Elenco’s advanced designed Digital/Analog Trainer is specially designed for school projects. It is built on a single PC board for maximum reliability. It includes 5 built-in power supplies, a function generator with continuously variable sine, triangular and square waveforms. All power supplies are regulated and protected against shorts. The trainer is mounted in a professional technician tool case made of reinforced metal with heavy-duty handles and locks. The removable, dual-sided tool pallet has many pockets and elastic retainers to hold a broad line of tools and devices. A special ramp in the case will hold the meter of your choice.

### Tools in Case

Model **XK-700T** (shown in photo) is a stock trainer with tools and includes tools shown below (meter, logic probe, & calculator shown are sold separately).

- ET-10 IC puller
- SE-1 Solder ease kit
- SH-1 Soldering iron holder
- SP-4 Desoldering pump
- SR-2B Deluxe soldering iron
- ST-1 Mini diagonal cutters
- ST-2 Mini long nose pliers
- LF-99 Lead-free solder tube
- ST-20 Safety goggles
- ST-30 Premium wire stripper
- ST-75 11 pc. screwdriver bit set
- SW-3 Desoldering wick
- TL-8 Precision screwdriver set

See page 3 for detailed specifications.

When ordering a meter to be used with the XK-700 Trainer, specify the PSV-50 Kit. It will provide you with the needed Velcro to hold the meter in place.

### Dimensions:

13” (H) x 18” (W) x 6 1/2” (D)

- **Model XK-700 Trainer** - Available fully assembled without tools.
- **Model XK-700T Trainer** - Available with tools as shown - meter, calculator, and logic probe sold separately.
- **Model XK-700K Trainer** - Available as kit without tools.
- **Model XK-700TK** - Available as a kit with tools as shown - meter, calculator, and logic probe sold separately.

Available with Tools & Equipment of Your Choice! Call, Fax or E-mail for Quote.
XK-550 DIGITAL / ANALOG TRAINER

Same trainer as XK-700, except in our molded organizer case. The tools shown with the trainer are the most commonly used in the educational field or you can make your own selection of tools and meter to go with the trainer.

Tools in Case

Model XK-550T (shown in photo) is a stock trainer with tools shown below (meter shown is sold separately).
- ET-10 IC puller
- JW-140 Jumper wire kit
- SP-4 Desoldering pump
- ST-1 Mini diagonal cutters
- ST-2 Mini long nose pliers
- ST-3 Wire stripper
- ST-5 Screwdriver slotted 3/16”
- ST-6 Screwdriver #1 phillips
- Anti-static foam pad

- When ordering a meter to be used with the XK-550 Trainer, specify a PSV-50 kit which will provide you with velcro to hold the meter in place and an anti-static foam pad that fits below the meter for storage of ICs. This is supplied FREE with meter order.
- When ordering tools, specify a TM-30 tool mounting kit. When four or more tools are ordered, the tool mounting kit is supplied FREE!

Dimensions: 12 1/4” (H) x 16 3/8” (W) x 5 1/4” (D)

Elenco® Electronics can supply the XK-550 Trainer complete with any combination of tools or any of the meters shown in our catalog. Call or write for more information.

- Model XK-550 Trainer - Available fully assembled without tools.
- Model XK-550T Trainer - Available with tools as shown - meter sold separately.
- Model XK-550K Trainer - Available as kit without tools.
- Model XK-550TK - Available as a kit with tools as shown - meter sold separately.

### Specifications for XK-550 & XK-700 Trainers on Pages 2 and 3

<table>
<thead>
<tr>
<th>Power Supplies</th>
<th>Analog Section</th>
<th>Digital Section</th>
<th>Fast Track Construction</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Variable Power Supply</strong></td>
<td>Function Generator - Sine, Triangular, Square Wave.</td>
<td>Eight data switches.</td>
<td>Most of the components are on one PC board, eliminating all wires between the PC board, pots, regulators and switches. Makes assembly easier and faster, eliminates errors.</td>
</tr>
<tr>
<td>0V to 20VDC @ 0.5A (0V to 15VDC @ 1A)</td>
<td>Frequency adjustable in five ranges from 1 to 100kHz.</td>
<td>Two no bounce logic switches.</td>
<td></td>
</tr>
<tr>
<td>0V to –20VDC @ 0.5A (0V to –15VDC @ 1A)</td>
<td>Fine frequency adjust.</td>
<td>Eight LED readouts, buffered.</td>
<td></td>
</tr>
<tr>
<td>+12VDC @ 1A</td>
<td>Amplitude adjust.</td>
<td>Clock amplitude 5Vpp square wave.</td>
<td></td>
</tr>
<tr>
<td>–12VDC @ 1A</td>
<td>DC offset</td>
<td></td>
<td></td>
</tr>
<tr>
<td>+5VDC @ 1A</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>+30VAC center-tapped to 15VAC @ 1A</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Potentiometers</strong></td>
<td><strong>Breadboards</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2 undedicated potentiometers 1kΩ &amp; 100kΩ</td>
<td>2 breadboards, each containing 830 tie points (total 1,660).</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
XK-150 DIGITAL / ANALOG TRAINER

A low cost, full-function digital/analog trainer that meets the needs of electronic training programs. Rugged construction, can be used as fixed lab equipment or be portable.

<table>
<thead>
<tr>
<th>Specifications</th>
<th>Power Supplies</th>
</tr>
</thead>
<tbody>
<tr>
<td>Digital Section</td>
<td></td>
</tr>
<tr>
<td>• Eight data switches.</td>
<td>• Variable power supply</td>
</tr>
<tr>
<td>• Two no bounce logic switches.</td>
<td>• +1.25V to 15VDC @ 0.25A.</td>
</tr>
<tr>
<td>• Eight LED readouts, buffered.</td>
<td>• -1.25V to -15VDC @ 0.25A.</td>
</tr>
<tr>
<td>• Clock frequency 1Hz, 60Hz, 1kHz, 100kHz.</td>
<td>• +5VDC @ 0.25A.</td>
</tr>
<tr>
<td>• Clock amplitude 5Vpp square wave.</td>
<td>• +30VAC center-tapped to 15VAC @ 0.25A.</td>
</tr>
<tr>
<td>Analog Section</td>
<td>Case</td>
</tr>
<tr>
<td>• Function generator - Sine, square wave.</td>
<td>High impact molded case 2” (H) x 11” (W) x 11” (D). With flow-thru cooling to ventilate the power supply.</td>
</tr>
<tr>
<td>• Frequency adjustable in two ranges from 200 - 400kHz.</td>
<td></td>
</tr>
<tr>
<td>• Amplitude Sine 4Vpp.</td>
<td></td>
</tr>
<tr>
<td>• Square 12Vpp.</td>
<td></td>
</tr>
<tr>
<td>Potentiometers</td>
<td>Bredboards</td>
</tr>
<tr>
<td>• 2 undedicated potentiometers 1kΩ and 100kΩ.</td>
<td>• 1 bredboard, 830 tie points including two bus strips.</td>
</tr>
</tbody>
</table>

COMPUTER INTERFACE TRAINERS

Micro-Master®
A Basic Computer Training Kit
to Learn the Fundamentals of Computers

Model MM-8000K

Starting from scratch, you build a complete computer system. Our Micro-Master® Trainer teaches you to write into RAMs, ROMs, and run an 8085 microprocessor. You will write the initial instructions in permanent memory in a 2816E2PROM. Teaches all about input and output ports and computer timers. Complete with 128 page lesson manual, instructions, and experiments.

Microprocessor Training System

Model MP-Z80

The trainer and the manuals will guide the user through the studying and understanding of Z80 instruction sets and assembly language programming. The manuals were specifically designed as a learning tool for students and individuals who are interested in practical experiments of assembly language programming.

The manuals contain more than 15 hands-on experiments, covering essential microprocessor course contents. Theory is covered to understand the experiments.

Includes power pack, user manual, and experimentation manual.
<table>
<thead>
<tr>
<th>Calculator Model</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Texas Instruments®</strong></td>
<td><strong>Scientific Calculator</strong></td>
</tr>
<tr>
<td>Model TI-30Xa</td>
<td>10 + 2 digit display, one variable statistic, three memories, fractions and</td>
</tr>
<tr>
<td></td>
<td>fraction / decimal conversations, trigonometric functions in degrees,</td>
</tr>
<tr>
<td></td>
<td>radians, grads and hyperbolics, common and natural logarithms, universal</td>
</tr>
<tr>
<td></td>
<td>powers and roots, reciprocals and factorials, polar / rectangular conversions,</td>
</tr>
<tr>
<td></td>
<td>degrees, minutes, seconds, seconds / decimal degrees, conversions. Automatic</td>
</tr>
<tr>
<td></td>
<td>power down. Durable slide case.</td>
</tr>
<tr>
<td><strong>Texas Instruments®</strong></td>
<td><strong>Scientific Calculator</strong></td>
</tr>
<tr>
<td>Model TI-30X IIis</td>
<td>Solar / Battery</td>
</tr>
<tr>
<td></td>
<td>Two-line display scientific calculator combines statistics and advanced</td>
</tr>
<tr>
<td></td>
<td>scientific functions and is a durable and affordable calculator. The two-</td>
</tr>
<tr>
<td></td>
<td>line display helps students explore math and science concepts in the class</td>
</tr>
<tr>
<td></td>
<td>room. Automatic power down (APD™). Lithium battery included.</td>
</tr>
<tr>
<td></td>
<td>Protective slide case.</td>
</tr>
<tr>
<td><strong>Sharp®</strong></td>
<td><strong>Scientific Calculator</strong></td>
</tr>
<tr>
<td>Model EL-520WBBK</td>
<td>Advanced solar scientific calculator Model EL-520WBBK. Ergonomic design;</td>
</tr>
<tr>
<td></td>
<td>solar and battery powered, two-line, 12-digit display D.A.L. (Direct Algebra</td>
</tr>
<tr>
<td></td>
<td>Logic). Multi-line playback, complex numbers and calculus functions; 238</td>
</tr>
<tr>
<td></td>
<td>total functions. Hard case included.</td>
</tr>
<tr>
<td><strong>Texas Instruments®</strong></td>
<td><strong>Scientific Calculator</strong></td>
</tr>
<tr>
<td>Model TI-30Xa</td>
<td>Solar / Battery</td>
</tr>
<tr>
<td></td>
<td>Two-line display scientific calculator combines statistics and advanced</td>
</tr>
<tr>
<td></td>
<td>scientific functions and is a durable and affordable calculator. The two-</td>
</tr>
<tr>
<td></td>
<td>line display helps students explore math and science concepts in the class</td>
</tr>
<tr>
<td></td>
<td>room. Automatic power down (APD™). Lithium battery included.</td>
</tr>
<tr>
<td></td>
<td>Protective slide case.</td>
</tr>
<tr>
<td><strong>Casio®</strong></td>
<td><strong>Scientific Calculator</strong></td>
</tr>
<tr>
<td>Model FX-260</td>
<td>Advanced scientific calculator, 10 + 2 digit display, ideal for use in</td>
</tr>
<tr>
<td></td>
<td>advanced algebra, trigonometry, geometry, computer science, chemistry,</td>
</tr>
<tr>
<td></td>
<td>engineering, physics, calculus and statistics. ANYLITE™ solar power.</td>
</tr>
<tr>
<td></td>
<td>Protective slide case.</td>
</tr>
<tr>
<td><strong>Casio®</strong></td>
<td><strong>Scientific Calculator</strong></td>
</tr>
<tr>
<td>Model FX-115MS Plus</td>
<td>New advanced design with 2-line, 12-digit LCD display. Visually perfect</td>
</tr>
<tr>
<td></td>
<td>algebraic method 1 and 2, variable statistics, boolean logic and number</td>
</tr>
<tr>
<td></td>
<td>bases. Preprogrammed scientific constants. Complex number calculations.</td>
</tr>
<tr>
<td></td>
<td>Snap-on hard case included.</td>
</tr>
</tbody>
</table>

Other advanced calculators are available . . .

Call for information & pricing.
## ANALOG OSCILLOSCOPES

### 100MHz Model S-1390
**Delayed Sweep & Dual Trace**

**Specifications**
- **Horizontal Amplifier (CH 1 and CH 2)**
  - Sensitivity: 5mV/Div or 0.2V/Div (X/Y mode)
  - 1mV/Div or 0.5V/Div (X/Y mode)
  - Attenuator: 1:1 - 5:1 sequence, 10 step attenuator, plus vernier control.
  - Rise time: 5.6ns (S-1390), 3.5ns (S-1390)
  - Over shoot: Less than 5%
  - Input impedance: 1MΩ x 20 or 250Ω x 10Ω
  - Max. input voltage: 400V (DC + AC peak)
- **Operating modes:** CH 1, CH 2, DUAL (ALT or CHOP and ADD).
- **Chop frequency:** Approximately 50kHz
- **Algebraic addition:** CH 1 + CH 2, CH 1 - CH 2, DUAL (ALT or CHOP) and ADD
- **Horizontal Amplifier**
  - Internal: 100Hz - 60/100MHz
- **Input impedance:** 1MΩ + 2%, 10pF + 2% (DS-203 & 303)
- **Rise time:** DS-203: 17.5ns
- **Sensitivity:** CH 1, CH 2: 0.1Vpp
- **Max. input voltage:** 400V (AC peak)
- **Input impedance:** 1MΩ + 2%, 10pF + 2%

### 60MHz Model S-1360
**Delayed Sweep & Dual Trace**

**Features**
- 1mV/Div sensitivity
- Sweep to 2ms/Div (S-1390), 10ns/Div (S-1360)
- Component tester (S-1360 only)
- Z-axis input

**Specifications**
- **Horizontal Amplifier (CH 1 and CH 2)**
  - Sensitivity: 5mV/Div or 0.2V/Div (X/Y mode)
  - 1mV/Div or 0.5V/Div (X/Y mode)
  - Attenuator: 1:1 - 5:1 sequence, 10 step attenuator, plus vernier control.
  - Rise time: 5.6ns (S-1390), 3.5ns (S-1390)
  - Over shoot: Less than 5%
  - Input impedance: 1MΩ x 20 or 250Ω x 10Ω
  - Max. input voltage: 400V (DC + AC peak)
- **Operating modes:** CH 1, CH 2, DUAL (ALT or CHOP and ADD).
- **Chop frequency:** Approximately 50kHz
- **Algebraic addition:** CH 1 + CH 2, CH 1 - CH 2, DUAL (ALT or CHOP) and ADD
- **Horizontal Amplifier**
  - Internal: 100Hz - 60/100MHz
- **Input impedance:** 1MΩ + 2%, 10pF + 2% (DS-203 & 303)
- **Rise time:** DS-203: 17.5ns
- **Sensitivity:** CH 1, CH 2: 0.1Vpp
- **Max. input voltage:** 400V (AC peak)
- **Input impedance:** 1MΩ + 2%, 10pF + 2%

---

### DIGITAL STORAGE OSCILLOSCOPES

### 20MHz, 10Ms/s Model DS-203
**30MHz, 20Ms/s Model DS-303**

**Features**
- 2-channel
- 2k Memory per channel
- Internally backed-up memory (DS-303)
- 1mV sensitivity
- RS-232 output (DS-303)
- Dust cover included
- 2 free x1, x10 probes

**Specifications**
- **Vertical Amplifiers (CH 1 and CH 2)**
  - Sensitivity: 5mV/Div or 0.2V/Div (X/Y mode)
  - 1mV/Div or 0.5V/Div (X/Y mode)
  - Attenuator: 1:1 - 5:1 sequence, 10 step attenuator, plus vernier control.
  - Rise time: 5.6ns (S-1390), 3.5ns (S-1390)
  - Over shoot: Less than 5%
  - Input impedance: 1MΩ x 20 or 250Ω x 10Ω
  - Max. input voltage: 400V (DC + AC peak)
- **Operating modes:** CH 1, CH 2, DUAL (ALT or CHOP and ADD).
- **Chop frequency:** Approximately 50kHz
- **Horizontal Amplifier**
  - Internal: 100Hz - 60/100MHz
  - Input impedance: 1MΩ + 2%, 10pF + 2% (DS-203 & 303)
  - Rise time: DS-203: 17.5ns
  - Sensitivity: CH 1, CH 2: 0.1Vpp
  - Max. input voltage: 400V (AC peak)
- **Input impedance:** 1MΩ + 2%, 10pF + 2%

---

### Other Specifications
- Component tester (S-1360 only)
- **Sweep speed:**
  - DC - 20MHz, 20Ms/s Model DS-303
  - DC - 30MHz, 20Ms/s Model DS-303
  - DC - 1MHz, 20Ms/s Model DS-303
- **Component Tester (S-1360 / S-1390)**
  - **Trigger Sensitivity**
    - S-1360: 0.1Vpp
    - S-1390: 0.1Vpp
  - **Trigger speed:**
    - DS-203: 10Msample/s
    - DS-303: 10Msample/s
  - **Trigger sensitivity:**
    - DS-203: 10Msample/s
    - DS-303: 10Msample/s
  - **Trigger source:**
    - DS-203: Main, Mix, Delay
    - DS-303: Main, Mix, Delay
  - **Delay time position:** Variable control to locate desirable waveform for extending.
  - **Variable time control:**
    - DS-203: 6% (DS-203 & 303)
    - DS-303: 3% (DS-203 & 303)
  - **Rise time:**
    - DS-203: 17.5ns
    - DS-303: 17.5ns
  - **Sensitivity:**
    - DS-203: 0.1Vpp
    - DS-303: 0.1Vpp
  - **Max. input voltage:**
    - DS-203: 400V (DC + AC peak)
    - DS-303: 400V (DC + AC peak)
  - **Input impedance:**
    - DS-203: 1MΩ + 2%, 10pF + 2%
    - DS-303: 1MΩ + 2%, 10pF + 2%
  - **Rise time:**
    - DS-203: 17.5ns
    - DS-303: 17.5ns
  - **Sensitivity:**
    - DS-203: 0.1Vpp
    - DS-303: 0.1Vpp
  - **Max. input voltage:**
    - DS-203: 400V (AC peak)
    - DS-303: 400V (AC peak)
  - **Input impedance:**
    - DS-203: 1MΩ + 2%, 10pF + 2%
    - DS-303: 1MΩ + 2%, 10pF + 2%
**ANALOG OSCILLOSCOPES**

### 30MHz Model S-1330

**Component Tester, Beam Find, Dual Time Base**

#### Specifications (CH 1 and CH 2)

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sensitivity</td>
<td>5mV/div - 5V/div (x1 mode), 1mV/div - 1V/div (x5 mode)</td>
</tr>
<tr>
<td>Attenuation</td>
<td>1-5-5 sequence, 10-step attenuator, plus vernier control</td>
</tr>
<tr>
<td>Rise time</td>
<td>About 1.6ns</td>
</tr>
<tr>
<td>Over shoot</td>
<td>Less than 5%</td>
</tr>
<tr>
<td>Input impedance</td>
<td>1MΩ ±2%, 25pF ±10pF</td>
</tr>
<tr>
<td>Max. input voltage</td>
<td>400V (DC + AC peak)</td>
</tr>
<tr>
<td>Operating modes</td>
<td>CH 1, CH 2, DUAL (ALT or CHOP) and ADD</td>
</tr>
<tr>
<td>Chop frequency</td>
<td>Approximately 50kHz</td>
</tr>
<tr>
<td>Algebraic addition</td>
<td>CH 1 + CH 2, CH 1 - CH 2, CH 2 only</td>
</tr>
</tbody>
</table>

#### Horizontal Amplifier (continued)

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>X-Y mode</td>
<td>Switch selectable using X-Y switch CH 1: X-axis, CH 2: Y-axis</td>
</tr>
<tr>
<td>Accuracy</td>
<td>Y-axis ±3%, X-axis ±6%</td>
</tr>
</tbody>
</table>

#### Bandwidth (continued)

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Bandwidth</td>
<td>DC - 1MHz (–3dB)</td>
</tr>
<tr>
<td>X-Y phase difference</td>
<td>Approximately 3° at 50kHz</td>
</tr>
</tbody>
</table>

#### Sweep System

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sweep display mode</td>
<td>Main, Mix, Delay (S-1330 only)</td>
</tr>
<tr>
<td>Hold off time</td>
<td>5.1 continuously variable</td>
</tr>
</tbody>
</table>

#### Main Sweep

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sweep speed</td>
<td>0.1µs/div - 0.2µs/div in 1-2-5 sequence, 20 steps</td>
</tr>
<tr>
<td>Accuracy</td>
<td>±3%</td>
</tr>
<tr>
<td>Variable time control</td>
<td>5.1, uncalibrated, continuously variable between steps</td>
</tr>
<tr>
<td>Sweep magnification</td>
<td>10X ±10%, extend sweep speed up to 10ns/div</td>
</tr>
</tbody>
</table>

#### Delayed Sweep (S-1330 only)

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sweep speed</td>
<td>0.1µs/div - 2µs/div in 1-2-5 seq., 20 steps</td>
</tr>
</tbody>
</table>

### 30MHz Model S-1325

**Component Tester, Beam Find, Oscilloscope**

#### Features
- Dual or single trace operation
- Calibrated 20-step time base with x10 magnifier
- AUTO/NORM triggered sweep operation with AC, TV-H, TV-V and line coupling.
- 1mV/DIV sensitivity
- 2 modulation (S-1330 only)
- Y (CH 2) output (S-1330 only)
- Dust cover included
- 2 free x1, x10 probes

