or DC Range**  
**Volts:** 0-130, 0-260  
**Watts:** 0-1,000, 0-5,000  
**ACCURACY:**  $\pm 5\%$  or better of full scale.  
 Supplied with cord, plug, and operator's manual. **\$49.95**  
**Leatherette Carrying Case... Part No. 3413... \$5.95**

# Simpson INDUSTRIAL • RADIO AND TV TEST EQUIPMENT

AVA

## MODEL 430 COLOR BAR GENERATOR†



Hinged Door for quick access and maintenance.

Size: 19 1/4" x 17 1/2" x 14" . . . Shpg. Wt. 26 lbs.  
Complete with operator's manual and test leads. . . . . **\$395.00**  
†Usable only on TV sets receiving transmission on U. S. Standards.

- 100% Saturated NTSC Signals
- Outputs pictured on a single, master control . . . a color print of the signal output is featured at each position on the master control
- Exceptionally wide range of outputs . . . includes G-Y at 90°
- Line Voltage 105/125 volts, 60 cycle only.

**Outputs**—Y; chroma; color bar (8 bars simultaneously); R-Y; B-Y; R-Y and B-Y simultaneously; I; Q; I and Q simultaneously; G-Y at 90°; sync and burst; horizontal sync; high level 3.58 megacycle output; high level modulated rf output; positive or negative video output. 4.5 Megacycle (crystal controlled) marker for proper tuning.

**Chroma Level Switch**—0 db for checking older style receivers and some current models; -6 db for video checks of newer receivers using vestigial color sideband alignment; -15 db for checking color sync lock under weak signal conditions. Variable chroma control position for other chroma levels.

**Color Bar Display Pattern**—Left to right; red, yellow, green, cyan, white, magenta, blue, black.

## MODEL 383A CAPACOHMETER



Line Voltage: 105/125v, 60 cycles only.  
Shipping Weight 12 lbs.

Complete with test leads and operator's manual. . . . . **\$99.95**

### World's First IN-CIRCUIT Capacitor Leakage Tester

#### "ONE PACKAGE FLEXIBILITY"

- Measures the leakage resistance of defective paper, mica, or ceramic capacitors
- Indicates directly the capacitance of good paper, mica, or ceramic capacitors over a range of 10.0 mmf to 10.0 mf

A pulse technique detects many marginal capacitors. All measurements are made under load conditions. No adjusting of a bridge circuit and balancing controls. Borderline capacitors which cause costly "call backs" are detected immediately with the pulse test.

## MODEL 2620 PULSE GENERATOR



Line Voltage:  
110v, 50/60 cycles.

Size: 15 1/2" x 13 1/4" x 21"  
Net Wt.: 66 lbs.

Detachable line cord and operator's manual are supplied with the equipment.

Price . . . . . **\$625**

### No Other Unit Offers Such Accuracy, Versatility, and Set-Up Speed Within This Price Range

Twin meters read pulse repetition frequency and pulse duration simultaneously. Rise time is 0.02 microsecond; decay time, 0.04 microsecond. Pulse duration, continuously variable from 0.1 to 1000 microseconds. Jitter, less than 0.005 microsecond. Pulse repetition rate, continuously variable from 10 to 100,000 pps in four ranges.

**WRITE FOR ADDITIONAL SPECIFICATIONS**

# AVAILABLE FROM STOCK AT YOUR ELECTRONIC DISTRIBUTOR

## MODEL 466

## HANDISCOPE WITH 5" SCREEN

### AC operated portable oscilloscope • Ruggedly constructed

Ideal for general purpose applications in radio and TV servicing and for industrial use. The Handiscope contains horizontal push-pull amplification for the X axis, vertical push-pull amplification for the Y axis, and an intensity modulation input for the Z axis. Horizontal deflection may be obtained from either the internal sweep circuits or from an external signal voltage.



**Size:** 7 $\frac{1}{4}$ " x 12 $\frac{1}{4}$ " x 16 $\frac{1}{4}$ "  
**Net Weight:** 19 lbs.

For use on 110 volts, 50/60 cps.

Complete with input cable  
No. 0100 and  
operator's manual **\$149.95**

Dual Voltage model  
for 220/110 volts,  
50/60 cycle . . . . . **\$159.95**

**Frequency Response of Vertical Amplifier:** From 15 cycles/sec to 100 Kc/sec, flat within  $\pm 1$  db; 6 db down at 250 Kc/sec; usable to 1 Mc/sec.

