SELF-FUSING RUBBER TAPE
Stretch and wrap self-fusing rubber tape for a moisture-tight, insulating seal on electrical connections. High resistance to salt water, steam and oil. Stretch a 2-3" piece of tape and wrap it spirally around the object with a 50% overlap. Can be removed easily without leaving any residue. 1" x 16.4' roll.
CAT# SFT-5 $4.50 each

ALLIGATOR CLIP JUMPERS
5 test leads. 2" Clips.
CAT # HDTL-5 $2.75 each

SOLDERLESS BREADBOARD, 400 CONTACTS
Design and change circuits quickly and cleanly. Breadboards accommodate all sizes of dips and discrete components with lead diameters up to 0.032". Interconnect with solid hook-up wire (#22 AWG recommended). Wires and components can be used and re-used many times without damage to board or components. 400 tie points. 300 contacts on main board and 50 contacts on each of two power distribution strips. Distribution strips are removable.
CAT # PB-400 $4.00 each
10 for $3.75 each

2-CONDUCTOR LOCKING CONNECTORS W/ LEADS
Mating pair of polarized multi-pin connectors with wire leads. Pins on 2.5mm centers. Black nylon housing with release on male side of connector. Female side of connector can be snap-mounted into a rectangular chassis mounting hole. 12" color-coded leads, 22 AWG stranded wire on both connectors.
CAT # CON-240 $1.35 each
10 for $1.20 each • 100 for 95¢ each

6-24 VDC GEAR MOTOR, 1:84 RATIO
Hennkwell# P2Z2GR9120R-084BBH Good quality 22mm diameter planetary gear brush motor. Smooth, quiet operation. Wide operating range, 6-24Vdc. Dual ball bearings. Rated 142RPM @ 24Vdc, no-load. 113 RPM with load. 6mm diameter x 14mm shaft with hole. 2mm diameter shaft at rear of motor. Overall length of motor and gearbox, 60mm. Solder lug terminals.
CAT# DCM-9120 $7.95 each

TIME - TEMPERATURE - VOLTAGE METER
3 in 1 module -- clock, thermometer, voltmeter, using the DS3231 chip. Can display any one or cycle through all three. Power supply voltage: DC5.0 ~ 30V. Temperature range: -40 to 85°C, resolution 0.1°. Voltmeter range: DC5 ~ 30V. Dimensions: 40 x 13mm. Requires connector we suggest our CAT# CON-240. Requires power supply, any 5-30 Vdc 300 mA.
CAT # DCLK-1 $5.50 each

THROUGH-BEAM PHOTO-ELECTRIC SENSOR PAIR
SICK Optics WS15-D1130 / WE15-A1130. Photo-electric sender and receiver pair detects the presence of an object when the beam between the two is interrupted. When the beam is broken, the receiver produces a current that can be used to trigger an audio-visual signal or relay-operated device. 5 Meter range. Built-in LED alignment and power indicators. Modules are 38 x 21 x 16.2mm and can be front or side-mounted. Front-mount hardware is included. Operate on 10-30Vdc. Power supply not included. cULus.
CAT # OSU-1130 $15.00 • $11.35 pair

HIGH VOLTAGE TASER COMPONENT
Converts 3.7 Volts to approximately 18,000 Volts. The main component in a taser/ stun gun, it creates quite a spark and a loud crackling noise when the probes are within 1/2" inch of each other. 1.35" x 1.55" x 0.31". The output leads have pointed probes attached. Warning: Operate carefully!
CAT# HVS-01 $9.90 • $7.50 each

ECONOMY PROJECT BOXES
Black ABS plastic project enclosure. Inter-locking lid secured with self-tapping screws. Interior slots for PC boards. Includes hardware.

Dimensions | CAT# | 1-9 | 10+
-------------|------|-----|-----
3.95" x 3.02" x 1.60" | MB-173 | 3.00 | 2.75
5.3" x 3" x 1.9" | MB-113 | 4.50 | 4.00

VISIT OUR WEBSITE - WWW.ALLELECTRONICS.COM
2 POSITION  Standard style.  
CAT# DWS-2  65¢ each

4 POSITION  Standard style.  
CAT# DWS-4S  50¢ each  
100 for 30¢ each

4 POSITION  Low profile style.  
CAT# DWS-4S  $1.00 each

7 POSITION  Piano style.  
CAT# DWS-7P  50¢ each

8 POSITION  Standard style.  
CAT# DWS-8  $1.00 each

10 POSITION  Standard style.  
CAT# DWS-10  85¢ each

REED SWITCHES
Magnetically-operated reed switches. Hermetically-sealed glass body.

NORMALLY-OPEN REED SWITCHES
Coto #RI-01C  
Body:  1.8mm diameter x 13.5mm long  
CAT# RSW-41  $1.25 each  
10 for $1.10 each  •  100 for 95¢ each

ORD2201  
1 Amp rating.  2.75mm diameter x 21.0 long  
CAT# RSW-43  2 for $1.50

S.P.D.T. REED SWITCH
Hamlin  
Body:  4.7mm diameter x 33mm long  
CAT# RSW-40  $1.50 ea.  • 10 for $1.25 ea.