### 40MHz Model S-1340

**2-Channel - Delayed Sweep**

#### Specifications (CH 1 and CH 2)

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sensitivity</td>
<td>5mV/div - 5V/div (x1 mode), 1mV/div - 1V/div (x5 mode)</td>
</tr>
<tr>
<td>Attenuation</td>
<td>1-5-5 sequence, 10-step attenuator, plus vernier control</td>
</tr>
<tr>
<td>Rise time</td>
<td>About 1.6ns</td>
</tr>
<tr>
<td>Over shoot</td>
<td>Less than 5%</td>
</tr>
<tr>
<td>Input impedance</td>
<td>1MΩ ±2%, 25pF ±10pF</td>
</tr>
<tr>
<td>Max. input voltage</td>
<td>400V (DC + AC peak)</td>
</tr>
<tr>
<td>Operating modes</td>
<td>CH 1, CH 2, DUAL (ALT or CHOP) and ADD</td>
</tr>
<tr>
<td>Chop frequency</td>
<td>Approximately 50kHz</td>
</tr>
<tr>
<td>Algebraic addition</td>
<td>CH 1 + CH 2, CH 1 - CH 2, CH 2 only</td>
</tr>
</tbody>
</table>

#### Horizontal Amplifier (continued)

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>X-Y mode</td>
<td>Switch selectable using X-Y switch CH 1: X-axis, CH 2: Y-axis</td>
</tr>
<tr>
<td>Accuracy</td>
<td>Y-axis ±3%, X-axis ±6%</td>
</tr>
</tbody>
</table>

#### Bandwidth (continued)

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Bandwidth</td>
<td>DC - 1MHz (–3dB)</td>
</tr>
<tr>
<td>X-Y phase difference</td>
<td>Approximately 3° at 50kHz</td>
</tr>
</tbody>
</table>

#### Sweep System

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sweep display mode</td>
<td>Main, Mix, Delay (S-1340 only)</td>
</tr>
<tr>
<td>Hold off time</td>
<td>5.1 continuously variable</td>
</tr>
</tbody>
</table>

#### Main Sweep

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sweep speed</td>
<td>0.1µs/div - 2µs/div in 1-2-5 sequence, 20 steps</td>
</tr>
<tr>
<td>Accuracy</td>
<td>±3%</td>
</tr>
<tr>
<td>Variable time control</td>
<td>5.1, uncalibrated, continuously variable between steps</td>
</tr>
<tr>
<td>Sweep magnification</td>
<td>10X ±10%, extend sweep speed up to 10ns/div</td>
</tr>
</tbody>
</table>

#### Delayed Sweep (S-1340 only)

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sweep speed</td>
<td>0.1µs/div - 2µs/div in 1-2-5 seq., 20 steps</td>
</tr>
</tbody>
</table>

### 40MHz Model S-1345

**2-Channel - Delayed Sweep Component Tester, Beam Find, Dual Time Base**

#### General Features
- 1mV/DIV sensitivity
- Variable hold off
- X-Y operation
- TV sync
- Beam finder (S-1345 only)
- Sweep mix (S-1345 only)
- 2 modulation (S-1345 only)
- Component tester (S-1345 only)
- Dust cover included
- 2 free x1, x10 probes

### Accessories & Probes
- Two x1, x10 probes, schematic diagram, a spare kit, AC power cord, spare fuses, and dust cover.

---

**FREE DUST COVER & PROBES**

---

**115, 230VAC + & parts list, AC power cord, spare fuse, and dust cover.**

**Model S-1340**

**Dimensions:**
- 5 1/4" (H) x 12 3/4" (W) x 15 5/8" (D)
- Weight: 16 lbs. 12 oz. (7.6kgs.)

**Model S-1345**

**Dimensions:**
- 5 1/4" (H) x 12 3/4" (W) x 15 5/8" (D)
- Weight: 17 lbs. 3 oz. (7.8kgs.)

**Output level:**
- 100mV/div (no load) 50mV/div (50Ω load)

**Sweep magnification:**
- 10X, +
- 20X, +

**Sweep display mode:**
- Main, Mix, Delay (S-1340 only)

**Sweep magnification:**
- 10X, +
- 20X, +

**Sweep magnification:**
- 10X, +
- 20X, +

**Sweep system:**
- Variable time control to locate desirable waveform for extending.

**Trigger:**
- Trigger coupling: AUTO, NORM, TV-V, TV-H

**Other Specifications:**
- CRT: Type: Rectangular with internal graticules. Adjustable graticule illumination (S-1340 only).
- Display area: 8 x 10 (5.5 x 1.5 cm)
- Accelerating voltage: 21kV
- Z modulation (S-1340 only): Positive TTL signal, low level blank intensity at any intensity, high level/blank any intensity
- Trace rotation: Adjustable front panel

**Model S-1330**

**Dimensions:**
- 5 1/4" (H) x 12 3/4" (W) x 15 5/8" (D)
- Weight: 16 lbs. 12 oz. (7.6kgs.)

**Output level:**
- 100mV/div (no load) 50mV/div (50Ω load)

**Sweep magnification:**
- 10X, +
- 20X, +

**Sweep display mode:**
- Main, Mix, Delay (S-1330 only)

**Sweep magnification:**
- 10X, +
- 20X, +

**Sweep magnification:**
- 10X, +
- 20X, +

**Sweep system:**
- Variable time control to locate desirable waveform for extending.

**Trigger:**
- Trigger coupling: AUTO, NORM, TV-V, TV-H

**Other Specifications:**
- CRT: Type: Rectangular with internal graticules. Adjustable graticule illumination (S-1340 only).
- Display area: 8 x 10 (5.5 x 1.5 cm)
- Accelerating voltage: 21kV
- Z modulation (S-1340 only): Positive TTL signal, low level blank intensity at any intensity, high level/blank any intensity
- Trace rotation: Adjustable front panel

**Model S-1325**

**Dimensions:**
- 5 1/4" (H) x 12 3/4" (W) x 15 5/8" (D)
- Weight: 17 lbs. 3 oz. (7.8kgs.)

**Output level:**
- 100mV/div (no load) 50mV/div (50Ω load)

**Sweep magnification:**
- 10X, +
- 20X, +

**Sweep display mode:**
- Main, Mix, Delay (S-1325 only)

**Sweep magnification:**
- 10X, +
- 20X, +

**Sweep magnification:**
- 10X, +
- 20X, +

**Sweep system:**
- Variable time control to locate desirable waveform for extending.

**Trigger:**
- Trigger coupling: AUTO, NORM, TV-V, TV-H

**Other Specifications:**
- CRT: Type: Rectangular with internal graticules. Adjustable graticule illumination (S-1340 only).
- Display area: 8 x 10 (5.5 x 1.5 cm)
- Accelerating voltage: 21kV
- Z modulation (S-1340 only): Positive TTL signal, low level blank intensity at any intensity, high level/blank any intensity
- Trace rotation: Adjustable front panel
Models SG-9500 and SG-9000 are stable high frequency generators capable of AM modulation. They are primarily designed for work on AM and FM radio receivers, but can be used in any project requiring a modulated RF signal.

Model SG-9200 is a low cost audio generator featuring very low distortion sine wave and a rapid-rise square wave. All models have vernier frequency control for easy tuning and switchable high-low output levels.

Model SG-9500 has built-in frequency counters which are switchable to measure external frequencies up to 150MHz.
**5MHz SWEEP FUNCTION GENERATOR**

**Model GF-8056** with Built-in 60MHz Frequency Counter

- **Output Waveforms:** Sine, square, triangle
- **Output Frequency:** 1Hz - 1MHz
- **Output Impedance:** 600Ω ±10%
- **Output Level:** TTL level, >3Vpp fixed amplitude
- **Frequency Multiplier:** 6 decade steps
- **Sine Wave Characteristics:**
  - Distortion: <0.05%
  - Flatness: +0.5 dB 1Hz-100kHz
- **Square Wave Characteristics:**
  - Symmetry: Less than 5% (at 1kHz)
  - Rise & Fall time: Less than 500ns (at 1kHz)
- **Frequency:** X0.05 - X3.0
- **Sync Output:**
  - Output Impedance: 50Ω ±2% accuracy
  - Fanout: >20
  - Rise time: <60ns
- **Sweep Output:**
  - DC/AC, HF/LF, 100kHz filter switch
  - EXT counter trigger level control and input attenuator –26dB
  - Output Level from 0.1Vpp to 20Vpp
  - Amplitude with –20dB attenuator
- **Frequency:** 0.200Hz to 60MHz 250 Vrms max. input
- **Sweep Rate:** 10ms to 5s
- **Output Level from 0.1Vpp to 20Vpp
- **Input Impedance:** 1MΩ ±2%
- **Power Source:** AC 115V / 230V +10%, 50/60Hz, 25W
- **Dimensions:** 10 13/16" (W) x 3 1/2" (H) x 11 13/16" (D)
- **Weight:** 5 lbs.
- **Safety Approvals:** UL, CUL, GS, TUV, CE, IEC1010, EN61010

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**20Hz - 150kHz Low Distortion Sine/Square Wave Audio Generator**

**Model GF-800/555**

- **Frequency Range:** 0.5Hz to 5MHz in 8 ranges
- **Waveforms:** 4 waveforms (sine, square, triangle, DC)
- **Stability:** 0.1% for 15 minutes, 0.2% for 24 hours
- **DC Offset:** Continuously variable ±10V no load
- **Symmetry:** 50% (positive and negative half)
- **Linearity:** <1% 1Hz-100kHz for triangle wave
- **Distortion:** <1% 1Hz to 100kHz
- **Rise / fall time:** <90ns for square wave
- **Output Impedance:** 500Ω ±2% accuracy
- **Max. output:** 20Vpp no load, 10Vpp 50Ω load
- **Min. output:** 0.1Vpp no load, 0.05Vpp 50Ω load
- **Attenuator:** X20 –26dB (±2% accuracy), X1: 0dB
- **Sync Output:**
  - Output Impedance: Continuous adjustment 0.2Hz - 100Hz
  - Fanout: >20
  - Rise time: <60ns
- **VCF Input:**
  - Input Voltage: 0-10V
  - Input Frequency: DC-1kHz
  - Output Amplitude: 10Vpp (no load) or 5Vpp (1kΩ load)
  - Output Frequency: Continuous adjustment 0.2Hz - 100Hz
  - Sweep Speed: 10ms - 5s, continuously variable
  - Sweep Width: 1:1 - 1:100 continuously variable
  - Output Waveform: Linear or log sweep ramp wave
- **Counter:**
  - Display: 5 digit 0.36" red LED display with autorange
  - Resolution: 0.1Hz
  - Time Base: 20MHz
  - Accuracy: ±0.002%

---

**1MHz Function Generator**

**Model FG-500**

- **Frequency Range:** 0.5Hz to 1.5kHz in 23 steps
- **Stability:** 0.1% for 15 minutes, 0.2% for 24 hours
- **DC Offset:** Continuously variable
- **Symmetry:** 50% (positive and negative half)
- **Linearity:** <1% 1Hz-100kHz for triangle wave
- **Distortion:** <1% 1Hz to 100kHz
- **Rise / fall time:** <90ns for square wave
- **Output Impedance:** 50Ω ±2% accuracy
- **Max. output:** 20Vpp no load, 10Vpp 50Ω load
- **Min. output:** 0.1Vpp no load, 0.05Vpp 50Ω load
- **Attenuator:** X20 –26dB (±2% accuracy), X1: 0dB
- **Output Waveform:** Linear or log sweep ramp wave
- **Counter:**
  - Display: 5 digit 0.36" red LED display with autorange
  - Resolution: 0.1Hz
  - Time Base: 20MHz
  - Accuracy: ±0.002%

---

**Specifications**

- **Frequency Range:** 20Hz to 1.5kHz (23 steps), 1Hz to 150kHz (23 steps)
- **Accuracy:** 0.1% for 15 minutes, 0.2% for 24 hours
- **DC Offset:** Continuously variable ±10V no load
- **Symmetry:** 50% (positive and negative half)
- **Linearity:** <1% 1Hz-100kHz for triangle wave
- **Distortion:** <1% 1Hz to 100kHz
- **Rise / fall time:** <90ns for square wave
- **Output Impedance:** 50Ω ±2% accuracy
- **Max. output:** 20Vpp no load, 10Vpp 50Ω load
- **Min. output:** 0.1Vpp no load, 0.05Vpp 50Ω load
- **Attenuator:** X20 –26dB (±2% accuracy), X1: 0dB
- **Output Waveform:** Linear or log sweep ramp wave
- **Counter:**
  - Display: 5 digit 0.36" red LED display with autorange
  - Resolution: 0.1Hz
  - Time Base: 20MHz
  - Accuracy: ±0.002%

---

**Available in Kit FG-500K**

- **Frequency Range:** 0.5Hz to 1.5kHz (23 steps), 1Hz to 150kHz (23 steps)
- **Accuracy:** 0.1% for 15 minutes, 0.2% for 24 hours
- **DC Offset:** Continuously variable ±10V no load
- **Symmetry:** 50% (positive and negative half)
- **Linearity:** <1% 1Hz-100kHz for triangle wave
- **Distortion:** <1% 1Hz to 100kHz
- **Rise / fall time:** <90ns for square wave
- **Output Impedance:** 50Ω ±2% accuracy
- **Max. output:** 20Vpp no load, 10Vpp 50Ω load
- **Min. output:** 0.1Vpp no load, 0.05Vpp 50Ω load
- **Attenuator:** X20 –26dB (±2% accuracy), X1: 0dB
- **Output Waveform:** Linear or log sweep ramp wave
- **Counter:**
  - Display: 5 digit 0.36" red LED display with autorange
  - Resolution: 0.1Hz
  - Time Base: 20MHz
  - Accuracy: ±0.002%

---

**Power Source:** AC 115V / 230V +10%, 50/60Hz, 25W

**Dimensions:** 10 13/16" (W) x 3 1/2" (H) x 11 13/16" (D)

**Weight:** 5 lbs.

**Safety Approvals:** UL, CUL, GS, TUV, CE, IEC1010, EN61010

---

**Specifications**

- **Frequency Range:** 20Hz to 1.5kHz (23 steps), 1Hz to 150kHz (23 steps)
- **Accuracy:** 0.1% for 15 minutes, 0.2% for 24 hours
- **DC Offset:** Continuously variable ±10V no load
- **Symmetry:** 50% (positive and negative half)
- **Linearity:** <1% 1Hz-100kHz for triangle wave
- **Distortion:** <1% 1Hz to 100kHz
- **Rise / fall time:** <90ns for square wave
- **Output Impedance:** 50Ω ±2% accuracy
DIGITAL MULTIMETERS

Compact Multimeter
Model M-1000D

- 3 1/2 digit, 2,000 count display
- Transistor test
- Audible continuity
- Diode test
- Signal injector
- Overload protection
- Pocket-size
- Low cost

Specifications
- AC + DC volts: 200mV, 2V, 20V, 200V, 1000V, 2000V, 750V
- Accuracy: ±0.5% rdg + 2 dgt (200mV), ±0.25% rdg + 2 dgt (2V-1,000V)
- Input impedance: 1MΩ
- DC current: 200μA, 2mA, 20mA, 200mA, 1A, 10A
- Accuracy: ±0.5% rdg + 2 dgt (1μA), ±0.2% rdg + 2 dgt (20mA-1A)
- Resistance: 200Ω, 2kΩ, 20kΩ, 200kΩ, 2MΩ
- Accuracy: ±0.5% rdg + 2 dgt (200Ω), ±0.2% rdg + 2 dgt (2kΩ-2MΩ)
- Accessories: Test leads, manual, and holster included
- Dimensions / weight: 6 3/8” (H) x 3” (W) x 1 3/4” (D) / 10.56 oz.

Features
- Low cost

Autoranging Digital Multimeter
Model M-2625

- 3 3/4 digit, 4,000 count display
- Frequency 5Hz to 10MHz
- Temperature to 752°F
- Rel. / reset mode
- Audible continuity / diode test
- Temperature probe included
- Capacitance to 100μF
- Holster included
- Auto power off
- Data hold

Specifications
- AC + DC volts: 400mV, 4V, 40V, 400V, 600V
- Accuracy: ±0.5% rdg + 5 dgt (400mV), ±(0.8% rdg + 5 dgt) on 4V-400V ranges
- AC: ±1.5% rdg + 8 dgt (400V), ±2.5% rdg + 5 dgt (600V)
- Input impedance: 1MΩ
- DC current: 40μA, 400μA, 4mA, 40mA, 400mA, 4A, 10A
- Accuracy: ±0.5% rdg + 5 dgt (40μA), ±1.5% rdg + 5 dgt (4mA-10A)
- Resistance: 40Ω, 4kΩ, 40kΩ, 400kΩ, 4MΩ
- Accuracy: ±0.5% rdg + 5 dgt (40Ω), ±1.5% rdg + 5 dgt (4kΩ-4MΩ)
- Temperature: -58°F - 725°F probe included
- Accesories: Test leads, manual, holster, and two (2) "AA" batteries included
- Dimensions / weight: 6” (H) x 3” (W) x 1 1/2” (D) / 9.9 oz.

Model M-1750

- 3 3/4 digit, 4,000 count display
- Frequency to 10MHz
- Capacitance to 200μF
- Diode and transistor test
- Audible continuity
- AC/DC current to 10A
- 3-Way overload protection
- Holster included
- Relative measurement

Specifications
- AC + DC volts: 400mV, 4V, 40V, 400V, 600V
- Accuracy: ±0.5% rdg + 1 dgt (400mV), ±0.5% rdg + 2 dgt (4V-600V)
- Input impedance: 1MΩ
- DC current: 40μA, 4mA, 40mA, 400mA, 4A
- Accuracy: ±0.5% rdg + 5 dgt (40μA), ±1.5% rdg + 5 dgt (4mA-4A)
- Resistance: 4Ω, 4kΩ, 40kΩ, 400kΩ, 4MΩ
- Accuracy: ±0.5% rdg + 5 dgt (4Ω), ±1.5% rdg + 5 dgt (4kΩ-4MΩ)
- Temperature: -58°F - 725°F
- Accesories: Test leads, manual, holster, and two (2) "AA" batteries included
- Dimensions / weight: 5” (H) x 2 29/32” (W) x 1” (D) / 4.5 oz.