**Maximum Vertical Deflection Sensitivity:** 30 Millivolts RMS/inch.

**Frequency Response of Horizontal Amplifier:** From 15 cycles/sec to 20 Kc, flat within  $\pm 1$  db; 6 db down at 100 Kc/sec.

**Maximum Horizontal Deflection Sensitivity:** 0.7 volt RMS/inch.  
**Z-Axis Sensitivity (Voltage Required to Extinguish Beam):** 20 volts RMS.

**Calibrating Voltage** (at 117.5 VAC power source): 1 volt P-P  $\pm 10\%$ .

**Maximum Input Voltage:** 400 volts peak.

**Input Resistance:** 0.1 Meg (at atten. x 1); 0.5 Meg (at atten. x 100).

**Input Capacitance:** 40 uuf (at atten. x 1); 35 uuf (at atten. x 100).

**Sawtooth Sweep Range:** 15 cycles/sec to 80 Kc/sec.

**Power Consumption** (at 117.5 volts AC): 50 watts  $\pm 10\%$ .

## MODEL 458

## 7" COLORSCOPE



**Line Voltage:** 105/125v,  
50/60 cycle.

**Size:** 11" x 16 $\frac{1}{2}$ " x 14 $\frac{1}{2}$ "

**Weight:** 29 lbs., Shpg. Wt. 38 lbs.

Complete with  
operator's manual . . . . **\$249.95**

**Accessory probes:** See Model 739  
in accessory section on back cover.

**Dual Voltage:** 220/110 volts,  
50/60 cps.

Complete with  
operator's manual . . . . **\$259.95**

### features:

- 7" Cathode Ray Tube.
- Wide band operation, the frequency response is flat within  $\pm 1.0$  db to 4.5 Mc. Faithfully displays COLOR BURST frequency with a sensitivity greater than 40 Mv rms per inch of vertical deflection.
- Narrow band operation, the frequency response is flat within  $\pm 2$  db from 10 cycles to 300 Kc with a sensitivity greater than 15 Mv rms per inch.
- Good square wave response provides accurate representation of sync pulses and composite wave-form pattern for trouble-shooting video, sync, and sweep circuits.
- Horizontal sweep, to 250 Kc, for expansion of high frequency wave-form detail and color burst.
- Vernier and Compensated Decimal Step Attenuator for better signal controls.
- Provision for Intensity Modulation of CRT.
- 1 volt peak to peak calibrating voltage.

## MODEL 2610

## WIDE BAND OSCILLOSCOPE



**Accessories:** A 10:1 probe, green filter, Graticule, detachable line cord, and instruction manual are provided as standard accessories and shipped with each unit.

**Size:** 15" x 11 $\frac{1}{2}$ " x 20 $\frac{1}{2}$ "  
Net Wt. 53 lbs.

**Power Requirements:** Approx.  
200 watts @ 117.5v., 50/60 cps.

**\$575**

### For the 1001 Jobs Where You Don't Need an Expensive Specialized Scope

Here's a high-gain scope that makes your test equipment appropriation go farther. Vertical sensitivity, 6 mv RMS/in. Vertical calibration accuracy,  $\pm 3\%$ . Response (linear position): DC to 5.0 mc/sec,  $\pm 0.5$  db; DC to 8.0 mc/sec,  $\pm 1.5$  db. Response (transient position): DC to 3.5 mc/sec,  $-3$  db; and  $-6$  db at 5.0 mc/sec. Triggered and recurrent sweeps. Precalibrated triggered sweep positions of 5, 50, 500, 5000 microseconds.

Low Capacity Probe Cat. No. 0299. . . . . **\$17.55**

**WRITE FOR ADDITIONAL SPECIFICATIONS**

WORLD'S LARGEST MANUFACTURER OF ELECTRONIC TEST EQUIPMENT

SIMPSON ELECTRIC COMPANY 11

## MULTI-RANGE SECONDARY STANDARDS

### SIMPSON INSTRUMENTS THAT STAY ACCURATE

DC VOLTMETERS • DC AMMETERS • DC MILLIAMMETERS  
DC MICROAMMETERS • DC MILLIVOLTMETERS

Accuracy:  $\pm \frac{1}{2}$  of 1% of Full Scale

DC VOLTMETER  
Model 1700

DC MILLIAMMETER  
Model 1702

DC MICROAMMETER  
Model 1703

DC MILLIVOLTMETER  
Model 1704



DC AMMETER  
Model 1701

Ever-Redy Leather  
Carrying Case (Only)  
Part No. 9808 ... \$18.90

Simpson introduces a new line of laboratory standards for general industrial laboratory testing, plant incoming inspection, production line applications and for high school and college laboratories.