ALARM SWITCHES
SPDT  
Can be used on normally open or normally closed loop systems. Switch measures 2" long X 3/8".  
CAT# MS-7  $6.00 each  
10 for $5.50 each

PRESS-FIT MAGNET SWITCH  
Press-fit into 3/8" hole. Ideal for windowsand doors. For normally closed systems. 0.75” operating gap.  
U.L. listed.  
CAT# MS-11  $3.50 per set  
10 sets for $32.50

SNAP-TOGETHER PROJECT BOXES
Two or three piece black ABS enclosures.  

1.46" X 1.06" X 0.67"  
Black ABS plastic project box.  
Bottom snap-fits tightly into place.  
0.71” x 0.22” slot in one side of box.  
CAT# MB-95  $1.50 ea.  • 10 for $1.35 ea.

2.1" X 1.61" X 0.89"  
3-pieces. Bottom and one (long) side snap-fit in place. Mounting ears with holes on 2.6” centers.  
CAT# MB-96  $2.35 each  
10 for $2.00 each

3.56" X 1.50" X 1.20"  
Bottom snap-fits into place. Mounting ears with holes on 3.9” centers. 0.25” x 0.43” opening near the bottom of one long side.  
CAT# MB-97  $1.95 ea.  • 10 for $1.70 ea.
MINI-ABS CASES
Black or gray ABS plastic with inter-locking lid. Integral standoffs for pc board mounting. Lid held in place with self-tapping #4 screws (included).

1.97" x 1.38" x 0.59"
CAT# 1551-FBK Black $1.90 each
CAT# 1551-GGY Gray $1.90 each

2.36" x 1.38" x 0.8"
CAT# 1551-HGY Gray $2.25 each
CAT# 1551-HBK Black $2.25 each

3.15" x 1.57" x 0.8"
CAT# 1551-KGY Gray $2.35 each
CAT# 1551-KBK Black $2.35 each

GENERAL PURPOSE CASES
Black ABS cases with countersunk lid secured with self-tapping screws. Slots for mounting pc boards.

CAT # Dimensions 1-9 10+
1591-MSBK 3.3" x 2.2" x 0.8" 3.50 3.25
1591-ASBK 3.9" x 2.0" x 0.8" 3.75 3.50
1591-BGBK 4.4" x 2.4" x 1.1" 4.30 4.10
1591-CSBK 4.7" x 2.6" x 1.4" 4.65 4.35

INSTRUMENT CASES
Gray ABS plastic. Two piece tongue and groove construction. 0.064" brushed aluminum front and rear panels. Integral pc standoffs. Front and rear vertical pc board guides.

CAT # Dimensions 1-9 10+
1598-ASGY 6.1" x 3.65" x 1.36" 9.10 8.50
1598-BSGY 5.26" x 5.3" x 1.1" 7.75 7.25

CASES w/ BATTERY COMPARTMENTS
Black ABS plastic cases with removable front panels and panel for battery compartment. Integral pc board standoffs. Includes self-tapping screws. 9V batteries won’t fit in CAT#s 1593-SBK & TBK.

CAT # Dimensions 1-9 10+
1593-PBK 2.6" x 3.54" x 1.1" 4.15 3.95
1593-QBK 2.6" x 4.4" x 1.1" 4.75 4.55
1593-SBK 2.6" x 3.6" x 0.83" 4.10 3.85
1593-TBK 2.6" x 4.35" x 0.83" 4.50 4.30
1593-YBK 2.6" x 5.45" x 1.1" 5.10 4.85

ECONOMY PROJECT BOXES
ABS plastic project enclosure. Inter-locking lid secured with self-tapping screws. Interior slots for PC boards. Includes hardware. Boxes are black, except CAT#s with “G” are grey.

CAT # Dimensions 1-9 10+
1590-15 2.51" x 1.73" x 1.25" 2.53" x 1.75" x 1.37" 2.96" x 1.94" x 1.05" 3.95" x 3.02" x 1.60" 4" x 3" x 1.6" 4.97" x 2.12" x 1.72" 4.33" x 2.24" x 0.83" 5.3" x 3" x 1.9" 5.30" x 3" x 1.9" 5.30" x 3" x 1.9" 6.18" x 3.78" x 2.10" 7.55" x 4.39" x 2.48" 7.38" x 4.70" x 2.05

PROJECT BOXES W/ MOUNTING FLANGES
High-impact ABS plastic utility boxes. Black textured finish. Interlocking lid held in place with screws. Interior card guides for 1.6mm thick PC board. Mounting flange has counter-sunk screw holes and adds 1" to 1.25" to overall length of box.
ENCLOSURES WITH ALUMINUM COVERS

Heavy-duty 3/32" molded plastic boxes with brushed aluminum covers. Built in stand-offs for PC or perf boards. Includes screws. Solderable perf boards PC-1, 2, 3, 4 listed below fit these cases.