Features
- Large 1”, 3 3/4 digit, 4,000 count display
- Autoranging frequency to 4MHz
- Capacitance to 400μF
- Inductance to 40H
- Resistance to 4000MΩ
- Logic test
- Diode and transistor test
- Audible continuity test
- Holster included

Model LCM-1950

Specifications
- AC + DC volts: 40V, 400V, 1,000V, 750V
- Accuracy: ±0.5% rdg + 1 dgt (400V), ±1.0% rdg + 4 dgt (4,000V ranges)
- Input impedance: 1MΩ
- DC current: 40μA, 4mA, 40mA, 400mA, 4A
- Accuracy: ±0.5% rdg + 1 dgt (40μA), ±1.0% rdg + 5 dgt (4mA-4A)
- Resistance: 4Ω, 4kΩ, 40kΩ, 400kΩ, 4MΩ
- Accuracy: ±0.5% rdg + 5 dgt (4Ω), ±1.0% rdg + 5 dgt (4kΩ-4MΩ)
- Temperature: -58°F - 725°F
- Inductance: 0.1H - 100H
- Temperature probe included
- Accesories: Test leads, manual, holster, and 9V battery included
- Dimensions / weight: 7 3/4” (H) x 3 1/2” (W) x 1 1/2” (D) / 10.88 oz.
### DIGITAL MULTIMETERS

#### Model M-1700

**Features**
- 3 1/2 digit, 2,000 count display
- Frequency to 20MHz
- Capacitance to 20μF
- Diode and transistor test
- Audible continuity
- AC/DC current to 10A
- 3-way overload protection
- Low cost
- Holster included

**Specifications**

<table>
<thead>
<tr>
<th>AC + DC volts</th>
<th>200mV, 2V, 20V, 200V, 600V</th>
</tr>
</thead>
<tbody>
<tr>
<td>DC accuracy</td>
<td>±(0.5% rdg + 1 digit)</td>
</tr>
</tbody>
</table>
| AC accuracy   | ±(1% rdg + 4 digits)        | Resolution 100μA

<table>
<thead>
<tr>
<th>AC + DC current</th>
<th>2mA, 20mA, 200mA, 10A</th>
</tr>
</thead>
<tbody>
<tr>
<td>DC accuracy</td>
<td>±(0.1% rdg + 1 digit)</td>
</tr>
</tbody>
</table>
| AC accuracy    | ±(1.0% rdg + 0 digit)     | Resolution 10μA

<table>
<thead>
<tr>
<th>Resistance</th>
<th>200Ω, 2kΩ, 20kΩ, 200kΩ, 2MΩ, 20MΩ</th>
</tr>
</thead>
<tbody>
<tr>
<td>AC accuracy</td>
<td>±(0.8% rdg + 3 digits)</td>
</tr>
<tr>
<td>DC accuracy</td>
<td>±(3.0% rdg + 3 digits)</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Capacitance</th>
<th>2nF, 20nF, 200nF, 2μF</th>
</tr>
</thead>
<tbody>
<tr>
<td>AC accuracy</td>
<td>±(1% rdg + 1 digit)</td>
</tr>
<tr>
<td>DC accuracy</td>
<td>±(2.0% rdg + 10 digits)</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Frequency</th>
<th>10Hz - 20MHz autoranging</th>
</tr>
</thead>
<tbody>
<tr>
<td>Accuracy</td>
<td>±(0.1% rdg + 1 digit)</td>
</tr>
<tr>
<td>Resolution</td>
<td>1Hz</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Accessories</th>
<th>Test leads, holster, manual, 9V battery included</th>
</tr>
</thead>
<tbody>
<tr>
<td>Options</td>
<td>C-90 Case, C-17 Holster</td>
</tr>
<tr>
<td>Dimensions / weight</td>
<td>6” (H) x 2 1/2” (W) x 1 1/2” (D) / 7.4 oz.</td>
</tr>
</tbody>
</table>

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#### Model M-2795

**Features**
- 3 1/2 digit, 4,000 count display
- Audible continuity test
- Data hold / rel. value
- Frequency to 15MHz
- Capacitance to 200μF
- Transistor / diode / logic test
- AC/DC current to 10A
- Auto power off
- Holster included

**Specifications**

<table>
<thead>
<tr>
<th>AC volts</th>
<th>400mV, 4V, 40V, 400V, 750V</th>
</tr>
</thead>
<tbody>
<tr>
<td>DC volts</td>
<td>±(0.8% rdg + 3 digits)</td>
</tr>
<tr>
<td>400mV</td>
<td>±(0.8% rdg + 3 digits)</td>
</tr>
<tr>
<td>4V</td>
<td>±(1% rdg + 3 digits)</td>
</tr>
<tr>
<td>40V</td>
<td>±(1.5% rdg + 3 digits)</td>
</tr>
<tr>
<td>400V</td>
<td>±(2% rdg + 5 digits)</td>
</tr>
<tr>
<td>1000V</td>
<td>±(2% rdg + 5 digits)</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>AC current</th>
<th>40μA, 400μA, 4mA, 40mA, 400mA, 10A</th>
</tr>
</thead>
<tbody>
<tr>
<td>DC current</td>
<td>40μA, 400μA, 4mA, 40mA, 400mA, 10A</td>
</tr>
<tr>
<td>AC accuracy</td>
<td>±(0.5% rdg + 5 digits)</td>
</tr>
<tr>
<td>DC accuracy</td>
<td>±(1.5% rdg + 5 digits)</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Resistance</th>
<th>200Ω, 2kΩ, 20kΩ, 200kΩ, 2MΩ, 20MΩ</th>
</tr>
</thead>
<tbody>
<tr>
<td>AC accuracy</td>
<td>±(0.8% rdg + 3 digits)</td>
</tr>
<tr>
<td>DC accuracy</td>
<td>±(3.0% rdg + 3 digits)</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Capacitance</th>
<th>20nF, 200nF, 2μF, 20μF</th>
</tr>
</thead>
<tbody>
<tr>
<td>AC accuracy</td>
<td>±(1% rdg + 1 digit)</td>
</tr>
<tr>
<td>DC accuracy</td>
<td>±(2.0% rdg + 10 digits)</td>
</tr>
<tr>
<td>Resolution</td>
<td>1μF</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Frequency</th>
<th>10Hz - 15MHz</th>
</tr>
</thead>
<tbody>
<tr>
<td>Accuracy</td>
<td>±(0.1% + 5)</td>
</tr>
<tr>
<td>Sensitivity</td>
<td>Sine wave 0.6Vrms</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Accessories</th>
<th>Heavy-duty test leads, holster, manual, &amp; 9V battery included</th>
</tr>
</thead>
<tbody>
<tr>
<td>Dimensions</td>
<td>7 1/2” (H) x 3 1/2” (W) x 1 3/4” (D) (without holster) / 10.56 oz. (without holster)</td>
</tr>
</tbody>
</table>

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#### Bench Digital Multimeter

**Model M-5500R**

**Features**
- True rms. / relative display
- Data hold / rel. value
- Auto power off
- 3-way overload protection
- Capacitance to 200μF
- Frequency to 15MHz
- AC/DC current to 10A
- Holster included

**Specifications**

<table>
<thead>
<tr>
<th>AC + DC volts</th>
<th>400mV (DC only), 4V, 40V, 400V, 1,000V, 750VAC (True rms)</th>
</tr>
</thead>
<tbody>
<tr>
<td>DC volts</td>
<td>±(0.3% rdg + 2 digits)</td>
</tr>
<tr>
<td>400mV</td>
<td>±(0.3% rdg + 5 digits)</td>
</tr>
<tr>
<td>4V</td>
<td>±(0.8% rdg + 5 digits)</td>
</tr>
<tr>
<td>40V</td>
<td>±(1.5% rdg + 5 digits)</td>
</tr>
<tr>
<td>400V</td>
<td>±(2.0% rdg + 10 digits)</td>
</tr>
<tr>
<td>750VAC</td>
<td>±(2.5% rdg + 10 digits)</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>AC current</th>
<th>4mA, 40mA, 400mA, 10A</th>
</tr>
</thead>
<tbody>
<tr>
<td>DC current</td>
<td>±(0.8% rdg + 5 digits)</td>
</tr>
<tr>
<td>4mA</td>
<td>±(1.5% rdg + 5 digits)</td>
</tr>
<tr>
<td>40mA</td>
<td>±(2.0% rdg + 10 digits)</td>
</tr>
<tr>
<td>10A</td>
<td>±(3.0% rdg + 10 digits)</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Resistance</th>
<th>4kΩ, 4MΩ, 40MΩ, 400MΩ, 2kΩ, 20kΩ, 200kΩ, 2MΩ, 20MΩ</th>
</tr>
</thead>
<tbody>
<tr>
<td>AC accuracy</td>
<td>±(0.5% rdg + 5 digits)</td>
</tr>
<tr>
<td>DC accuracy</td>
<td>±(1.0% rdg + 5 digits)</td>
</tr>
<tr>
<td>Resolution</td>
<td>0.1μΩ</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Capacitance</th>
<th>20nF, 200nF, 2μF, 20μF</th>
</tr>
</thead>
<tbody>
<tr>
<td>AC accuracy</td>
<td>±(1% rdg + 1 digit)</td>
</tr>
<tr>
<td>DC accuracy</td>
<td>±(2.0% rdg + 10 digits)</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Frequency</th>
<th>100Hz, 1kHz, 10kHz, 100kHz, 1MHz</th>
</tr>
</thead>
<tbody>
<tr>
<td>Accuracy</td>
<td>±(0.1% + 4 digits)</td>
</tr>
<tr>
<td>Sensitivity</td>
<td>Sine wave 0.6Vrms</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Power</th>
<th>AC: 120VAC</th>
</tr>
</thead>
<tbody>
<tr>
<td>Dimensions</td>
<td>9V battery &amp; 6 “AA” batteries (not incl.)</td>
</tr>
<tr>
<td>Weight</td>
<td>2 lbs. 11 oz.</td>
</tr>
</tbody>
</table>

---

**Software included!**
DIGITAL MULTIMETERS

Model M-2785

Features
• 3 1/2 digit, 2,000 count display
• Audible continuity test
• Data hold / peak hold
• Frequency to 15MHz
• Capacitance to 200µF
• Transistor / diode / logic test
• AC/DC current to 10A
• Auto power off
• Holster included

Specifications
| AC + DC | 200mV / 0.25% DC, 1% AC; 2V, 20V, 200V / 0.8% DC, 1% AC; 1000VDC / 0.8%, 750VAC / 1.5% |
| Volts / Accuracy | 1000VDC / 0.8%, 750VAC / 1.5% |
| AC + DC | 20µA, 200µA, 2mA, 20mA / 0.8%, 1.2% AC; 200mA / 1% DC, 1.5% AC; 10A / 1.5% DC, 2% AC |
| Current / Accuracy | 200mA / 1% DC, 1.5% AC; 10A / 1.5% DC, 2% AC |
| Resistance / Accuracy | 200Ω, 2kΩ, 20kΩ, 200kΩ / 0.8%; 2MΩ / 1.5%; 20MΩ / 2% |
| Frequency / Accuracy | 12kHz, 20kHz, 200kHz, 1MHz, 1.25MHz / 0.25% |
| Accessories | Heavy-duty test leads, holster, manual, and 9V battery included |
| Dimensions | 7 1/2” (H) x 3 1/2” (W) x 1 3/16” (D) |
| Weight | 1 lb., 6 oz. including holster, 12 oz. without holster |

Compact VOM

Model M-105

Features
• 10,000Ω/V DC, AC
• Reads volts, amps, ohms
• 15 ranges
• Pocket size
• Battery test
• Fuse protected
• Safety test leads

Specifications
| DC volts | 2.5, 10, 50, 250, 1000 DC volts / 0.5% Full Scale Reading (FSR) |
| AC volts | 200mV / 0.8%, 1000mV / 1.5%, 2V / 1%, 20V / 1.5%, 200V / 2% |
| DC current | 10mA, 250mA, 2mA, 20mA / 0.5% Full Scale Reading (FSR) |
| Ohmmeter | x10, x1k (3.6kΩ Mid Scale), 30kΩ Full Scale Reading (FSR) |
| Battery test | 1.5V (250mA), 9V (10mA) |
| Accessories | Test leads, manual, 1.5V “AA” battery included |
| Dimensions / weight | 4 1/2” (H) x 2 1/2” (W) x 1 9/16” (D) / 4.2 oz. |

20k/V VOM

Model M-1250

Features
• 20,000Ω/V DC, AC
• 23 ranges
• 3 1/2” meter
• Mirrored scale
• Audible continuity
• Checks transistors/diodes
• 10A DC current
• dB scale
• Battery test
• Safety test leads

Specifications
| DC volts | 1, 5, 2.5, 10, 50, 250, 1000, 3% Full Scale Reading (FSR) |
| AC volts | 10, 50, 250, 1kV, 4% Full Scale Reading (FSR) |
| DC current | 50µA, 2.5mA, 25mA, 250mA, 10% 3% Full Scale Reading (FSR) |
| Ohmmeter | x1, x10, x100, x1k, x10k |
| Battery test | 1.5V (250mA), 9V (10mA) |
| Accessories | Test leads, manual, 9V & (2) 1.5V AA batteries included |
| Dimensions / weight | 5 29/32” (H) x 3 23/32” (W) x 1 11/16” (D) / 9.9 oz. |

ANALOG MULTIMETERS

Digital Capacitance Meter

Model CM-1555

Features
• 3 1/2 Digit, 2,000 count LCD readout with unit indicator.
• Measures capacitors from 0.1pF to 20,000µF.
• Zero control for test lead compensation.
• Banana jack and special insertion jack included.
• Compact size with tilt stand and holster.

Specifications
| Range | 200pF, 2,000pF, 20nF, 200nF, 2µF, 20µF, 200µF, 2,000µF, 20mF |
| Resolution | 0.1pF, 1pF, 10pF, 100pF, 1nF, 10nF, 100nF, 1µF, 10µF |
| Accuracy | 200pF: ±(0.5% rdg + 1 dgt + 0.5pF), 2,000pF-200µF: ±(0.5% rdg + 1 dgt), 2,000µF: ±(2.0% rdg + 1 dgt), 20mF: ±(4.0% rdg + 1 dgt) |
| Accessories | Test leads, manual, holster, and 9V & (2) 1.5V AA batteries included |
| Dimensions / Weight | 6 3/8” (H) x 3” (W) x 1 3/4” (D) / 10.56 oz. |

Available as kit

Model M-1250K

Features
• 3 1/2 digit, 2,000 count display
• Audible continuity test
• Data hold / peak hold
• Frequency to 15MHz
• Capacitance to 200µF
• Transistor / diode / logic test
• AC/DC current to 10A
• Auto power off
• Holster included
Digital AC Clamp Meter
Model ST-1012

Features
- 3½ digit display
- AC current to 1,000A
- AC voltage to 750VAC
- DC voltage to 1,000VDC
- Temperature type K
- Resistance to 2MΩ
- Audible continuity
- Data hold
- Diode test
- Zippered case included

Specifications
AC volts 200V, 750V
Accuracy 200V: ±(1.0% rdg + 5dgts)
750V: ±(1.2% rdg + 5dgts)
DC volts 200mV, 2V, 20V, 200V, 1,000V
Accuracy 200mV: ±(0.5% rdg + 1dgt);
2V - 200V: ±(0.5% rdg + 3dgts)
1,000V: ±(0.8% rdg + 3dgts)
AC current 20A, 200A, 1,000A
Accuracy 20A: ±(4.0% rdg + 5dgts);
200-400A: ±(2.5% rdg + 5dgts);
400-1,000A: ±(3.0% rdg + 10dgts)
Resistance 200, 2kΩ, 20kΩ, 200kΩ, 20MΩ:
Accuracy 200Ω: ±(1.0% rdg + 5dgts);
2kΩ-20MΩ: ±(1.0% rdg + 5dgts)
Temperature 32°F - 753°F: ±(1.0% rdg + 3dgts);
754°F - 1,382°F: ±(2.0% rdg + 3dgts)

Digital AC/DC Clamp Meter
Model ST-3030

Features
- 3¾ digit, 4,000 count display
- AC/DC clamp-on meter
- Auto/manual range
- Capacitance
- Diode check/continuity buzzer
- Relative measurement
- Temperature type K
- Frequency
- Data hold
- Back light
- Auto power off
- Zippered case included

Specifications
AC volts 4V, 40V, 400V: ±1.0%;
400mV/600V: ±0.8%
DC volts 400mV, 4V, 40V, 400V: ±0.5%;
600V: ±0.8%
AC current 400A: ±2.0%
1,000A: ±2.5%
DC current 400A: ±1.5%; 1,000A: ±2.0%
Resistance 40Ω, 4kΩ, 40kΩ, 400kΩ, 4MΩ:
±1.0%; 40MΩ: ±2.0%
Capacitance 40nF ±3.0%; 400nF/4μF ±2.5%
40/100μF ±5.0%
Frequency 10Hz - 10MHz: ±1.0%
Duty cycle 0.1% - 99.9% ±2.0%
Temperature -58°F - 302°F: ±(5% + 2°F)
302°F - 1,292°F: ±(3% + 2°F)

Halogen Leak Detector
Model WJL-6000

Features
- Detect all kinds of halogen refrigerants.
- Sensitivity adjusted at any time and it can be adjusted automatically to the best state of detecting.
- Audible and visual leak indicators
- Inner precise IC with Ultra-Low consume circuit design, more stable, longer battery time.
- Tri-color visual display of battery voltage
- Excellent sensor, high sensitivity, longer use time
- Storage pouch included

Digital Clamp Meter
Model DL-379

Features
- Dual display
- 3¾ digit, 4,000 count display
- AC current - 400A
- AC voltage - 750VDC
- DC voltage - 1,000VDC
- AC/DC microamps - 2,000μA
- Resistance - 40MΩ with continuity buzzer
- Capacitance - 4,000μF
- Temperature Type K - -40°F - 752°F
- Frequency - 10Hz to 100kHz
- Diode test
- Data hold
- Auto power off
- Zippered case included
VARIABLE VOLTAGE POWER SUPPLIES

Triple Output Power Supply
Model XP-770

The XP-770 is a triple-output regulated power supply providing two variable outputs (0-20VDC @ 2A) and one fixed (5VDC @ 3A). Four LCD displays allowing the output voltages and currents to be displayed simultaneously. The variable outputs can work independently, in series, or in parallel modes. The highest output voltage is the sum of twice the voltage value in series mode and the highest output current is the sum of twice the current value when in parallel mode.

Specifications

<table>
<thead>
<tr>
<th>Input voltage</th>
<th>120/220VAC, 50/60Hz</th>
</tr>
</thead>
<tbody>
<tr>
<td>Output voltage</td>
<td>Dual 0-20VDC @ 2A</td>
</tr>
<tr>
<td>Output voltage</td>
<td>5V @ 3A</td>
</tr>
<tr>
<td>Dimensions / weight</td>
<td>10⅞” (H) x 6⅞” (W) x 14” (D) / 12 lbs. 14 oz.</td>
</tr>
</tbody>
</table>

0-50VDC @ 3A Power Supply
Model XP-752

The XP-752 has an output of 50VDC @ 3A. Its features include fine and coarse controls for voltage and current, and contains two 3 digit LED Volt / Current meters.

The supply incorporates an externally controlled current cutoff circuit with an LED indicating current overload. Protected against short circuits and overloads.

Specifications

<table>
<thead>
<tr>
<th>Input voltage</th>
<th>120/220VAC, 50/60Hz</th>
</tr>
</thead>
<tbody>
<tr>
<td>Output voltage</td>
<td>0-50VDC @ 3A</td>
</tr>
<tr>
<td>Dimensions</td>
<td>5 13/32” (H) x 11⅛” (W) x 6⅜” (D)</td>
</tr>
<tr>
<td>Weight</td>
<td>13 lbs.</td>
</tr>
</tbody>
</table>

0-30VDC @ 5A Power Supply
Model XP-605

The XP-605 has an output of 30VDC @ 5A. Its features include fine and coarse controls for voltage and current, and contains two analog Volt / Current meters.

The supply incorporates an externally controlled current cutoff circuit with an LED indicating current overload. Protected against short circuits and overloads.

Specifications

<table>
<thead>
<tr>
<th>Input voltage</th>
<th>120/220VAC, 50/60Hz</th>
</tr>
</thead>
<tbody>
<tr>
<td>Output voltage</td>
<td>0-30VDC @ 5A</td>
</tr>
<tr>
<td>Dimensions</td>
<td>5 13/32” (H) x 11⅛” (W) x 6⅜” (D)</td>
</tr>
<tr>
<td>Weight</td>
<td>13 lbs.</td>
</tr>
</tbody>
</table>
4 Fully Regulated Power Supplies in One Unit

Model XP-581A

The XP-581 is our most popular power supply. It is ideally suited for laboratories, classrooms, and hobbyist use. It features 3 fixed DC voltages: +5V @ 3A, +12V @ 1A, –12V @ 1A and variable DC voltage: 0V - 20V @ 2A. Housed in a rugged steel case, it is the perfect combination of versatility and high value.

AC/DC Variable Power Supply

Model XP-625

The XP-625 is an ideal power supply for your school lab. It contains three voltages: 0-30VDC @ 5A, 0-40VAC @ 5A, and 0-110VAC @ 2.5A. All three supplies are controlled by the voltage adjust knob on the front panel. The unit contains a voltmeter and an ammeter. The voltmeter is used for both 30VDC and 40VAC output voltages. The ammeter only registers the DC output current. The outputs are fuse protected from overload or shorting.

Fixed Voltage Supply

Model XR-38

Model XR-38 is a 13.8VDC regulated power supply capable of delivering up to 3A of continuous current. It is ideal for mobile radio, cellular phones, CB or ham radio equipment.
POWER SUPPLIES

Deluxe Battery Eliminator

Model XP-100

This power supply is an ideal bench top battery eliminator. Substitutes a wide variety of batteries including AA, AAA, C, D, and 9V types. The voltage is conveniently selected by a rotary switch. Advanced, solid-state electronics provide both LINE and LOAD regulation of the output voltage. The voltage selector switch is precision-designed so that the output voltage does not increase during adjustment between voltage ranges.

Specifications

<table>
<thead>
<tr>
<th>Input voltage</th>
<th>120VAC</th>
</tr>
</thead>
<tbody>
<tr>
<td>Output voltage</td>
<td>1.5, 2.2, 3, 4.5, 5, 6, 7.2, 9, 10, 12, 13.8, 15VDC</td>
</tr>
<tr>
<td>Output current</td>
<td>1A max.</td>
</tr>
<tr>
<td>Accuracy</td>
<td>±5%</td>
</tr>
<tr>
<td>Dimensions / weight</td>
<td>3 ¾” (H) x 8 ¼” (W) x 7” (D) / 5 lbs.</td>
</tr>
</tbody>
</table>

Available in kit XP-100K

Triple Output AC/DC Power Supply

Model XP-720

The Model XP-720 has 3 fully regulated supplies; 1.25-15V @ 1A, –1.25 to –15V @ 1A, or (3-30V @ 1A) and 5V @ 3A. It also has 6.3VAC @ 1A and 12.6VAC center-tapped @ 1A.

It features short circuit protection on all supplies.

Specifications

<table>
<thead>
<tr>
<th>Input voltage</th>
<th>120VAC, 60Hz</th>
</tr>
</thead>
<tbody>
<tr>
<td>Output voltage</td>
<td>1.25VDC - 15VDC @ 1A; –1.25VDC - –15VDC @ 1A; 5VDC @ 3A</td>
</tr>
<tr>
<td>Dual 6.3VAC @ 1A, 12.6VAC @ 1A (center-tapped)</td>
<td></td>
</tr>
<tr>
<td>Dimensions / weight</td>
<td>3 ½” (H) x 8” (W) x 6 ½” (D) / 7 lbs.</td>
</tr>
</tbody>
</table>

Available in kit XP-720K

Spectrum Tube Power Supply

Model STPS-1

This power supply provides safe and reliable operation for 10” spectrum tubes. The unique design supplies a voltage that prolongs the life of the spectrum tubes. Specially designed sockets eliminate electrical shock hazards. The unit operates at 120V @ 60Hz.

(Tube not included).