These standards feature Simpson's self-shielded deep core construction with spring mounted sapphire jewels and hardened steel pivots. This ensures the high degree of accuracy built into each standard. The combination of the self shielded

core magnet meter movement and the steel case make these instruments impervious to the effects of external fields.

The meter is temperature compensated from 15° C. to 35° C. Hand stepped, hand drawn, white enameled dial with mirror segment assures greater accuracy over the entire scale arc. Tubular aluminum knife-edge pointer (painted black on top side only) improves readability, eliminates parallax.

SPECIFICATIONS	DC VOLTMETER MODEL 1700	DC AMMETER MODEL 1701	DC MILLI- AMMETER MODEL 1702	DC MICRO- AMMETER MODEL 1703	DC MILLI- VOLTMETER MODEL 1704
RANGES	0-1.5, 3, 7.5, 15, 30, 75, 150, 300, 750, 1500	0-0.75, 1.5, 3.0, 7.5, 15, 30, 75	0-1.5, 3, 7.5, 15, 30, 75, 150, 300, 750, 1500	0-75, 150, 300, 750, 1500	0-30, 75, 150, 300, 750, 1500
ACCURACY	$\frac{1}{2}$ of 1% of Full Scale in Horizontal Position @ 25° C.				
LOSS (Max.)	1 milliampere	45 mv (approx.)	50 to 150 mv	.160—.578 Volt	5 ma
EXT. TEMP. INFLUENCE	$\frac{1}{4}$ of 1%				
DIELECTRIC TEST	3000 V. RMS		3300 V. RMS		
MIRROR SCALE LENGTH	5.5"				
DAMPING	Magnetic				
METER MOVEMENT	Deep Core Magnet Meter Movement (1-5/16")				
SENSITIVITY	1000 $\Omega$ /V	—	—	—	200 $\Omega$ /V
RANGE SWITCH	Rotary, Ceramic, Solid Silver Contacts				
POINTER	Knife-Edge Tubular Aluminum				
PANEL	Etched Aluminum				
ZERO ADJUSTER	External				
CASE	Steel				
SIZE	11 $\frac{1}{4}$ " x 7 $\frac{1}{4}$ " x 3 $\frac{1}{4}$ "				
WEIGHT (Net)	5 lbs, 10 oz.	8 lbs	—	—	5 lbs, 10 oz.
LEADS	—	—	—	—	.026 ohm
NET PRICE	\$160.00	\$155.00	\$135.00	\$140.00	\$150.00
CARRYING CASE	Ever-Redy Leather—Part No. 9808—\$18.90				

Made to Conform to ASA C 39.1—1959

## NEW DECADING VOLTMETERS

Simpson's New Laboratory Type wide range Decading Voltmeters feature a voltage range of 1.00 volt through 1000.99 volts with an accuracy of  $\pm 0.1\%$  of reading. Model 1900 is for DC. Model 1901 is AC/DC. Both of these decading voltmeters are ideal for general purpose laboratory and field applications. They are designed for high accuracy . . . stable operation and have excellent portability. Completely self powered, self calibrating, compact and lightweight . . . it goes where you go . . . with the accuracy of a "stay-at-home" standard laboratory instrument.