<table>
<thead>
<tr>
<th>Dimensions</th>
<th>CAT#</th>
<th>10+</th>
</tr>
</thead>
<tbody>
<tr>
<td>2.7” x 1.7” x 1.2” H</td>
<td>TB-1</td>
<td>1.90</td>
</tr>
<tr>
<td>3.3” x 2.1” x 1.4” H</td>
<td>TB-2</td>
<td>2.50</td>
</tr>
<tr>
<td>4.2” x 2.7” x 1.6” H</td>
<td>TB-3</td>
<td>2.95</td>
</tr>
<tr>
<td>5.3” x 3.3” x 1.6” H</td>
<td>TB-4</td>
<td>3.75</td>
</tr>
</tbody>
</table>

SOLDERABLE BREADBOARDS

Perf board with mounting holes designed to fit our project enclosures TB-1,2,3 and 4. Boards have holes on 0.1” matrix to fit most standard components. Copper solder rings on one side.

1 1/2” x 1 3/4”. Fits TB-1 enclosure
Cat# PC-1 75¢ each

1 7/8” x 2 1/4”. Fits TB-2 enclosure
Cat# PC-2 $1.00 each

2 1/2” x 3 1/8”. Fits TB-3 enclosure
Cat# PC-3 $1.50 each

3” x 4 1/4”. Fits TB-4 enclosure.
Cat# PC-4 $2.00 each

60 x 80mm, 594 point multilayer epoxy board. Single hole pads. Holes on 0.1” centers. Double-sided with pre-tinned through-holes. Rows and columns are labeled alphanumerically.
Cat# SB-25 $3.00 each

Same pattern and spacing as our solderless breadboard, Cat# PB-400. Transfer your parts and wires, keeping the same layout to get a long-lasting prototype with reliable solder connections. High-quality FR4 glass epoxy PC board. Copper on one side. Cat# SB-300 has the same pattern as SB-400 w/o the bus strips on each side.

300 point Cat# SB-300 $4.00 each
400 point Cat# SB-400 $5.00 each
800 point Cat# SB-800 $6.50 each

SOLDERABLE PERF BOARD WITH SOLDER PADS AND BUSS STRIPS

Multilayer epoxy boards. Holes on 0.1” centers for SIP and DIP components.

SINGLE HOLE PADS
double sided w/ plated through-holes
50 x 80mm Cat# SB-24 $4.00 each
80 x 100mm Cat# SB-48 $6.60 each

TWO HOLE PADS
copper pads one side
50 x 80mm Cat# SB-2H1 $3.25 each

SOLID LINE PATTERN
copper pads one side
50 x 80mm Cat# SB-ST1 $3.15 each
100 x 80mm Cat# ECS-6 $4.00 each
160 x 100mm Cat# ECS-4 $6.95 each

SNAPPABLE BREADBOARD
Solderable, double-sided breadboard that can be used as a single prototype board or snapped into four smaller boards for tiny projects. 2-hole strips and 4-hole strip areas. Four power rails. Centerline pads. High-quality FR4 glass epoxy PCB. Lead-free. Anti-tarnish coating. 0.042” holes drilled on 0.1” centers. Size: 2.5” x 3.8” (63.5 x 96.5mm).
Cat# SBB-4 $5.50 each

SMT PADS
Grid of SMT pads on 0.05” centers allows SMT components of various sizes & pitches to be mounted. Larger components can span pads. Solid copper ground plane on bottom of board. Every 4th SMT pad has an unplated hole for easy connection to the ground plane.

50 x 80mm Cat# SB-5050 $4.00 each
100 x 160mm Cat# SB-3T $12.50 each

SOLDERLESS BREADBOARDS

Design and change circuits quickly and cleanly. Bread-boards accommodate all sizes of dips and discrete components with lead diameters up to 0.032”. Interconnect with solid hook-up wire (#22 AWG recommended). Wires & components can be used & re-used many times without damage to board or components.

170 Contacts. 1.80” x 1.40” x 0.375” high.
Cat# PB-170 $2.50 each
10 for $2.00 each

400 contacts. 300 contacts on main board & 50 contacts on each of two power distribution strips. Distribution strips are removable. White.
Cat# PB-400 $4.00 ea. • 10 / $3.75 ea.

Same specs as PB-400 above, but made of clear plastic.
Cat# PB-400C $3.65 each
10 for $3.40 each

470 contacts plus two 70 contact buss strips, for a total of 610 contacts. 3 binding posts mounted on aluminum back plate. 5.92” x 3.75” x 0.43” high.
Cat# PB-610 $12.50 each

840 contacts. Dual row of buss terminals on each side of terminal strip. Double-sided adhesive tape backing. Holes for screw mounting. 2.2” x 6.5” x 0.38” high.
Cat# PB-840 $7.65 each

1680 contacts. 2 terminal strips. 4 buss strips, 3 binding posts mounted on an aluminum back plate. 5 1/8” x 6 7/8” x 3/8” high.
Cat# PB-1680 $15.95 each

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