Specifications

<table>
<thead>
<tr>
<th>Input voltage</th>
<th>120VAC, 60Hz</th>
</tr>
</thead>
<tbody>
<tr>
<td>Output voltage</td>
<td>5,000V without spectrum tube.</td>
</tr>
<tr>
<td>Operating temperature</td>
<td>10°C to 50°C</td>
</tr>
<tr>
<td>Storage temperature</td>
<td>–20°C to 60°C</td>
</tr>
<tr>
<td>Dimensions / weight</td>
<td>13 3/4” (H) x 4 5/8” (W) x 3½” (D) / 4 lbs. 12.8 oz.</td>
</tr>
</tbody>
</table>
Logic Probe & Pulser Combo
Model LP-900/625
A unique two-in-one logic probe & pulser that simplifies troubleshooting and analyzing digital circuits.

Specifications - Logic Probe
- Frequency Response: 50MHz
- Detectable Pulse Width: 10ns
- Logic Threshold: TTL HI 3V, Lo 0.75V
- Input Impedance: 120kΩ
- Operating Supply Voltage: 5-15V
- Power Supply Protection: +
- Minimum detectable pulse width: 25ns
- Frequency response: 20MHz
- Working voltage: 4-18VDC
- Pulse indicator flash time: 500ms
- Operating temperature: 32°C - 122°F (0°C - 50°C)
- Supply voltage protection: +

Logic Probe Model LP-560
The LP-560 Logic Probe provides convenient and precise use in the measurement of logic circuits. It displays logic levels (high or low), pulses and voltage transients down to 25 nanoseconds. High intensity LED readouts provide instant response to the logic state.

Specifications - Logic Pulser
- Pulse Repetition Rate: 0.5/400Hz
- Pulse Width: 10ns
- Output Current:
  - Pulse Mode @ 0.5Hz: 100mA sink/source
  - Square Wave Mode @ 50Hz: 5mA sink/source
- Operating Supply Voltage: 5-15V
- Max. Sync Input Protection: +
- Operating temperature: 32°C - 122°F (0°C - 50°C)
- Power Supply Protection: +

Logic Pulser Model LP-425K (kit)
The Logic Pulser Kit is a desirable device in the troubleshooting of logic circuits and compliments the logic probe in pulse tracing signals in complex circuits. It injects a signal directly into a circuit without having to disconnect components. It is circuit powered and has a switchable output of 0.5 or 400Hz at 100mA. Designed for easy construction.

Specifications - Logic Pulser
- Pulse Repetition Rate: 0.5/400Hz
- Pulse Width: 10ns
- Output Current:
  - Pulse Mode @ 0.5Hz: 100mA sink/source
  - Square Wave Mode @ 50Hz: 5mA sink/source
- Operating Supply Voltage: 5-15V
- Max. Sync Input Protection: +
- Operating temperature: 32°C - 122°F (0°C - 50°C)
- Power Supply Protection: +

Logic Probe Model LP-525K (kit)
Digital Logic Probe in kit form provides convenient and precise use in measurement of logic circuits. It displays logic levels (high or low), pulses and voltage transients down to 25 nanoseconds and a maximum input of 20MHz. Large PC board and detailed manual for fast construction.

Specifications - Logic Pulser
- Pulse Repetition Rate: 0.5/400Hz
- Pulse Width: 10ns
- Output Current:
  - Pulse Mode @ 0.5Hz: 100mA sink/source
  - Square Wave Mode @ 50Hz: 5mA sink/source
- Operating Supply Voltage: 5-15V
- Max. Sync Input Protection: +
- Operating temperature: 32°C - 122°F (0°C - 50°C)
- Power Supply Protection: +

Frequency Counter 1MHz - 3GHz
Model F-2800

Features
- 10-digit liquid crystal display
- Hold switch to lock display
- Hi-Z low range
- Auto power-off after 10 minutes
- 1MHz to 3GHz frequency range
- 0.1Hz resolution
- Low battery indicator

Specifications
- Frequency range: 1MHz - 3GHz
- Impedance: 50Ω (BNC socket)
- Case: Stamped aluminum w/ black anodized finish
- Power: 9VDC, 300mA
- Battery: Standard 9V battery or 200mA NiCd pack
- Dimensions/Weight: 4 3/16"(W) x 2 11/16"(D) x 1 1/4"(H) x 7.5 oz.

Frequency Counter 10Hz - 3GHz
Model F-2850

Features
- 10-digit liquid crystal display
- Hi-Z low range
- Automatic hold, LED back light, beeper
- 1MHz to 3GHz frequency range
- 0.1Hz resolution
- Low battery indicator

Specifications
- Frequency range: 10Hz - 3GHz
- Impedance: One dual-purpose BNC socket
- Case: Plastic, 50Ω for range 1MHz to 3GHz
- Power: 9VDC/300mA
- Battery: Standard 9V battery or 200mA NiCd pack
- Dimensions/Weight: 3 13/16"(W) x 2 11/16"(D) x 1 1/8"(H) x 8.8 oz.
Tone Generator / Probe Set

Model TPG-70

The Model TPG-70 includes both TP-20 (probe) and TG-50 (generator). Technicians and installers can quickly locate wires in applications such as TeleCom, Networking, CATV, HVAC, Electrical, and Automotive Circuits.

Features
- Use to locate termination point of all types of communication cables.
- Single or dual tone with adjustable volume.
- Audible continuity on telco and bare wires.
- LED signal confirmation.
- Probe works with any tone generator.
- Non-conductive plastic tip for safety.
- Low battery indicator.

Telegram Case Included

Also Sold Separately (TP-20 Probe) (TG-50 Generator)

Telephone Test Set

Model BSM-200

The Model BSM-200 is a pocket-size test set used by telephone technicians and installers.

Features
- Mega ohm mW meter for testing insulation resistance and determining line conditions without help from the central office.
- High impedance monitor mode so not to disrupt conversation or data transfer.
- Other convenient functions include: Last number redial, hook and flash, speaker phone, mute, polarity check, battery check, touch tone, and pulse dialing.
- Model BSM-200 features ear microphone for hands-free operation.
- Made of high impact material for shock resistance.
- Tests cords use piecing pin and Angled Bed of Nails (ABN) connectors.
- 9V battery included.

Carrying Case Included

Multi-Network Cable Tester

Model TCT-355

The TCT-355 Cable Tester is a convenient instrument for testing different shielded/unshielded wiring schemes communication cable with RJ11 and RJ45 connectors and coax cables with F and BNC connectors.

Features
- Tests RJ45 TIA568A/B (AT&T 258A), 10 Base-T, token ring, RJ11/RJ12, USOC and coaxial BNC cable.
- Automatically check cable for continuity, shorted, open and crossed wire pairs.
- Coaxial cable port identifies cable conditions including shorts, shield opens, and center conductor breaks.
- Main unit and remote allow one person testing.
- Terminator and carrying case included.

Requires one (1) 9V battery (part # 590009)

Carrying Case
FIBER OPTICS

Fiber Optics Voice & Data Kit
w/ training course Model FO-30K

Learn the basics of fiber optics communications while you build this exciting kit. Transmit your voice or a 1kHz signal through the fiber optic cable to a fiber optic receiver. Comes complete with all of the necessary components, including PC boards, microphone, speaker and fiber optic cable. Transmitter and receiver on separate boards, can be located hundreds of feet apart. Use for science projects.

Requires two (2) 9V batteries (part # 590009).

Fiber Optic Cable P/N 810020 - Fiber Optic Cable - Sold in spools of 10 feet.

Fiber Optics Tool Kit
Model TK-5000

Includes
- C-200 - Case
- ST-92 - Viewing microscope
- C-10 - Parts case
- ST-90 - Fiber continuity tester
- ST-88 - Fiber optical stripper
- ST-91 - Carbide fiber scribe
- ST-340 - Kevlar® scissors
- ST-950 - Hex-type crimping tool
- ST-86 - Polishing pad SC (37.8mm)
- ST-87 - Polishing pad ST (32.8mm)
- ST-89 - Foam swab cleaning kit

Fiber Continuity Tester Model ST-90

Powerful Krypton light source provides long range over multimode fiber.

Requires two (2) "AA" batteries (included)

Fiber Optic Viewing Scope Kit Model ST-92

This fiber optic viewing scope kit makes it simple to view ST/SC/FC - supplied with dual face plates.

Zoom lens: 160X, 180X, and 200X

Requires two (2) "AA" batteries (included)

Carbide Fiber Scribe Model ST-91

Wide inclined carbide tip for easy cleaving. Lightweight, pen-size body clips to shirt pocket.

Fiber Optical Stripper Model ST-88

Strips 125 micron fiber with 250 micron buffer coating without scratching or nicking fiber.
As the primary manufacturer, we can design and manufacture breadboards with an unlimited number of test points and special connectors. Call us for further information and cost.

* Available in retail packaging - See price sheet

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**BREADBOARD - PROTOTYPE DESIGN AIDS**

A broad array of breadboards that provide unlimited freedom in laying out circuits and prototyping. Breadboards are arrayed from 830 tie points up to 3,220 tie points with colored binding posts that simplify identification of voltage points. Base material heavy aluminum, black anodized.

<table>
<thead>
<tr>
<th>Model 9440 *</th>
<th>Model 9438 *</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Terminals:</strong> 3,220 tie points, 504 separate 5 point terminals, plus 14 horizontal bus lines.</td>
<td><strong>Terminals:</strong> 2,390 tie points, 378 separate 5 point terminals, plus 10 horizontal bus lines of 50 test points each.</td>
</tr>
<tr>
<td><strong>Binding Posts:</strong> Four coded black, red, yellow, and green.</td>
<td><strong>Binding Posts:</strong> Four coded black, red, yellow, and green.</td>
</tr>
<tr>
<td><strong>Dimensions:</strong> 8 1/4&quot; wide, 9 1/2&quot; long.</td>
<td><strong>Dimensions:</strong> 7&quot; wide, 9&quot; long.</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>**Model 9438 *</td>
<td>Model 9425 *</td>
</tr>
<tr>
<td><strong>Terminals:</strong> 1,660 tie points, 252 separate 5 point terminals, plus 8 horizontal bus lines of 50 common tie points each.</td>
<td><strong>Terminals:</strong> 830 tie points, 126 separate 5 point terminals, plus 4 horizontal bus lines of 50 tie points each.</td>
</tr>
<tr>
<td><strong>Binding Posts:</strong> Three coded black, red, and green.</td>
<td><strong>Binding Posts:</strong> Three coded black, red, and green.</td>
</tr>
<tr>
<td><strong>Dimensions:</strong> 5 1/4&quot; wide, 8 1/2&quot; long.</td>
<td><strong>Dimensions:</strong> 7 1/4&quot; wide, 3 3/4&quot; long.</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>**Model 9433 *</td>
<td>Model 9425 *</td>
</tr>
<tr>
<td><strong>Terminals:</strong> 830 tie points, 126 separate 5 point terminals, plus 4 horizontal bus lines of 50 tie points each.</td>
<td><strong>Terminals:</strong> 830 tie points, 126 separate 5 point terminals, plus 4 horizontal bus lines of 50 tie points each.</td>
</tr>
<tr>
<td><strong>Binding Posts:</strong> Three coded black, red, and green.</td>
<td><strong>Binding Posts:</strong> Three coded black, red, and green.</td>
</tr>
<tr>
<td><strong>Dimensions:</strong> 7 1/4&quot; wide, 3 3/4&quot; long.</td>
<td><strong>Dimensions:</strong> 7 1/4&quot; wide, 3 3/4&quot; long.</td>
</tr>
</tbody>
</table>

**Model 9483WK**

- 9433 breadboard (830 tie points) with a JW-70 (70 piece) jumper wire kit.

**Jumper Wire Kits for Bredboarding**

<table>
<thead>
<tr>
<th>Model JW-350 *</th>
<th>Model JW-140 *</th>
</tr>
</thead>
<tbody>
<tr>
<td>Contains 350 lengths of pre-stripped, pre-formed #22 solid wire in various colors. 14 different lengths of 25 pieces each.</td>
<td>Contains 140 lengths of pre-stripped, pre-formed #22 solid wire in various colors. Contains 14 different lengths of 10 pieces each.</td>
</tr>
<tr>
<td>Contained in a large 14 compartment plastic case.</td>
<td>Contained in a plastic case.</td>
</tr>
<tr>
<td><strong>Dimensions:</strong> 2 1/8&quot; (H) x 6 1/2&quot; (W).</td>
<td><strong>Dimensions:</strong> 2&quot; (H) x 6 1/2&quot; (W) x 1/2&quot; (D).</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Model JW-70</th>
<th>Model JW-30</th>
</tr>
</thead>
<tbody>
<tr>
<td>Contains 70 lengths of pre-stripped, pre-formed #22 solid wire in assorted colors and lengths.</td>
<td>Contains 30 pieces of reinforced, male to male jumpers - 10 pieces each of 2&quot;, 4&quot;, and 6&quot;. Assorted colors.</td>
</tr>
<tr>
<td><strong>Dimensions:</strong> 2&quot; (H) x 6 1/2&quot; (W) x 1/2&quot; (D).</td>
<td><strong>Dimensions:</strong></td>
</tr>
</tbody>
</table>

As the primary manufacturer, we can design and manufacture breadboards with an unlimited number of test points and special connectors. Call us for further information and cost.
Basic Electronic Experiments Model PK-101
Transforms any Standard Bredboard into an Electronic Learning Center!

The experiments in Model PK-101 require a bredblox (version PK-101B) or can be done on the Elenco® XK-150, XK-550 or XK-700 Trainers. No soldering or tools required, all parts included.

Perform 50 Experiments
• Electronic keyboard
• Water alarm
• Finger touch lamp
• Electronic kazoo
• Battery tester
• Magnetic bridge
• Voltmeter
• Morse code

* And a Lot More! *

Ordering Information:
Model PK-101: Includes 72 page manual and all parts to perform 50 experiments.
Model PK-101B: Same as PK-101, but includes our 9830 Bredblox (shown on page 6 and a 9V battery).

Basic Electronics with Computer Interface
Model PK-201

Computer interface turns your PC into an oscilloscope and spectrum analyzer. See visually how oscillators and amplifiers work. Analyze your own voice on the monitor.

Over 50 Experiments
• Audio amplifiers
• Oscillators
• Siren

* And a Lot More! *

Requires one (1) 9V battery (part # 590009) or power supply.

Before You Learn Electronics, Learn About Electronic Components!
Model ECK-10

28 page manual with dozens of illustrations includes detailed descriptions of all parts, their functions in a circuit, color codes, and five self tests.

Basic Parts Kit
Model CK-1000

Over 50 Parts Come with the Course!

Plastic Parts Container
1’ x 7’ x 1 1/2’ - 18 divisions
Resistors: 1/4W - 5 each
10Ω, 100Ω, 470Ω, 1kΩ, 2kΩ, 4.7kΩ, 8.2kΩ, 10kΩ, 22kΩ, 100kΩ, 470kΩ, 1MΩ
Electrolytic Capacitors: 50V Radial - 2 each 1µF, 4.7µF, 10µF, 47µF, 100µF, 1000µF
Mylar Capacitors: 100V Radial DIP - 2 each .01µF, .047µF, .01µF, .047µF, .1µF, .33µF
Inductors: 1 each 4.7µH, 10µH, 47µH, 100µH, 1mH, 10mH, 33mH
Trimpots: Single Turn - 1 each 50Ω, 1kΩ, 10kΩ, 100kΩ, 500kΩ, 1MΩ
Switches: 2 each Push-button, SPDT slide, DPDT slide, 6-position DIP

Hook-Up Wire on Spools
#22 Gauge Solid 25ft.
Black Part #: 884410
Red Part #: 884420
Yellow Part #: 884440
Green Part #: 884450
White Part #: 884490

Lead-free Solder - 99.3/0.7 rosin core .032” dia.
1lb. spools part #: 551136 - 1LB

Wire in 1,000 and 5,000 ft. spools (20, 22, and 24 gauge) solid or stranded - all colors - available upon request.

Resistor Kit
365 Total Pieces Model RK-365

Contains five (5) each of 73 standard values from 1Ω to 1MΩ, 1/2W.

-21-
HVAC ELECTRICIAN TOOL KITS

Electricians General Purpose Tool Kit
Model TK-8000
A heavy-duty tool pouch, designed for electricians and maintenance people, made from a heavy-duty polypropylene material. Includes an adjustable quick-release belt.

Includes the following:
- C-170 Tool pouch
- ST-36 Electrician knife
- ST-30Y Wire stripper
- ST-26 Diagonal pliers
- ST-34 Long nose pliers
- ST-71A #2 philips screwdriver
- ST-72A 1/4" slotted screwdriver
- ST-70 Linesman pliers
- ST-95 8" groove pliers
- ST-38G AC receptacle tester

HVAC Electricians Master Tool Kit
Model TK-8200
A complete tool kit for the troubleshooting of HVAC systems includes two meters for making all critical voltage, current and temperature measurements. Also includes quality, heavy-duty, large durable tool bag featuring 18 pockets of every conceivable size. It is designed with an open top for ease of access, triple-bottom construction and sturdy handles.

Includes the following:
- C-180 Portable tool bag
- M-2625 Autoranging meter with temperature
- ST-1012 Clamp meter
- ST-95 8" groove pliers
- ND-3 Nut drivers 3/16", 1/4", 5/16"
- ST-26 Diagonal pliers
- ST-125 6 pc. Screwdriver set
- ST-74 AC line splitter
- ST-73 AC voltage detector probe
- ST-32 Inspection flashlight
- ST-38G AC receptacle tester

AC Voltage Detector Probe
Model ST-73
Detect AC voltages 120/240VAC without contact. Visual and audible indicators. Excellent for voltage tracing circuits.

AC Line Splitter
Model ST-74
For measuring current in plug-in appliances and air conditioners. Splits two conductor line cord for reading at outlets under load. Permits voltage measurements at outlet under active conditions. Direct and 10X sensitivity.

AC Receptacle Tester w/ Built-in GFCI Tester
Model ST-38G
UL listed. Gives instant display of wiring conditions of any standard 3-wire 110VAC outlet. Also tests GFCI.

Circuit Tester
Model ST-37
AC/DC 80-500 volts. Bright neon indicator, pocket clip, insulated case.
**Network Service Tool Kit**

**Model TK-4000**

A service and installation tool kit for networks, modems, and telephones. Includes quality, heavy-duty tools and a tester that will handle telephone cables with RJ-11 and RJ-45 connectors and coaxial cable with F or BNC connectors.

**Includes the Following:**
- TCT-355 Phone/coax cable tester
- ST-38G AC receptacle tester
- TWT-1 Telephone line analyzer
- ST-35 Coaxial cable stripper
- ST-568 Modular crimping tool
- ST-60 Hex-type crimping tool
- ST-75 11 pc. screwdriver bit set
- ST-620 Punch down tool w/ blade
- ST-211 Round cable cutter
- C-30 Parts box
- C-200 Carrying case

**Deluxe 50pc. Computer Technician Service Tool Kit**

**Model TK-1700**

A complete tool kit for the repairing and maintaining of computers and electronic devices. Included in this kit is a powerful mini vacuum with attachments and a pressurized canned-duster to remove debris or dust. **OVER 50 ITEMS.**

**Includes the Following:**
- ST-75 11 pc. drive set
- SR-1N 25-watt soldering iron
- MSV-1 Mini vacuum w/ 3 attachments
- SH-2 Soldering iron stand
- LF-99 Lead-free solder tube
- ET-10 IC puller
- ST-44 Anti-static wipes
- ST-620 Punch down tool w/ blade
- C-200 Large zipper case with handles
- ST-15 9 pc. allen wrench set
- ST-43 10 cotton swabs
- ST-16 Crossover tweezers
- ST-568 Modular crimping tool
- ST-60 Hex-type crimping tool
- ST-75 11 pc. screwdriver bit set
- ST-211 Round cable cutter
- C-30 Parts box
- C-200 Carrying case

**12pc. Computer Service Tool Kit**

**Model TK-1100**

**Includes the Following:**
- 3/16” nut driver
- 1/4” nut driver
- Driver handle - Fits all bits
- Reversible screwdriver bits T10 & T15.
- Reversible screwdriver bits 3/16” & 1/4”
- Reversible screwdriver bits #1 & #2 phillips
- ST-17 Tweezers
- ET-14 IC inserter 14-16 pin
- ET-10 IC puller
- ST-101A 1/8" slotted screwdriver
- ST-101B #0 phillips screwdriver
- PR-3 3-prong parts retriever

**Model TK-1100A** - Same TK-1100 with spare parts tube, but without the IC inserter.

**2-Year Warranty on all tools.**
NEW IN THE ELECTRONICS EDUCATIONAL FIELD. A PROFESSIONAL ORGANIZER TOOL KIT AT AFFORDABLE PRICES. NO TECHNICIAN SHOULD BE WITHOUT THIS UNIQUE TOOL KIT THAT HOLDS ALL OF THE TOOLS YOU NEED (METER, EXPERIMENTS, ETC.).

**Tools Included in Case:**
- C-800 Deluxe heavy-duty large zipper case
- ET-10 IC puller
- SE-1 Solder ease kit (4 pc.)
- SH-3 Soldering iron holder
- SP-4 Desoldering pump
- SR-2B Deluxe 25W soldering iron
- ST-1 Mini diagonal cutters
- ST-2 Mini long nose pliers
- ST-3 Wire stripper
- LF-99 Lead-free solder tube
- ST-20 Safety goggles
- ST-75 11 pc. screwdriver bit set (3 nut drivers, 2 slotted, 2 phillips, & 3 star bits)
- SW-3 Desoldering wick
- TL-8 Precision screwdriver set (6 precision screwdrivers)
- Meter shown is sold separately.
Deluxe 25 pc. Electronic Technician Tool Kit  
Model TK-2000

An electronic technician tool kit designed for the educational field. Heavy-duty deluxe tool box comes with two cantilever trays having 18 component trays. Deep bottom storage area for bulky items. 25 quality tools to meet most educational requirements.