1.00-1000 Volts • Self Powered • Self Calibrating  
Accuracy:  $\pm 1/10\%$  of Reading

SPECIFICATIONS	Model 1900	Model 1901
VOLTAGE RANGE	1.00 Volt through 1000.99 Volts in 0.01 Volt steps	
SENSITIVITY	1000 ohms/volt	100 ohms/volt
ACCURACY	$\pm 0.1\%$ of reading @ 25° C. $\pm 0.25\%$ of reading from 15° C. to 35° C.	$\pm 0.1\%$ of reading @ 25° C. over complete frequency range. $\pm 0.25\%$ of reading from 20° C. to 30° C. over complete frequency range.
FREQUENCY	DC only	DC and AC from 20 cps to 20,000 cps
SENSING ELEMENT	Expanded scale D'Arsonval movement	Over voltage protected thermo- couple. True RMS readings.
EXTERNAL POWER REQUIREMENTS	None	
INTERNAL POWER REQUIREMENTS	One 45 Volt Eveready battery No. 482 or equivalent. (Used for the calibration circuit only.)	
BATTERY LIFE	Based on two calibrations per day. One Year (approximate).	
SIZE	17" x 9" x 6"	
NET WEIGHT	16 lbs.	
NET PRICE	\$345.00	\$645.00

# SINGLE AND MULTI-RANGE SECONDARY STANDARDS

SIMPSON—WORLD'S LARGEST TEST EQUIPMENT MANUFACTURER  
 DC-AC VOLTMETERS • DC-AC AMMETERS • DC-AC MILLIAMMETERS  
 DC MICROAMMETERS • WATTMETERS

**ACCURACIES:**

± 1/2 of 1% of full scale @ 77° F., Model 9  
 ± 1% of full scale @ 77° F., Models 10, 880

**METER MOVEMENTS:**

D'Arsonval.....DC Model 9  
 Iron Vane.....AC Model 10  
 Dynamometer.....AC/DC Model 880

Hand Drawn Mirrored Scale • Knife-edge Pointer



MODEL 9



MODEL 10



MODEL 880

Simpson Models 9, 10, and 880, AC and DC precision portable instruments, are offered in a wide selection of ranges to meet practically every demand for general purpose testing. Ruggedly constructed, these instruments insure accuracy

within 1/2 of 1% on DC meters and within 1% on AC meters. Large, easy-to-read hand drawn scale. Self shielded. Molded black phenolic case with Simpson's exclusive Adjust-A-Vue handle.

**MULTI-RANGE SECONDARY STANDARDS**

SINGLE RANGE			MULTIPLE RANGE		
Range	DC Model 9	AC Model 10	Range	DC Model 9	AC Model 10
<b>VOLTMETERS</b>			<b>VOLTMETERS</b>		
50	49.50	43.95	15-150	55.00	—
100	49.50	43.95	150-300	60.45	55.00
150	49.50	43.95	300-750	66.00	60.45
300	55.00	49.50	15-150-300	63.75	—
			150-300-600	66.00	60.45
<b>MILLIAMMETERS</b>			<b>MILLIAMMETERS</b>		
1	57.15	—	10-100	55.00	—
50	49.50	43.95	25-250	55.00	—
100	49.50	43.95	100-500	55.00	—
500	49.50	43.95	—	—	—
<b>AMMETERS</b>			<b>AMMETERS</b>		
5	49.50	43.95	2.5-5	55.00	—
15	49.50	43.95	5-10	55.00	—
30	49.50	43.95	2.5-10-25	60.45	—
50	49.50	43.95	10-25-50	60.45	—
100	52.50	—	—	—	—
<b>MICROAMMETERS</b>			<b>MICROAMMETERS</b>		
50	71.55	—	—	—	—
100	67.00	—	—	—	—
200	64.95	—	—	—	—

**WATTMETERS, SINGLE PHASE—Maximum Volts 150-300**

Amperes		Watts Range		Price
Normal	Maximum	Low	High	
1	1.5	100	200	\$60.45
2	3.0	200	400	60.45
5	7.5	500	1000	60.45
10	15.	1000	2000	60.45
20	30.	2000	4000	66.00
50	75.	5000	10000	66.00

**WATTMETERS, DOUBLE CURRENT RANGE**

Maximum Volts 150-300			
2.5- 5	3.75- 7.5	250- 500-1000	76.95
5-10	7.5 -15.0	500-1000-2000	76.95

**VOLTMETERS—Single and Multiple Ranges**

Maximum Volts	Price
0-150	\$60.45
0-150-300	71.55
0-75-150-300	76.95
0-150-300-600	76.95

All portable instruments above can be furnished in the Simpson Roll Top Safety Case at an additional cost of \$8.00.



Model 1900  
\$345.00



Model 1901  
\$645.00

**IN STOCK NOW!!!**

**TRUE RMS**

**SIMPSON ELECTRIC CO. 13**



MODEL 880

on AC meters.  
dled. Molded  
Adjust-A-View

Volts 150-300

Price
\$60.45
60.45
60.45
66.00
66.00

76.95  
76.95

Price
60.45
71.55
76.95
76.95

of \$8.00.

!!



Model 1901  
\$645.00

## MILLIOHMETER Model 1699

MULTI-RANGE PRECISION MILLIOHMETER  
ACCURACY:  $\pm 1\%$  of Full Scale

### FEATURES

1. Large 7" meter with mirrored scale and knife-edge pointer.
2. Easy readability. Single arc, 90° dial with 100 divisions.

Ideal for laboratory use to supplement other high precision, low resistance measuring test instruments. Accurately measures low resistance values from .001 ohm to 50 ohms.

<b>RANGES</b>	0-.05/.1/.25/.50/1/5/10/50 ohms
<b>ACCURACY</b>	$\pm 1\%$ of full scale
<b>TEST LEADS</b>	Coaxial cable terminated in Kelvin clips.
<b>POWER</b>	Battery operated.
<b>CONTROLS</b>	Function switch, Range switch, Zero adjust, Full Scale adjust.
<b>SIZE</b>	11 1/8" x 7 3/8" x 3 1/4"
<b>NET WEIGHT</b>	5 lbs., 10 oz.
<b>NET PRICE</b>	..... \$150.00

## SELF POWERED CALIBRATOR Model 2600

The model 2600 is a multi-range, self-powered calibrator designed primarily for the calibration and test of electrical instruments. Semi-portable, model 2600 is a laboratory standard which can set-up and indicate certain parameters. In particular, it will produce and meter accurate values of DC voltage and current and AC voltage over a wide range. The model 2600 with exceptional reliability is the instrument used on our Simpson production lines to check and calibrate the "World Famous" Simpson 260.

<b>DC RANGES</b>	
<b>Volts:</b>	0-1.6/4/8/16/40/80/160/400/800/1600
<b>Microamperes:</b>	0-1.6/4/8/16/40/80/160/400/800/1600
<b>Milliamperes:</b>	0-1.6/4/8/16/40/80/160/400/800/1600
<b>Amperes:</b>	0-16
<b>AC RANGES</b>	
<b>Volts:</b>	0-1.6/4/8/16/40/80/160/400/800/1600
<b>RESISTANCE</b>	
<b>Fixed Values:</b>	1, 10, 100, 1000, 10,000, 100,000 ohms; 1, 10, and 100 megohms
<b>ACCURACIES</b>	
<b>DC:</b>	$\pm 0.5\%$ of full scale (@ 77° F.) Calibration data supplied
<b>AC:</b>	$\pm 0.75\%$ of full scale (@ 77° F.) for operation from 45° F. to 105° F.
<b>Fixed Resistance Values:</b> $\pm 1\%$ accuracy for all values through 10 megohms. $\pm 2\%$ accuracy for the 100 megohm resistor.	
<b>AC, DC METERS</b>	
<b>Movement:</b> Deep core, temperature compensated.	
<b>Scale:</b>	Mirrored, 5.9 inches long, hand stepped at 160 points.
<b>Arc:</b>	0-400/800/1600 full scale.
<b>POWER REQUIREMENTS</b>	
Approximately 50 watts @ 117.5 volts, 60 cps (150 watts on the 16 amp DC range).	



Complete with operator's manual and test leads..... \$150.00

Ideal for Electrical Instrument Maintenance  
and High Accuracy Testing



**Size:** 15" x 31" x 15"    **Power Requirement:** Approx. 50 watts  
**Net Wt:** 132 lbs.    @ 117.5 volts 50/60 cps.  
**Export:** Same as above, but requires an external power transformer for 220 volt operation.  
**NET PRICE**..... \$1620.00

### FEATURES:

- Nine values of accurate ohmic resistance.
- Spring backed jewels are incorporated in the core meter movement. This eliminates damage to the meter pivots which may result from shock or vibration.
- Two very rugged, seven inch, core type panel instruments. One for AC and one for DC. Both instruments have mirrored, easy-to-read scales with an arc length of 5.9 inches.
- Fast operation: Two terminal connections cover all 49 ranges.
- Easy readings: The front panel slopes @ 30° with respect to the vertical plane.