Tools in Case

- SR-2B Soldering iron, 25W, 3-wire grounded plug
- ST-1 4 1/2” diagonal cutters, return spring, cushion grip
- ST-2 5” long nose pliers, return spring, cushion grip
- ST-3 5” adjustable wire strippers, cushion grip
- SH-1 Soldering iron holder with sponge
- SP-4 Desoldering vacuum pump
- SE-1 Solder ease kit (4 pcs.)
- TL-8 Precision screwdriver set (6 pcs.) in case
- ST-5 Slotted 3/16” screwdriver, chrome vanadium
- ST-6 Phillips #1 screwdriver, chrome vanadium
- ND-3 3-piece nut driver set, 3/16”, 1/4”, and 5/16”
- ET-10 IC puller, stainless steel, vinyl grip
- ST-20 Safety goggles
- LF-99 Lead-free solder tube
- SW-3 Desoldering wick

Deluxe 32 pc. Technician Tool Kit  
Model TK-1500

Includes the following:

- M-1000D Digital multimeter
- SR-2B Soldering iron, 25W, 3-wire grounded plug
- SE-1 Solder ease kit (4 pcs.)
- SP-4 Desoldering vacuum pump
- ST-1 4 1/2” diagonal cutters, return spring, cushion grip
- ST-2 5” needle nose pliers, return spring, cushion grip
- ET-10 IC puller, stainless steel, vinyl grip
- C-10 Parts box
- SH-2 Soldering iron stand (wire form)
- TL-8 6 pc. precision screwdriver set
- LF-99 Lead-free solder tube
- SW-3 Desoldering wick
- ST-75 11 pc. screwdriver bit set (3 nut drivers, 2 phillips, 2 slotted, & 3 star bits)

Model TK-1600 - Same as above but without meter.

15 pc. Basic Technician Tool Kit  
Model TK-1350

Includes the following:

- SR-2B Deluxe soldering iron
- ST-1 4 1/2” diagonal cutters
- ST-2 5” needle nose pliers
- ST-30 Premium wire stripper
- ST-5 3/16” slotted screwdriver
- ST-6 #1 phillips screwdriver
- SP-4 Desoldering pump
- ST-101A 1/8” slotted screwdriver
- ST-101B #0 phillips screwdriver
- SH-2 Soldering iron stand (wire form)
- LF-99 Solder tube
- ND-3 Nut driver set, 3/16”, 1/4”, & 5/16”

High quality tools in black vinyl zippered case.
## TOOLS FOR THE ELECTRONIC & ELECTRICAL INDUSTRY

### PLIERS / TOOL KIT

<table>
<thead>
<tr>
<th>Mini Diagonal Cutters</th>
<th>Mini Long Nose Pliers</th>
<th>Diagonal Cutters</th>
<th>Long Nose Pliers</th>
</tr>
</thead>
<tbody>
<tr>
<td>Drop forged steel, return spring, cushion grip. 4 ½&quot; long.</td>
<td>Drop forged steel, return spring, cushion grip. 5&quot; long.</td>
<td>Drop forged steel, cushion grip. 6&quot; long.</td>
<td>Drop forged steel, cushion grip. Two sizes.</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Wire Stripper</th>
<th>Premium Wire Stripper</th>
<th>Deluxe Wire Stripper</th>
<th>Professional Wire Stripper/Crimper</th>
</tr>
</thead>
<tbody>
<tr>
<td>Adjustable wire stripper, return spring, cushion grip. 8&quot; long.</td>
<td>7-in-1 all-purpose wire stripper, cutter, pliers, and crimper. Cushion grip. Strips AWG16 - 26. 6&quot; long.</td>
<td>Knife-type blade cuts, strips AWG 12 - 24; cushion grip, return spring. 6&quot; long.</td>
<td>Multi-purpose wire stripper, cutter, crimper, &amp; pliers. Cushion grip. Strips AWG 10-22. 8&quot; long</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Linesman Pliers</th>
<th>Slip Joint Pliers</th>
<th>Locking Pliers</th>
<th>Wire Stripper/Cutter Romex</th>
</tr>
</thead>
<tbody>
<tr>
<td>Drop forged, fully polished, cushion grip. 8&quot; long.</td>
<td>Drop forged steel, chrome plated, cushion grip. Three sizes.</td>
<td>Drop forged, fully polished, cushion grip. Three sizes.</td>
<td>Used to strip, cut and loop 12 &amp; 14 AWG Romex (NM-B non-metallic sheathed cable). Cushion grip, 8&quot; long.</td>
</tr>
</tbody>
</table>

### Hand Tool Kit

**Model ST-10**
- ST-1 4 ½" diagonal cutters
- ST-2 5" needle nose pliers
- ST-3 Wire stripper
- ST-5 3/16" slotted screwdriver
- ST-6 #1 phillips screwdriver

### 9 Piece Electronic Technician Starter Tool Kit

**Model TK-14**
- SR-1N Standard 25W soldering iron
- SH-2 Soldering iron stand
- ST-2 5" needle nose pliers
- ST-3 Wire stripper
- LF-99 Lead-free solder tube
- ST-5 3/16" slotted screwdriver
- ST-6 #1 phillips screwdriver
- LT-99 Heat sink
- SW-3 Desoldering wick

### Solder Tool Kit

**Model ST-12**

Consists of:
- SR-1N - Standard soldering iron
- SP-4 - Desoldering pump
- SW-3 - Desoldering wick
- LF-99 - Lead-free solder tube
- SH-2 - Soldering iron stand

* Available in retail packaging - See price sheet
# SCREWDRIVERS & NUT DRIVERS

## 6 pc. Mechanics Screwdriver Set
**Model ST-125**
Hardened and tempered chrome vanadium steel shafts. Hex bolster for wrench assisted torque; magnetized tips.

### Pocket Screwdriver
Slotted 1/8” x 2” with clip. Overall 4 1/4”.
- Slotted: 3/16”, 1/4”, 5/16”, 3/8”
- Phillips: #1 & #2

### Pocket Screwdriver
Phillips #0 x 2” with clip. Overall 4 1/4”.

### Screwdriver
Shock-proof, cellulose acetate plastic handles. Chrome vanadium blade. Overall 9”.
- ST-71: #1 Phillips x 6”
- ST-71A: #2 Phillips x 6”

## 7 pc. Professional Screwdriver Set
**Model ST-121**
Chrome vanadium steel shafts. Color line handles for comfort and identity; vapor blasted magnetized tips.

### Screwdriver
Slotted 1/8” x 3”. Overall 5 1/4”.
- Slotted: 1/8”
- Phillips: #0, #1, #2

### Screwdriver
Phillips #0 x 3”. Overall 5 1/4”.

### Screwdriver
Phillips #1 x 3” chrome vanadium. Overall 6”.

### Screwdriver
Slotted 3/16” x 3” chrome vanadium. Overall 6”.

### Screwdriver
Phillips #1 x 3” chrome vanadium. Overall 6”.

### 11 Piece Screwdriver Bit Socket Set
- 3 nut drivers
- 2 phillips
- 2 slotted
- 3 star

### 5-in-1 Driver Set
- 2 Slotted (3/16” and 1/4”)
- 1 Nut driver (5/16”)

### 15 pc. Precision Quality Screwdriver Set
**Model ST-152**
- Vanadium blades, plastic handles
- Star: #T6, #T7, #T8, #T9, #T10, #T15, #T20
- Flat: 0.08”, 0.10”, 0.12”, 0.16”
- Phillips: #000, #00, #0, #1

### 17 pc. Offset Ratchet & Socket Driver Set
**Model ST-151**
This screw and socket driver set comprises six hexagon sockets made from good quality carbon steel. The screwdriver has a 1/4” hexagon drive to accommodate ten 1/4” bits: slotted, phillips, and star.
## SPECIAL TOOLS

<table>
<thead>
<tr>
<th>Item</th>
<th>Description</th>
<th>Model</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Crimping Tool/Wire Stripper</strong></td>
<td>Cuts, strips, and crimps 10 - 22 gauge wire. Cushion grip. 8” long.</td>
<td>ST-24</td>
</tr>
<tr>
<td><strong>Adjustable Wrenches</strong></td>
<td>Drop forged, chrome plated, max. jaw opening. Three sizes:</td>
<td></td>
</tr>
<tr>
<td>ST-63</td>
<td>4”</td>
<td></td>
</tr>
<tr>
<td>ST-62</td>
<td>6”</td>
<td></td>
</tr>
<tr>
<td>ST-59</td>
<td>8”</td>
<td></td>
</tr>
<tr>
<td><strong>PLCC Extractor</strong></td>
<td>A spring-assisted extraction tool designed for the removal of PLCC's from sockets.</td>
<td>ST-96</td>
</tr>
<tr>
<td><strong>IC Puller</strong></td>
<td>Stainless steel construction for removing IC's. Insulated vinyl grip.</td>
<td>ET-10</td>
</tr>
<tr>
<td><strong>IC Inserter</strong></td>
<td>14/16-pin.</td>
<td>ET-14</td>
</tr>
<tr>
<td><strong>Parts Retriever</strong></td>
<td>3-prong. Pick up parts in hard-to-reach places.</td>
<td>PR-3</td>
</tr>
<tr>
<td><strong>Tweezers Crossover</strong></td>
<td>With pointed tip. 4 1/2” long.</td>
<td>ST-16</td>
</tr>
<tr>
<td><strong>Tweezers</strong></td>
<td>6” straight. Insulated with blunt serrated ends.</td>
<td>ST-17</td>
</tr>
<tr>
<td><strong>Lighted Magnifier</strong></td>
<td>Requires 2 “AAA” batteries.</td>
<td>ST-25</td>
</tr>
<tr>
<td><strong>Electrician Knife</strong></td>
<td>2 blades, spear and screwdriver with shackle at end.</td>
<td>ST-36</td>
</tr>
<tr>
<td><strong>Allen Wrench Set</strong></td>
<td>8 pc. Ring set with springs - Twist off, twist on.</td>
<td>ST-15</td>
</tr>
<tr>
<td><strong>13 pc. Long Hex Key Wrench Set - SAE</strong></td>
<td>Chrome vanadium steel. Hardened and tempered.</td>
<td>ST-67</td>
</tr>
<tr>
<td><strong>6” Ruler</strong></td>
<td>Etched metal. Inch and metric divisions with pocket clip.</td>
<td>ST-14</td>
</tr>
<tr>
<td><strong>Inspection Mirror</strong></td>
<td>All-angle, telescoping inspection mirror.</td>
<td>ST-55</td>
</tr>
<tr>
<td><strong>Inspection Flashlight</strong></td>
<td>6” Inspection light. Bright bulb. Requires 2 “AA” batteries, part # 590001.</td>
<td>ST-32</td>
</tr>
<tr>
<td><strong>Deluxe Alignment Tool</strong></td>
<td>Metal non-magnetic tip.</td>
<td>ST-41</td>
</tr>
<tr>
<td><strong>Magnetic Pick-up Tool</strong></td>
<td>Telescopic pick-up tool with pocket clip.</td>
<td>ST-45</td>
</tr>
<tr>
<td><strong>Electricians Scissors</strong></td>
<td>Hot forged - scraper and file on back edge of blade. Double stripping botch. 5” long.</td>
<td>ST-68</td>
</tr>
<tr>
<td><strong>Hemostat</strong></td>
<td>Straight 6” insulated handle Use as a clamp to hold parts in place.</td>
<td>ST-19</td>
</tr>
<tr>
<td><strong>Mini-Vacuum Cleaner</strong></td>
<td>Includes three attachments. Requires 4 “AA” batteries (part # 590001).</td>
<td>MSV-1</td>
</tr>
<tr>
<td><strong>Precision Duster</strong></td>
<td>Pressurized blaster removes microscopic dust, lint, and other particles. Net weight: 10 oz.</td>
<td>ST-49</td>
</tr>
</tbody>
</table>

* Available in retail packaging - See Price Sheet
# DATACOM TOOLS

## Universal Stripping Tool
**Model ST-350**
- Strips outer jacket of UTP and STP cable and CAT 5 round. Strips RG 58/6/11/7 coaxial cable. Strips flat telephone cable. Cable cutter function.

## Multi-Function Wire Stripper
**Model ST-302**
- Cuts, strips RG-58, RG-59, and RG-62. Precision strips 16 to 26 gauge wire.

## Coaxial Cable Stripper
**Model ST-35**

## Ceramic Kevlar® Cutter
**Model ST-340**
- Easily trim Kevlar® strength member in fiber optic cable. The ceramic blades cut Kevlar® quickly and precisely.

## Cable Tie Gun
**Model DCT-300V / ST-375**
- Speeds up cable tie applications. Insures correct tension and provides automatic cutoff.

## Round Cable Cutter
**Model ST-211**
- The 100 pair group cutter is rated for ethernet, 100 pair group telephone cable, and RG-174 / RG-9 coax. Spring return with safety lock.

## Die Sets
The following die sets are for the Model ST-950 Crimp Tool.

- **Model DS-803**: For RG-59, RG-6, F-type CATV, BNC/TNC. 0.350", 0.320", 0.255".
- **Model DS-806**: For RG-58 & RG-59/62 AU BNC/TNC. 0.213", 0.259", 0.068".
- **Model DS-808**: For RJ-45 Eight-position Modular Plugs.
- **Model DS-810**: For RJ-45 10-position Telecom Plug.

## Universal Crimp Tool
**Model ST-950**
- Ratchet crimp action provides repeatable and reliable terminations. Pressure adjustment for activation force. Dies change quickly - 10 dies available (sold separately). Cushion grip; length 9".

## Hex-Type Crimping Tool
**Model ST-60**
- For use on RG-58 and RG-59 connectors. Cushion grip; length 9".

## Multi-Function Telephone Tool
**Model ST-500**
- Crimps, cuts, and strips. Steel frame gives long term durability. Ratchet construction for RJ-45/11/12 modular plugs. Cushion grip; length 9 ½".

## Modular Crimping Tool
**Model ST-568**
- Cuts, strips, and crimps modular plugs 8P/RJ45 and 6P/RJ12, RJ11. Cushion grip; length 7 ½".

## Economy Crimping Tool
**Model ST-560**
- Multi-function telephone tool crimps, cuts, and strips for 4, 6, and 8 pole modular plugs. Plastic construction; length 8".

## Deluxe Punch Down Tool
**Impact Type**
**Model ST-630**
- Adjustable pressure control. Suitable for 66 & 110 or KRONE terminal blocks. Includes (1) combination 66 & 88/110 blade. Storage for 1 spare blade in handle.

## Punch Down Tool
**Model ST-620**
- Non-impact tool includes (1) combination 66 & 88/110 blade. Spare blade storage in handle included.

## Can Wrench
**Model ST-670**
- An easy-to-use tool that allows access to telephone boxes and pedestals. 3/8" and 7/16" hex double end, plastic handle.
<table>
<thead>
<tr>
<th>Code</th>
<th>Description</th>
<th>Dimensions</th>
<th>Notes</th>
</tr>
</thead>
<tbody>
<tr>
<td>C-200</td>
<td>Large Zipper Case with Handles</td>
<td>9” (H) x 14 ½” (W) x 3” (D)</td>
<td>See TK-1500 for suggested tool array.</td>
</tr>
<tr>
<td>C-800</td>
<td>Deluxe, Heavy-duty, Black Canvas Zipper Case - Three outside pockets for meters, testers, and manuals.</td>
<td>12” (H) x 17” (W) x 4” (D)</td>
<td>See TK-4000 for suggested tool array.</td>
</tr>
<tr>
<td>C-400</td>
<td>Deluxe Case - Metal reinforced with handle and locks. Includes double-sided tool pallet, meter ramp and dividers.</td>
<td>13” (H) x 18” (W) x 5 ½” (D)</td>
<td>See TK-3000 for suggested tool array.</td>
</tr>
<tr>
<td>C-575</td>
<td>Plano Molded Tool Case - Heavy-duty, extra-large molded tool case with organizer tray that provides the extra tool space that may be required.</td>
<td>11 ¼” (H) x 10 7/8” (W) x 20 ¼” (D)</td>
<td></td>
</tr>
<tr>
<td>C-500</td>
<td>Heavy-duty, Deluxe Plano Tool Box - Two cantilever trays with a total of 18 compartments. Deep bottom storage.</td>
<td>8 ¼” (H) x 13 ¾” (W) x 6 ¾” (D)</td>
<td>See TK-2000 for suggested tool array.</td>
</tr>
<tr>
<td>C-520</td>
<td>Plano Tool Box - Top access area; full-size, lift-out tray and bulk storage area.</td>
<td>7 ½” (H) x 13” (W) x 5” (D)</td>
<td></td>
</tr>
<tr>
<td>C-400B</td>
<td>Deluxe case shown above but with interior filled with pre-cut foam. Bottom with ½” cushion and lid with 3” convoluted (egg crate) type foam. Pallet and dividers are optional.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>C-180</td>
<td>Deluxe Heavy-duty Tool Bag - Ruggedly constructed with heavy-duty zipper and padded handles, a hard bottom to keep shape. Includes 18 pockets.</td>
<td>10” (H) x 15” (W) x 9 ½” (D)</td>
<td>See TK-8200 for suggested tool array.</td>
</tr>
<tr>
<td>C-170</td>
<td>General Purpose Tool Pouch - Ideal for electricians and maintenance people. Made from heavy-duty, green canvas material with adjustable quick release belt. Pouch 11” x 10” with multiple pockets.</td>
<td></td>
<td>See TK-8000 for suggested tool array.</td>
</tr>
<tr>
<td>C-20</td>
<td>Small Zipper Case</td>
<td>8 ½” (H) x 12 ½” (W) x 1 ¼” (D)</td>
<td>See TK-1100 for suggested tool array.</td>
</tr>
<tr>
<td>C-570</td>
<td>Plastic Case - Built-in handles provide a large gripping area for easy carrying. Large sliding closures, lock lid into place.</td>
<td>10 ½” (H) x 8” (W) x 3 3/16” (D)</td>
<td></td>
</tr>
<tr>
<td>C-40</td>
<td>Plastic case with pin hinge, latch and side handle.</td>
<td>8” (H) x 10” (W) x 3” (D)</td>
<td></td>
</tr>
<tr>
<td>C-50</td>
<td>Plastic case with built-in hinge and latch.</td>
<td>7 ½” (H) x 10” (W) x 3” (D)</td>
<td></td>
</tr>
<tr>
<td>C-10</td>
<td>Five fixed compartments.</td>
<td>3 ¾” (H) x 6 ½” (W) x 1 1/8” (D)</td>
<td></td>
</tr>
<tr>
<td>C-30</td>
<td>Four fixed compartments.</td>
<td>2 7/8” (H) x 4 5/8” (W) x 1” (D)</td>
<td></td>
</tr>
<tr>
<td>C-900</td>
<td>6 to 18 adjustable compartments.</td>
<td>7 ¼” (H) x 11” (W) x 1 ¾” (D)</td>
<td></td>
</tr>
</tbody>
</table>
### PROBES & TEST LEADS

**65MHz Scope Probe, Switchable**

*P-1D*

- Built-in 2 position switch; X1, X10, complete with accessories, 10MΩ input impedance. Fits all scopes with BNC connector.
- Compensation range 10 to 35pF.
- Includes minigrabber, insulating tip, adjusting tool, channel identifier clips, and IC tip.
- Length - 60”.

**250MHz Scope Probe, Switchable**

*P-3D*

- Built-in 3 position switch; X1, X10, ref. Complete with accessories.
- 10MΩ input impedance.
- Fits all scopes with BNC connector.
- Compensation range 10 to 35pF.
- Length - 60”.

**100MHz Scope Probe, Switchable**

*P-2D*

**TL-3 *  
BNC Test Lead Set  
BNC to minigrabber. Length - 48”**

**TL-4 *  
Test Lead Set  
Banana to test probe lead set. Length - 36”**

**TL-5 *  
Banana to Alligator Lead Set with Small Alligator Clips  
Stackable banana to alligator clip. Length - 36”**

**TL-6 *  
Alligator Lead Set with Small Alligator Clips  
Jumper clip lead set (10 pieces, 5 colors). Length - 36”**

**TL-7 *  
BNC Cable  
BNC male to BNC male. 50Ω. Length - 36”**

**TL-9 *  
Minigrabber to Minigrabber IC clip test lead set. Length - 36”**

**TL-12 *  
Banana to Minigrabber Set  
Stackable banana to minigrabber. Length - 36”**

**TL-13 *  
Component Test Lead  
Banana to alligator for testing capacitors, inductors, and resistors. Length - 7”**

**TL-15 *  
Heavy-Duty Test Lead Set  
Insulated banana to test probe lead with screw-on alligator clips. Length - 36”**

**TL-16 *  
Banana to Alligator Lead Set with Large Alligator Clips  
Stackable banana to alligator clip. Length - 36”**

**TL-17 *  
BNC Test Lead Set  
BNC to alligator clips. Length - 48”**

**TL-18 *  
Banana to Banana Lead Set  
Stackable 3-way banana plugs. Length - 36”**

**TL-21 *  
Minigrabber to Minigrabber IC Test Lead Set  
Jumper minigrabbers. 5 pieces, 5 colors.**

**TL-22 *  
Banana to Probe Heavy-duty Test Lead Set  
Rated max 1,000V & 10A (CAT III) Protective covers for tips. Length - 36”**

**TL-19 *  
Component Test Lead  
Banana to alligator for testing capacitors, inductors, and resistors. Length - 7”**

**TL-20 *  
Banana to Alligator Lead Set with Large Alligator Clips  
Stackable banana to alligator clip. Length - 36”**

**TL-22 *  
Banana to Probe Heavy-duty Test Lead Set  
Rated max 1,000V & 10A (CAT III) Protective covers for tips. Length - 36”**

**TL-29 *  
Push-on Alligator Test Lead Set  
Extra-large red and black insulated boots. Slips onto most 0.08” diameter test lead tips.**

*Available in retail packaging - See Price Sheet*
The SL-5 Soldering Station is electronically controlled to provide 5 to 40 watts and is ideal for professionals, students, and hobbyists. The unit includes a holder funnel for the iron, sponge pad for cleaning the tip and an on/off indicator light. It is available assembled or in kit form.