# ACCESSORIES

## CARRYING CASES • TEST LEADS



Ever-Redy Carrying Case  
No. 4236...\$9.75



Ever-Redy Carrying Case  
No. 5262...\$9.95



Ever-Redy Carrying Case  
No. 9808...\$18.90



Roll Top Safety Case  
\$9.95



Microtester Ever-Redy  
Carrying Case  
No. 4299...\$7.50



Leatherette Covered  
No. 3413...\$5.95

### CARRYING CASES

... Saves you time and protects your instruments. Instruments are always ready for instant testing.

For Models	Cat. No.	Price
260, 261, 270—Leather	1818	\$8.50
260, 261, 270, 303—Ever-Redy Leather	4236	9.75
262, 263, 267, 268, 269, 388-3L, 389-3L— Ever-Redy Vinyl	5262	9.95
385-3L—Ever-Redy Leather	8073	8.75
391, 392—Leatherette-Covered	3413	5.95
355—Ever-Redy Leather	6355	3.95

For Models	Cat. No.	Price
All Microtesters—Ever-Redy Leather	4299	7.50
All Microtesters—Leatherette-Covered	3011	5.95
Roll Top Safety Case For 260-2, 9, 10, 880's	6192	9.95
Roll Top Safety Case For 260-3, 261, 270	0249	9.95
Roll Top Safety Case For 303	6379	9.95
1700 Series—Ever-Redy Leather	9808	18.90

### TEST LEADS



Test Prods and Spade Terminals  
For Microtesters, Cat. No. 8379



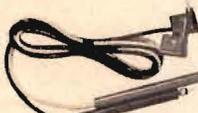
Banana Plugs and Test Prods  
For 260-3, -4, 261, 267, 268, 270,  
Cat. No. 7538



Alligator Clips and Spade Terminals  
For Microtesters, Cat. No. 8376



Banana Plugs and Alligator Clips  
For 260-3, -4, -4M, 261, 267, 268, 270,  
Cat. No. 7500



Test Prods and Elbow Terminals  
For 230, 240, 260-2, 372, Cat. No. 8381



Alligator Clips and Elbow Terminals  
For 230, 240, 260-2, 372, Cat. No. 8375

### LEADS

For Models	Cat. No.	Price
260 Series 3, -4, 261, 270, Banana plugs and alligator clip	7500	\$2.10
260 Series 3, -4, 261, 267, 268, 270, Banana plugs and test prods	7538	2.50
355 Test prods	8600	1.85
650 Test Lead	7545	1.20
651 Ground Lead	7547	1.20
1704—0.26Ω leads for Millivolt Standard; spade lugs both ends	0105	2.95
466, 715 Input cable	0100	2.85
230/240/260-2/372 Test prods and elbow terminals	8381	2.50
Test prods and spade terminals— all microtesters	8379	2.50
230/240/260-2/372 Alligator clips and elbow terminals	8375	1.75
Alligator clips and spade terminals— all microtesters	8376	1.75
262/269 Combination test prods with re- movable alligator clips and elbow terminals	8463	2.30
263, 269-2 Combination test prods with re- movable alligator clips and elbow terminals	0115	2.30

Simpson Distributor  
"Pick-A-Lead" Display



## SIMPSON ELECTRIC COMPANY

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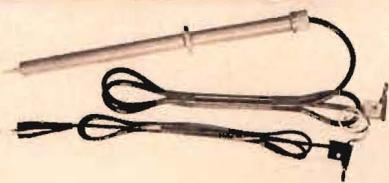
WESTERN DIVISION: 1130 SIMPSON WAY, (P.O. BOX 488), ESCONDIDO, CALIFORNIA

IN CANADA: BACH-SIMPSON, LTD., LONDON, ONTARIO

EXPORT DEPT. 400 WEST MADISON ST., CHICAGO, ILLINOIS 60606

# ACCESSORIES

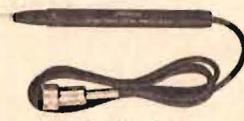
## HIGH VOLTAGE PROBES TEMPERATURE LEADS AND PROBES



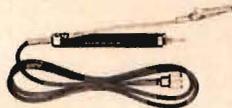
Typical High Voltage Probe  
Cat. No. 0507, 0508, 0509, 0510, 0511



Oscilloscope Probe Kit  
Model 739...\$45.15



AC-DC Ohm Probe  
For Model 311, Cat. No. 0734



High Frequency Probe for Model 303



Typical Multiplier

### OSCILLOSCOPE PROBE KIT—

#### Model 739

For use with Model 458 Oscilloscope. Includes \*low capacity probe, voltage doubler, detector, 100:1 voltage divider and dual direct-resistive. (Isolation)

Complete with 4 probes, plastic roll, and operator's manual. . . . . \$45.15  
\*For Model 458 only.

### PROBES—High Voltage Types

For	Voltage	Cat. No.	Price
221	30,000v	0009	\$12.55
260 Series 2	25,000v	0007	10.75
	50,000v	0179	12.50
260 Series 3,			
4, 4M, 5P	10,000v	0507	10.20
261	25,000v	0508	11.50
267	50,000v	0509	12.50
270			
262 Series 1	16,000v	0172	11.95
	40,000v	0180	12.50
262 Series 2	16,000v	0172	11.95
	40,000v	0180	12.50
263	30KV @ 10KΩ/v } 15KV @ 20KΩ/v }	0141	11.95
268	12,000v DC	0510	10.95
	30,000v DC	0511	10.95

For		Cat. No.	Price
269 Series 1	16,000v	0173	11.95
	40,000v	0181	13.50
269 Series 2	16,000v	0119	11.95
	40,000v	0120	12.50
303	30,000v	0074	11.95

### PROBES—Miscellaneous Types

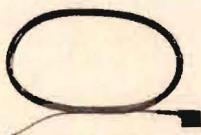
303 High frequency	0073	\$ 8.75
AC Probe	0068	3.55
DC Probe	0067	3.55
Ground lead	0069	1.00
311 High frequency	0731	11.50
High voltage	0732	11.75
DC-AC/OHMS	0734	8.50
Ground lead	0733	1.25
2610 Low Capacity	0299	17.55

	Cat. No.	Price
Voltage Doubler	0740	14.65
Low Capacitance	0741	14.00
100:1 Voltage Divider	0742	15.20
Direct-Resistive		
Dual Purpose	0743	11.55

### MULTIPLIERS

267 2500 V DC Multiplier	8568	\$ 3.60
267 5000 V DC Multiplier	8569	3.60
267 2500 V AC Multiplier	8570	3.60
267 5000 V AC Multiplier	8571	3.60
268 3000 V DC Multiplier	8572	3.60
268 6000 V DC Multiplier	8573	3.60
268 3000 V AC Multiplier	8574	3.60
268 6000 V AC Multiplier	0004	3.60

## TEMPERATURE TEST LEADS AND PROBES



General Purpose Thermocouple Lead No. 0190



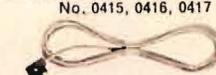
Free Air Temperature Probe, No. 0789



Surface Temperature Probe, No. 0790



General Purpose Thermistor Probe  
No. 0415, 0416, 0417



Ruggedized Thermocouple Lead  
For 388-3L



Surface Temperature  
Thermocouple Probe . . .  
Catalog No. 0187 (1000° F. Max.)

### FOR TEMPERATURE TESTERS

Models 385-3L, 389-3L, 260—Adapter 652

	Cat. No.	Price
Free Air Temperature Probe	0789	\$ 7.45
15 ft. Thermistor lead	0010	5.50
30 ft. Thermistor lead	0216	6.45
50 ft. Thermistor lead	0415	7.60
100 ft. Thermistor lead	0416	10.40
150 ft. Thermistor lead	0417	12.90
Surface temperature probe	0790	5.95

### Models 388, 388-3L

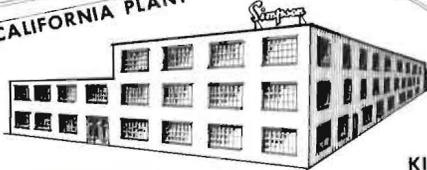
388, -3L, Rugged Service Lead (8 ft.)	0496	5.25
388, -3L General purpose thermocouple	0190	4.95
388, -3L Surface temperature thermocouple (1000° F. Max.)	0187	8.90



CALIFORNIA PLANT



ELGIN PLANT



KINZIE ST. PLANT

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