**ASSEMBLED SOLDERING STATIONS**

Model SL-540 - This station comes complete with a 40-watt soldering iron providing you with variable heat - 5 watts to 40 watts. For general soldering requirements.  
Model SL-5 is the station that comes without a soldering iron. You may plug in any iron and obtain variable heat. It is suggested that you use 40-watt or 60-watt irons.

**SOLDER STATION KITS**

Model SL-5K40 - A solder station in kit form using a 40-watt soldering iron that is included to build the station. The 40-watt soldering iron then becomes part of the station.  
Model SL-5K is a solder station in kit form. The soldering iron is not included. You build the station with your own soldering iron (40-watt iron suggested), ideal for student projects.

**Temperature Controlled Soldering Stations**

**Model SL30A**  
Digital Display

LED readout for greater accuracy (SL-30 only) • Temperature range 300°F to 900°F

This hi-tech soldering station incorporates a sophisticated electronic circuit that enables the user to change the tip temperature from 300°F (150°C) to 900°F (480°C). The temperature is maintained within ±10°F of its preset temperature. The tip is isolated from the AC line by a 24V transformer. The tip is grounded to eliminate static charges.

**Replacement Tips:**

<table>
<thead>
<tr>
<th>Tip Type</th>
<th>Code</th>
<th>Size</th>
</tr>
</thead>
<tbody>
<tr>
<td>Conical</td>
<td>600020</td>
<td>1/32&quot;</td>
</tr>
<tr>
<td>Conical</td>
<td>600021</td>
<td>1/64&quot;</td>
</tr>
<tr>
<td>Wedge</td>
<td>600022</td>
<td>3/32&quot;</td>
</tr>
<tr>
<td>Screwdriver</td>
<td>600023</td>
<td>3/32&quot;</td>
</tr>
</tbody>
</table>

**Model SL10A**

**Temperature Controlled Soldering Station**

Model SL-75  
Low-cost solder station features manual temperature settings.

**Features**

- 48W heater power  
- Temperature range 350°F - 900°F  
- Electronic temperature control  
- Power on LED  
- Anti-static ground output

**Deluxe Temperature Controlled Soldering Station w/ Ceramic Heater**

Model ZD-931  
Ideal for applications requiring temperature stability when working with sensitive components.

**Features**

- 48W ceramic heating element with temperature sensor  
- Temperature range 302°F - 842°F  
- Temperature preset on LCD display  
- LCD display with digital temperature display
SOLDERING EQUIPMENT

**Deluxe 25W Soldering Iron**  
*Model SR-2B*

- 3-wire grounded plug  
- Screw-in tip  
- Rubber sleeve handle with long-life plated tip  
- Replacement tips: Conical - SR-2BT2, Fine (1/64") - SR-2BT, Wedge - SR-2BT

**Professional Soldering Iron**  
*Model SR-3B*

- 25 watts  
- Ceramic element  
- Long-life tip  
- Lightweight  
- Rubber sleeve  
- Conical replacement tip: SR-3T

**Soldering Iron Stand**  
*Model SH-1*

- Heavy-duty holder with sponge

**Soldering Iron Stand**  
*Model SH-2*

- Small stand w/ flip-up form

**Soldering Iron Stand**  
*Model SH-3*

- Flip-up wire form with sponge

**Soldering Iron Stand**  
*Model SH-3*

**Soldering Iron Stand**  
*Model SH-3*

**Desoldering Pump**  
*Model SP-4*

- Deluxe, high-vacuum pump  
- Anti-static tip

**Lead-free Solder**  
*Model LF-99*

- 5 ft.  
- Rosin core, 0.031" dia.

**Desoldering Wick**  
*Model SW-3*

- Solder removal braid removes solder from all types of connections.  
- 5 ft. roll in handy dispenser.

**Tip Tinner, Cleaner**  
*Model TTC-1*

- Prevents oxide build-up. Prolongs tip life and heat transfer.

**Soldering Tip Cleaner**  
*Model SH-1025*

- Features
  - Made of low abrasive brass shavings.  
  - No water necessary  
  - No temperature drop  
  - Cleans better than conventional sponges.

**Helping Hands**  
*Model HH-55*

- For soldering or making fine adjustments.  
- Adjustable arms can hold objects in any position

**Solder Ease Kit**  
*Model SE-1*

- 4 pc. Set: Brush, scraper, probe, and ST-23 heat sink in pouch

**Safety Goggles**  
*Model ST-20*

- Contours to head  
- Soft vinyl frame ventilated  
- (Safety approved)

**Safety Spectacles**  
*Model ST-22*

- Features wide upper frame. It can also fit over prescription glasses.  
- (Safety approved)

**Heat Sink**  
*Model ST-23*

**Soldering Iron Tip Package**  
*Model TIPK-1*

- For SR-2B and SR-6

- 1/64"  
- 3/64"  
- 5/64"  
- 1/16"  
- 3/32"  
- 7/64"  

* Available in retail packaging - See price sheet
<table>
<thead>
<tr>
<th>Model</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>K-10</td>
<td><strong>Space War Gun</strong></td>
</tr>
<tr>
<td></td>
<td>This gun gives you realistic sounds and flashes you expect in a Space Gun. Produces rapid fire or</td>
</tr>
<tr>
<td></td>
<td>single shot with two flashing LED's.</td>
</tr>
<tr>
<td>K-11</td>
<td><strong>0-15V Power Supply</strong></td>
</tr>
<tr>
<td></td>
<td>This kit is one of the most useful, low-cost power supplies you can build. It supplies voltage</td>
</tr>
<tr>
<td></td>
<td>to transistor radios, tape recorders, and electronic games. Output: 0-15VDC @ 250mA, 8.5VAC @</td>
</tr>
<tr>
<td></td>
<td>500mA.</td>
</tr>
<tr>
<td>K-14</td>
<td><strong>Christmas Tree</strong></td>
</tr>
<tr>
<td></td>
<td>Produces flashing colored LED's and three popular Christmas melodies!</td>
</tr>
<tr>
<td>K-16</td>
<td><strong>Electronic Cricket</strong></td>
</tr>
<tr>
<td></td>
<td>The Electronic Cricket is the perfect project and fun game for family and friends. You will</td>
</tr>
<tr>
<td></td>
<td>drive your friends crazy trying to find it!</td>
</tr>
<tr>
<td>K-17</td>
<td><strong>LED Robot Blinker</strong></td>
</tr>
</tbody>
</table>
|         | AK-400                                  | With the LED Robot Blinker, you will learn about free-running oscillators. You'll have fun building, 
<p>|         |         | displaying and learning about the LED Robot Blinker.                                            |
| K-19    | <strong>Digital Bird</strong>                                                                                |
|         | There are all kinds of birds in this world, singing all kinds of songs. But neither you nor they |
|         | probably have heard anything quite like this!                                                    |
| K-20    | <strong>Nerve Tester</strong>                                                                                |
|         | Test your ability to remain calm. Indicates failure by lit LED or mild shock.                    |
| K-22    | <strong>Yap Box</strong>                                      | Makes six exciting sounds:                                                                      |
|         | K-22A                                  | - Laser Gun                                      | - Diesel Horn                                   |
|         |         | - Siren                                           | - Wolf Whistle                                  |
|         |         | - Puppy Bark                                      | - Machine Gun                                   |
| K-23    | <strong>Burglar Alarm</strong>                                                                               |
|         | The Burglar Alarm is an easy-to-build alarm control for your car, house, room, or closet. After |
|         | the alarm is on, the only way to turn it off is to open the switch.                             |
| K-24    | <strong>Whooper Alarm</strong>                                                                               |
|         | The Whooper Alarm makes an excellent alarm device for the Combination Lock/Alarm Control. It     |
|         | can also be used independently as a sounder or siren.                                           |
| K-26    | <strong>Metal Detector</strong>                                                                              |
|         | Find new money and old treasure. Get started in the fascinating hobby of metal detecting.       |
| K-28    | <strong>Pocket Dice</strong>                                                                                 |
|         | The Pocket Dice is a handy little project to be used with any game of chance. Since it uses CMOS  |
|         | circuitry, it has the advantage of operating off a 9-volt battery.                               |
| K-34    | <strong>One Button Bandit</strong>                                                                           |
|         | Press the button and away she goes. If three LEDs light, you win! Our version of Vegas' one arm |
|         | bandit.                                                                                        |
| K-35    | <strong>Telephone Bug</strong>                                                                               |
|         | Our bug is only the size of a quarter, yet transmits both sides of a telephone conversation to |
|         | any FM radio. No battery needed.                                                                |
| K-36    | <strong>Sound Activated Switch</strong>                                                                       |
|         | Clap your hands and the light comes on . . . clap again and off it goes. Many other uses.        |
|         | Complete with microphone.                                                                       |
| K-44    | <strong>Lie Detector</strong>                                                                                |
|         | The sound will tell if you are lying. The sound gets louder the more you lie. Fun at parties!    |</p>
<table>
<thead>
<tr>
<th><strong>EDUCATION KITS</strong></th>
<th><strong>Complete with PC Board and Instruction Book</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Digital Roulette</strong>&lt;br&gt;AK-300&lt;br&gt;The Digital Roulette will be a sure winner with you, your friends and your relatives. Thirty-eight LEDs are arranged in a five inch diameter circle.</td>
<td></td>
</tr>
<tr>
<td><strong>Universal Stereo Pre-Amplifier</strong>&lt;br&gt;K2572&lt;br&gt;This kit has a frequency range of 40Hz to 30kHz (−dB), 40dB gain with 40dB maximum adjustable gain. It has a maximum input voltage of 50mVrms and an output impedance of 1kΩ.</td>
<td><strong>7W Amplifier</strong>&lt;br&gt;K4001&lt;br&gt;This small amplifier is constructed around the TDA2003 IC, capable of delivering 4Wrms at 4Ω. The IC is completely thermally and short-circuit protected. A conventional direct current can be connected as supply.</td>
</tr>
<tr>
<td><strong>Water Alarm</strong>&lt;br&gt;MK111&lt;br&gt;Gives alarm sound when water is detected. Incorporated alarm buzzer. Water sensor can be placed at a distance by cutting the board and using wires to connect the sensor.</td>
<td><strong>Metronome</strong>&lt;br&gt;MK106&lt;br&gt;Speaker included. LED beat indication. Adjustable volume and beats / minute with potentiometers. On / off switch on board.</td>
</tr>
<tr>
<td><strong>Interval Timer</strong>&lt;br&gt;MK112&lt;br&gt;For intermittent operation of circuits and equipment. Blinking light, video/photo single frame shooting, slide projector control, miniature models.</td>
<td><strong>Brain Game</strong>&lt;br&gt;MK113&lt;br&gt;Just 4 LEDs and 4 push buttons provide hours of fun. The aim-of-the-game is to repeat a pattern, which is generated at random. The pattern is played both visually and audible or visually only (selectable). It features 4 difficulty levels, which can be selected at start-up. The replay speed gradually increases during the game, to make it even more challenging. Low power consumption. Microprocessor controlled. Auto power-off.</td>
</tr>
<tr>
<td><strong>Traffic Light</strong>&lt;br&gt;MK131&lt;br&gt;Miniature traffic light as used on four-way junctions. Realistic operation with adjustable delay. 12 LEDs. Great for model railroads, exhibitions, as a toy, etc.</td>
<td><strong>Light Barrier</strong>&lt;br&gt;MK120&lt;br&gt;Applications: announce visitors, warn against burglars, set boundaries, for science projects, etc.</td>
</tr>
<tr>
<td><strong>Steam Engine Sound Generator w/ Whistle</strong>&lt;br&gt;MK134&lt;br&gt;Generates sound of a vintage steam engine. Adjustable “speed” and volume. Great for model railroads, radio plays, stage, or as a gadget. With “steam whistle” push-button.</td>
<td><strong>Super Ear Amplifier</strong>&lt;br&gt;MK136&lt;br&gt;Stereo audio amplifier boosts sound 50 times. Great for the hearing impaired (e.g. when watching TV), as a gadget, science project, etc. With volume control and on/off switch.</td>
</tr>
<tr>
<td><strong>Voice Changer</strong>&lt;br&gt;MK171&lt;br&gt;Make your voice sound like a robot. Add vibrato effect. “Pitch” buttons make your voice sound lower or higher. Built-in microphone and power amplifier with volume control, just add a speaker.</td>
<td><strong>Dual White LED Stroboscope</strong>&lt;br&gt;MK147&lt;br&gt;Two super bright white LEDs, powerful flash effect, great for parties, in scale models, to observer moving parts, slow/fast selector, and speed adjust trimmer, speed adjustable between approx. 1 to 60 flashes per second.</td>
</tr>
<tr>
<td><strong>Color Code Calculator for resistors, capacitors, and inductors</strong>&lt;br&gt;CC-100&lt;br&gt;Pocket-sized calculator is easy-to-use in determining values of resistors, capacitors, and inductors. Match colors and get a fast reading of values.</td>
<td><strong>Telephone Line Analyzer</strong>&lt;br&gt;TWT-1K&lt;br&gt;A telephone line analyzer kit that tests active phone lines with RJ-11 or RJ-45 modular jacks.</td>
</tr>
</tbody>
</table>

**Batteries**

| AA | General-purpose                        | 590001 |
|    | Alkaline                                | 590002 |
| AAA| General-purpose                        | 590003 |
|    | Alkaline                                | 590015 |
| D  | General-purpose                        | 590005 |
|    | Alkaline                                | 590006 |
| 9V | General-purpose                        | 590009 |
|    | Alkaline                                | 590011 |
**SPECIAL TEST EQUIPMENT**

**Diode / Transistor Tester**  
Model DT-100  
Checks transistors and diodes in circuit.  
Identifies NPN or PNP transistors.  
Checks small or large power types.  

Available in kit  
Model DT-100K

**1% 1W Resistor Substitution Box**  
Model RS-500  
The RS-500 Resistance Substitution Box is a convenient instrument for determining the desired resistance values in circuits under design or test. The resistance obtainable is from 0Ω to 11,111,110Ω in 1Ω increments. All resistors are 1% precision.  

(1 watt resistors)

**Resistor Substitution Box**  
Model RS-400  
Contains 24 standard value resistors from 10Ω to 1MΩ.  

Available in kit  
Model K-37

**Capacitor Substitution Box**  
Model CS-440  
Contains 24 different value capacitors from 100pF to 0.1μF.  

Available in kit  
Model K-38

**Telephone Line Analyzer**  
Model TT-400  
A telephone line analyzer that provides fast indication of telephone line polarity, ring and line voltage levels, and the condition of phone line from user’s telephone to central telephone office. It can also check basic telephone functions and condition of telephone line cord.  

Available in kit  
Model TT-400K

**Telephone Line Analyzer**  
Model TWT-1  
A telephone line analyzer that tests active phone lines with RJ-11 or RJ-45 modular jacks.  

Available in kit  
Model TWT-1K
## TESTERS - KITS

### Multi-Network Cable Tester Kit
**Model TCT-255K**
This tester is a convenient instrument for testing different unshielded wiring schemed telephone cables with RJ-11 and RJ-45 connectors and coax cables (F and BNC connectors). Cables can be tested before and after they are installed.

**Features**
- Testing cables before or after their installation.
- Mapping function.
- Cable identification (straight or cross-pinned).
- Open or short testing.
- F to BNC connectors included.
- Low battery indicator.
- Auto power-off function (30 s.).
- 9V battery (part # 590009) included.

Requires one (1) 9V battery (part # 590009).

### Telephone Line Analyzer Kit
**Model TT-400K**
A telephone line analyzer that provides fast indication of telephone line polarity, ring and line voltage levels, condition of phone line from user's telephone to central telephone office - also can check basic telephone functions and condition of telephone line cord.

Soldering required.

### Anti-Static Wrist Straps
**WS-1** (elastic band)
**WS-1Y** (velcro band)

Protects ICs and other equipment from static discharges. Adjustable.

### Anti-Static Work Mat
**Model WS-2**
Protects your workstation from static discharge. Made of semiconductive vinyl.

Size: 11” x 22”

### Resistor Substitution Box
**Model K-37**
Contains 24 different value resistors from 10Ω to 1MΩ. Soldering required.

### Capacitor Substitution Box
**Model K-38**
Contains 24 different value capacitors from 100pF to 0.1μF. Soldering required.

### Diode/Transistor Tester Kit
**Model DT-100K**
This dynamic tester allows the checking of transistors and diodes in circuit. Identifies NPN or PNP transistors. Checks all types: small or large power. Identifies anode or cathode of diodes.

Soldering required.

### Function Generator
**Model FG-500K**
Provides sine, square or triangle waveforms continuously variable 1Hz to 1MHz. Amplitude adjustable to 3V peak-to-peak. Complete with all parts, PC board, schematic, deluxe case and extensive assembly manual.

Soldering required.

### Capacitor Substitution Box
**Model CS-440**
Available Assembled

### Diode/Transistor Tester Kit
**Model DT-100**
Available Assembled

### Telephone Line Analyzer Kit
**Model TT-400**
Available Assembled

### Function Generator
**Model FG-500**
Available Assembled

### Resistor Substitution Box
**Model RS-400**
Available Assembled

### Capacitor Substitution Box
**Model K-37**
Contains 24 different value resistors from 10Ω to 1MΩ. Soldering required.

### Capacitor Substitution Box
**Model K-38**
Contains 24 different value capacitors from 100pF to 0.1μF. Soldering required.

### Resistor Substitution Box
**Model K-38**
Available Assembled

### Capacitor Substitution Box
**Model K-37**
Available Assembled
POWER SUPPLY KITS

The largest selection of variable and fixed voltage power supply kits in the electronics industry. Ideal as school projects for breadboarding, prototyping, and training. The regulated supplies are protected against damage from short circuits.

Power Supply Kit
Model XP-720K

Model XP-720K has 3 fully regulated DC supply outputs, two outputs are continuously variable and one is fixed, plus a 6.3VAC output center-tapped to 12.6VAC.

Specifications
Input Voltage: 120VAC
Output Voltage: 1) 1.25VDC - 15VDC @ 1A
               2) –1.25VDC - –15VDC @ 1A
               3) 5VDC @ 3A
               4) 6.3VAC @ 1A and 12.6VAC center-tapped @ 1A
Note: Variable outputs can be stacked to get 3 - 30VDC @ 1A.

Available Assembled Model XP-720

Deluxe Battery Eliminator Kit
Model XP-100K

This power supply is an ideal bench top battery eliminator. Substitutes a wide variety of batteries including AA, AAA, C, D, and 9V types. The voltage is conveniently selected by a rotary switch. Advanced, solid-state electronics provide both LINE and LOAD regulation of the output voltage. The voltage selector switch is precision-designed so that the output voltage does not increase during adjustment between voltage ranges.

Specifications
Input voltage: 120VAC
Output voltage: 1.5, 2.2, 3, 4.5, 5, 6, 7.2, 9, 10, 12, 13.8, 15VDC
Output current: 1A max.
Accuracy: ±5%
Dimensions / weight: 3 ¾” (H) x 8 ¼” (W) x 7” (D) / 5 lbs.

Available Assembled Model XP-100

Variable Voltage Power Supply Kit
Model XP-15K

A handy portable power supply with a variable output voltage of 15VDC. Mounted in a rugged bakelite case.

Specifications
Input Voltage: 120VAC
Output Voltage: 1.25 - 15VDC
Output Current: 0.5A @ 8V; 0.3A @ 12V
0.2A @ 15V
Short Protected IC Thermo

Variable Voltage Power Supply Kit
Model K-11

A low cost way to supply voltage to school projects. For breadboarding, prototyping, and training.

Specifications
Input Voltage: 120VAC
Output Voltage: 0 - 15VDC @ 250mA
AC: 8.5V @ 500mA

Ideal for School Projects!
MULTIMETER KITS

If you are using or planning to use a digital or analog meter in your training programs, consider one of the meter kits below - easy construction, detailed assembly manuals.

**Deluxe Full Function Digital Multimeter Kit**
**Model M-2666K**

**Features**
- Extra-large 1”, 3 1/2 digit display
- Transistor tester
- Overload protection
- Capacitance to 200μF
- Diode test
- Audio continuity
- AC/DC current to 20A
- Low battery indication
- Rubber holster
- Tilt stand
- Safety input sockets & test leads.

**Specifications**
- AC + DC Volts: 200mV, 2V, 20V, 200V, 1,000V, 750VAC
  - DC: ±(0.5% rdg + 2dgt), 1,000V: ±(0.8% rdg + 2dgt)
  - AC: 200mV, 750V: ±(1.5% rdg + 2dgt), 71mV-1000mV: ±(1.0% rdg + 2dgt)
  - Resolution 100μV
- AC + DC Current: 200μA, 2mA, 20mA, 200mA, 2A
  - DC: ±(1.5% rdg + 2 dgt), 200mA: ±(2.0% rdg + 2 dgt), 20A: ±(2.5% rdg + 3 dgt)
  - AC: ±(1.5% rdg + 3 dgt), 200mA: ±(2.0% rdg + 3 dgt)
  - Resolution 0.1μA
- Resistance: 200Ω, 2kΩ, 20kΩ, 200kΩ, 2MΩ
  - DC: ±(1.0% rdg + 2 dgt), 2kΩ: ±(0.8% rdg + 3 dgt), 20MΩ: ±(2.0% rdg + 4 dgt)
  - Resolution 0.1Ω
- Capacitance: 2nF, 20nF, 200nF, 2μF, 20μF, 200μF
  - Resolution 1pF
- Size / Weight: 7 1/2” (H) x 3 1/2” (W) x 1 13/32” (D)
- Accessories: Test leads, Manual, 9V Battery included

**20K/V VOM**
**Model M-1250K**

**Features**
- 20,000Ω/V
- 23 ranges
- 3 1/2“ meter
- Mirrored scale
- Audible continuity
- Checks transistors / diodes
- Safety input sockets and test leads
- 10A DC current
- dB scale
- Battery test
- Tilt stand
- 0.1% rdg + 2 digits

**Specifications**
- DC Volts: 0.1, 0.5, 2.5, 10, 50, 250 – 3% FSR / 1k – 5% FSR
- AC Volts: 10, 50, 250 – 4% FSR / 1kV – 5% FSR
- DC Current: 50μA, 2.5mA, 25mA, 250mA – 3% FSR / 10A 5% FSR
- Resistance: x1, x10, x100, x1k, x10k – 3% of ARC
- Transistor hFE: 0-1000
  - ICEO 15mA, 150mA
- Size: 5 29/32” (H) x 3 23/32” (W) x 1 1/4” (D)
- Accessories: Test leads, Manual, 9V and (2) 1.5V AA batteries

**Digital Multimeter Kit**
**Model M-1007K**

**Features**
- Low cost
- 3 1/2 digit LCD
- 19 ranges
- Transistor test
- Diode test
- Overload protection
- Pocket-size

**Specifications**
- DC Volts: 200mV, 2V, 20V, 200V, 1,000V
- AC Volts: 200V, 750V
- Accuracy: DC 1/2%, AC 1.2%
- Input Impedance: 1MΩ
- DC Current: 200μA, 2mA, 20mA, 200mA, 10A
  - ±1.2% rdg + 2 digits
  - Resolution 0.1μA
- Resistance: 200Ω, 2kΩ, 20kΩ, 200kΩ, 2MΩ
  - ±1% rdg + 2 digits
  - Resolution 0.1Ω
- Size: 5” (H) x 2.29/32” (W) x 1” (D)
- Accessories: Test leads, Manual
SOLDER PRACTICE KITS
& SURFACE MOUNT TECHNOLOGY

Practical Soldering Project Kit
Model SP-3B
Elenco® Electronics is proud to present another superb solder practice kit designed to meet the ever-increasing demands on proper soldering procedures. Some of the features of this kit are as follows:

- Identifying components
- Color-code reading exercises, resistors, capacitors, and inductors. Includes color code calculator (Model CC-100).
- 163 solder points, standard soldering connections, close-tolerance soldering, and tack soldering.
- Evaluation exam of performed soldering connections. Written & visual.
- Complete voltage and resistance analysis of circuit.
- Desoldering exercise

Requires one (1) 9V battery (part # 590009).

Practical Soldering Project Kit
Model SP-1A
Working with printed circuit boards is in the future of every electronic technician. Almost every electronic device today has a printed circuit board and whether you are assembling a PC board or repairing it, you must understand the basics of working with these boards.

Good soldering requires practice and an understanding of soldering principles. This solder practice project will help you achieve good soldering techniques, help you become familiar with a variety of electronic components, and provide you with dynamic results.

Requires one (1) 9V battery (part # 590009).

Surface Mount Technology
Solder Practice Kit
w/Training Course
Model SM-200K
The future of electronics is headed for miniaturization through surface mount technology (SMT). Taking our course of training will prepare you for the future. Includes all parts and instructions to give you experience on working with surface mount components. The finished project is a decision maker with 6 flashing LED’s to help you make vital decisions.

SM-200K PC board showing practice areas & mounted components
SM-200K in its final assembly as a decision maker

Requires one (1) 9V battery (part # 590009).

Learn Surface Mounting Techniques
Function Generator Kits
w/ Training Courses
Model FG-600K
These versatile function generators include surface mount components such as IC’s, resistors and capacitors. When completed, they provide Sine, Square and Triangle waveforms, continuously variable to 1MHz. Amplitude adjustable. Complete with all parts and PC board. Both include case and extensive training manual.

Specifications
- Waveforms: Sine, square, triangle
- Frequency: 1Hz - 1MHz
- Impedance: 600Ω ±10%
- Amplitude: Sine/Trig: 0.9V; Square: 8V
- Frequency variable range: 10:1 or more
- Frequency multiplier: Six decade steps
- Sine Wave
  - Distortion: Less than 1% (at 1kHz)
  - Flatness: ±0.05dB (1Hz - 100kHz)
- Square Wave
  - Symmetry: Less than 5% (at 1kHz)
  - Rise / fall time: Less than 500ns (at 1Hz)
- Triangle Wave
  - Linearity: Less than 1% (up to 100kHz)
  - Power requirements: 9V battery

Requires one (1) 9V battery (part # 590009).
Training course divided into 5 lessons: Audio Amplifier, Detector, IF Amplifier, Oscillator, and Mixer. “Superheterodyne” designed to receive standard AM (amplitude modulation) broadcast frequencies. Includes radio mounting stand.

Model AM/FM-108K
AM/FM Radio Kit and Training Course
1 Integrated Circuit, 9 Transistors and 4 Diodes

Training course of 56 pages is divided into 9 lessons; Audio Amplifier, AM Detector, AM IF, AM Amplifier, AM Mixer & Oscillator, FM Detector, 1st FM IF, 2nd FM IF, FM RF Stages. Integrated circuit technology now included. “Superheterodyne” designed to receive standard AM (amplitude modulation) and FM (frequency modulation) broadcast frequencies. Includes radio mounting stand.

Also Available
Model AM/FM-108TK
14-Transistor, 5-Diode Version (without IC)

Requires one (1) 9V battery (part # 590009)

Model AM-550TK
AM Radio Kit and Training Course
7 Transistors and 2 Diodes

Training course divided into 5 lessons: Audio Amplifier, Detector, IF Amplifier, Oscillator, and Mixer. “Superheterodyne” designed to receive standard AM (amplitude modulation) broadcast frequencies. Includes radio mounting stand.

Requires one (1) 9V battery (part # 590009)
DELUXE KITS

FM Wireless Microphone Kit
Model AK-710
Now you can hear your voice on the radio! This kit will have you singing in no time at all. After following our easy assembly manual, you'll be ready to transmit your voice on an actual FM Radio. Range up to 100 feet.
Soldering required.

Motion Detector Kit
Model AK-510
Learn the basics of motion detector technology while building this motion detector kit that uses an infrared sensor. Use as a burglar alarm, message minder, room detector, or entry to home or business.
Soldering required.

Tunable FM Stereo Transmitter
Model FM10CK
Learn the basics of FM transmitters. Tunable anywhere in standard FM band 88 to 108MHz. Operates on 5 to 15VDC settable pre-emphasis 50 to 75μsec. Includes matching case and knobset.
Soldering required.

Line Tracking Mouse Kit
Model 21-880
A smart Robot Mouse tracks a black line using a photo interrupter for its eyes. Create a twisting and turning road layout yourself with black tape on a white background. See how it tracks the black line to find the target.
Soldering required.

Sound Reversing Car Kit
Model 21-881
A Robot Car with a sensor to detect noise (like a clap) or physical contact for its reaction. It moves forward when it detects noise and reverses when it touches obstacles.
Soldering required.

Turning Frog Kit
Model 21-882
This is an interesting robot kit. When it detects sounds, it will move and repeat the following steps sequentially: Start (move forward), Stop, Left Turn, Stop, Right Turn, Stop.
Soldering required.

Hexapod Monster Kit
Model 21-883
The Hexapod Monster is a robot that uses an infrared emitting diode for its eyes, and moves by its six legs. It turns left when it detects obstacles, and keeps moving forward if there is no shade in front of the sensor. Soldering required.

Gear Set 1:

<table>
<thead>
<tr>
<th>Gear Ratio</th>
<th>Gear</th>
<th>Teeth</th>
<th>ID</th>
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<td>16T</td>
<td>1.9mm</td>
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<tr>
<td></td>
<td>Face Gear</td>
<td>36T/14T</td>
<td>2.05mm</td>
</tr>
<tr>
<td></td>
<td>Double Spur Gear</td>
<td>36T/14T</td>
<td>3.05mm</td>
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<tr>
<td></td>
<td>Double Spur Gear</td>
<td>36T/14T</td>
<td>2.05mm</td>
</tr>
<tr>
<td>Reduction RPM</td>
<td>41.6</td>
<td></td>
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</tr>
</tbody>
</table>

Gear Set 2:

<table>
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<th>Teeth</th>
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<td>8T</td>
<td>1.9mm</td>
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<tr>
<td></td>
<td>Face Gear</td>
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<td>2.05mm</td>
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<tr>
<td></td>
<td>Double Spur Gear</td>
<td>36T/10T</td>
<td>3.05mm</td>
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<tr>
<td></td>
<td>Double Spur Gear</td>
<td>40T/10T</td>
<td>2.05mm</td>
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<tr>
<td></td>
<td>Spur Gear</td>
<td>40T/2T</td>
<td>3.9mm</td>
</tr>
<tr>
<td>Reduction RPM</td>
<td>41.6</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
DELUXE KITS

Telephone Kit
Model PT-323K
Clear, See-Through Case
with Training Course

The Elenco® PT-323K is a push button electronic telephone. It is equipped with the following features: Pulse/tone dialing, automatic redial, a ringer turn off switch, 4 neon bulbs for visual indication of telephone ringing, and a clear see-through case to show the total inner workings of the phone. A detailed, easy-to-follow 36 page manual included. Sectionalized construction and testing makes construction easy. Wall mounting cradle included.

Radio Controlled Race Car
Model RCC-7K
with Training Course

The purpose of this project is to expand your understanding of basic transmitters, receivers and electronic switching theories. Your Turbo King Car will be built from the ground up. You'll learn all about gears, motors, printed circuit boards, and integrated circuits from our detailed assembly and training manual. You will construct each section, explore the circuitry and troubleshoot it.

Features
- 7 Remote Functions
- Flashing Top Light
- Single Channel Operation
- Remote Control Included

Two IC AM Radio Kit
Model AM-780K with Training Course

New Design - Easy-to-Build complete radio on a single PC board. Unique design allows you to place parts over its corresponding symbol on the PC board. Teaches the basic theory of AM radio operation. Detailed instructions and illustrations make it an easy and educationally sound project.

Requires one (1) 9V battery (part # 590009).
The Robotic Arm Trainer teaches the basic robotic principles of electronics, gear mechanisms, and demonstrates two different modes of propulsion.

The Knight Invader is a super race car that includes mini-construction projects, teaches the basic principles of electricity, gear mechanisms, and demonstrates two different modes of propulsion.

The ROBOTIC ARM TRAINER is a 2-wheel robotic arm that you can program to follow an interesting path "WORTHOUT" a personal computer. The brain is an 8-bit microcontroller and keyboard with 33 tactile buttons. Stores up to 60 programming steps and 30 FOR-NEXT multiple loops. 6 vision sensors (two infrared light sensors to detect obstructions and four floor light sensors enable k to detect a contrast of light (like an edge-up of a table). Programming makes you think creatively, systematically and logically, develop problem-solving skills, and challenge you to think creatively. Easy to assemble. Intermediate level kit.

ROBOTIC ARM EDGE is an exciting way to demonstrate the use of alternative energy. It features and aerodynamic sports car shell design, a 4-wheel chassis, a powerful 1.4V, 350mA solar cell (included) and a transparent plastic body that can be painted or left clear to display the car's inner mechanical construction. The steerable front axle, rear wheel and adjustable (directional/angle) solar panel mount are all independent parts, allowing for separate solar projects.

The Solar Car is an exciting way to demonstrate the use of alternative energy. It features and aerodynamic sports car shell design, a 4-wheel chassis, a powerful 1.4V, 350mA solar cell (included) and a transparent plastic body that can be painted or left clear to display the car's inner mechanical construction. The steerable front axle, rear wheel and adjustable (directional/angle) solar panel mount are all independent parts, allowing for separate solar projects.

For more OWI Robots, visit our website at www.elenco.com

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This kit presents an opportunity to learn about some of the mechanics, operation and history of robots. When assembled, this robot uses a phototransistor to sense changes in light (such as turning on a lamp) and a condenser microphone to sense changes in sound (such as clapping). It converts these stimuli into electrical signals to power a motor, and the robot walks forward for a preset time. When it stops, affecting another change in area light or sound may activate it again. The sensors may be adjusted for different sensitivity levels. Printed circuit board pre-assembled.

Printed circuit board pre-assembled.

Printed circuit board pre-assembled.

Printed circuit board pre-assembled.

Printed circuit board pre-assembled.
The following warning pertains to all products on this page.

WARNING: CHOKING HAZARD
Small parts. Not for children under 3 years.

OWI ROBOT KITS

None of our OWI Kits require soldering (unless otherwise noted).

BINARY PLAYER ROBOT OWI-9875

(Binary Programmable, Infrared Sensor)

Binary Player Robot is controlled by black and white patterns on a disk, which are read by an infrared sensor. Particular patterns activate either of two wheels to turn left, right, forward, or pause. These on/off commands illustrate the basic principles of binary coding. To change a movement program, the operator simply creates a new disk pattern. Set your course and explore the fascinating world of Binary Player Robot! Ages 10 & up.

4-in-1 ROBOT KIT OWI-9874

(Sound Sensor)

4-in-1 Robot Kit features 4 different methods of movement: traversing - hand over hand (Orangutan mode), 2 legged walking (Gorilla mode), 4 legged walking (Centaur mode) and 6 legged walking (Spider mode). Discover the dynamics of animal locomotion. This is an excellent beginner series robot. This battery-controlled kit can teach the basic principles of robotic sensing and locomotion. It features a pre-assembled printed circuit board, hardware, and mechanical drive system that can be handled by almost anyone from ages 10 & up.

TURBO 3000 OWI-8606

(Optional Solar Power)

TURBO 3000 will amaze children nine years and older. This monster vehicle with oversized tires and independent suspension is "tricked-out". It features three modes of propulsion: direct motor drive, air propulsion, and solar power (optional). The kit includes electricity experiments involving series and parallel circuits and a high powered miniature light bulb. The special air-blowing compartment allows the styrofoam ball (included) to magically float into the air while the car is running. No tools are required for this easy to assemble and disassemble magical beauty. If that’s not enough, some of its transparent parts allow you to view and study the inner mechanics of the product! Ages 9 & up.

KABUTO MUSHI ROBOT OWI-8800

(Infrared Sensor)

The Kabuto Mushi (Rhinoceros Beetle) Robot is an infrared remote controlled robot with caterpillar traction. The infrared remote control itself has 8 buttons, each button controls 4 motors. This easy-to-build kit will provide students, teachers, and hobbyists (with little or no experience), a fun and informative building session. Ages 10 & up.

AMPHIBIOUS SOLAR VEHICLE OWI-688

(Solar Power)

This kit introduces the fundamentals of solar power through hands-on experiments. The sun or any intense mobile light can power the solar battery (included). A multiple function switch (solar [1.4V, 350mA] or battery) allows this kit to be energized day or night, indoors or outdoors. The user can explore different types of energy and energy conversion with this land and water vehicle. Learn what materials solar batteries are made from and the characteristics of solar batteries, advantages, and disadvantages of solar power. Ages 10 & up.

6-in-1 SOLAR KIT OWI-MSK610

(Solar Power)

Mini Solar building kits teach children the benefits of solar energy while they create a toy that is both fun to play with and requires no batteries. Newest member of this popular line is the 6-in-1 Educational Solar Kit, an excellent beginner building kit designed to teach how solar power is used to drive a small motor. Children use the 21 snap together parts (no tools required) to build six different working models including an airboat, windmill, puppy, and two different planes. Ages 8 & up.

OWIKIT TEACHKIT OWI-991

(ELEMENTARY TECHNOLOGY CURRICULUM OWI-ELEM2)

A complete teacher resource written by educators. Ages 9 & up.

WEASEL OWI-9910

(Touch/Light Sensors)

"THEE GOES ... WEASEL" Weasel has two sensors that allow it to "see" a line or "feel" its way along walls and around corners. The two motors and contact sensor activate the wall sensing micro switch to control the motors on/off operation that determines the path of a wall. It is the classic robot design using the "Left Hand Rule" to escape mazes. Imagine the endless mazes that can be set up for Weasel to try to escape. Ages 9 & up. With OWI’s continued pursuit in making robots "smart", they have added another feature to this line of toys: optical sensors. Discover and learn about the phototransistors underneath Weasel that enable it to detect and follow a black line. Want speed? Its three-speed position will help navigate at the velocity you determine. Quick and easy to assemble, this is a beginner robot that makes great entertainment for robotic competitions, robotics workshops, after-school programs, special events, gifts, science enrichment camps, and classroom activities. Ages 10 & up.

ROLY POLY ROBOT OWI-9855

(Gear Technology)

Roly Poly Robot will tumble, tumble, stumble but will find a way to right itself up. The moment you turn it on, Roly Poly will speed away on its two cycloidal wheels. The engineering genius behind this well thought-out machine enables it to get on its feet whenever it tumbles and then will continue on its new path of exploration. After assembling one worm gear and less than 20 parts, your mechanical marvel is ready to amuse any household pet. Ages 10 & up.

HAPPY HOPPING FROG OWI-MSK-671

(Solar Power)

Using its hind legs and rubber feet, Happy Hopping Frog jiggles its eyes as a dog would wag its tail acknowledging its love and appreciation to its owner. The tailless, leapfrogging mini solar kit is activated by the power of the sun’s rays; no batteries required. Ages 9 & up.

SOLAR BATTERY OWI-608

(Solar Power)

Currently available as a kit, the solar F1 races at amazing speeds. Easy to build and fun to play. Have hours of fun experimenting with it in the sun. No batteries required and eight plastic parts to assemble. Ages 9 & up.

SOLAR BATTERY OWI-8608

(Solar Power)

Have fun in the sun with our safe, encapsulated mini-solar panel. This sturdy panel will endure handling without breakage or cell damage traditionally associated with solar cells. Create various experiences by exposing and positioning the panel as the energy source. Intended for use to familiarize students and hobbyists with fundamental silicon solar cell principles, and practical applications of solar cells. Mounting bracket not included. Current: 350mA. Voltage: 1.4V. Compatible with: O WI-865, O WI-688, O WI-6573, & O WI-8606.

Current: 350mA. Voltage: 1.4V. Compatible with: O WI-865, O WI-688, O WI-6573, & O WI-8606.

Current: 350mA. Voltage: 1.4V. Compatible with: O WI-865, O WI-688, O WI-6573, & O WI-8606.

Current: 350mA. Voltage: 1.4V. Compatible with: O WI-865, O WI-688, O WI-6573, & O WI-8606.

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Current: 350mA. Voltage: 1.4V. Compatible with: O WI-865, O WI-688, O WI-6573, & O WI-8606.
NON-SOLDERING KITS

**Solar Deluxe Educational Kit**
*Model SK-40*

- By solar power, harness the power of the sun with this environment-friendly D.I.Y. kit!
- Children can do a series of do-it-yourself experiments to acquire the basic knowledge of solar energy.
- Children can learn how to make an electrical circuit, make a solar circuit, how to increase voltage and current, and how to use solar power to produce energy for a radio, calculator, battery charger, a cassette player and more!

**Radio Controlled Car Kit w/ Training Course**
*Model FUN-875*

The purpose of this project is to expand your understanding of basic transmitters, receivers and electronic switching theories. Your Turbo King Car comes with the PC board already built. There is no soldering required! You’ll learn all about gears, motors, printed circuit boards, and integrated circuits from our detailed assembly and training manual. You will construct each section, explore the circuitry, and troubleshoot it.

**Cola Clock Kit**
*Model FUN-285*

Cola not only quenches your thirst, but can power a clock too! Build this kit and amaze your family and friends with this cola-powered clock.

Learn how batteries work when you use cola to make a chemical reaction that powers a clock. Completely safe and doesn’t require batteries! Parts are easily identified and assembled with full color manual.

**Photon Solar Racer Kit**
*Model AK-590*

Learn all about solar energy and how to convert it to useful applications. You will build this exciting sleek solar car that runs on a high efficiency solar cell. Have your friends build one too and have fun racing them. No soldering required.

The solar car comes in clear plastic. The car can be painted any color scheme that you desire (paint is not supplied). Photo is painted to illustrate how your car could look.

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**Cola Clock Kit**
*Model FUN-285*

Cola not only quenches your thirst, but can power a clock too! Build this kit and amaze your family and friends with this cola-powered clock.

Learn how batteries work when you use cola to make a chemical reaction that powers a clock. Completely safe and doesn’t require batteries! Parts are easily identified and assembled with full color manual.
Electronic Crystal Radio Kit  
**Model MX-901C**

- Safe, solderless, educational, and fun!
- Easy-to-read instructions included
- Crystal diode converts RF to audio
- Tune in your favorite AM radio stations!
- Learn how radios work
- Includes earphone
- For ages 10 and up

**Features**

- No batteries required!

Electronic AM/FM Radio Kit  
**Model MX-901AF**

- Learn and build your own AM/FM radio kit - it’s easy, it’s fun, and it’s safe!
- Tune in your favorite AM/FM radio stations - receives 520-1650kHz band and 88-108MHz band.
- Easy-to-read illustrated operating manual included.
- Safe, solderless, exciting, educational, and fun!

**Features**

- Requires one (1) 9V battery (part # 590009)

Electronic AM Radio Kit  
**Model MX-901A**

- Learn and build your own AM radio kit - it’s easy, it’s fun, and it’s safe!
- Tune in your favorite AM radio stations - receives 520-1650kHz band
- Easy-to-read illustrated operating manual included
- Safe, solderless, exciting, educational, and fun!

**Features**

- Requires one (1) 9V battery (part # 590009)

Electronic FM Radio Kit  
**Model MX-901F**

- Learn and build your own FM radio kit - it’s easy, it’s fun, and it’s safe!
- Tune in your favorite FM radio stations - receives 88-108MHz band
- Easy-to-read illustrated operating manual included
- Safe, solderless, exciting, educational, and fun!

**Features**

- Requires one (1) 9V battery (part # 590009)

Electronic Short Wave Radio Kit  
**Model MX-901SW**

- Learn and Build Your Own Short Wave Radio Kit - It's easy, It's Fun, and It's Safe!
- Explore the Fascinating World of Short Wave Radio!
- Receives Band from 6 - 8MHz (SW1) and 12 - 18MHz (SW2).
- Easy-to-read Illustrated Operating Manual Included.
- Safe, Solderless, Exciting, Educational, and Fun!

**Features**

- Requires one (1) 9V battery (part # 590009)

4-1 Action Kit Lab  
**Model MX-902**

- Safe, solderless, educational, and fun!
- Easy-to-read, illustrated, lab-style manual included.
- Discover how an electric bell is constructed and how it’s made to ring.
- Build your own operating motor - It’s easy, it’s fun, it’s safe!
- Find out how a generator makes the electricity that makes things work.
- Meter measures the amount of electricity used in your experiments.
- For ages 10 and up.

**Features**

- Requires two (2) “AA” batteries (part # 590001)

**Just a Few of the Many Exciting Experiments**

- Controlling motor’s forward/reverse rotation with generator.
- Fan using motor and generator.
- Electromagnet and reverse polarity.
- Operating the electric bell with generator.
- Color mixing with rotating color disc.

**Ordering Information**

MX-902 - 4 pc. set: Includes motor, bell, meter, and generator.
MX-902T - 2 pc. set: Includes motor and generator.
MX-510B - 1 pc. set: Includes bell.
MX-510L - 1 pc. set: Includes light.
MX-510G - 1 pc. set: Includes generator.
MX-510M - 1 pc. set: Includes motor.
Breadboard Method:
Featured in our advanced kits, this system is used by professionals and engineers. Just plug the components and wires into the special breadboard socket holes. No soldering is required. Everything uses safe battery power - no dangerous AC is required, so it's safe for all ages. Labs come with all components and wires needed to build each project. NO TOOLS ARE REQUIRED. No prior knowledge is needed to assemble and build these exciting projects. Easy-to-read, illustrated, lab-style manuals take you through each electronic experiment step-by-step. All are designed for ages 10 & up, so these are ideal for MIDDLE SCHOOLS and HIGH SCHOOLS.

500-IN-ONE Electronic Project Lab
Model MX-909

Features
- Everything you need to build 500 Exciting Electronic Projects.
- Learn the basics of electronics and put your knowledge to work creating 500 different electronic experiments, special lighting effects, radio transmitter and receivers, amazing electronic sound effects, cool games and MORE!
- Includes built-in breadboard for easy wiring and connection of components, and an LCD (Liquid Crystal Display) indicates the information during the experiments in process!
- Build your knowledge by exploring amplifiers, analog and digital circuits plus how to read schematic diagrams.
- Includes transistors, transformers, diodes, resistors, capacitors, phototransistors, CDs, integrated circuits, speaker, earphone, LEDs, LED digit display!
- Fact-filled, illustrated, lab-style manual included.

Requires six (6) "AA" batteries (part # 590001).

300-IN-ONE Electronic Project Lab
Model MX-908

Easy-to-read, illustrated, lab-style manual included.

Everything You Need to Build 300 Exciting Electronic Projects:
- A Transistor Radio
- IC Organ
- Burglar Alarm
- Delayed Timer
- Electronic Game
- Optical Volume
- Multiplier
- Rain Detector
- Digital Light Dimmer
- Tone Burst Generator
- Audio Signal Tracer
- Electronic Candle
- Voice Level Meter
- Metal Detector
- Voltage Drop Alarm
- Logic Checker
- Function Generator
- Voltage Controlled Amplifier
- AND MANY, MANY MORE!

Requires six (6) "AA" batteries (part # 590001).

200-IN-ONE Electronic Project Lab
Model MX-907

Requires six (6) "AA" batteries (part # 590001).

Features
- Easy-to-read, illustrated, lab-style manual included.
- Learn about transistors, transformers, diodes, capacitors, oscillators, basic electronic circuits, and schematic symbols.
- Build your own Radio, AM Broadcast Station, Burglar Alarm, Electronic Game, Ohmmeter, Telegraph, Rain Detector, Amazing Sound Effects, and Much More!
- With built-in speaker, earphone, meter, seven-segment LED digital display, out-front controls, and more!

Requires six (6) "AA" batteries (part # 590001).
PROJECT LABS

NO TOOLS OR SOLDERING REQUIRED!
These "Electronic Science Labs" will teach you about electronics from A-Z. With these all-in-one labs, you'll learn about electronic parts, how to read schematics, and wiring diagrams. All this while building up to 500 different projects. These kits use two quick and easy hook-up methods:

Electronic Playground
Model EP-50
Over 50 Electronic Projects

Build these exciting circuits:
- Finger touch lamp
- Magnetic bridge
- Voltmeter
- Morse code
- Alarm
- Electronic noisemaker
- Electronic kazoo
- Electronic keyboard
- Transistor radio
- Radio announcer
- Metal detector

Learn about:
- Voltage
- Current
- Resistors
- Capacitors
- Transistors
- Diodes
- Transformers
- Speakers
- Antennas

OVER 50 EXPERIMENTS
Specifically Designed for Beginners.
(Spanish Manual Available)

Requires one (1) 9V battery (part # 590009).

75-IN-ONE Electronic Project Lab
Model MX-905

- Easy-to-read, illustrated, lab-style manual included.
- Learn basic principles of electricity, electronics, physics and magnetism!

Everything You Need to Build:
- Timer Buzzer
- Sound Alarm
- Burglar Alarm
- Photo-level Alarm
- Logic Tester
- Electronic Coin Toss
- Motion LED
- Electronic Organ
- Motion Detector
- First-Aid Siren
- Pulse Width Modulation
- Water Level Alarm
- Sound Level Meter
- DC-to-DC Converter
- Sound-sensor Timer
- Four-level Photometer
- Two Stage Timer Sound
- Voltage Detector
- Conductivity Tester
- Optical Volume

Requires four (4) “AA” batteries (part # 590001).

130-IN-ONE Electronic Project Lab
Model EP-130

- Easy-to-read, illustrated, lab-style manual included.
- Learn basic principles of electricity, electronics, physics and magnetism!
- Comes with built-in speaker, 7-segment LED display, two fully integrated circuits and rotary controls.

Everything You Need to Build:
- AM Broadcast Station
- Electronic Organ
- Strobe Lights
- Timer
- Logic Circuits

Requires six (6) “AA” batteries (part # 590001).

Uses spring hook-up method.
Snap-Micro™ I is an easy way to learn about micro-controllers and how they are used in the world around us. Our easy-to-follow instructions will guide you through the programming of basic commands by using flow charts to operate the micro-controller. After a brief intro, Snap-Micro™ I will have you programming over 25 projects such as data loggers, A/D converters, DC motors and much more using Snap Circuits® components. No prior understanding of micro-controllers required.

Snap-Micro™ I Deluxe    Model SCM-450

Snap-Micro™ I comes with all the components and software you need to get started. All that is required is a computer with Windows®-based system. The 86 page instruction manual is divided into 4 sections: ① Getting Started (electronic components), ② Flow Chart Programming and Snap Circuits Basics, ③ Programming for Snap Circuits®, and ④ Audacity® Sound Circuits. After the course is completed, you will have a better understanding of programming a micro-controller and how you can use them for real world applications.

Snap-Micro™ I Standard    Model SCM-400

Learn About:
• Micro-controllers
• Flow charts
• Basic commands
• Electronic components
• Programming
• Data logging
• Sensors
• Analog to digital conversion

Snap-Micro™ I Deluxe    Model SCM-450

Deluxe SNAPCASE7 included!

NEW!

SNAP-MICRO™ I

Topics Covered:
• Solar Energy
• Chemical Power
• Wind Power
• Rechargeable
• Hydro Power
• Batteries
• Generators
• Analog Meters

NEW!

Alternative Energy Kit
Model SCG-125

Learn about energy sources and how to “think green”. Build over 125 projects, using the flexibility of our award-winning Snap Circuits®, to have loads of fun learning about environmentally friendly energy and how the electricity in their home works. Includes full-color manual with over 100 pages and separate educational manual. This educational manual will explain all the forms of environmentally friendly energy including: geothermal, hydrogen fuel cells, wind, solar, tidal, hydro, and others. Contains over 40 parts.

Learn about:
• Solar Energy
• Wind Power
• Hydro Power
• Generators
• Chemical Power
• Rechargeable
• Batteries
• Analog Meters

NEW!
Introducing the next generation of the RC Snap Rover™! This version includes a disc shooter, digital voice recorder, and music sounds. Over 50 parts allow you to complete over 40 additional projects.

**Features**
- Disc shooter
- Digital voice recorder
- Music sounds
- Over 40 additional projects
- Over 50 parts
- Left & right turning control
- Goes forward & backward
- Headlight
- Red & blue side lights
- Wireless remote control
- Run up to three Rovers at once
- No soldering required

**SNAP ROVER® RADIO CONTROLLED VEHICLE**

**Model SCROV-10**

Have FUN building your own RC Snap Rover® using the colorful Snap Circuits® parts that come with this kit. There is no soldering required as all the parts snap together with ease. Once completed, you will be able to navigate your surroundings going left, right, forwards and backwards with the easy-to-use Snap Rover® remote control. The remote is a 27MHz multi-channel that allows you to run up to three cars at the same time!

Snap Rover® includes a headlight and red & blue side lights that allow you to operate it in the dark. Build over 20 projects. Includes over 30 parts.

**Musical Recorder**

Model SCP-01
- Records up to 8 seconds.
- Plays music after your recording.
- Easy to build.
- Fun to use!

**FM Radio**

Model SCP-02
- Have fun building this kit and tune it to your favorite FM station when you are finished!
- Easy to build.
- Fun to use!

**Motion Detector**

Model SCP-03
- Whenever somebody walks in front of the Motion Detector, the sound of a laser comes out of the speaker!

**Music Box**

Model SCP-04
- Push the button and music plays.
- Easy to build.
- Fun to use!

**Space Battle**

Model SCP-05
- Amuse yourself and your friends with exciting space battle sound effects!
- Laser ray and explosion sound effects.
- Fun to use!

**Flying Saucer**

Model SCP-06
- Press & release the switch and watch the saucer rise into the air!
- Easy to build.
- Fun to use!
Elenco®'s new Snap Circuits® Kits make learning electronics a “snap”. Just follow the colorful pictures in our manual and build over 750 projects, such as AM/FM radios, burglar alarms, flashlights, door-bells, and much more. You can even play electronic games with your friends!

Contains over 80 parts that are mounted on plastic modules and snap together with ease. Enjoy hours of educational fun while learning about electronics. With our deluxe version, you will also learn about and use an oscilloscope and spectrum analyzer, as you build over 73 bonus experiments using your Windows-based PC. Comes with all of the interface parts you need and the software. Great for introducing electronics through a computer. No tools required. Uses “AA” batteries.

**Models Available**

**SC-750** - *Extreme Version*, contains over 80 parts to build over 750 experiments. Includes everything from SC-500 plus experiments in solar, electromagnetism, vibration switches, and 70 computer interfaced experiments.

**SC-500S** - *Deluxe Version*, same as SC-500 plus 73 bonus computer interfaced experiments.

**SC-500** - *Snap Circuits® Pro*, contains over 75 parts to build over 500 experiments. Includes voice recording IC, FM radio module, analog meter, transformer, relay, 7-segment display and SCR.

**SC-300S** - *Deluxe Version*, same as SC-300 plus 73 bonus computer interfaced experiments.

**SC-300** - *Standard Version*, contains over 60 parts to build 300 experiments using resistors, capacitors, LED’s, switches, speaker, transistors, integrated circuits, and more.

**SC-100** - *Snap Circuits® Jr.*, Contains over 30 parts. Build over 100 experiments.
# SNAP CIRCUITS® UPGRades & Parts

## Upgrade Kits Available
Get the additional parts and manuals to take your Snap Circuits® set to the next level!

<table>
<thead>
<tr>
<th>Model UC-30</th>
<th>Model UC-40</th>
</tr>
</thead>
<tbody>
<tr>
<td>Converts SC-100 Snap Circuits® Jr. into SC-300 Snap Circuits® Pro</td>
<td>Converts SC-100 Snap Circuits® Jr. into SC-500 Snap Circuits® Pro</td>
</tr>
<tr>
<td>includes 30 new parts (AM radio components, transistors, ICs, capacitors, resistors, &amp; more) and 200 projects!</td>
<td>includes 42 new parts, AM/FM radio, recorder, meter &amp; more, and 400 projects!</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Model UC-50</th>
<th>Model UC-60</th>
</tr>
</thead>
<tbody>
<tr>
<td>Converts SC-300 Snap Circuits® into SC-500 Snap Circuits® Pro</td>
<td>Converts SC-100 Snap Circuits® Jr. into SC-750 Snap Circuits® Pro</td>
</tr>
<tr>
<td>includes 12 new parts (recording IC, transformer, FM radio, meter, &amp; more) and 200 projects!</td>
<td>includes 52 new parts, CI-73 computer interface, solar panel, and more than 650 projects!</td>
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</tbody>
</table>

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<tr>
<th>Model UC-70</th>
<th>Model UC-80</th>
</tr>
</thead>
<tbody>
<tr>
<td>Converts SC-300 Snap Circuits® into SC-750 Snap Circuits® Extreme</td>
<td>Converts SC-500 Snap Circuits® Pro into SC-750 Snap Circuits® Extreme</td>
</tr>
<tr>
<td>includes 22 new parts, CI-73 computer interface, solar panel, and more than 450 projects!</td>
<td>includes 10 new parts, CI-73 computer interface, solar panel, and more than 250 projects!</td>
</tr>
</tbody>
</table>

## Computer Interface for Snap Circuits®
**Model CI-73**

The CI-73 allows the SC-300 or SC-500 set to interface with a computer! With this module, you will learn about and use an oscilloscope and spectrum analyzer, as you build over 73 BONUS PROJECTS using your Windows-based PC (32 projects require the SC-500). Comes with all of the interface parts you need and the software. Great for introducing electronics through a computer. Acts as a scope and allows you to see the signals in the circuit. Included FREE with SC-750!

## Teaching Aids for the Homeschooler - Student Guides

**Student Guide**  
753307  
Enhance your learning with detailed explanations and quizzes. 137 full-color pages covering all 750 Snap Circuits® projects! Ideal for ALL Snap Circuits® models. One book covers them all!

**Student Guide**  
Enhance your learning with detailed explanations and quizzes. 137 full-color pages covering all 750 Snap Circuits® projects! Ideal for ALL Snap Circuits® models. One book covers them all!

**Teacher Guide**  
753290  
The Teacher Guide is meant to prepare educators for proper introduction of Snap Circuits® and guide them through each chapter with quizzes for the students to test their knowledge.
Snap Circuits® Training Program

Model SC-300R  Includes student & teacher guides

The Model SC-300R contains over 60 modular snap-together parts that will allow students to build over 300 experiments. With an easy-to-read color manual, students can jump right in and start building projects that teach about motors, batteries, lamps, speakers, resistors, capacitors and switches . . . just to name a few. Students as early as the 4th grade on up to high school will enjoy learning and have fun working with Snap Circuits®.

Topics Covered:
- Resistors
- Capacitors
- Transistors
- Motors
- Integrated Circuits
- Series Circuits
- Parallel Circuits
- Switches
- Batteries

Requires four (4) “AA” batteries (part # 590001).

Snap Circuits® Training Program

Model SC-100R  Includes student & teacher guides

The Model SC-100R contains over 30 parts to introduce students at the elementary level to the world of electricity and electronics. Build over 100 experiments from the easy-to-follow color manual by simply snapping all the parts in place. No tools needed. Student will learn about resistors, capacitors, motors, batteries, series/parallel circuits, and much more.

Topics Covered:
- Resistors
- Capacitors
- Transistors
- Motors
- Switches
- Series Circuits
- Parallel Circuits

Requires two (2) “AA” batteries (part # 590001).

Snaptricity®  Model SCBE-75

Learn how electricity and magnetism can be used to make each other. Learn about magnetic fields, how the electricity in your home works, how switches control the electricity to the lights in your home, and how series and parallel circuits affect electricity.

Features
- Over 40 parts
- Includes: Meter, electromagnet, motor, lamps, switches, fan, compass, and electrodes
- Educational toy: Projects that relate to electricity in the home and magnetism and how it is used.
- Build over 75 projects!

Requires three (3) “AA” batteries (part # 590001) or AC adapter (see page 45).
Elenco® Electronics is proud to present four training programs to introduce your students to basic electricity and electronics. Through the development of Snap Circuits®, Elenco® has revolutionized the approach educators use in the teaching of basic electronics. Through the safe use of modules that easily snap together, students can construct hundreds of projects from simple light circuits to radios, burglar alarms, and much more. The teachers guide and student guide booklets make the administration of the program not only educational, but easy and fun.

Snap Circuits® Training Program

Model SC-750R Includes student & teacher guides

The Model SC-750R is an in-depth exploration of the electronic components included with the SC-750 Snap Circuits® Extreme. Ideal for use in home schooling, middle schools and high schools, where students will grasp the basic principles of electronics.

The Student Guide for the SC-750R includes 137 pages of educational curriculum. Written with the help of educators, the Student Guide is essential in covering all topics related to electricity and electronics being taught in middle schools and above. Includes real world applications and problem solving quizzes.

The teacher guide is meant to prepare educators for proper introduction of Snap Circuits® and guide them through each chapter with quizzes for students to test their knowledge.

Topics Covered:
- Resistors
- Capacitors
- Transistors
- Motors
- Integrated Circuits
- Diodes
- Series Circuits
- Parallel Circuits
- Motors
- Relays
- Transformers
- Digital Recording
- 7-segment Displays
- Solar Energy
- Electro-magnetism

Requires four (4) "AA" batteries (part # 590001).

Snap Circuits® Training Program

Model SC-500R Includes student & teacher guides

The Model SC-500R is an in-depth exploration of the electronic components included with the SC-500 Snap Circuits® Pro. Ideal for use in home schooling, middle schools and high schools, where students will grasp the basic principles of electronics.

The Student Guide for the SC-500R includes 137 pages of educational curriculum. Written with the help of educators, the Student Guide is essential in covering all topics related to electricity and electronics being taught in middle schools and above. Includes real world applications and problem solving quizzes.

The teacher guide is meant to prepare educators for proper introduction of Snap Circuits® and guide them through each chapter with quizzes for students to test their knowledge.

Custom Storage Case

Each SC-500R comes with a lightweight, durable case with custom foam inserts to store all Snap Circuits® parts. Easy to identify missing components.

Topics Covered:
- Resistors
- Capacitors
- Transistors
- Motors
- Integrated Circuits
- Diodes
- Series Circuits
- Parallel Circuits
- Motors
- Relays
- Transformers
- Digital Recording
- 7-segment Displays

Requires four (4) "AA" batteries (part # 590001).
Elenco® Electronics, Inc.
150 Carpenter Ave.
Wheeling, IL 60090  U.S.A
Phone: 847.541.3800   Fax: 847.520.0085
Website: www.elenco.com
e-mail: elenco@elenco.com
For all international inquiries, please contact our International Department.

Elenco® specializes in building kits for many of the largest schools in the country. Tell us what PC board, transformer, resistors, capacitors, semiconductors and hardware your school needs and we will package them for you. We also do custom design, complete with PC board layout and special cabinet or case.

WARRANTY
All Elenco® models are guaranteed for two full years on all parts and service. For the first three months, you receive full coverage at absolutely no charge. For the remaining 21 months, a nominal service charge is required to cover mailing and handling.

New and Larger Facility to Serve You Better Since 1972!

Distributor: