We hope you enjoy this new catalog.

Over the last year we have been busy modernizing, updating and re-designing our website to be smart phone and tablet optimized. The shopping experience on these devices should be much improved, so please check us out at [www.allelectronics.com](http://www.allelectronics.com)

We update our website almost daily with new arrivals and special deals, as our stock is constantly changing. We also publish a weekly email newsletter which you can subscribe to using the form on our homepage, or if you have an account, login and click on the email subscription link.

The website has thousands more items than we’re able to cram into this print catalog, so have a look at our website if you don’t see what you are looking for in here.

Thanks for shopping with us.

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<td><strong>Thermostatic Control Module</strong>&lt;br&gt;Digital module can be programmed to turn equipment on or off at specific, pre-set temperatures. Also has hysteresis setting, delay setting, upper-limit setting and upper limit alarm setting. Displays temperature in Celsius on 3-digit LED display. On-board 20A relay. Waterproof temperature sensor. Three buttons for navigating temperature parameters and other functions. Operating voltage 12 Vdc. Overall dimensions 48mm x 40mm x 14mm.</td>
<td>$6.00 each</td>
</tr>
<tr>
<td><strong>Tesla Coil Kit</strong>&lt;br&gt;Fascinating mini Tesla Coil kit is great for educational demonstrations and entertainment purposes. Produces a high-voltage, low-current arc when you hold a metallic object (ie. insulated screwdriver) next to it. Impressively, it uses wireless power to transmit electrical energy to a high-frequency, low current electrical load such as a neon lamp or fluorescent bulb without any physical connection. 85mm x 54mm x 68mm assembled. Requires a 12 Vdc 2 Amp power supply, we suggest our CAT# PS-1292.</td>
<td>$8.50 each</td>
</tr>
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<td><strong>Battery Level Meter</strong>&lt;br&gt;Monitor battery usage in lead-acid and lithium-ion batteries. LCD displays percentage of voltage remaining in numerical and graphic format. Designed for use with 12, 24, 36 or 48V lead-acid batteries or 3 to 15 cell (8-63V) lithium-ion batteries. Battery symbol flashes when level reaches 5%.</td>
<td>$7.75 each</td>
</tr>
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<td><strong>0-100V DC Voltmeter</strong>&lt;br&gt;3-digit LED voltmeter for 0-100VDC range. 0.28” digits on a 0.89” x 0.39” display. Digits on black background. Three wire operation. Red-black for power; yellow-black for voltage being monitored. Will monitor its own voltage. Mounting ears with holes on 1.03” centers.</td>
<td>$3.95 each</td>
</tr>
<tr>
<td><strong>12 VDC 3 AMP Power Supply</strong>&lt;br&gt;Model: PS-2.1-12-3-DC-U-S, 4.42” x 2.12” x 1.35” high. Detachable power input cord. 6” output cable with 2.1mm coax plug, center positive. cULUs.</td>
<td>$6.95 each</td>
</tr>
<tr>
<td><strong>3 AMP DC Motor Speed Controller</strong>&lt;br&gt;Controls the speed of a DC motor using Pulse-Width-Modulation. An efficient method of changing the speed of a DC motor without changing voltage. Has a potentiometer with on-off switch and a four-position screw-terminal strip for easy connection to motor and power source. Can be used as a lighting dimmer and similar applications with DC loads up to 3A. 30 x 28mm pc board.</td>
<td>$5.75 each</td>
</tr>
<tr>
<td><strong>AGC (3AG) Fuse Post</strong>&lt;br&gt;Screw style cap. Holder fits 3 AG (AGC) or MDL fuses. Chassis mounting hole 0.59” (15mm) diameter.</td>
<td>$1.50 each</td>
</tr>
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<td><strong>Voice Record / Playback Module</strong>&lt;br&gt;Based on the ISD1820 chip, this multiple-message record/playback device offers true single-chip voice recording, non-volatile storage, and playback capability for 8-20 seconds. Features on-board microphone as well as internal audio amplifier which can drive an 8 Ohm 0.5W speaker directly. Can be manually operated with on-board pushbuttons or by microcontroller. Supply voltage 3.3-5 Vdc. Board dimensions 54mm x 38mm x 15mm high.</td>
<td>$6.00 each</td>
</tr>
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<td><strong>Socket for Automotive Relay</strong>&lt;br&gt;With two 18 AWG leads and three 14 AWG leads. Sockets can be interlocked side-to-side. Pre-wired sockets for use in car alarms, door-locks, starter-interrupt, light circuits and other auto applications. Color-coded leads. Will fit our relay, CAT# RLY-351.</td>
<td>$2.25 each • 10 for $17.50</td>
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| **2-Conductor Waterproof Connectors, 18 AWG**<br>Mating, weather-resistant polarized connectors. 12” red & black 18 gauge stranded wire leads. | $1.85 each • 10 for $17.00 each
| $1.25 each

---

**30 DAY MONEY-BACK GUARANTEE**

◊◊◊◊◊◊ Best Sellers ◊◊◊◊◊◊
FLASHING ROAD HAZARD FLARE
Flashinig roadside emergency LED flare with flashlight. Easy to use, extremely durable, and much safer than traditional flares. Features 10 different flashing patterns including 3-LED work-light and provides 360 degrees of illumination. Contains a hook and strong magnet for placement on vehicle or boat and may be used in any weather condition. Ideal for road safety identification by emergency responders, personal vehicles, construction sites and marine applications. Powered by 3 AAA batteries (not included). 4.0" diameter x 1.5" high.
CAT # ERL-1 $9.95 each

SMALL DC GEAR MOTOR, 3V 20 RPM
Mini DC motor with plastic/nylon gear assembly. 20 RPM @ 3Vdc, no load. Plastic gear housing, nylon gears. Body dimensions 42mm x 42mm x 17mm. 2mm shaft with square shaped extension. Overall shaft dimensions 36mm L x 5mm diameter.
CAT # DCM-542 $3.00 each

TWEEZER TEST LEADS
A must for testing small, in-circuit components. Shrouded banana plugs fit most test meters. Tweezer marked with + and - symbols. 5.9" long tweezer probe. Overall length of leads, 24".
CAT # TL-126 $6.95 each

300 LEDS, RED, GREEN, YELLOW, BLUE, WHITE
Keep a good selection of LEDs on hand for whatever your project might require. Red, Green, Blue, Yellow (Amber) and White 3mm and 5mm LED assortment. All are clear in off-state.
• 5mm LEDs, 20 pcs each color.
• 3mm LEDs, 40 pcs each color.
• Clear plastic divided box with locking lid. Because all of these water-clear LEDs look alike and might easily get mixed, we suggest ordering our LED tester, CAT# LT-100 to assure LED color before soldering.
CAT # LED-K1 $8.00 kit

BATTERY HOLDER FOR TWO AA CELLS
Holder for 2 AA size batteries. 2.25" long x 1.25" x 0.61" high. Unbreakable black plastic. 6" wire leads.
CAT # BH-32 85¢ each
10 for 75¢ each • 100 for 60¢ each

2.1MM ID COAX PLUG W/ 9V BATTERY SNAP
2.1mm ID co-ax plug on two 4" wire leads terminate to 9 volt T-type battery snap.
CAT # CB-239 $1.30 each
10 for $1.15 each

ILLUMINATED MULTI POWER HEAD MAGNIFIER & LOUPE
Illuminated multi-power head magnifier keeps your hands free while enhancing your vision. 2 led bulbs with tilt and angle controls to adjust the light beam. Magnification: 1.9x acrylic fixed lens, 1.9x acrylic flip-down lens and 4.5x glass swivel loupe. Magnifier assembly can be flipped up out of your way when not in use. Adjustable head strap with dial control. Plastic body.
CAT # HD-LMAG $10.95 each

3-POLE BULLET CONNECTOR SET
3.5mm gold-plated bullet connectors. Polarized, tough plastic (Nylon) connectors that fit securely together. Solder cups for up to AWG12 wire. Includes sleeves to hide solder connections. 46 x 12 x 12mm.
CAT # CON-37 $3.25 set

EXTRA-LOUD MINI PIEZO SIREN
Small, painfully-loud two-tone piezo siren for auto or home security devices. Operates 6-12 Vdc, 110 ma. 108dB output (30cm). 1.81" x 1.55" x 0.88" high black plastic body. Two mounting holes on diagonal 1.80" centers. 3" wire leads.
CAT# ES-10 $5.85 ea. • 10 for $5.65 ea.

7A 12 POSITION TERMINAL BLOCK
For 22-18 wire. 3.78" x 0.87" x 0.32"(8mm) terminal centers. UL, CSA, VDE.Flexible white (natural) Nylon 66 body, 94V2 rated for 105 C degrees. 400 Volts. All metal parts are completely recessed in the housing to prevent shorts. Strip has 12 circuits, with a mounting hole between each circuit. Can be easily shortened with a knife or saw.
CAT # TB-7 $2.00 each
10 for $1.80 each • 100 for $1.60 each
VISIT OUR WEBSITE - WWW.ALELECTRONICS.COM

SPDT ON-ON MINI TOGGLE SWITCH
RATED: 2 Amp 250 Vac, 5 Amp 120 Vac.
Solder lug terminals. 1/4-40 threaded bushing, 0.43" long handle.
CAT # MTS-4 $1.25 each
10 for $1.10 each • 100 for $0.95 each

25 FT. CAT-5E PATCH CABLE
Snagless molded RJ45, 350Mhz.
UTP, Pure Bare Copper stranded 24AWG, Blue.
CAT # CB-525 $2.50 each
10 for $2.00 each
100 for $1.70 each
500 for $1.30 each

LM555 TIMER (MC1455)
8 pin DIP
CAT # LM555 75¢ each

12V DIFFUSED LED, 5MM (T 1 3/4)
Bright 5mm round LEDs with built-in resistors for 12Vdc, 12mA operation.
No external resistor required. Works well on 4-12Vdc. Dimmer at lower voltages.
35° viewing angle. Lenses are tinted the same color as the LED when lit.

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<tr>
<td>Green</td>
<td>LED-12G</td>
<td>50¢</td>
<td>45¢</td>
<td>40¢</td>
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<tr>
<td>Red</td>
<td>LED-12R</td>
<td>50¢</td>
<td>45¢</td>
<td>40¢</td>
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2N3904 NPN TO-92 TRANSISTOR
CAT # 2N3904 5 for 75¢
100 for 13¢ each • 1000 for 10¢ each

SPST MOMENTARY N.O.
RED PUSHBUTTON
Normally open switch with 1/4" bushing and red plastic button. Ideal for most low current projects.
CAT # MPB-1 85¢ each
100 for 65¢ each

STANDARD T-1 3/4
Diffused

<table>
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<th>CAT#</th>
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<td>RED</td>
<td>LED-1</td>
<td>10 for $1.00</td>
<td>.09</td>
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<tr>
<td>GREEN</td>
<td>LED-2</td>
<td>10 for $1.50</td>
<td>.12</td>
</tr>
<tr>
<td>YELLOW</td>
<td>LED-3</td>
<td>10 for $1.50</td>
<td>.12</td>
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2.1MM COAX POWER JACK
(FEMALE) W/ PIGTAIL
2.1mm coax power jack with 10” color-coded leads. 2.1mm id x 5.1mm od.
CAT # CB-209 $1.75 each

DE-SOLDERING WICK
For easy removal of parts from P.C. boards. Top quality solder wick. 5’ per spool. 1/16” wide.
CAT # SWK $2.25 per spool

HEATSHRINK TUBING ASSORTMENTS
IN UNBREAKABLE CLEAR PLASTIC BOXES
Have the right piece of heatshrink tubing when you need it. 4” lengths of 6 different diameters:
1/16” - 56 pcs, 3/32” - 35 pcs, 1/8” - 28 pcs,
3/16” - 18 pcs, 1/4” - 9 pcs, 3/8” - 8 pcs.

ASSORTED COLORS, 154 PIECES:
black, red, clear, yellow, green, blue, white
CAT # HS-4900 $10.95 per kit

BLACK ONLY, 154 PIECES:
CAT # HS-4901 $10.95 per kit

5” FLUSH CUTTER
Trim leads on PC boards. Thin cutting edge for hard to reach areas.
Insulated handle. Spring return.
CAT # FC-14 $5.25 each

10-POSITION DUAL-ROW STRIP,
20 AMP
10 circuit, dual-row barrier strip rated.
20 Amps @ 300 Volts. Accepts wire from 22 to 14 AWG. 0.375” (9.5mm) centers. UL94V-0
black thermoplastic. Brass, tin-plated terminals. Steel, Ni-plated screws. 0.85” wide x 0.52” high
x 4.40” long. Mounting holes on 8mm centers.
CAT # TS-210 $3.36 each
25 for $3.12 each • 100 for $2.88 each

CR2032 3 VOLT 180 MAH LITHIUM
BUTTON CELL
CR2032. 3 volt, 180mAh
0.787” diameter (20MM X 3.0MM).
CAT # LBAT-20 $1.00 each
10 for 85¢ each • 100 for 70¢ each

PRE-WIRED CONNECTORS WITH
MATING HEADERS
Nylon connectors and mating pc mount, snap-lock headers.
Female socket connector is pre-wired with 11” long color-coded stranded wire.

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<thead>
<tr>
<th>CAT#</th>
<th>pins</th>
<th>AWG</th>
<th>spacing</th>
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<td>CON-242</td>
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<td>22</td>
<td>0.1&quot;</td>
<td>85¢   per set</td>
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<td>CON-244</td>
<td>4</td>
<td>22</td>
<td>0.1&quot;</td>
<td>$1.30 per set</td>
</tr>
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</table>

2.1MM COAX POWER JACK,
PANEL MOUNT
Normally closed shunt opens when plug is inserted. 2.1 mm mates with CAT# DCSID. Panel mount.
CAT # DCJ-21 $1.75 each
10 for $1.60 each • 100 for $1.45 each
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# P222GR9120R-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

12 VDC ULTRABRIGHT WHITE LED, 5MM
Water-clear 5mm package. Clear in off-state. 12Vdc operation, built-in resistor. Operates at lower voltages with lower brightness.
CAT # LED-12WP 50¢ each
10 for 45¢ each • 100 for 40¢ 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

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

VISIT OUR WEBSITE - WWW.ALELECTRONICS.COM
KITS

A NOTE ABOUT KITS....
Kits cannot be returned or exchanged once assembly has begun.
All parts supplied EXCEPT batteries.

2-DIGIT COUNTER WITH POWER SUPPLY
Large, two digit counter assembly. Advances one digit at a time, from 0 to 99 each time button is pushed. Each digit is 2.75” high and consists of 21 red 5mm LEDs. 5” x 4.18” black display board connected to 4.25” x 2” controller board. Five 4” pigtail wires. Included is a 9 Vdc power supply and a momentary, normally-open pushbutton switch.
CAT# CTR-92 $6.00 each
10 for $5.65 each

L.E.D. FLASHER KIT
Two L.E.D.’s flash in unison when a 9V battery is attached. This kit includes a p.c. board, all the parts and instructions to make a simple flasher circuit. A quick and easy project for anyone with basic soldering skills.
CAT# LEDKIT $2.50 each
100 for $2.25 each

ADJUSTABLE LED FLASHER
Two potentiometers adjust the flash rate of two LEDs. 9V operation. Battery not included.
CAT# MK-1021 $4.95 each

LED CHASER KIT
Build this variable speed LED chaser. 10 leds flash sequentially at whatever speed you set them for. Easy to build kit includes pc board, parts and instructions. Ideal for special lighting effects, costumes, etc. Operates on 3 to 9 volts. PC board is 5” x 2.25”.
CAT# AEC $6.95 each • 10 for $65.00

EM4 ROBOT KIT
Owkit# OWI-891 Fun & easy-to-assemble Educational motorized robot kit with four modes: 6-leg walking cricket, motorized transmission trailer, grand rolling Beast and gear driven walking Grandpa-Bot! This 32 piece, 3 speed kit provides entertainment, imagination and education. Multi Ratio Gear Box. Requires one AA battery. Easy assembly and only requires a diagonal cutter and screwdriver. No soldering required. Assembled dimensions: 10.50” x 7.25” x 3.50”. For ages 8+.
CAT# OWI-891 $20.95 each

6-IN-1 EDUCATIONAL SOLAR KIT
An excellent building kit for beginners, teaching children the benefits of solar energy while they create a toy that is fun to play with and requires no batteries. Children use the snap-together plastic parts to build six different motorized working models including an airboat, windmill, puppy, car, and two different planes. No tools required for assembly. Diagonal cutter may be needed to initially separate plastic parts. Kit includes plastic parts, 75mA solar cell, 1.2V electric motor, wires, springs and instruction book. For children 10+. May require adult assistance.
CAT# KFK-2 $8.25 each

10-LED SPINNING WHEEL
Push the button to start spinning. Speed gradually decreases, stops and one LED remains lit. Auto power-off. Low power consumption. Power supply: 9V battery (not included). 2.6” x 1.3”
CAT# MK-152 $7.95 each

40 EDUCATIONAL ELECTRONIC PROJECTS, BOOK & PARTS KIT
The Basics: 40 Exciting Labs eTron Circuit Labs. An immersive, hands-on curriculum of fun and illustrative electronics projects that teaches the fundamentals of electronics. Designed to be STEM (Science, Technology, Engineering, Math) Education Compliant for use in school curriculum. Beautiful color photos and illustrations lead you through a wide variety of labs covering a lot electronic fundamentals. Projects are designed to be breadboarded, taken apart and reused.
Complete Lab includes The Basics v2.0 manual (112 pages), and all the parts necessary for the 40 projects in this book, the basics parts kit, solderless circuit board and 9-Volt battery.
CAT# KT-40 $24.95 each
If you only wish to purchase the book, use CAT# BK-52 $15.95 each

WIND-UP TOY MOTOR W/ WHEELS
Create your own wind-up toy using this small wind-up motor. Attached is a pair of 9/16” diameter wheels on 1 1/8” wheel base. Winding shaft is 1 1/8” long with knurled nylon knob. Body dimensions 1 1/4” x 5/8” x 1/2”. Running time is approximately 10 seconds.
CAT # WM-4 $1.00 each
10 for 85¢ each

ORDER TOLL FREE 1-800-826-5432
**ARDUINO COMPATIBLE PRODUCTS**

Arduino is an open-source physical computing platform based on a simple I/O board and a development environment that implements the Processing/Wiring language. Arduino can be used to develop stand-alone interactive objects or can be connected to software on your computer (e.g. Flash, Processing, MaxMSP). The open-source IDE can be downloaded for free (currently for Mac OS X, Windows, and Linux).

We carry Arduino microprocessors and related products. See our online store for full descriptions.

**UNO R3**

Everything needed to support the onboard ATMega328 microcontroller; connect to a computer with a USB cable or power it with a AC-to-DC adapter or battery. It has 14 digital input/output pins (6 can be used as PWM outputs), 6 analog inputs, a 16 MHz ceramic resonator, a USB connection, a power jack, an ICSP header, and a reset button. This version of the board has a socketed / replaceable ATMega328 chip (see CAT# ARD-24). Recommended operating voltage, 7-12 Vdc.

**ATMEGA328 W/ ARDUINO OPTIBOOT (UNO), DIP**

Pre-loaded with the Arduino Optiboot (Uno 16MHz) Bootloader, to use Arduino code in a custom embedded project without using an actual Arduino board.

**MICRO SD CARD READER/WRITER MODULE**

This Micro SD card module can be used to read and write Micro SD cards with your Arduino or favorite microcontroller. Great for adding storage space to any Arduino project. Especially useful for datalogging, saving preferences, or storing game data. Features on board level shifting IC to go from 5v to 3.3v and uses standard SPI interface. 6-pin header. Overall dimensions 24.19mm x 41.8mm x 3.52mm.

**LOGIC LEVEL CONVERTER, BI-DIRECTIONAL**

Bi-directional logic level converter safely steps down 5V signals to 3.3V and steps up 3.3V to 5V at the same time. This level converter also works with 2.8V and 1.8V devices. 0.63 x 0.52” (16.05 x 13.33mm).

**ARDUINO STACKABLE HEADER KIT**

Works with Arduino Main Board, Pro & Mega. They clear the USB-B connector and enable stacking of multiple shields. This kit includes four headers (2 8-pin and 2 6-pin).

**SPARKFUN INVENTORS KIT**

The SparkFun Inventor's Kit is a great way to get started with programming and hardware interaction with the Arduino programming language. The kit includes everything you need to complete five overarching projects consisting of 16 interconnected circuits that teach everything from blinking an LED to reading sensors. The culminating project is your very own autonomous robot! No previous programming or electronics experience is required to use this kit.

**PRO MINI 328**

For users that understand the limitations of system voltage (3.3 or 5V), lack of connectors, and USB off board. Not populated with connectors so you can solder any connector or wire with any orientation you need. We recommend first time users start with the Uno R3 (CAT# ARD-21).

**RFID READ AND WRITE KIT**

Allows you to both read and write MiFare-type cards. Can be used for identification applications, tracking inventory, or contactless security lock. Includes one credit-card style tag and one key-fob style tag.

**WiFi MODULE - ESP8266**

Self contained WiFi module capable of either hosting an application or offloading all Wi-Fi networking functions from another application processor. Pre-programmed with an AT command set firmware. Operating voltage 3.3V.

**16 X 2 LCD W/ KEYPAD**

For Arduino compatible boards for user input and menu selection in custom applications. Features a 1602 white character LCD with blue LED backlight and 4-bit Arduino LCD library. Character size: 2.95 x 4.35mm. Keypad consists of 6 keys: select, left, up, down, right and reset. Potentiometer for dimmable backlighting. LED indicator. Operates on 5Vdc. 80mm x 58mm x 13mm.
JOYSTICK SHIELD
Turn your Arduino board into a gamepad similar to a Nintendo controller. Can communicate with other wireless interfaces. Features the Nokia 5110 LCD / nRF24L01 interface. Seven push buttons (four big, two small, joystick select button) and a two-axis thumb joystick. Operates on 3.3-5Vdc. Board dimensions 83mm x 54mm.
CAT # ST-1124 $4.95 each

VOICE RECORD / PLAY MODULE
W/ SPEAKER
Based on the ISD1820 chip, this multiple-message record/playback device offers true single-chip voice recording, non-volatile storage, and playback capability for 8-20 seconds. Features on-board microphone as well as internal audio amplifier which can drive the included 8 Ohm 0.5W speaker directly. Can be manually operated with on-board pushbuttons or by microcontroller. Supply voltage 3.3-5 Vdc. Board dimensions 54mm x 38mm x 15mm high.
CAT # ME-63S $7.00 each
Above module without the speaker,
CAT # ME-63 $6.00 each

HC-05 BLUETOOTH MODULE
HC-05 / ZS-040 Bluetooth module. 37 x 16.5 x 4.0mm pc board with 6-pin header. Can be set for master or slave operation. Onboard 3.3V regulator. Operates on 3.3-6V. For use with Arduino.
CAT # HC-05 $8.50 each

LIGHT SENSORS
CdS PHOTOCELLS – PHOTO RESISTORS
Light dependent Cadmium sulfide (CdS) resistors. Plastic coated resistors on ceramic, 0.2-0.25” diameter. Light and dark resistances are approximate.
2MO Dark 1K – 60KO Light
CAT# PRE-24 1.25 each
10 for $1.10 each
30K Dark – 1.5K Light
CAT# PRE-25 95¢ each
10 for 85¢ each
Arduino-style Module
Approximately 100Ω light, 10KΩ+ dark resistance. 0.60” x 0.75” pc board with 3-pin output, 0.10” spacing.
CAT# SE-12 $2.40 each

INFRARED SENSORS
LINE FOLLOWING / REFLECTIVITY SENSOR
Measures the reflectivity of a surface using infrared emitter/detector pair. Built around the LM393 comparator, it requires only 3 connections, V+, 5VDC, and GND. LED indicator. Can make a robot follow a painted line or count rotations of a motor shaft. 1.64” x 0.42” x 0.40”. Three pin header, 0.1” centers. Operates on 3.3-5Vdc. 20mA @ 5Vdc.
CAT# ST-1140 $3.50 Reduced Price $2.75 each

IR OBSTACLE AVOIDANCE SENSOR
Uses IR beam to detect proximity of obstacles. Great for sounding an alarm or changing direction of a robot or self-propelled vehicle. Potentiometer to adjust detection distance (2-40cm). Supply voltage 5 Vdc. 45mm x 16 mm x 9mm.
CAT# ST-1081 $2.75 each

PIR SENSOR
HC-SR501 Passive InfraRed (PIR) motion sensor can be used alone or with Arduino or other microcontroller. Adjustable sensitivity and timing. 33 x 24mm pc board. 25mm overall depth.
CAT# PIR-7 $4.95 Reduced Price $3.25 each

INFRARED SENSOR
RE 200B passive infrared sensor. Two active elements helping compensate for differences in environmental temperature. Used in alarm systems and automatic switches that respond to human body motion. Hermetically sealed TO5 metal case with 3 leads.
CAT# PIR-200B $1.00 ea. • 10 for 90¢ ea.

IR RECEIVER MODULE
Simple IR receiver module used to read infrared light value. Can be used to communicate with our IR transmitter module (CAT# SE-28).
CAT# ST-1089 $2.40 each

IR TRANSMITTER MODULE
IR transmitter module designed for IR communication when paired with IR receiver (CAT# ST-1089). Indicator LED lights when signal voltage change is detected. Operating voltage 5Vdc. Includes 3-pin female jumpers for attachment to header pins. 34mm x 20mm.
CAT# SE-28 $3.40 each
ULTRASONIC SENSORS

ULTRASONIC DISTANCE SENSOR
The HC-SR04 is an affordable proximity/distance sensor that can be used for object avoidance in various applications from robotics to car parking. The module has integral ultrasonic transmitters, receiver and control circuit and is for use in conjunction with Arduino boards. 45 x 27 x 17mm.
CAT# UST-4 $4.50 each

ULTRASONIC TRANSDUCER
Matsushita #OD24K2.
0.95” diameter x 0.38” metal case.
0.65” long pc leads on 0.4” centers.
CAT # XDR-24 4 for $1.20

32 KHZ ULTRASONIC TRANSDUCER
Nippon Ceramics R32-16CN
0.64” diameter x 0.37” metal case.
0.70” long pc leads on 0.45” centers.
CAT # UST-32 4 for $1.40

40 KHZ ULTRASONIC TRANSDUCER
Nippon Ceramics AT40-12PK
0.50” diameter x 0.36” black plastic case.
0.30” long pc leads on 0.32” centers.
CAT # UST-40P 4 for $1.40

TEMPERATURE SENSORS

TMP36 TEMPERATURE SENSOR, TO92
Low voltage, precision centigrade temperature sensor. It provides a voltage output that is linearly proportional to the Celsius temperature. It also doesn’t require any external calibration to provide typical accuracies of ±1°C at +25°C and ±2°C over the -40°C to +125°C temperature range.
CAT # TMP-36 $2.50 $2.00 each

DIGITAL TEMPERATURE SENSOR
DS18B20 1-Wire digital temperature sensor. Reports degrees C with 9 to 12-bit precision, -55C to 125C (+/-0.5°C). Each sensor has a unique 64-Bit Serial number etched into it - allows for a huge number of sensors to be used on one data bus. The corner stone of many data-logging and temperature control projects. TO-92 package.
CAT# DS18B20 $1.50 each

TEMPERATURE / HUMIDITY SENSOR
CAT# SEN-4 $3.50 each

DIGITAL TEMPERATURE SENSOR MODULE
Dallas DS18B20 temperature sensor chip mounted on a pc board with pins for plug-in use with Arduino and other platforms.
CAT# TS-12 Reduced Price $2.75 each

TEMPERATURE SENSOR
National Semi # LM34DZ
Precision Fahrenheit sensor. Voltage is linearly proportional to the temperature. Operates on 5-30Vdc TO-92 package.
CAT# LM34DZ $3.30 each

THERMOSTATIC CONTROL MODULE
Digital module can be programmed to turn equipment on or off at specific, pre-set temperatures. Also has hysteresis setting, delay setting, upper-limit setting and upper limit alarm setting. Displays temperature in Celsius on 3-digit LED display. On-board 20A relay. Waterproof temperature sensor. Three buttons for navigating temperature parameters and other functions. Operating voltage 12 Vdc. Overall dimensions 48mm x 40mm x 14mm.
CAT # THM-4 $6.00 each

TEMPERATURE SENSOR MODULE
NTC thermistor sensor. LM393 voltage comparator for clean output waveform. Driving ability more than 15mA. Working voltage 3.3V-5V. Digital switching outputs ( 0 and 1 ). PC board. 32 x 14mm.
CAT # SEN-19 $1.50 each

HALL EFFECT SENSORS

HALL EFFECT SENSOR BOARD
44E938 and related components on a pc board designed for use with Arduino boards. 30 x 15mm overall dimensions. Operates on 5V.
CAT# SE-54 $2.25 each

HALL EFFECT SENSOR
Allegro MicroSystems # UGN3503U
Ratio metric, linear hall-effect sensor in a miniature three-lead plastic SIP package. Flat Response to 23 kHz. 4.5V to 6V Operation.
CAT# HES-2 $1.50 each

LINEAR MAGNETIC HALL SENSOR
Simple analog hall sensor module used for proximity switching, positioning, speed detection, and current sensing applications. Signal output is low when magnetic field is present, signal output is high when magnetic field is absent. LED indicator. Potentiometer for adjustable sensitivity. Operating voltage 5Vdc. 44mm x 15mm x 13mm.
CAT# SE-14 $2.50 each
BI-POLAR HALL EFFECT SENSOR
MICRONAS HAL1150A-C
Detects the presence or the absence of a magnetic field. TO-92UA. VDD = 4.5V to 24V. Typical VDD = 12V.
CAT# HES-1 75¢ each
10 for 65¢ each  •  100 for 55¢ each

LIQUID SENSORS
FLOAT SWITCH WITH INTEGRATED THERMISTOR
Gems Sensors 222727
Horizontal liquid level float switch. For sensing rising or falling liquid levels (normally open or normally closed). Hermetically sealed magnet and reed switch for accurate, reliable long-life operation. Integrated 10k ohm NTC thermistor allows monitoring of liquid temperature as well. Threaded 13/16" male Nylon stem. Polypropylene float, 2.4" long from hinge to end. Four 10" leads, two for switch (red) and two for thermistor (green).
CAT# FLW-1  $3.50 ea.  •  10 for $3.00 ea.

LIQUID LEVEL SENSOR
Float switch closes circuit when float rises to top of switch (end opposite leads). Can be used in opposite direction as well to close circuit when water level drops. 0.96" diameter plastic float and 0.35" threaded bushing with plastic nuts and rubber O-ring. 2.64" overall length. 14" pigtail leads.
CAT # FLW-2  $3.35 each

FLUID PRESSURE SENSOR
Using a 5 Vdc input, the fluid pressure sensor provides a 0.25 - 4 Vdc output proportional to pressure from 0-5" H2O max. Typical applications include duct air flow, filter pressure monitoring, combustion air flow and gaseous leak detection. Measures 1-5/16" x 17/32" on a pair of 7/8" long slotted mounting wings. Two 3/16" O.D. barbs. 3-pin connector with 3" wire leads for power and output.
CAT # FLS-4  $3.15 each

LIQUID FLOW SENSOR
Measures the rate of liquid flowing through it. Consists of a plastic valve body, flow rotor and hall effect sensor. When liquid flows through the sensor, a magnetic rotor will rotate and the rate of rotation will vary with the rate of flow. The hall effect sensor will then output a pulse width signal. Can be used with a microcontroller such as Arduino to monitor devices. Operates on 5vdc @ 15mA. Water flow range 0.3-6 L/min. Water pressure <0.8MPa. 4mm I.D. x 6mm O.D. inlets. Overall dimensions 35mm x 35mm x 26mm. 6" 3-wire leads with 3-pin connector.
CAT # FLW-3  $5.00 each

MOTION / VIBRATION SENSORS
MERCURY TILT SWITCH
Glass bulb with mercury bead that closes circuit when tilted above position parallel to ground. 4mm dia. x 13mm long bulb.
CAT # MS-121  2 for $1.00

MERCURY TILT SWITCH
Single-pole, plastic encapsulated tilt switch with 28" wire leads. When leads are up the contact is open. When leads are down the contact is closed. 1.47" x 0.35" x 0.39". Double stick tape on back.
CAT # MS-230  $7.00 each

3-AXIS ACCELEROMETER
The ADXL335 is a small, thin, low power, complete 3-axis accelerometer with signal conditioned voltage outputs. Measures acceleration with a minimum full-scale range of ±3 g. It can measure the static acceleration of gravity in tilt-sensing applications, as well as dynamic acceleration from motion, shock, or vibration.
CAT # ACX-61  $8.95 each

PHOTO DETECTOR
Photonic Detectors Inc # 1541-80A
Miniature photovoltaic cell in a 5mm diameter LED-type package. 0.53Vdc.
CAT# PD-8  2 for $1.00  •  3 for 99¢

STEREO AMPLIFIER MODULES
Based on the PAM8610 chip, this little board just needs speakers, power and a signal source to provide lots of crisp, clear stereo sound. Operates on 7-15Vdc. The audio source (ie. Cellphone, MP3 player) provides the volume control. Clearly marked solder spots for easy assembly. 25 x 30mm pc board.
CAT# AMP-8610  $7.95 each

High-quality 3W stereo amplifier based on the PAM8403 chip. 24.5 x 15.0 x 3.5mm pc board. Low current drain. Operates on 2.5-5Vdc. Clearly marked solder or header connections.
CAT# AMP-8403  $4.00 each

CLOCK MODULE
The DS1302 trickle-charge timekeeping chip contains a Real-Time Clock-calendar. It communicates with a microprocessor via a simple serial interface. On-board CR2032 backup battery. Operates on 2-5.5VDC @ 300mA. 44mm x 23mm x 11mm.
CAT # ME-48  $3.00 each

NO Hassle Return Policy
**LIGHT EMITTING DIODES (LED)**

### STANDARD T-1 3/4 (5mm)

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<tr>
<th>Color</th>
<th>Description</th>
<th>CAT#</th>
<th>Price</th>
<th>100</th>
<th>1000</th>
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<tr>
<td>RED</td>
<td>diffused</td>
<td>LED-1</td>
<td>10 for $1.00</td>
<td>.09</td>
<td>.07</td>
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<tr>
<td>RED</td>
<td>high-brightness</td>
<td>LED-10R</td>
<td>10 for $1.00</td>
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<td>.05</td>
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<td>GREEN</td>
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<td>10 for $1.50</td>
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<td>.08</td>
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<td>LED-3</td>
<td>10 for $1.50</td>
<td>.12</td>
<td>.08</td>
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<td>AMBER</td>
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<td>LED-173</td>
<td>10 for $1.50</td>
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<td>AMBER</td>
<td>water clear</td>
<td>LED-275</td>
<td>10 for $1.00</td>
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### ULTRA-BRIGHT T-1 3/4 (5mm)

Improved brightness and color consistency.

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<th>Color</th>
<th>Description</th>
<th>CAT#</th>
<th>Each</th>
<th>100</th>
<th>1000</th>
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<tr>
<td>AQUA</td>
<td>water clear in off state</td>
<td>LED-130</td>
<td>.60</td>
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<td>.30</td>
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<tr>
<td>RED</td>
<td>water clear in off state</td>
<td>LED-257</td>
<td>.35</td>
<td>.28</td>
<td>.17</td>
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<tr>
<td>RED</td>
<td>our “brightest red,” water clear in off-state</td>
<td>LED-233</td>
<td>.50</td>
<td>.40</td>
<td>.25</td>
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<tr>
<td>BLUE</td>
<td>water clear in off-state, 20° viewing angle</td>
<td>LED-215</td>
<td>.60</td>
<td>.45</td>
<td>.30</td>
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<td>BLUE</td>
<td>water clear in off-state, Ammo-pack.</td>
<td>LED-153</td>
<td>.50</td>
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<td>.30</td>
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<td>GREEN</td>
<td>water clear 16K mcd</td>
<td>LED-57</td>
<td>1.10</td>
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<td>GREEN</td>
<td>water clear in off-state</td>
<td>LED-128</td>
<td>.75</td>
<td>.55</td>
<td>.40</td>
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<td>WHITE</td>
<td>water clear in off-state, 20° viewing angle</td>
<td>LED-214</td>
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<td>.45</td>
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<td>YELLOW</td>
<td>water clear 3000 mcd</td>
<td>LED-72</td>
<td>.95</td>
<td>.75</td>
<td>.47</td>
</tr>
<tr>
<td>ORANGE</td>
<td>water clear point source</td>
<td>LED-136</td>
<td>.25</td>
<td>.15</td>
<td></td>
</tr>
</tbody>
</table>

### MINIATURE T-1 (3mm)

<table>
<thead>
<tr>
<th>Color</th>
<th>Description</th>
<th>CAT#</th>
<th>Price</th>
<th>100</th>
<th>1000</th>
</tr>
</thead>
<tbody>
<tr>
<td>RED</td>
<td>diffused</td>
<td>MLED-1</td>
<td>10 for $1.00</td>
<td>.08</td>
<td>.04</td>
</tr>
<tr>
<td>GREEN</td>
<td>diffused</td>
<td>MLED-2</td>
<td>10 for $1.25</td>
<td>.10</td>
<td>.04</td>
</tr>
<tr>
<td>YELLOW</td>
<td>diffused</td>
<td>MLED-3</td>
<td>10 for $1.25</td>
<td>.10</td>
<td>.03</td>
</tr>
<tr>
<td>RED</td>
<td>point source</td>
<td>MLED-7</td>
<td>10 for $1.00</td>
<td>.08</td>
<td>.07</td>
</tr>
<tr>
<td>AMBER</td>
<td>point source</td>
<td>MLED-12</td>
<td>10 for $1.25</td>
<td>.10</td>
<td>.08</td>
</tr>
<tr>
<td>BLUE</td>
<td>point source Ultrabright</td>
<td>LED-59</td>
<td>.60</td>
<td>.45</td>
<td>.35</td>
</tr>
<tr>
<td>WHITE</td>
<td>water clear Ultrabright</td>
<td>LED-83</td>
<td>.95</td>
<td>.80</td>
<td>.65</td>
</tr>
</tbody>
</table>

**12 VDC LEDS**

Bright 5mm round LEDs with built-in resistors for 12Vdc, No external resistor required. Works well on 4-12Vdc. Dimmer at lower voltages.

<table>
<thead>
<tr>
<th>Color</th>
<th>Lens Color</th>
<th>Description</th>
<th>CAT#</th>
<th>Each</th>
<th>10</th>
<th>100</th>
</tr>
</thead>
<tbody>
<tr>
<td>RED</td>
<td>Red</td>
<td></td>
<td>LED-12R</td>
<td>.50</td>
<td>.45</td>
<td>.40</td>
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<tr>
<td>BLUE</td>
<td>Milky-white</td>
<td></td>
<td>LED-12BW</td>
<td>.50</td>
<td>.45</td>
<td>.40</td>
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<tr>
<td>WHITE</td>
<td>Milky-white</td>
<td></td>
<td>LED-12W</td>
<td>.50</td>
<td>.45</td>
<td>.40</td>
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<tr>
<td>GREEN</td>
<td>Green</td>
<td></td>
<td>LED-12G</td>
<td>.50</td>
<td>.45</td>
<td>.40</td>
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<tr>
<td>WHITE</td>
<td>Water-clear</td>
<td></td>
<td>LED-12WP</td>
<td>.50</td>
<td>.45</td>
<td>.40</td>
</tr>
<tr>
<td>BLUE</td>
<td>Water-clear</td>
<td></td>
<td>LED-12BP</td>
<td>.50</td>
<td>.45</td>
<td>.40</td>
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<tr>
<td>YELLOW</td>
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<td></td>
<td>LED-12Y</td>
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<td>.45</td>
<td>.40</td>
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</table>

**BI-COLOR**

<table>
<thead>
<tr>
<th>T 1 3/4 (5mm) RED / GREEN diffused</th>
<th>CAT#</th>
<th>1-99</th>
<th>100</th>
<th>1000</th>
</tr>
</thead>
<tbody>
<tr>
<td>LED-6</td>
<td></td>
<td>.50</td>
<td>.45</td>
<td>.35</td>
</tr>
</tbody>
</table>

Two leads. Reverse polarity to change color. Milky-white off-state.

<table>
<thead>
<tr>
<th>T 1 3/4 (5mm) RED / GREEN</th>
<th>CAT#</th>
<th>1-99</th>
<th>100</th>
<th>1000</th>
</tr>
</thead>
<tbody>
<tr>
<td>LED-6WC</td>
<td></td>
<td>.50</td>
<td>.45</td>
<td>.35</td>
</tr>
</tbody>
</table>

Two leads. Reverse polarity to change color. Water-clear off-state.

### RGB LED

4-lead, T 1 3/4 (5mm) red-green-blue LED.

One common lead (anode) and one lead for each color. Water-clear in off-state.

**ORDER TOLL FREE 1-800-826-5432** 13
500 ASSORTED 5MM LEDS

Keep a good selection of LEDs on hand for whatever your project might require. Red, green, blue, yellow and white 5mm LED assortment. 100 pieces of each color. Clear plastic divided box with locking lid.

CAT# LED-K2 $10.00 kit

VISIT OUR WEBSITE - WWW.ALLELECTRONICS.COM
COOL-WHITE DUAL LED ASSEMBLY

Nice bright miniature LED light source for display and lighting applications. 2 high-brightness surface-mount white LEDs mounted on a 0.56" x 0.31" (7 x 14mm) pc board. Built-in circuitry for 8 Vac operation. Works on 8 Vdc as well. Two pc pins on 5mm centers.

CAT# LED-2W 4 for $1.00 • 100 for 15¢ ea.

SUPER-BRIGHT, HIGH-FLUX RED LED

Ultra-bright, super-flux Piranha red LED. 7.62mm square, 4-pin DIP package aids heat dissipation. Designed for high-current, high-flux output.

CAT# LED-912 30¢ each 10 for 25¢ each • 100 for 20¢ each

LED INDICATOR ASSEMBLIES

12 VDC W/ PLASTIC HOUSING

Threaded bushings with nuts. Solder-lug terminals. 2 sizes, 4 colors (red, green, blue, yellow).

10mm diameter lens. 10mm bushing.
CAT# IND-10(R,G,B,Y) $1.25 each 10 for $1.10 each

12mm diameter lens. 12mm bushing
CAT# IND-12(R,G,B,Y) $1.35 each 10 for $1.15 each

12 VDC RED LED

5mm red diffused LED. Press-fit mounting in 0.25" diameter hole. Two 10" pigtail leads.

CAT# LED-12VR $1.15 each 10 for $1.05 each • 100 for 90¢ each

LED INDICATOR -- RESISTOR REQUIRED

5mm LED in a 10mm dia. chrome bezel. 8mm dia. threaded bushing with mounting hardware. Red Point-source.

15° viewing angle. Operates on any DC voltage as long as an appropriate resistor is connected. See our LED Hook-up guide in Spec Sheets online. Red Point-source -- 15° viewing angle
CAT# IND-15R $1.50 $1.00 each 10 for 85¢ each

12 VDC W/ CHROME HOUSING

5mm diameter LED in 10mm diameter chrome bezel. 8mm threaded bushing with mounting hardware. Extends 34mm below mounting panel. Available in Red (R), Blue (B), Green (G) and Amber (A).

CAT# IND-160(R,B,G,A) $2.25 each

12 VDC LED MODULES & STRIPS

WEATHER-RESISTANT 12 VDC LED MODULE, COOL-WHITE

Miniature lensed weather-resistant LED module provides 160-degrees of cool white light. Narrow footprint and adhesive backing makes it easy to mount, even on curved surfaces. IP67 rating for outdoor use. Wired together in 20 module strands, with LEDs on 2.36" centers. Can be purchased individually.

CAT # LED-161CW $0.80 module 20 for 70¢ per module

12 VDC MODULE STRIPS

Rugged, high-luminosity 3-LED modules suitable for indoor or outdoor, shelf, display or sign lighting. Operates on 12Vdc. Dimmable. Covered lens protects against humidity and sun damage. Double-stick tape on back of each module for attachment to clean, flat surface. Hole for screw mounting. Modules linked on 2-conductor 18AWG zip cord, 161mm (6.5") center-to-center spacing. Maximum string is 50 modules, 10 meters (32Ft). 0.72W per module, 36W per string. UL, CE. Can be used w/ dimmer CAT# DMR-8

Warm White CAT# LS-123WW
Cool White CAT# LS-123CW
Red CAT# LS-123R
Yellow CAT# LS-123Y
Green CAT# LS-123G
Blue CAT# LS-123B

Cool White CAT# LS-123HCW

High-Power. 1.2W per module. 60W (50 x 1.2W) per string.

$2.65 per module 10 for $2.35 per module 50 for $2.00 per module

12 VDC LED LIGHT STRIPS

Adhesive-backed ribbon with surface-mount ultrabright LEDs. Ideal accent lighting in auto or home. Great for under cabinet or shelf lighting. Dimmable. Can be cut every third LED or 50mm (approx. 0.2") and each segment can be lit independently. Wires can be soldered directly to solder spots on ribbon tape. 5 Metres, 100 segments per continuous strip. Can be connected end-to-end for longer strips. Can be purchased in 2" (3-led) segments.

Cool-white CAT# LS-12-CW
Warm-white CAT# LS-12-WW
Neutral-white CAT# LS-12-NW

$1.00 per 3-led segment 10 segments 90¢ per segment 100 segments 75¢ per segment

$1.50 per 3-led segment 10 segments $1.30 per segment 100 segments $1.00 per segment

ORDER TOLL FREE 1-800-826-5432

15
ECONOMY MODULES
COOL-WHITE
Very bright, but less bright than our other modules. 3.5’’ wires between modules.
20 modules per string. 0.72W per module
CAT# LS-200CW $1.40 per module
20 modules for $1.10 per module
100 modules for 85¢ per module

RED/GREEN/BLUE 12 VDC STRIPS
Each LED is capable of red, green or blue, or any combination of colors. When all three colors are activated LED appears white. Should be used with controller, like our CAT# CT-21, which can be used to flash the LEDs in several programmed sequences at controllable speeds, also allowing dimming.
CAT# LS-22 75¢ per 3-led segment
For one roll of 100 segments (300 LEDs), use CAT# LS-22RGB $35.00 per roll

RF REMOTE CONTROL FOR RGB LED STRIPS
Allows flashing, sequencing and dimming of tri-color LED strip, CAT# LS-22. Will operate up to 5 strips, 1500 LEDs. Operates on 12-24Vdc. Input via screw terminals or 2.5mm coax power plug. Power supply not included.
CAT# CT-21 $35.00 $25.00 each

12-24 VDC 8A DIMMER
Designed for 12-24 VDC LED strip lights like our CAT#s LS-12-CW, NW, WW. Clearly-marked screw-clamp input/output terminals. Rotary adjustment. 3.5’’ x 2.35’’ x 2.25’’ high (including knob). Mounting holes on 1.6’’ x 3.1’’ centers.
CAT# DMR-8 $19.95 each

POCKET-SIZED LED TESTER
Handy device for testing LEDs (2-150mA). Simply plug your LED into the correct holes and push the button to test its brightness, illuminant color, etc. The top row is for 2 pin LEDs with currents ranging from 2mA - 30mA. The bottom row is for 4 pin LEDs (super-flux LEDs) with currents ranging from 20mA - 150mA. Powered by a 9V battery (included). Approximate size: 3.15’’ x 2.16’’ x 0.87’’
CAT# LT-100 $8.95 each

ALPHANUMERIC DISPLAYS
4 DIGIT RED CLOCK DISPLAY, 0.4’’ DIGITS
MSGC4911C
4 character 7-segment LED display module. Red Characters. Semi-colon between middle digits. Decimal points after all digits. Gray face. Common Anode. Rate: 2V 20mA. 0.508” H x 1.582” W x 0.276” D. 16-pin DIP. 0.10” pin spacing on 0.40” rows. Fits our part# ICS-22W.
CAT# FDA-5 $1.00 each

3-DIGIT 7-SEGMENT LED DISPLAY, .28” GREEN
LT-2621G. 7-segment, 3 character LED display module. Lights green. Common anode. 2.1V 20mA. 0.891” L x 0.394” W x 0.24” h (22.64mm L x 10mm W x 6.1mm H). 0.28” (7.00mm) digits. 16-pin DIP configuration.
CAT# TDA-26 85¢ each
10 for 80¢ each • 100 for 70¢ each

4-DIGIT 7-SEGMENT SERIAL DISPLAY
Sparkfun# COM-11441
Combines a 4-digit 7-segment display and an ATmega328 microcontroller allowing you to control every segment individually using only a few serial lines. Serial TTL communication, SPI serial communication or I2C serial. Can be programmed for stand-alone operation since the ATmega328 comes pre-loaded with the Arduino bootloader. On-board FTDI header for easier programming. 41mm x 23mm.
CAT# SDA-20 $13.95 each

2.3’’ 5 X 8 RED-GREEN DOT MATRIX
Lite-On # LTP2558AA-RA
Large, 2.3’’ matrix height. Red-Orange and Green LEDs. Overall dimensions, 2.40’’ x 1.5” x 0.33”. Gray face with white dots in off-state. Spec sheet available.
CAT# SDD-25 $1.00 ea. • 10 for 80¢ ea.

LED FESTOON LAMPS
6 LED festoon lamps operates on 12 AC/DC 45ma.
120° radiance angle. 10.7mm dia. x 44mm L.
Cool-white - 45 lumen. 6000 CCT(K).
CAT# HFL-12CW $4.50 each
10 for $4.35 each
Warm-white - 40 lumen. 3000 CCT(K).
CAT# HFL-12WW $4.50 each
10 for $4.35 each
Festoon socket for 44mm lamps. Fits CAT#s HFL-12CW and HFL-12WW. Can be used with other 37-44mm festoon based lamps and LEDs.
CAT# FLS-3 75¢ each • 10 for 70¢ each

FAX YOUR ORDER 24 HOURS A DAY (818) 781-2653
FLUSH-MOUNT LED FIXTURE, 120 VAC

Earthtronics Model LEDX485090
120Vac, 60Hz, 0.062A, 3.5W.
Color temperature: 5000K “Cool-white”. 6” dia. LED fixture. Off-white (beige) plastic assembly snaps into a 7.5” dia. metal rough-in frame. Array of 61 LEDs provides a fairly bright light. We don’t have specs, but the intensity is approximately that of a 50-60W incandescent lamp.
CAT# LED-485 $6.50 $4.75 each

LED WALL WASHER, 120 VAC

Earthtronics Model TLP250K3X3
120 VAC, 60Hz, 0.029A, 1.6W.
Color temperature: 5000K “Cool-white”. Nice-looking white plastic “wall washer-type” fixture. Operates on 120Vac house current. 30 bright white LEDs in a 2” x 2” array with diffuser lens. Inclines approximately 30° from mounting surface. Mounts with 2 screws on 2.35” centers. Removable 3.4” square frame hides screws. Mounts in 2.5” x 2.0” cut-out. 0.70” behind-mounting plane depth.
CAT# TLP-250 $4.00 $3.35 each

FUSE LAMPS

Popular lamps which are the same size as a 3AG 1/4” x 1 1/4” (AGC) fuse.

<table>
<thead>
<tr>
<th>VOLTS</th>
<th>CAT#</th>
<th>EACH</th>
</tr>
</thead>
<tbody>
<tr>
<td>14</td>
<td>LPFS-6</td>
<td>$1.65</td>
</tr>
<tr>
<td>18</td>
<td>LPFS-8</td>
<td>$1.65</td>
</tr>
<tr>
<td>30</td>
<td>LPFS-12</td>
<td>$1.65</td>
</tr>
</tbody>
</table>

INCANDESCENT LAMPS

<table>
<thead>
<tr>
<th>3MM GRAIN-OF-WHEAT, T-1</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.5V, 40Ma  10” insulated wire leads</td>
</tr>
<tr>
<td>CAT# LP-3</td>
</tr>
<tr>
<td>1.5V, 75mA  30” insulated wire leads</td>
</tr>
<tr>
<td>CAT# LP-41</td>
</tr>
<tr>
<td>3V, 55mA  10” insulated leads</td>
</tr>
<tr>
<td>CAT# LP-4</td>
</tr>
<tr>
<td>5V, 60mA  11” insulated leads</td>
</tr>
<tr>
<td>CAT# LP-5</td>
</tr>
<tr>
<td>5V, 115mA  bare wire leads</td>
</tr>
<tr>
<td>CAT# LP-715</td>
</tr>
<tr>
<td>12V, 45Ma  10” insulated leads</td>
</tr>
<tr>
<td>CAT# LP-6</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>3MM, T-1 SPECIAL</th>
</tr>
</thead>
<tbody>
<tr>
<td>14V, 40Ma  3mm, bare wire leads</td>
</tr>
<tr>
<td>CAT# LP-23</td>
</tr>
<tr>
<td>500 for 18¢ each • 1000 for 14¢ each</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>T-1 3/4 5MM DIAMETER LAMPS</th>
</tr>
</thead>
<tbody>
<tr>
<td>T - 1 3/4 BI-PIN LAMP</td>
</tr>
<tr>
<td>VOLTS</td>
</tr>
<tr>
<td>-------</td>
</tr>
<tr>
<td>14</td>
</tr>
<tr>
<td>28</td>
</tr>
<tr>
<td>T-1 3/4 MIDGET FLANGE LAMP</td>
</tr>
<tr>
<td>VOLTS</td>
</tr>
<tr>
<td>-------</td>
</tr>
<tr>
<td>14</td>
</tr>
<tr>
<td>28</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>14V MINI BAYONET BASE LAMP</th>
</tr>
</thead>
<tbody>
<tr>
<td>#1815 lamp. 14.0 volts, 0.200 amps.</td>
</tr>
<tr>
<td>CAT# LP-1815 75¢ each</td>
</tr>
<tr>
<td>100 for $67.50</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>BAYONET BASE LAMP SOCKETS</th>
</tr>
</thead>
<tbody>
<tr>
<td>PC / solder leads.</td>
</tr>
<tr>
<td>CAT# LS-17 2 for $1.00</td>
</tr>
<tr>
<td>For use with #44, 47, 1815 etc... standard mini-bayonet base lamps.</td>
</tr>
<tr>
<td>CAT# LHL-37 2 for $1.00</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>EL BACKLIGHTS</th>
</tr>
</thead>
<tbody>
<tr>
<td>For backlighting displays, control panels, special effects and model lighting. Flexible, produces practically no heat. Operates on 80-120Vac &amp; will run off of inverter or standard “house” electricity.</td>
</tr>
<tr>
<td>2.8” x 2.2”</td>
</tr>
<tr>
<td>Salmon color in off-state. Glows white when energized. Solderable pins.</td>
</tr>
<tr>
<td>CAT# EL-15</td>
</tr>
<tr>
<td>1.2” x 2.6”</td>
</tr>
<tr>
<td>Glows green when energized. Ivory off-state. Solderable pin.</td>
</tr>
<tr>
<td>CAT# EL-26</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>12 VDC FLASH ASSEMBLY</th>
</tr>
</thead>
<tbody>
<tr>
<td>Bright xenon strobe assembly for highway emergency signal. Approximately 80 flashes per minute. 12Vdc operation. Horseshoe flash tube (31.5 x 16 x 6mm) mounted on 65 x 75mm pc board. On/off switch. Easy to connect. See hook-up diagram on-line spec sheet.</td>
</tr>
<tr>
<td>CAT# FSH-13 $4.50 each</td>
</tr>
<tr>
<td>10 for $4.00 each</td>
</tr>
</tbody>
</table>
**FUSES**

**3 AG (AGC) FUSES**

STANDARD FUSES 1/4" x 1 1/4"

<table>
<thead>
<tr>
<th>AMP</th>
<th>CAT#</th>
<th>PACK OF 5</th>
<th>100</th>
</tr>
</thead>
<tbody>
<tr>
<td>1/4</td>
<td>FS-025</td>
<td>1.25</td>
<td>20.00</td>
</tr>
<tr>
<td>1/2</td>
<td>FS-05</td>
<td>1.25</td>
<td>20.00</td>
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<tr>
<td>1</td>
<td>FS-1</td>
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<td>15.00</td>
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<tr>
<td>1.5</td>
<td>FS-1.5</td>
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<tr>
<td>2.5</td>
<td>FS-2.5</td>
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<td>15.00</td>
</tr>
<tr>
<td>3</td>
<td>FS-3</td>
<td>1.00</td>
<td>15.00</td>
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<tr>
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<tr>
<td>30</td>
<td>FS-30</td>
<td>1.00</td>
<td>15.00</td>
</tr>
</tbody>
</table>

**SLOW BLOW 3AG (MDL) FUSES**

1/4" x 1 1/4"

<table>
<thead>
<tr>
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<th>AMP</th>
<th>CAT#</th>
</tr>
</thead>
<tbody>
<tr>
<td>0.5</td>
<td>FSSB-0.5</td>
<td>3</td>
<td>FSSB-3</td>
</tr>
<tr>
<td>1</td>
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<tr>
<td>2.5</td>
<td>FSSB-2.5</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

pack of 5 for $1.75
100 for $30.00 (no mixing)

**CERAMIC 3 AG FUSES**

6 x 32mm. 250V.

<table>
<thead>
<tr>
<th>AMP</th>
<th>CAT#</th>
<th>AMP</th>
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</thead>
<tbody>
<tr>
<td>0.25</td>
<td>FSC-025</td>
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<tr>
<td>0.5</td>
<td>FSC-050</td>
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<td>FSC-8</td>
</tr>
<tr>
<td>0.75</td>
<td>FSC-075</td>
<td>10</td>
<td>FSC-10</td>
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<tr>
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<td>FSC-1</td>
<td>12</td>
<td>FSC-12</td>
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<tr>
<td>1.5</td>
<td>FSC-1.5</td>
<td>15</td>
<td>FSC-15</td>
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<tr>
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</tr>
<tr>
<td>3</td>
<td>FSC-3</td>
<td>30</td>
<td>FSC-30</td>
</tr>
</tbody>
</table>

75¢ each • 10 for 70¢ each
100 for 60¢ each (no mixing)

**MINI ATC BLADE FUSES**

11mm wide

<table>
<thead>
<tr>
<th>AMP</th>
<th>COLOR</th>
<th>CAT#</th>
<th>4 PCS</th>
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<tbody>
<tr>
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<td>MATC-2</td>
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<tr>
<td>3</td>
<td>PURPLE</td>
<td>MATC-3</td>
<td>1.20</td>
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<tr>
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<td>PINK</td>
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<tr>
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<td>RED</td>
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</tr>
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<td>15</td>
<td>TEAL</td>
<td>MATC-15</td>
<td>1.20</td>
<td>22.00</td>
</tr>
<tr>
<td>20</td>
<td>YELLOW</td>
<td>MATC-20</td>
<td>1.20</td>
<td>22.00</td>
</tr>
<tr>
<td>25</td>
<td>CLEAR</td>
<td>MATC-25</td>
<td>1.20</td>
<td>22.00</td>
</tr>
<tr>
<td>30</td>
<td>GREEN</td>
<td>MATC-30</td>
<td>1.20</td>
<td>22.00</td>
</tr>
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**GMA SIZE FUSES**

**MINIATURE FUSES 3/16" x 3/4"**

<table>
<thead>
<tr>
<th>AMP</th>
<th>CAT#</th>
<th>PACK OF 5</th>
<th>100</th>
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<tbody>
<tr>
<td>1/2</td>
<td>GMA-05</td>
<td>1.25</td>
<td>20.00</td>
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<tr>
<td>1</td>
<td>GMA-1</td>
<td>1.00</td>
<td>15.00</td>
</tr>
<tr>
<td>1.5</td>
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<tr>
<td>2</td>
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<tr>
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<td>4</td>
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<td>5</td>
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<tr>
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<tr>
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</tr>
<tr>
<td>20</td>
<td>GMA-20</td>
<td>1.00</td>
<td>15.00</td>
</tr>
</tbody>
</table>

Littelfuse® 1.6A 250V slow blow fuse.

**AGC (3AG) FUSE HOLDERS (for fuses 1/4" x 1 1/4")**

| PANEL MOUNT | Screw style cap. Holder fits 3 AG (AGC) or MDL fuses. Chassis mounting hole 0.59" (15mm) diameter. CAT# FHPM-31 $1.50 each 10 for $1.35 each • 100 for $1.15 each |

| PANEL MOUNT | Littelfuse® # H3453HSLN. High profile, screwdriver cap. Fits in 0.47" diameter hole, with special 1/2" thread. Rated: 20 Amp 250 Vac. 1/4" quick-disconnect right angle terminals. CAT# FHP-63 $2.25 ea. • 100 for $1.95 ea. |

**ATC AUTOMOTIVE BLADE FUSES**

19mm wide. Fits fuseholder FHP-25. Four piece minimum per item.

<table>
<thead>
<tr>
<th>AMP</th>
<th>COLOR</th>
<th>CAT#</th>
<th>4 PCS</th>
<th>100</th>
</tr>
</thead>
<tbody>
<tr>
<td>3</td>
<td>VIOLET</td>
<td>FSA-3</td>
<td>$1.20</td>
<td>$22.00</td>
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<tr>
<td>5</td>
<td>TAN</td>
<td>FSA-5</td>
<td>$1.20</td>
<td>$22.00</td>
</tr>
<tr>
<td>10</td>
<td>RED</td>
<td>FSA-10</td>
<td>$1.20</td>
<td>$22.00</td>
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<tr>
<td>15</td>
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<tr>
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<td>30</td>
<td>GREEN</td>
<td>FSA-30</td>
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<td>$22.00</td>
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<td>35</td>
<td>PURPLE</td>
<td>FSA-35</td>
<td>$1.20</td>
<td>$22.00</td>
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<tr>
<td>40</td>
<td>ORANGE</td>
<td>FSA-40</td>
<td>$1.20</td>
<td>$22.00</td>
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</table>

**FUSES HOLDERS**

**AGC (3) FUSE HOLDERS**

| PANEL MOUNT | Red wire. Fuse not included. CAT# FHP-2 $1.00 each • 20 for 85¢ each |

| FUSE BLOCK | For glass or ceramic fuses 1/4" x 1 1/4" (6.3 x 32mm). Can be snapped together for multi-pole applications. Rated 15A 125 Vac. UL, CSA. CAT# FHP-59 $1.10 ea. • 10 for $1.00 ea. |
FUSE CLIP FOR 1/4" DIA. FUSE
Buss fuse clip BK / 1A1119-04. Requires 2 clips per fuse. PC mount with pins on 0.3" mounting centers. Fits 3AG / AGC fuse.
CAT# FC-PC 2 for 40¢\footnote{100 for 17¢ each \cdot 1000 for 15¢ each}

AUTOMOTIVE BLADE FUSEHOLDERS

ATC BLADE FUSEHOLDERS
Red 14 AWG wire.
CAT# FHP-25 $1.50 ea.
Red 10 AWG wire.
CAT# FHP-31 $2.00 each

WEATHER-PROOF ATC FUSE HOLDER W/ 3A FUSE
5" white 22AWG leads on each side.
CAT# FHP-58 2 for $1.20

ATO/ATC FUSE BLOCKS
Clear cover with gasket protects fuses from dust and water. Bulkhead mount. 1/4" QC/ solder terminals.

4-CIRCUIT
1.43" high with cover. 1.75" wide with terminals. 3.15" overall length, including mounting tabs.
CAT # FHBL-43 $9.95 each

6-CIRCUIT
1.43" high with cover. 1.75" wide with terminals. 3.92" overall length, including mounting tabs.
CAT # FHBL-60 $11.10 each

8-CIRCUIT
1.43" high with cover. 1.75" wide with terminals. 4.71" overall length, including mounting tabs.
CAT # FHBL-80 $11.55 each

GMA FUSE HOLDERS (for fuses 3/16" x 3/4")
In-line fuseholder for 5 x 20mm GMA-style cartridge fuses. AWG 22 stranded leads, stripped and tinned ends. Overall length, 9".
CAT # FHP-72 2 for 90¢ \cdot 100 for 40¢ each
In-Line. Red 22 ga. wire. 32" overall length. Includes F1L250V fuse.
CAT# FHP-49 85¢ each \cdot 100 for 65¢ each
Eagle Plastic # R3-32. For 5-6mm diameter fuses. 20-25mm long, including FST, GMA, 2AG, 7AG, 8AG cartridge fuses. Rated 20A, 250VAC/32VDC. Red AWG 12 wire, 7.87" overall length. cULus.
CAT# FHP-69 $1.50 each 100 for $1.25 each

RESETTABLE CIRCUIT BREAKER

POLYSWITCH® 0.65-1.3A
Raychem “Polyswitch” # RXE-06SS-1. Current: 0.65 Amps. Trip Current: 1.3 Amps. Max Voltage: 60 Volts. 0.33" diameter. UL, CSA.
CAT# RXE-065 3 for $1.00 \cdot 100 for $20.00 500 for $85.00 \cdot 1000 for $150.00

CIRCUIT BREAKER

P&B SERIES W28-XQ1A, 20 AMPS
Push-to-reset. Snap-mounts in 0.625" to 0.635" dia. cutout. 0.25" qc/solder terminals. UL, CSA.
CAT# CB-2820 $1.75 ea. \cdot 10 for $1.60 ea.

THERMAL SWITCHES

NORMALLY-CLOSED

Prevent overheating by opening circuit at rated temperature. Open upon rise to rated temperature. Auto-reset when temperature drops.

Opens at 115°F
Elmwood Sensors 2450 L115 97/51
Normally-closed bi-metallic disc. Rated 10 (6)A 250Vac. 0.63" dia. x 0.53". Solder-loop tabs.
THSW-115 2 for $1.00 \cdot 100 for 45¢ each

75°C (167°F) Closes 50°C (122°F)
Klixon 9700K251-48
Rated 13A/250 Vac. 3" lead length.
CAT# THSW-167 75¢ each

95°C (203°F)
Selco# 802L-095.
PC 2 pin terminals. TO-220 package.
CAT# THSW-095 85¢ each 100 for 70¢ each

Opens at 110°C (230°F)
Uchiya U-62G.
Normally-closed thermal protector. Rated 2.5A/250VAC (resistive). 0.62" x 0.250" x 0.12". 4" insulated stranded pigtail leads. VDE.
CAT # THSW-110C 50¢ each

MANUFACTURERS

We Purchase Excess Inventories. CALL, WRITE, E-MAIL or FAX your list.
MINIATURE TOGGLE

1/4” threaded bushing. Rated 3A/120Vac. Note: Parentheses indicate a momentary position, ie, (on)-off indicates "momentary-on”

<table>
<thead>
<tr>
<th>CAT#</th>
<th>DESCRIPTION</th>
<th>Terminals</th>
<th>1</th>
<th>10</th>
<th>100</th>
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<tbody>
<tr>
<td>MTS-4</td>
<td>SPDT, on-on</td>
<td>Solder-lugs</td>
<td>$1.25</td>
<td>$1.10</td>
<td>95¢</td>
</tr>
<tr>
<td>MTS-4PC</td>
<td>SPDT, on-on</td>
<td>PC pins</td>
<td>$1.25</td>
<td>$1.10</td>
<td>95¢</td>
</tr>
<tr>
<td>MTS-5</td>
<td>SPDT, on-off-on</td>
<td>Solder-lugs</td>
<td>$1.25</td>
<td>$1.10</td>
<td>95¢</td>
</tr>
<tr>
<td>MTS-5PC</td>
<td>SPDT, on-off-on</td>
<td>PC pins</td>
<td>$1.25</td>
<td>$1.10</td>
<td>95¢</td>
</tr>
<tr>
<td>MTS-8</td>
<td>DPDT, on-on</td>
<td>Solder lugs</td>
<td>$1.75</td>
<td>$1.60</td>
<td>$1.35</td>
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<tr>
<td>MTS-8PC</td>
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<td>PC pins</td>
<td>$1.75</td>
<td>$1.60</td>
<td>$1.35</td>
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<td>MTS-12</td>
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<td>Solder lugs</td>
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<td>MTS-12PC</td>
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<td>PC pins</td>
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<td>Solder lugs</td>
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<td>MTS-94</td>
<td>DPDT, (on)-off-(on)</td>
<td>Solder lugs</td>
<td>$2.30</td>
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<td>MTS-60</td>
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<td>Solder lugs</td>
<td>$2.40</td>
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<td>MTS-70</td>
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<td>Solder lugs</td>
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MINIATURE TOGGLE - FLAT HANDLE

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<tbody>
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<td>SPST, on-off</td>
<td>Solder lugs</td>
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<td>MTS-18</td>
<td>SPDT, on-on</td>
<td>Solder lugs</td>
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<td>MTS-19</td>
<td>SPDT, on-off-on</td>
<td>Solder lugs</td>
<td>$1.50</td>
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<td>MTS-20</td>
<td>DPDT, on-on</td>
<td>Solder lugs</td>
<td>$2.00</td>
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<tr>
<td>MTS-21</td>
<td>DPDT, on-off-on</td>
<td>Solder lugs</td>
<td>$2.00</td>
</tr>
</tbody>
</table>

D.P.D.T. ON-OFF-ON

C&K 7203. Two-pole. 3-position, on-off-on mini-toggle switch with short, 0.2”, bat handle. Horizontal switching action. 1/4-32 threaded bushing. Gold-plated, right-angle pc pins. Rated 2A, 250Vac / 3A, 120Vac. CAT# MTS-80 $1.50 each 10 for $1.25 each

MINIATURE TOGGLE - PLAIN BUSHING

S.P.D.T. ON-ON

C&K 7101. Rated 0.4VA Max. 6mm (0.25”) diameter plain, unthreaded bushing, 0.3” long mini-toggle. Gold plated pc leads. Vertical switching action. CAT# MTS-4VP 75¢ each

D.P.D.T. ON-ON Reduced Price

Rated 5A, 120Vac. Plain, non-threaded 0.25” diameter bushing. 0.95” long, flat toggle handle. PC leads. CAT# MTS-75 45¢ 65¢ each 10 for 45¢ each

SWITCH COVER FOR 1/4” BUSHING

Protects mini-toggle switches from dust and moisture. Rubber boot attached to 1/4” threaded nut fits over handle and screws onto bushing. Fits all mini-toggle switches (our CAT#s MTS-XXX) except those with short or extra-long handles. Round trim, black plastic. CAT# SBT-1 75¢ each

SUB MINIATURE TOGGLE

0.2” dia. threaded bushing unless otherwise noted.

S.P.D.T. ON-ON

Rated: 1.5 amp @ 250 Vac. Solder lug terminals. 0.4” long bat handle. CAT# SMTS-4 $1.35 each 10 for $12.50 • 100 for $110.00

D.P.D.T. ON-ON

Rated: 1.5 amp @ 250 Vac. Solder lug terminals. 0.4” long bat handle. CAT# SMTS-8 $1.75 each 10 for $15.50 • 100 for $135.00

FREE SHIPPING on orders over $75.00 in the Continental US

$8.00 shipping on all other Continental US orders
STANDARD TOGGLE

15/20A TOGGLE SWITCHES
Heavy-duty, toggle switches rated 20A @ 125Vac / 15A @ 250Vac. STS-70 and STS-71 are rated 15A @ 125Vac / 10A @ 250Vac.

SOLDER / 0.25" QC TERMINALS

<table>
<thead>
<tr>
<th>CAT#</th>
<th>DESCRIPTION</th>
<th>Each</th>
<th>10</th>
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<tbody>
<tr>
<td>STS-94</td>
<td>SPST, on-off</td>
<td>$2.10</td>
<td>$1.95</td>
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<tr>
<td>STS-95</td>
<td>SPDT, on-on</td>
<td>$2.45</td>
<td>$2.20</td>
</tr>
<tr>
<td>STS-96</td>
<td>SPDT, on-off-on</td>
<td>$2.50</td>
<td>$2.30</td>
</tr>
<tr>
<td>STS-100</td>
<td>DPST, on-off-on</td>
<td>$2.65</td>
<td>$2.45</td>
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<tr>
<td>STS-97</td>
<td>DPST, on-off</td>
<td>$2.70</td>
<td>$2.55</td>
</tr>
<tr>
<td>STS-98</td>
<td>DPDT, on-on</td>
<td>$3.10</td>
<td>$2.90</td>
</tr>
<tr>
<td>STS-99</td>
<td>DPDT, on-off-on</td>
<td>$3.30</td>
<td>$3.05</td>
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<tr>
<td>STS-101</td>
<td>DPDT, (on)-off-(on)</td>
<td>$3.45</td>
<td>$3.15</td>
</tr>
<tr>
<td>STS-102</td>
<td>DPDT, (on)-off-on</td>
<td>$3.65</td>
<td>$3.35</td>
</tr>
</tbody>
</table>

SOLDER terminals

Note: Parentheses in DESCRIPTION, ie, (on)-off, indicates a momentary-on position.

SPST ON-OFF TOGGLE SWITCH

15/32" threaded mounting bushing

15/20A TOGGLE SWITCHES

SOLDER terminals

10 for $1.55 each • 100 for $1.35 each

SPST ON-OFF TOGGLE SWITCH W/ SCREW TERMINALS

Standard SPST On-Off toggle switch with screw terminals. 0.45" long toggle. Rated: 6A 125Vac/3A 250Vac. M12x0.75 threaded mounting bushing.

CAT # STS-136 $1.65 each

TOGGLE SWITCH COVER FOR 15/32" BUSHING

Protects standard toggle switches from dust and moisture. Fits all our standard toggle switches. Round, knurled nut

CAT# SBT-2 85¢ each

ROTARY SWITCHES

ENCLOSED BODY

6mm diameter flatted shaft. 9mm threaded bushing. 10 Amp/ 125Vac, 6 Amp/ 250V T85. Plastic body, shaft and bushing. Body, 28.5mm diameter x 11.5mm. Solder-lug terminals.

1-POLE, 2-POSITION

CAT# RSW-210 $1.65 each

1-POLE, 3-POSITION

CAT# RSW-310 $1.70 each

1-POLE, 4-POSITION

CAT# RSW-410 $1.80 each

WAFFER STYLE

6mm diameter knurled, split shaft. 9mm dia. threaded bushing. 0.5A/ 125Vac.

2-POLE, 6-POSITION

Solder-lug terminals.

CAT# RSW-260 $1.90 each

1-POLE, 11-POSITION

PC pin terminals. Can be wrapped and soldered.

CAT# RSW-39 $1.45 each

1-POLE, 12 POSITION Solder-lug terminals.

CAT# RSW-112 $2.00 each

KNIFE SWITCH

S.P.D.T. Screw terminals. Rated 10A / 12Vac. Base is 75 x 12 x 9mm high. Two mounting holes on 46mm centers.

CAT# SWS-10 $2.25 each
SNAP ACTION SWITCHES

STANDARD BODY
Standard body switches are 27.8 x 15.9 x 10.3mm, S.P.D.T.

STYLE

<table>
<thead>
<tr>
<th>STYLE</th>
<th>AMPS</th>
<th>TER.</th>
<th>MFG. #</th>
<th>CAT#</th>
<th>PRICE</th>
<th>10</th>
<th>100</th>
</tr>
</thead>
<tbody>
<tr>
<td>A</td>
<td>10</td>
<td>0.25”</td>
<td>Zippy VMN-03N-02D0-B</td>
<td>SMS-226</td>
<td>1.10</td>
<td>1.00</td>
<td>0.85</td>
</tr>
<tr>
<td>B</td>
<td>3</td>
<td>0.187”</td>
<td>Mulon</td>
<td>SMS-332</td>
<td>1.60</td>
<td>1.45</td>
<td>1.25</td>
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<tr>
<td>B</td>
<td>5</td>
<td>0.187”</td>
<td>Zippy VMN-15Q-02D0-B</td>
<td>SMS-299</td>
<td>0.90</td>
<td>0.80</td>
<td>0.75</td>
</tr>
<tr>
<td>B</td>
<td>10</td>
<td>0.25”</td>
<td>Zippy VMN-03N-05D0-B</td>
<td>SMS-338</td>
<td>1.75</td>
<td>1.55</td>
<td>1.25</td>
</tr>
<tr>
<td>B</td>
<td>11</td>
<td>0.187”</td>
<td>Defond</td>
<td>SMS-308</td>
<td>1.50</td>
<td>1.35</td>
<td>1.20</td>
</tr>
<tr>
<td>B</td>
<td>15</td>
<td>0.187”</td>
<td>Zippy VMN-15Q-06D0-B</td>
<td>SMS-310</td>
<td>2.20</td>
<td>2.10</td>
<td>1.85</td>
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<tr>
<td>C</td>
<td>10</td>
<td>0.25”</td>
<td>Zippy VMN-06S-06D0-B</td>
<td>SMS-312</td>
<td>1.75</td>
<td>1.60</td>
<td>1.25</td>
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</table>

SMALL SIZE BODY
Small body switches are 19.8 x 10.6 x 6.4mm, S.P.D.T. (unless otherwise specified) and have solder terminals, 125/250 Vac.

STYLE

<table>
<thead>
<tr>
<th>STYLE</th>
<th>AMPS</th>
<th>MFG. #</th>
<th>CAT#</th>
<th>PRICE</th>
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<td>SMS-359</td>
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<td>B</td>
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<td>Burgess V4NC / PC pins</td>
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<td>0.85</td>
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<td>C</td>
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<td>Micro 311SM56</td>
<td>SMS-357</td>
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<td>1.00</td>
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<td>D</td>
<td>5</td>
<td>Cherry DB3</td>
<td>SMS-302</td>
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<td>0.80</td>
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<td>E</td>
<td>6</td>
<td>Defond, Used</td>
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<td>A</td>
<td>16.1</td>
<td>Honeywell 2M195G10A03-B</td>
<td>SMS-372</td>
<td>0.60</td>
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</table>

MINI BODY STYLE

SPDT MINI-SNAP-ACTION SWITCH W/ SIM ROLLER LEVER
Omron D2F-01L3. SPDT. Rated 0.1 Amp @ 30 VDC. Simulated roller lever extends to end of switch. Body: 12.8 x 5.5 x 5.5mm. Thru-hole mounting. PC pins. RoHS.
CAT # SMS-371 $4.40 85¢ each • 10 for 70¢ each

JOYSTICKS
2-Axis, self-centering joysticks. Two independent 10K Ohm pots, one per axis. Select button actuated when the joystick is pressed down.
27mm dia. footprint.
31mm max height.
CAT# JS-932 $3.95 each
10 for $3.56 each

Reduced Price
Interfaced through a 5-pin header.
2 analog outputs (X & Y), 1 digital output (button). Output voltage: 2.5V. 37mm x 25mm x 32mm.
CAT# ST-1079 $2.90 $1.50 each

VISIT OUR WEBSITE - WWW.ALLElECTRONICS.COM
ROCKER SWITCHES

ROUND ROCKERS
Matte-black, single-pole.
Snap-mounts in 0.8” diameter hole.
0.9” dia. bezel. 0.6” dia. round rocker.
Rated 13 Amps / 125 Vac. Solder or 0.187” qc terminals.
Four configurations:
With BLACK rocker
ON-OFF, S.P.S.T. CAT# RS-144 $1.25 each
ON-ON, S.P.D.T. CAT# RS-145 $1.35 each
ON-OFF-ON CAT# RS-146 $1.40 each
With Red rocker Rated 10 Amps / 125 Vac
ON-OFF, S.P.S.T. CAT# RS-144R $1.20 each

SPDT MINIATURE ROCKER SWITCH
Eleidis # 3A11-BFST SE22.
S.P.D.T., on-on. Rated 5A, 120Vac.
Solder-lug terminals. Bezel is 16 x 20 mm.
Matte-black Nylon rocker and bezel.
Snap-mounts into a 0.5” x 0.6” cut-out.
CAT # RS-228 2 for $1.00
25 for 45¢ each • 100 for 40¢ each

DPST PADDLE SWITCH
Arrow England
# PSP2SB A / 93RP-404.
ON-OFF D.P.S.T.
0.90” long white paddle switch rated at 15(6) amp 250V.
1 1/2 HP 20A 250Vac, 3/4 HP 125Vac.
Mounting tabs with holes 1.60” centers.
Solder lugs. CSA, UL.
CAT# RS-222 65¢ each

12V LIGHTED ROCKER SWITCHES

12V LIGHTED ROCKER SWITCHES, ROUND
S.P.S.T., on-off. Round body.
Rated 16A (except LRS-29G). Can be wired to be always on, or
when contacts are closed. Solder or 0.187” qc terminals.
0.90” DIA. BEZEL
12V INCANDESCENT LAMP
Lighted red rocker with on-off symbols. Mounts in 0.8” diameter hole.
CAT# LRS-32 $1.85 each
as same as above, but green, 10 Amps, no symbols.
CAT# LRS-29G $1.00 each
10 for 85¢ each

12 VDC LED LIGHTED ROCKERS (OVAL)
S.P.S.T., on-off, surface-mount rocker switch with LED indicators.
Built-in resistors for 12 Vdc operation.
Surface mount switch with threaded bushing with nut, conveniently mounts in 0.48” diameter hole.
Matte-black oval switch with LED on one side of rocker.
Above panel dimensions are 1.22” x 0.78” x 0.63” high.
0.25” qc / solder terminals. Rated 20 A / 12 Vdc.
Available with LEDs in 4 colors, red (R), green (G), amber (A), and blue (B).
CAT# LRS-30X (X=R, G, A, or B) $2.20 ea.

ON-OFF MINI ROCKERS
C & K D-Series. S.P.S.T.
Rated 4A, 125Vac / 2A, 250Vac.
Matte black bezel and rocker with O-l, on-off symbols in white.
Snap-mounts in 13 x 19mm panel cutout. 0.187” qc / solder terminals, bent at 90 degrees for a lower profile. UL, CSA.
CAT# RS-223 2 for $1.00 • 100 for 40¢ ea.

ORDER TOLL FREE 1-800-826-5432
ON-OFF 12V LIGHTED ROCKER SWITCH
S.P.S.T. rocker switch with red 12V lighted rocker. Rated 20A / 12V. Snap-mounts in 1.05" x 0.45" cut-out. 0.25" qc/solder terminals.
CAT# LRS-20 $1.75 each

24V LIGHTED ROCKER SWITCH
Carlingswitch. S.P.T., ON-OFF, lighted rocker switch. Matte-black rocker and bezel. Red jewel in rocker. Snap-mounts in 1.4" x 0.8" rectangular cut-out. 0.25" qc/solder terminals.
CAT# LRS-51 $1.95 each
10 for 65¢ each

120V LIGHTED ROCKER SWITCHES
S.P.T. On-off red lighted rocker switch. On/Off symbols (- and O) printed in white. Black body, bezel 1.25" x 0.55". Snap mounts in 1.10" x 0.42" cutout. Current rating: 20A 125Vac; 15A 250Vac. 0.25" QC/solder terminals. TUVC.
CAT# LRS-40 $1.95 each
Neon-lit red rocker with on/off symbols. Rated 20A @ 125Vac. Snap-mounts in 23 x 27mm (0.90" x 1.07") rectangular cut-out. 0.25" qc/solder terminals.
D.P.T., ON-OFF CAT# LRS-42 $1.20 each
D.P.D.T., ON-OFF CAT# LRS-43 $1.35 each

SLIDE SWITCHES
SPDT MINI SLIDE SWITCH
S.P.D.T. miniature slide switch. 10.0 x 5.5mm body. Rating: DC 50V, 0.5A. Mounting holes on 15mm centers. Solder-loop terminals.
CAT# SSW-86 4 for $1.00
100 for 20¢ each • 1000 for 12¢ each

MINIATURE SPDT SLIDE SWITCH
7.5mm x 15.5mm (0.21" x 0.62") body. 5mm high slider, 3.5mm travel. Mounting holes on 19mm centers. Solder loop terminals.
CAT# SSW-91 4 for $1.00
100 for 20¢ each • 1000 for 12¢ each

MINIATURE DPDT SLIDE SWITCH
DPDT miniature slide switch. 7.5mm x 15.5mm (0.21" x 0.62") body. 5mm high slider. Rating: DC 50V 0.5A, contact resistance 30m ohm Max. Mounting holes on 19mm (0.75") centers. Solder loop terminals.
CAT # SSW-92 4 for $1.20
100 for 25¢ each • 1000 for 15¢ each

TACTILE PUSH BUTTONS
TACTILE MOMENTARY PUSHBUTTONS
6MM SQUARE
Off-(On) momentary pushbutton. Rated 50mA/12Vdc. 6 x 6 x 3mm body. PC leads on 4 x 6mm centers.

Overall
Height CAT# Price 100
4mm TSW-64 5 for 75¢ $12.00
8mm TSW-68 5 for 85¢ $13.00
12mm TSW-612 5 for 85¢ $13.00

12MM SQUARE
Off-(On) momentary pushbutton. Rated 50mA/12Vdc. 12 x 12 x 3mm body. PC leads on 4 x 12mm centers.
4mm TSW-124 5 for $1.00 $15.00
6mm TSW-126 4 for $1.00 $18.00
12mm TSW-1212 4 for $1.00 $18.00

MINI-TACTILE PUSHBUTTON SWITCH, SURFACE MOUNT
S.P.T., normally-open mini-pushbutton. 6mm square body. Four surface mount leads on 4 x 8mm centers.
CAT# MPB-43 3 for $1.00
100 for 29¢ each • 1000 for 23¢ each

LED LIGHTED TACTILE MOMENTARY PUSHBUTTONS
Good-looking 12mm square tactile pushbutton switch. S.P.T., normally-open. High-brightness LED in 7mm lens embedded in plunger. LED will operate on any voltage when used with appropriate resistor, and can be wired for always-on or operate when button is pushed. Ratings: 50 mA 12Vdc. Available in red, green, blue and yellow.
CAT# LTSW-127R, G, B or Y $1.00 each • 10 for 85¢ each

TACTILE SWITCH
Alps #SKEYAB028A. S.P.T., normally-open. “Soft-feeling” rubberized pushbutton for pc or breadboard mounting. 7.8 x 7.8 x 5mm. 1mm travel. Orange button on black base.
CAT# MPB-143 4 for $1.00 • 100 for $20.00

MOMENTARY PUSHBUTTON SWITCHES
MOMENTARY N.O. MINI-SWITCH
S.P.T. miniature momentary pushbutton switch. Push-on, release-off. Press-fit in 0.31" diameter chassis hole. 0.39" diameter black bezel. Green button extends 0.29" above mounting plane in off- position. Switch body is 0.31" dia. x 0.5" long (excluding pc pins) below mounting plane.
CAT# PB-159 35¢ ea. • 100 for 25¢ ea.

24 FAX YOUR ORDER 24 HOURS A DAY (818) 781-2653
SPDT MOMENTARY
C & K 8168. 1/4-40 UNS-2A threaded bushing. Also has metal mounting bracket. Black knob fits 0.122” diameter shaft. Rated: 0.4VA Max. 0.35” long PC leads.
CAT# MPB-178 $1.25 each 10 for $1.00 each

SUB-MINI PUSHBUTTON, SPST NORMALLY-OPEN
Right angle sub-miniature S.P.S.T. momentary N.O. pushbutton switch. Epoxy sealed. 4.7mm non-threaded bushing. Black plunger. Rated: 0.4VA max. Gold-plated PC terminals plus stabilizing pin.
CAT# MPB-237 75¢ each • 10 for 65¢ ea.

SPST MOMENTARY PUSHBUTTONS
1/4” bushings and plastic button. Ideal for most low current projects. Solder-loop terminals.

Normally open
Red button CAT# MPB-1
Black button CAT# MPB-1B
Blue button CAT# MPB-1BL
Green button CAT# MPB-1G
Yellow button CAT# MPB-1Y
White button CAT# MPB-1W
85¢ each • 100 for 65¢ each

Normally-closed
Red button CAT# MPB-5R
Black button CAT# MPB-5
60¢ each • 100 for 45¢ each

MOMENTARY PUSHBUTTONS
Rated 5A/120Vac, 2A/250Vac. Removable 10mm diameter red plastic cap. 6mm threaded bushing mounting. Includes nuts and washers. Solder terminals. UL.

S.P.D.T. CAT# MPB-174 $2.70 each
D.P.D.T. CAT# MPB-175 $3.00 each

N.O. MOMENTARY
S.P.S.T. normally-open, momentary pushbutton switch. Heavy-duty metal plunger, suitable for foot switch applications. 15/32” threaded bushing mounts in panels up to 1/2” thick. Solder-loop terminals.

4 A / 125 Vac CAT# PB-142 $2.75 each
10 A / 125 Vac CAT# PB-147 $3.25 each

MOMENTARY PUSHBUTTONS
(On)-(On), heavy-duty pushbutton switch designed for games and other repetitive applications. SPDT snap-action switch rated 5 Amps @ 125/250 Vac. 1.31” dia. x 0.15” high white bezel. 1.06” diameter threaded plastic bushing with nut. Fits panels up to 0.8” thick. 0.9” dia. opaque blue plastic plunger.
CAT# PB-9B $3.00 Reduced Price $2.00 each

LARGE, SURFACE-MOUNT PUSH BUTTON
S.P.S.T., normally-open, momentary pushbutton switch. 1.6” diameter metal body with mounting flanges, holes on 2.25” centers. Originally for automotive horn application. 0.84” diameter black push-button, 0.95” overall height.
CAT# PB-156 $1.75 each

LARGE MOMENTARY PUSHBUTTON SWITCH
Black plastic. Fairly rugged S.P.S.T. normally-open switch, possibly designed for gaming purposes. 19.5mm dia. plunger in a 29mm dia. x 20mm high case. Mounting holes on 50mm centers. 0.187”ac/ solder terminals. Can be surface mounted or mounted from behind panel through 29.5mm diameter hole.
Note: terminals are tarnished but functional.
CAT# PB-225 $1.15 each 10 for $1.00 each • 100 for 75¢ each

NORMALLY-OPEN MOMENTARY
Heavy-duty metal pushbutton switch. Threaded bushing mounts in 0.75” dia. hole in panels up to 0.35” thick. Screw-clamp terminals. Rated 4 A / 125 Vac.

Flat-top style. Nickel-plated button is flush with bezel in open position. Bezel measures 0.86” diameter x 0.05” high.
CAT# PB-144 $3.95 each

Dome style. Nickel-plated dome and bezel measure 0.86” diameter x 0.12” high.
CAT# PB-143 $3.95 each

WEATHER-PROOF METAL PUSHBUTTON SWITCH
Single-pole, push-to-make momentary pushbutton switch. IP66, waterproof, dustproof protection. Metal parts are nickel-plated. Push-button is recessed inside of 0.85” dia. bezel. Threaded bushing is 0.74” dia. x 0.73” long. 1.33” overall length including terminals. Screw-clamp terminals.
CAT# PB-172 $7.50 each

GAME SWITCH S.P.D.T.
MOMENTARY BLUE PUSHBUTTON
Rugged momentary pushbutton switch designed for games and other repetitive applications. SPDT snap-action switch rated 5 Amps @ 125/250 Vac.
1.31” dia. x 0.15” high white bezel. 1.06” diameter threaded plastic bushing with nut. Fits panels up to 0.8” thick. 0.9” dia. opaque blue plastic plunger.
CAT# PB-9B $2.00 each
MOMENTARY LIGHTED PUSHBUTTON SWITCHES
With polycarbonate 1" round lens assembly, designed for displays and games. The rugged S.P.D.T snap-action switch assembly is designed for millions of operations. Rated 5 Amps @ 125/250 Vac.

The assembly is lighted with a replaceable 12 Volt, 3 Watt, #161 wedge-base lamp. 1.25" dia. x 0.3" high matte black plastic bezel. 0.93" dia. threaded bushing with a plastic nut mounts in panels up to 0.70" thick. Lens colors: red (R), green (G), blue (B), white (W).

CAT# LPS-1(R, G, B, W) $3.75 each • 10 for $3.45 each

SPST MOMENTARY PUSHBUTTON
S.P.T., normally-open, momentary pushbutton switch rated 3A/125V.
10mm diameter red button. 14.5mm diameter x 7mm high black bezel. Threaded bushing mounts in 10mm diameter hole. Solder terminals.

CAT# PB-179 $1.00 each
10 for 90¢ each • 100 for 78¢ each

PUSHBUTTON WITH METAL BEZEL
S.P.T momentary pushbutton. 0.51" dia. plunger, 0.74" dia. metal bezel. 0.62" dia. threaded bushing mounts in panels up to 0.15" thick. Solder lug terminals. 4A 125 Vac.

<table>
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<tr>
<th>Plunger</th>
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<tr>
<td>Red</td>
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<tr>
<td>Blue</td>
<td>PB-160BL</td>
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<tr>
<td>Yellow</td>
<td>PB-145Y</td>
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</table>

SPECIAL - NORMALLY CLOSED MOMENTARY PUSHBUTTON, RED
S.P.T. 0.51" diameter red plunger, 0.74" diameter metal bezel. 0.62" diameter threaded bushing mounts in panels up to 0.15" thick. Solder lug terminals. 3A 125V. Good switch for prototypes and projects. Not recommended for frequent use.

CAT# PB-199 85¢ each • 20 for 75¢ each

SPST N.O. PUSHBUTTON
Single-pole, normally-open momentary switch. Attractive and functional dome-shaped pushbutton. 0.70" dia. black plastic bezel. 0.45" button. Extends 0.3" above mounting plane. Threaded bushing mounts in 0.53" diameter hole. Solder terminals.

<table>
<thead>
<tr>
<th>Button</th>
<th>CAT#</th>
<th>Each</th>
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<tbody>
<tr>
<td>Red Button</td>
<td>PB-138</td>
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<tr>
<td>Black Button</td>
<td>PB-139</td>
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<tr>
<td>Green Button</td>
<td>PB-172G</td>
<td></td>
</tr>
<tr>
<td>Blue Button</td>
<td>PB-172B</td>
<td></td>
</tr>
<tr>
<td>Yellow Button</td>
<td>PB-172Y</td>
<td></td>
</tr>
<tr>
<td></td>
<td>$1.50 each • 100 for $1.20 each</td>
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</table>

DPDT MOMENTARY MINI PUSHBUTTON, PC MT.
ITT PVA series DPDT Momentary mini pushbutton switch. Plastic body is 9mm x 9mm x 9mm excluding plunger. 3mm square plunger. PC terminals.

CAT# MPB-227 2 for $1.00 • 100 for 40¢ ea.

SURFACE-MT MOMENTARY PUSHBUTTON W/ 8' CABLE
SPST normally-open momentary pushbutton switch. Rated 6A/125VAC, 3A/250VAC. Switch housed in black plastic enclosure, 1.4" x 1.3" x 1.42". Mounting flanges on 1.6" centers. Durable 8’ cable with nylon braid sleeving, 2-conductor 20 AWG stranded wire.

CAT# PB-205 $3.95 each

LIGHTED DOORBELL SWITCH
Broan # R819. SPST, normally-open, surface-mount pushbutton switch. 2.7" x 1.0" x 0.75" high shiny brass/gold-colored plastic base with white pushbutton. Push-button is lighted when 10-16V is present. Screw terminals. Includes mounting screws.

CAT# PB-234 95¢ each • 10 for 85¢ each

PUSH-ON/PUSH-OFF SWITCHES
MINI SPDT
Rated 2A/250Vac. 6mm threaded bushing. 10mm diameter red plastic cap. Solder-lug terminals.

CAT# MPB-176 $2.85 each

PUSHBUTTON SWITCH
Judco model# J-188A-1. SPST, push-on push-off, plastic pushbutton. Contacts rated 6 amps @ 125 Vac. Black body, actuator and panel nut. 3/8-27 threaded bushing. 4 1/2" stranded wire pigtail. UL listed. For moisture-resistant cap/nut see CAT# WPC-3.

CAT# PB-13 $1.85 ea. • 100 for $1.50 ea.

BLACK RUBBER BOOT/CAP
Fits snugly over 13mm diameter knurled nut on Judco pushbutton switches. Prevents dust and moisture contamination.

Fits CAT# PB-13
CAT# WPC-3 65¢ each • 100 for 53¢ each

S.P.S.T. ON/OFF
Rated 3A/125V. 10mm diameter red button. 14.5mm dia. x 7mm high black bezel. Threaded bushing mounts in 10mm diameter hole. Solder terminals.

CAT# PB-177 $1.35 each
10 for $1.20 each • 100 for $1.05 each

SPST PUSH-ON / PUSH-OFF
Judco # J-977 Mini Flat Pac. Two terminal, push-on/push-off switch. Rated 300mA/12Vdc. 0.472" square x 0.268" thick (0.366" with pushbutton). PC leads on 0.276" centers.

CAT# PB-193 $1.00 ea. • 10 for 90¢ ea.
**DIP SWITCHES**

<table>
<thead>
<tr>
<th>Position</th>
<th>Style</th>
<th>CAT#</th>
<th>Price</th>
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<td>2</td>
<td>Standard</td>
<td>DWS-2</td>
<td>65¢ each</td>
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<tr>
<td>4</td>
<td>Standard</td>
<td>DWS-4</td>
<td>50¢ each</td>
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<tr>
<td>4</td>
<td>Low profile</td>
<td>DWS-4S</td>
<td>$1.00</td>
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<tr>
<td>7</td>
<td>Piano</td>
<td>DWS-7P</td>
<td>50¢ each</td>
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<td>8</td>
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<tr>
<td>10</td>
<td>Standard</td>
<td>DWS-10</td>
<td>85¢ each</td>
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</table>

**FOOT SWITCH**

Spring-return metal foot switch for 120Vac devices. Momentary-on action, on when pressed; off when released. Ideal for rotary tool, scroll saw, devices using 200W or less. 6' cords for power input and output. 5" x 3" x 2 1/4".

CAT# FSW-15  $19.95 each

**KEYPADS**

**16 BUTTON INDOOR / OUTDOOR KEYPAD**

Fully-sealed, tactile snap-dome contacts. Contacts rated 30 mA @ 12 Vdc. 4 x 4 buttons (2.7" x 3" x 0.36"), 9-pin headers, 0.1" spacing. See spec sheet on our web site for more info.

CAT# KP-23  $13.75 ea. • 10 for $12.75 ea.

**12 BUTTON KEYPAD**

Numerals 0-9, *, and #. One common terminal. Contacts rated 20 mA @ 24 Vdc. 2.01" x 2.24". Black with white buttons. Can be rear-mounted through a 2.25" x 1.81" cutout.

CAT# KP-12  $4.95 each

**4 X 4 MATRIX MEMBRANE KEYPAD**

Digits 0 through 9, letters A, B, C, D and symbols *, #. 3.0" x 2.7". Snap-action feel to switches. Peel-off adhesive backing and stick on smooth, clean surface. 3.2" ribbon connector, terminated with 8-pin socket connector, 0.1" spacing.

CAT# ME-44  $3.55 each

**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.
**RELAYS**

**AUTOMOTIVE / POWER RELAYS**

**SPDT 40 AMP AUTO RELAY**
12 Vdc, 88 Ohm coil. Contacts rated 40A. Plastic enclosed relay, 1.1" x 1.2" x 1" high. Plastic flange for bulkhead mounting. Mounts in standard automotive relay socket.

CAT# RLY-351  $2.55 each  10 for $22.50

**DUAL 12 VDC RELAY**

**Tyco Electronics**

PRD-11DYO-24

Potter & Brumfield.

24 Vdc, 288 Ohm coil. Contacts rated 25A, 240 Vac. 3.375" x 2.51" x 2.50" high. Screw terminals.

CSA, UL. 1HP, 120 Vac: 2HP, 250 Vac, 1 PH.

25A, 240 Vac. 20A, 277 Vac.

CAT# RLY-2425 $7.95 each

**24 VDC SPDT 10 AMP**

Omrón G5LE-14-DC24

High-capacity subminiature "sugar cube" relay with universal footprint.

24Vdc, 1,440 Ω coil. SPDT contacts rated 10A. 22.5 x 16.5 x 19.0mm sealed case. PC leads. UL, CSA.

CAT# RLY-579  $2.00  50¢ each  100 for 40¢ each

**12VDC SPDT AUTOMOTIVE RELAY**

Hella# 007794301

(4RD 007 794 30)

Shrouded weatherproof relay with mounting tab. N.O., 40A/ N.C. 20A. Coil resistance, 85 Ohms. 680 Ohm suppression resistor. 1/4 QC terminals. 35.5 x 35.5 x 44.7mm high not including tab.

CAT# RLY-657  $3.00 each

**12VDC SPST N.O. 16A RELAY**

American Zettler AZ948-1AET-12DE

12Vdc, 720 Ohm coil. SPST, normally-open contacts rated 16A. 125Vac. 1/10HP 125/250Vac. Miniature, epoxy sealed PBT polyester enclosure, 22 x 16 x 10.5mm high. PC leads. UL.

CAT# RLY-655  75¢ each  25 for 55¢ each

**12VDC SPDT 20/10A PC MOUNT RELAY**

P&B T90R5012-12


CAT# RLY-658  $2.00 each  10 for $1.75 each

**12 VDC SPDT 40A RELAY, PC MOUNT**

Song Chuan 822U-1C-S 12Vdc. 12 vdc 90 Ω coil. Contact ratings: N.O. 40 amp 14vdc, N.C. 20A/14 Vdc. Sealed type washable. 26.6mm x 21.4mm x 21.8mm high. PC pins.

CAT# RLY-573  85¢ each  10 for 75¢ each

**12VDC SPDT MINI POWER RELAY**

NEC# ET1-B3M1S

12.72 x 13.88 x 9.90mm. Coil rating 225 Ohm. Contacts rated 16 Vdc @ 25 A. Fully sealed. RoHS.

CAT# RLY-549  $1.00  85¢ each  10 for 75¢ each

**24VDC, SPDT 10A RELAY, PC MOUNT**

Part# C5-1CP-DC24

Sealed 24Vdc SPDT 10A relay. 1500 Ohm coil. Sealed case. PC mount 22mm x 16.5mm x 16mm high. UL rated.

CAT# RLY-661  50¢ each  10 for 45¢ each

**24 VDC DPDT 25A RELAY**

Tyco Electronics

PRD-11DY-24

Potter & Brumfield.

24 Vdc, 288 Ohm coil. Contacts rated 25A, 240 Vac. 3.375" x 2.51" x 2.50" high. Screw terminals. CSA. UL. 1HP, 120 Vac: 2HP, 250 Vac, 1 PH. 25A, 240 Vac. 20A, 277 Vac.

CAT# RLY-2425 $7.95 each

**14 PIN (ICE CUBE) RELAYS.** All have clear or opaque plastic dust covers.

Relay Size: 1.1” X 0.82” X 1.34” h.

**12 VDC, 4PDT**

MY4N. 12VDC, 130 Ohm coil. 4PDT contacts rated 3A. Green indicator LED lights when coil is energized. Solder or socket mount. Non-UL.

CAT# RLY-4212  $3.00 each

**8-PIN DPDT RELAYS**

Rated 10A or more. Clear polycarbonate dust cover. 1.1” x 0.83” x 1.37” high. 0.187” solder/ qc terminals or socket mount.

**12 VDC 10A**

LY2N. 135 Ohm coil.

CAT# RLY-2212  $2.85 each

24 VDC 10A

650 Ohm coil. Sky #SKNP-2C

CAT# RLY-556  $2.75 ea.  100 for $2.50 ea.

**120 VAC 10A**

NTE# R14-11A10-120.

Solder/socket mount

CAT# 2PRLY-120  $11.00 each

**120 VAC 10A**

NTE# R14-11A10-120P.

PC mount.

CAT# 2PRLY-120P  $10.65 each
RELAY MODULES

Similar in function to solid-state relays, allowing use of data signals to switch mechanical relays. Rated for 10A loads. Onboard LED indicators light when a relay is switched. Screw terminals for relay outputs. 0.1” header for voltage and signal input. Ideal for Arduino and microcontroller applications.

1-Channel CAT# RLY-1 $4.50 each
2-Channel CAT# RLY-2 $6.00 each
4-Channel CAT# RLY-4 $11.50 each

Can be triggered by high or low signal by changing jumper position. 1-Channel CAT# RLY-21 $4.75 each

DIP RELAYS

Miniature mechanical relays with pin configurations to fit standard DIP socket configurations (0.1” x 0.3” grid). Some are sealed for PC bath with vents that should be clipped after installation.

3 VDC DPDT DIP RELAY
Kest# KS2E-M-DC3
3 vdc 45Ω coil. DPDT contacts rated 2 amps. Small sealed case, 0.8” x 0.38” x 0.4” h. UL, CSA.
CAT# RLY-623 $1.75 each
10 for $1.50 each

5VDC DPDT DIP RELAY
NAIS DS2Y-S-DC5V, 5Vdc, 12Ω, 200mW coil. DPDT contacts, 2A switching, 3A carry current. Sealed DIP package, 20 x 10 x 11mm. PC leads, UL, CSA.
CAT# RLY-664 $1.25 each

5 VDC DPDT DIP RELAY
HUI KI # HK 19F-DC 5V-SHG
5 Vdc 125Ω coil. D.P.D.T. contacts rated 1A 125Vac / 2A 30Vdc. 20 x 9.5 x 11.5mm high sealed case. cULus.
CAT# RLY-625 $1.75 ea. • 10 for $1.50 ea.

5 VDC DIP REED RELAY
Meder# DIP05-1A57.
5 Vdc, 350 Ohm coil. S.P.S.T. normally-open contacts.
CAT# RLY-495 60¢ each
10 for 55¢ each • 100 for 45¢ each

12 VDC DPDT DIP RELAY
12 vdc 740Ω coil. DPDT contacts rated 2 amps. Small sealed case, 0.80” x 0.38” x 0.40” high. cULus.
CAT# RLY-622 $1.75 each
10 for $1.50 each

MISCELLANEOUS PC MOUNT RELAYS

3VDC SPST NO 10A LATCHING RELAY
Omron G6CU-1114P-FD-US
Single coil. 3Vdc. 45 Ohm coil resistance. 67 mA coil current. 200 mW power consumption. SPST Normally-open 10A contacts. 20 x 15 x 10mm sealed plastic package. PC leads. UL, CSA.
CAT# RLY-666 $3.75 each

4.5VDC DPDT SURFACE-MOUNT RELAY
NAIS #TQ2SA-4.5V.
Low-profile. DPDT contacts rated 2A @ 30Vdc. 145 Ohm coil, polarized. 140mW operating power. 14 x 9 x 6mm. Surface-mount contacts on 9.5mm centers. UL, CSA.
CAT# RLY-561 $1.25 each

4.5 VDC DPDT LATCHING RELAY, SURFACE-MOUNT
NAIS #TX2SA-LT-4.5V
Miniature 2-coil latching relay. 4.5Vdc, 101.2 Ohm coils. D.P.D.T. contacts rated 2A @ 30Vdc. Sealed case, 15 x 7.4 x 8.2mm. Surface mount. UL, CSA.
CAT# RLY-715 $1.10 each

ULTRA-SMALL 5 VDC DPDT RELAY
Omron G6K-2P-5VDC
5.2 x 6.5 x 10mm ultra-small pc mount relay. 5Vdc, 237 Ohm coil. DPDT contacts rated 1A/30Vdc. UL, CSA.
CAT# RLY-620 $2.25 each

5 VDC SPDT SIP REED RELAY
Elec-Trol # BBS1C05A10
5 Vdc, 205Ω coil. S.P.D.T. switching action. 0.99” x 0.30” x 0.35” high. Single-in-line pc pins. 5 pin on 0.2” centers.
CAT# RLY-496 $1.00 ea. • 10 for 85¢ ea.

5 VDC S.P.S.T. REED RELAY
Hasco 711-5S. 5Vdc S.P.S.T. N.O. reed relay. 500 Ohm coil. Contact ratings: 1.0A max. (carry), 0.3A max. (switching). Metal cover, 0.98” x 0.29” x 0.37” high. S.I.P. pc leads. UL, CSA.
CAT# RLY-572 65¢ each
10 for 60¢ each • 100 for 50¢ each

5VDC SPDT 2A MINI-RELAY
Midtex # MMS-105
5vdc, 75 Ohm coil. SPDT 2Amp contacts. 10 x 10 x 11mm. PC leads.
CAT# RLY-567 70¢ each
10 for 65¢ each • 100 for 45¢ each

5VDC DPDT 2A MINI-RELAY
Midtex# MMS-205
Miniature epoxy sealed pc mount relay. 10.4mm (0.4”) cube. 5 Vdc, 75Ω coil. 2A contacts. cULus.
CAT# RLY-587 $1.50 ea. • 10 for $1.00 each

ORDER TOLL FREE 1-800-826-5432
MINIATURE 12 VDC RELAY
Potter & Brumfield # T81H5D312-12
12Vdc, 700 Ohm coil. S.P.D.T.
Contacts rated 1A 120VAC/24VDC.
Miniature sealed case. 0.61” x 0.41” x 0.46” high.
PC pins. UL, CSA.
CAT# RLY-516 90¢ each
25 for 80¢ each • 100 for 65¢ each

12 VDC 3A SPDT RELAY
N4100F-2C3DC12A.
12 Vdc. 3A / 125 Vac. 400 ohm coil.
15.5 x 11 x 11.5mm. Sealed case.
PC leads. cULus.
CAT# RLY-585 60¢ each • 10 for 55¢ each

12 VDC SPDT RELAY, 10A
American Zettler AZ943-1CH-12DE
Miniature PC board relay with
SPDT contacts rated 10A @
277 Vac. 400 Ohm coil. Epoxy sealed
PBT polyester enclosure. 19 x 15 x 15mm.
PC terminals. UL, TUV.
CAT# RLY-622 65¢ each
20 for 60¢ each • 100 for 50¢ each

MICROMINIATURE
12 VDC SPDT RELAY
Fujitsu # FBR21D12
Subminiature PC mount relay. 7.5 x 10 x
10mm high. 12Vdc 534 Ohm coil. SPDT
contacts rated 1A @ 24Vdc, 0.5A @120VAC.
Maximum carry current, 2A. Note: PC leads are not as stiff as those on other relays.
Not suitable for automatic insertion.
CAT# RLY-616 2 for $1.00 • 100 for $35.00

12 VDC SPDT RELAY
Hasco# SSD 103PU DC12V
Miniature sealed relay. 12Vdc, 320 Ohm coil.
SPDT contacts rated 0.90” x 0.70” x
0.55” high. PC leads. UL.
CAT# RLY-498 75¢ ea. 2 for $1.00

12 VDC SPST N.O. PC RELAY
MSD Inc Magnecraft#276AXH-12D
12 Vdc S.P.S.T., normally-open, pc
mount relay. 720 Ohm coil. Contacts rated
10A @ 120/250Vac 30Vdc. 20 x 13 x 10mm
(0.78” x 0.50” x 0.38”). PC leads. UL, CSA.
CAT# RLY-557 65¢ each • 100 for 40¢ each

24 VDC DPDT RELAY
Omrorn G2R-24
24 Vdc, 1.1K Ohm coil resistance.
DPDT contacts rated 5A 250Vac/30Vdc.
29 x 13 x 25mm sealed plastic package.
PC leads. UL, CSA.
CAT# RLY-665 $2.50 75¢ each
10 for 60¢ each

24 VDC SPST N.O. MINI-RELAY
Zeitler # AZ965-24.
24VDC, S.P.S.T., normally-open contacts.
Sensitive sub-miniature relay. 2880 Ohm coil.
Contacts rated 5 Amps @ 30Vdc or 250Vac.
17.0 x 6.5 x 12.5mm high. PC pins. UL.
CAT# RLY-535 2 for $1.00 • 100 for 35¢ ea.

SOLID STATE RELAYS
TWO-PHASE (DUAL) 40 AMP SOLID STATE RELAY
Gordos # 84130241
Two-phase (dual) 40 Amp solid state relay. Dual inputs:
4-15Vdc. Dual outputs: 40 amp / 530 Vac max. Back to back SCRs.
Zero voltage switching. “Hockey-puck” 2.3” x
1.8” x 1” package. Screw terminal output. Input header 4 pins - 0.1” spacing. UL, CSA, VDE.
CAT# SRLY-16 $12.25 each

CROUZET SOLID STATE RELAY
Crouzet # 9700820, GZ series
Input: 4-15 Vdc.
Output: 480 Vac (20-25A).
Ratings not marked on relay, probably 20-25A based on
P2200GZ25 on side of
relay. 1.81” x 1.50” x 0.55” high. Turret pins for
input and output. Mounting holes on
2.25” centers. UL rated.
CAT# SRLY-17 $9.75 $2.75 each

RELAY SOCKETS
KH RELAY SOCKETS
Fits all KH & KHU style, 14 pin relays except PC mount style.

SOLDER-LOOP TERMINALS
Note: Terminals and contacts may be discolored.
CAT# RPLY-S 2 for $1.00
100 for 40¢ each

SCREW TERMINALS
Omrorn PYF14A-E.
Can be surface mounted or
snap-mounted to aluminum
DIN rail. UL, CSA, CE,
TUV. Removed from new
equipment in excellent condition.
CAT# RST-422U $3.85 each
PC PINS
CAT# RPLY-SC 75¢ each

8 PIN OCTAL SOCKETS
PC mount socket for round base 8 pin relays and vacuum tubes.
CAT# OCT-PC $1.25 each
10 for $1.10 ea. • 100 for 95¢ ea.
Screw terminals for easy
connections and changes.
Can be surface mounted or used with aluminum
DIN rail. UL listed.
CAT# OTO-8PC $2.90 each
10 for $2.75 each

30 MOST ORDERS SHIPPED WITHIN 24-48 HOURS
8 PIN DPDT RELAY SOCKETS
For 8-pin, DPDT relays with rectangular base. Fits our CAT#s RLY-556, RLY-2212 and 2PRLY-120. UL, CSA.
SOLDER TERMINALS
CAT# RST-2SL $1.35 each
SCREW TERMINALS
Bulkhead, surface mount. 2.6” x 0.87” x 1” high.
CAT# RST-2 $6.45 each

ALUMINUM DIN RAIL
An easy way to attach multiple relay sockets. Sockets snap-on and off of rail. DIN rails come in 1 meter (39”) lengths. Can be cut shorter.
CAT# C102P $5.60 each 10 for $47.50

AUTO RELAY SOCKETS
Pre-wired sockets for use in car alarms, door-locks, starter-interrupt, light circuits and other auto applications. Color-coded leads. Will fit our relay, CAT# RLY-351.
5 WIRE SOCKET
with two 18 AWG leads and three 14 AWG leads. Sockets can be interlocked side-to-side.
CAT# SRLY-2 $2.25 each • 10 for $17.50
4 WIRE SOCKET
For S.P.S.T., normally-closed applications in which relay contacts open when coil is energized. 12” leads, AWG 14 to contacts, AWG 20 to coil.
CAT# SRLY-35 $1.85 each 10 for $17.00
DUAL RELAY SOCKET
Dual 5 wire sockets designed for door-lock applications.
CAT # SRLY-4 $3.25 each 10 for $27.50

MINIATURE 12 VDC PUSH-TYPE SOLENOID
Ledex™. 0.5” diameter x 1” long tubular solenoid with 3/8” dia. threaded bushing for mounting. 1/16” dia. x 1/2” long plunger. 40 Ohm coil. Operates on 12 Vdc. 1” wire leads.
CAT# SOL-102 $2.75 ea. • 10 for $25.00 ea.

12 VDC 100 MA SOLENOID VALVE
Open when activated. Body: 24mm dia. x 31mm long. 62mm overall length, including inlet and outlet ports and terminals. 0.19” dia. ports. Used, removed from equipment.
CAT# SOL-132 $2.50 each

CLEARANCE ITEMS
These are items with special discounts on large quantities. See the clearance category on our website for lots more deals.

AC POWER CORD W/ INLINE ROCKER SWITCH
70° two-conductor power cord with on-off rocker switch mid-way. Molded, polarized AC plug. Black SPT-2 18 AWG zip cord rated 300V, 105°C, cULus.
CAT# LCAC-456 $2.00 each 100 for $1.70 each • 1000 for $1.25 each

SNAP-ON FERRITE BEAD, 7MM ID
Used to suppress RFI, EMI and unwanted spurious signals. Easy to install. Self-locking plastic snap sleeve holds ferrite form in place. 7mm (0.27”) I.D. snap-bead. 32.5 x 19.0 x 19.5mm case.
CAT# FB-103 40¢ each • 10 for 35¢ each 540 for 25¢ each • 1080 for 18¢ each

48 VDC 0.38A POWER SUPPLY
Phihong #PSC18U-480 Input: 100-240V, 0.5A, 50-60Hz, 39.51VA. 5” cord with molded 2.5mm coax power plug. Center positive. Includes detachable IEC power cord. cULus, CE. RoHS.
CAT # PS-480 $3.50 each 10 for $3.00 each • 500 for $2.25 each 1000 for $2.00 each

6 VDC, 25 RPM GEAR MOTOR
New gear head motor prepped with an arm that rotates an offset axle in a 1” circle. Can be used to facilitate reciprocating action. Motor is 1.45”D x 3.00”L. No-load specs: 25RPM @ 6Vdc, 150mA. Prepped w/ wire leads and drive arm. Includes a custom mounting bracket and slotted metal link rod.
CAT# DCM-470 $4.75 each 10 for $4.25 each • 100 for $3.75 each 1000 for $2.50 each

0.5” DIA. X 0.15” CERAMIC MAGNET
CAT # MAG-122 10 for 80¢ • 96 for 6¢ each 960 for 5¢ each • 5000 for 3¢ each

3.5MM MONO MINI-PHONE JACK
Mono 3.5mm jack. 6mm plain bushing. PC mount. CAT # SMJ-8 25¢ each 10 for 20¢ each • 100 for 15¢ each 1000 for 10¢ each • 5000 for 8¢ each

SHOP ON-LINE www.ALLELECTRONICS.COM 31
### HOOK-UP WIRE

Stranded and solid hook-up wire, PVC insulation.

Colors available:
- Black (BK), Red (RD), White (WT), Green (GN), Yellow (YL), Blue (BL), Brown (BR), Orange (OR), Purple (PR), Gray (GY).

Available in 25' and 100' rolls.

**CAT# X X X X - 25 or 100**

<table>
<thead>
<tr>
<th>AWG</th>
<th>CAT#</th>
<th>LENGTH</th>
<th>DESCRIPTION</th>
</tr>
</thead>
<tbody>
<tr>
<td>18</td>
<td>18xx-25</td>
<td>25'</td>
<td>Solid copper wire with a very thin insulating layer. Used in applications such as winding electric motor coils, speakers and transformers. Also used in the construction of electromagnets and inductors.</td>
</tr>
<tr>
<td>18</td>
<td>18xx-100</td>
<td>100'</td>
<td>Solid copper wire with a very thin insulating layer. Used in applications such as winding electric motor coils, speakers and transformers. Also used in the construction of electromagnets and inductors.</td>
</tr>
</tbody>
</table>

### MAGNET WIRE

Solid copper wire with a very thin insulating layer. Used in applications such as winding electric motor coils, speakers and transformers. Also used in the construction of electromagnets and inductors.

**1/4 LB ROLL**

<table>
<thead>
<tr>
<th>AWG</th>
<th>LENGTH</th>
<th>CAT#</th>
<th>PRICE</th>
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<tr>
<td>32</td>
<td>6'</td>
<td>MW-32-4</td>
<td>13.40</td>
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### ZIP CORD / SPEAKER WIRE

**RED / BLACK AUTOMOTIVE GRADE ZIP CORD**

- Automotive grade "GPT" zip cord with red and black conductors. 80°C, flame-retardant PVC insulation.
- Stranded conductors. Flexible insulation. 10 ft minimum order.

**BUSS WIRE**

<table>
<thead>
<tr>
<th>1/4 LB ROLL</th>
<th>1/2 LB ROLL</th>
<th>14 OZ. ROLL</th>
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<tr>
<td><strong>AWG</strong></td>
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<td><strong>CAT#</strong></td>
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<tr>
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<td>BW-16-4</td>
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<tr>
<td>16</td>
<td>64'</td>
<td>BW-16-2</td>
</tr>
<tr>
<td>26</td>
<td>1000'</td>
<td>BW-26-1000</td>
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</tbody>
</table>
CLEAR SPEAKER WIRE
Polarity marking one side.

AWG  CAT#  FT.  250 FT.
16  CSW-16   .19   .12
14  CSW-14   .23   .15
12  CSW-12   .28   .18

10 ft. minimum order.
18 Gauge clear speaker wire --- 40 ft. roll
CAT# 18C-40 $6.00 roll

12 AWG 2C STRANDED LANDSCAPE LIGHTING CABLE
Low-voltage cable. For outdoor use / direct burial. ULECC, RoHS.
CAT# 2C12 65¢ per ft
100' for 52¢ per ft • 500' for 49¢ per ft

MICROPHONE CABLE
2 CONDUCTOR SHIELDED
22 ga. stranded conductor. Braided copper shield. Flexible black PVC outer jacket. 0.23" nominal O.D.
CAT# MC-2 10 feet $4.50
100 feet $32.00 • 300 feet $90.00

CO-AXIAL CABLE
RG-6/U, 75 OHM
18 ga solid center. Black. Double shield, 100% foil shield, 60% aluminum braid.
CAT# RG-6U 50 feet for $10.00
250 feet for $37.50 (15¢ per ft.)
1000 feet for $120.00 (12¢ per ft.)

RG-58/U COAX CABLE, 50 OHM
BLACK. 20 gauge solid center, 80% copper braid shield, 50 ohm impedance.
CAT# RG-58U 50 feet for $17.50
100 for 34¢ per ft • 500 for 29¢ per ft

RG-174 MINI CO-AX
BLACK. 50 ohm impedance. 26 ga. stranded center. Braided copper shield.
CAT# RG-174 10 ft. $3.20
50 ft. $14.50 • 100 ft. $28.00
500 ft. $130.00 • 1000 ft. $228.00

TELEPHONE STATION WIRE
AWG 24, solid wire.

COND.  CAT#  100'  500'  1000'
4  4C24 10.00 45.00 85.00

* Special 4C24-50 50’ roll for $4.50

FLAT TELEPHONE WIRE
AWG 28, stranded wire.
For use with crimp-on RJ11, RJ12 and RJ45 modular connectors. Color-coded.

COND.  CAT#  50'  100'  500'
4  4CF  5.00 9.50 65.00
6  6CF  5.10 9.75 69.00
8  8CF  9.50 18.00 110.00

2, 4 AND 5-CONDUCTOR JACKETED CABLE
Stranded. Unshielded PVC jacket. Suitable for audio or control applications.
CAT#s 2C16UV and 2C14UV are audio-quality, high-strand-count, OFC (oxygen-free) cable with a specially formulated sun-resistant PVC jacket suitable for indoor or outdoor use in or above the ground. 10’ minimum.

2-CONDUCTOR

AWG  CAT#  10 feet  250 feet
16  2C18 .37  .33
16  2C16 .38  .35
16  2C16UV .40  .37
14  2C14 .45  .42
14  2C14UV .45  .42

4-CONDUCTOR

AWG  CAT#  10 feet  250 feet
16  4C16 .48  .41
14  4C14 .52  .49

5-CONDUCTOR

AWG  CAT#  10 feet  250 feet
16  5C18 .64  .59

FLAT RIBBON CABLE, 0.05” PITCH
0.050” pitch between conductors. 28 AWG stranded conductors. For use with IDC, insulation displacement connectors. 300V rating. UL, CSA.

GRAY OR BLUE INSULATION
3M 3365, Spectra Strip 191-2801-0xx, Alpha 3580/xx, Belden 9L280 xx or equivalent.

SHIELDED MULTI-CONDUCTOR JACKETED CABLES
100% FOIL SHIELD WITH DRAIN
For data communication, computer hook ups, audio and instrumentation. Stranded color coded conductors. Gray vinyl jacket.

CAT#  COND.  GAUGE  O.D.  10'  50'  100'  500'  1000'
2CS22  2  22  .135”  2.40 11.50 22.00 95.00 175.00
3CS22  3  22  .150”  3.00 14.00 26.00 125.00 220.00
4CS22  4  22  .170”  3.30 15.00 28.00 130.00 240.00
5CS22  5  22  .200”  3.70 17.50 33.00 130.00 255.00
10CS22  10  22  .264”  6.20 29.00 55.00 235.00 435.00

33 NO HASSLE RETURN POLICY
### FULLY INSULATED FEMALE BULLET CONNECTORS

<table>
<thead>
<tr>
<th>CAT#</th>
<th>WIRE SIZE</th>
<th>COLOR</th>
<th>50</th>
<th>100</th>
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<tbody>
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<td>2225</td>
<td>16-14</td>
<td>BLUE</td>
<td>3.50</td>
<td>6.30</td>
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<td>2325</td>
<td>12-10</td>
<td>YELLOW</td>
<td>4.00</td>
<td>7.20</td>
<td>32.00</td>
<td>56.00</td>
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### FULLY INSULATED MALE BULLET CONNECTORS

<table>
<thead>
<tr>
<th>CAT#</th>
<th>WIRE SIZE</th>
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### New Item

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WIRING NUTS

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QUICK SPLICES

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QUICK TAPS

Tap into an existing wire using pliers to squeeze connector in place. Connect to a standard male push-on terminal (not included).

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RATCHETING CRIMPER FOR INSULATED TERMINALS

Professional quality. Featuring an adjustable crimping compression mechanism and an up/down ratchet lock, the crimping tool is designed for 10 to 22-gauge wire. High carbon steel jaws, handles with a black oxide finish and ABS grip sleeves make this tool easy and comfortable to use.

For wire terminals | CAT# CT-51 | $34.95 each
For flag terminals | CAT# CT-67 | $36.50 each

RUBBER GROMMETS

Protects wire, cable and hoses passing through metal plates and panels

<table>
<thead>
<tr>
<th>Bore Diameter</th>
<th>Overall Diameter</th>
<th>Panel Hole Size</th>
<th>Max. Panel Thickness</th>
<th>Overall Thickness</th>
<th>CAT#</th>
<th>Price</th>
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<td>1/2&quot;</td>
<td>5/16&quot;</td>
<td>1/16&quot;</td>
<td>1/4&quot;</td>
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<td>5 for 1.20</td>
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<td>1/4&quot;</td>
<td>5/8&quot;</td>
<td>7/16&quot;</td>
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<td>9/16&quot;</td>
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<td>11/16&quot;</td>
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<td>5/16&quot;</td>
<td>GMT-60</td>
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</table>

TELECOM CONNECTORS

For 19-26 AWG wire. Simply put wires in place and push button with pliers or crimping tool. Filled with silicone gel to insulate and improve conductance.

2-WIRE BUTT
SPLICE - YELLOW
CAT# UYC    10 for $2.00
50 for $7.50 • 100 for $11.00

3-WIRE BUTT
SPLICE - RED
CAT# URC    10 for $2.50
50 for $10.00 • 100 for $14.00

TAP CONNECTOR
Allows user to tap directly into an existing wire without cutting.
CAT # UBC    10 for $2.50
50 for $10.00 • 100 for $14.00

30 DAY MONEY-BACK GUARANTEE
SPIRAL WRAP
33 Ft (10 Meters) of heavy duty 7/8" I.D. black spiral wrap tubing and a wire-guide tool to wrap the tubing around already connected cables.
CAT# WMK-1
$9.95 each
3 for $8.50 each

SPLIT LOOM TUBING
Dress up auto and home installations with split-loom tubing. Allows exit or entry of wires at any point.

<table>
<thead>
<tr>
<th>DIA</th>
<th>COLOR</th>
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<td>SLT-1</td>
<td>39¢</td>
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Minimum order 10' of one size.

Hook-&-Loop Straps with Buckles, 6-Pack
19" x 1" hook-and-loop straps with buckle to facilitate tightening. Strap together tools, sports equipment, etc. Suitable for bundles of approximately 8" to 12" circumference.
CAT# WR-19 $2.50 per pack
HEAT SHRINKABLE TUBING & ACCESSORIES

4' LENGTH OF HEATSHRINK TUBING
Polyolefin heat shrinkable tubing shrinks to 50% of its original diameter when heated. It forms a tight mechanical bond even over irregularly shaped materials. Size listed is expanded (pre-shrunk) diameter.

<table>
<thead>
<tr>
<th>Dia.</th>
<th>Color</th>
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<th>Per 4'</th>
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<td>WHITE</td>
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<td>CLEAR</td>
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100' ROLL OF HEATSHRINK TUBING

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<tr>
<th>Dia.</th>
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<th>Price</th>
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<td>HSS-316X</td>
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<td>HSS-14X</td>
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<td>HSS-12X</td>
<td>$30.00</td>
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X=color. Available colors are Black (B), White (W), Red (R), & Clear (C). * HSS-364B is only in black. i.e. 1/16" red = CAT# HSS-116R

STEINEL HEAT GUN
UltraHEAT™ #SV800
Dual temperature heat gun provides flameless heat for applying heat shrink tubing, curing epoxy, loosening adhesives, heating liquids, thawing frozen pipes, stripping paint and many other applications. Dual temperature, 600°F and 800°F. 1300 Watts. Impact resistant housing. Long-lasting heating element. UL listed. CAT# HG-800 $52.00 each

DUAL WALL HEAT SHRINK TUBING
Medium insulated polyolefin tubing, 3:1 shrink ratio. The inner tubing wall is a modified polyimide adhesive that melts & flows, encapsulating and sealing components contained within the tube. Flexible and flame retardant - provides excellent protection from fluids, moisture & corrosion. 4' length.

<table>
<thead>
<tr>
<th>Dia.</th>
<th>Color</th>
<th>CAT#</th>
<th>Per 4'</th>
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HEATSHRINK TUBING ASSORTMENTS
IN UNBREAKABLE CLEAR PLASTIC BOXES

Have the right piece of heatshrink tubing when you need it. 4" lengths of 6 different diameters: 1/16" - 56 pcs, 3/32" - 35 pcs, 1/8" - 28 pcs, 3/16" - 18 pcs, 1/4" - 9 pcs, 3/8" - 8 pcs.

ASSORTED COLORS, 154 PIECES:
color, red, clear, yellow, green, blue, white
CAT# HS-4900 $10.95 per kit

BLACK ONLY, 154 PIECES:
cat# HS-4901 $10.95 per kit

DUAL WALL HEATSHRINK TUBING KIT
Dual-wall, adhesive-lined heatshrink tubing assortment. 4" black polyolefin with adhesive lining. Shrinks to half its original diameter when heated, creating a moisture-resistant, tight, flexible protective seal. Contents: 1/8" 12 pcs 1/2" 4 pcs 3/8" 6 pcs 1/4" 10 pcs 3/4" 3 pcs 1" 2 pcs
CAT# HS-4903 $15.95 per kit

NYLON CABLE CLAMPS, #10 STUD
Available in white and black. Black = (B) i.e. add a B to the end of the catalog number for black.

<table>
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<td>NCL-916(B)</td>
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<td>NCL-14(B)</td>
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18 AWG TEFOLON TUBING

<table>
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<tr>
<th>Dia.#</th>
<th>CAT#</th>
<th>5'</th>
</tr>
</thead>
</table>
| PTFE 18 TW NATURAL, 18 AWG Teflon tubing Natural (white). Rated 200°C. 300V rated. Nominal I.D. 0.042". Wall Thickness: 0.012", CSA.
CAT# PTFE-18 5' for 75¢ (5' minimum) 100' for $10.00 • 1000' for $50.00

VISIT OUR WEBSITE - WWW.ALLELECTRONICS.COM
TERMINAL STRIPS

DUAL ROW TERMINAL STRIPS


DUAL ROW 20 AMP
Rated 20 A @ 300 Volts. Accepts wire from 22 to 14 AWG. 0.375” (9.5mm) centers. 0.85” wide x 0.52” high. Mounting holes on 8mm centers.

DUAL ROW 25 AMP
Rated 25 A @ 300 Volts. Accepts wire from 22 to 12 AWG. 0.438” (11mm) centers. 1.1” wide x 0.55” high. Mounting holes on 10.7mm centers.

DUAL ROW 30 AMP
Rated 30 Amps @ 600 Volts. Accepts wire from 22 to 10 AWG. 1.34” wide x 0.63” high.

JUMPERS FOR DUAL ROW STRIPS

Ties two consecutive terminals together. May be overlapped to tie more than two.

For TS-200 series (Dual Row 20 Amp Strips)
CAT# JMP-24 5 for 90¢  •  100 for $14.00

For TS-300 series (Dual Row 25 Amp Strips)
CAT# JMP-25 5 for 90¢  •  100 for $14.00

For TS-400 series (Dual Row 30 Amp Strips)
CAT# JMP-26 5 for 95¢  •  100 for $15.00

ORDER TOLL FREE 1-800-826-5432

INTERLOCKING PC MOUNT TERMINAL STRIPS

PC mount screw-clamp blocks with terminals on 5mm (0.197”) centers. Interlock two or three position blocks to provide strips of any required length. Accepts up to 14 AWG wire. Rated 10A, 300 Volts.

Side wire entry. 0.55” high x 0.41” wide. Green.

COND. CAT# EACH 100
2 TER-202 65¢  •  45 each
3 TER-203 60¢  •  45 each

PC MOUNT TERMINAL STRIPS

PC-mount screw-clamp terminals on 5mm (0.197”) centers. 10mm (0.4”) high. Blocks longer than 3 positions consist of 2 & 3 position interlocking strips. Will interlock w/ other similar strips to make longer configurations. Accepts up to 14 AWG wire. Rated 10 A, 300 Volts. Numbered in the following configurations:

3-POSITION, NUMBERED 1 - 3
CAT# TER-403
3¢ each  •  100 for 18¢ each
500 for 14¢ each  •  1000 for 10¢ each

4-POSITION (2 X 2), NUMBERED 1 - 4
Two interlocking 2-position blocks.
CAT# TER-404
45¢ each  •  100 for 20¢ each
500 for 15¢ each  •  1000 for 12¢ each

5-POSITION, NUMBERED 1 - 5
Two interlocking blocks, 1-3 & 4-5.
CAT# TER-405
53¢ each  •  100 for 25¢ each
500 for 20¢ each  •  1000 for 15¢ each

5-POSITION, NUMBERED 6 - 10
Two interlocking blocks, 6-8 and 9-10. Interlock with TER-405 for consecutive numbering 1-5 & 1-10.
CAT# TER-461
53¢ each  •  100 for 38¢ each

6-POSITION, NUMBERED 1 - 6
Two interlocking 3-position blocks.
CAT# TER-406
53¢ each  •  100 for 28¢ each
500 for 23¢ each  •  1000 for 18¢ each

INTERLOCKING 3-POSITION TERMINAL STRIPS

PC mount, screw-clamp terminal strips.

Interlocking 3-terminal segments can be combined to make desired length strip. PC pins on 5mm (0.197”) centers. Side wire entry. Screws on 45° angle. Each segment is 15.0 x 12.5 x 12.5mm. Accept up to 14 AWG wire. Sold in 21 terminal strips (7 x 3 segments).

CAT# TER-321 75¢ strip
10 strips 50¢ each  •  100 strips 40¢ each
1000 for 25¢ each
4-POSITION PLUGGABLE TERMINAL STRIP & HEADER

Riacon 4-position screw-clamp terminal block and mating friction-lock header. Terminals on 5mm centers. For 12-28 AWG wire. Rated 6A/125Vac. UL, CSA.

CAT# TER-104 $0.95 pair
10 for $7.50 per pair • 100 for $60.00 per pair

24-POSITION SINGLE-ROW TERMINAL STRIP, FEED-THRU

RDI/ Buchanan 4-series / AMP 796598-6. Single-row barrier strip. Screw terminals on 0.325” centers. 0.5” feed-through pins. 7.9” x 0.60” x 0.50” high. Rated 15A, 150V. For 14-22 AWG wire. UL, CSA.

CAT# TER-24FT $2.50
10 for $2.00 each

EUROSTYLE TERMINAL STRIPS

For connecting stripped wires from 8-22 AWG depending on the block size. Flexible white (natural) Nylon 66 body, 94V2 rated for 105ºC. 400 Volts. All metal parts are completely recessed in the housing to prevent shorts. Each strip has 12 circuits, with a mounting hole between each circuit. Can be easily shortened with a knife or saw.

7 AMP
For 22-18 wire. 3.78” x 0.67” x 0.57” h. 0.32”(8mm) terminal centers. UL, CSA, VDE.

CAT# TB-7 $2.00 each
10 for $1.80 each • 100 for $1.60 each

20 AMP
For 18-14 wire. 4.6” x 0.80” x 0.67” h. 0.39”(10mm) terminal centers. UL, CSA, VDE.

CAT# TB-20 $2.25 each
10 for $2.10 each • 100 for $1.80 each

35 AMP
For 14-10 wire. 5.38” x 0.93” x 0.75” h. 0.46”(11.5mm) terminal centers. UL.

CAT# TB-35 $2.70 each
10 for $2.45 each • 100 for $2.15 each

50 AMP
For 20-8 wire. 6.25” x 1.00” x 0.99” h. 0.53”(13.5mm) terminal centers. UL.

CAT# TB-50 $4.00 each
10 for $3.85 each • 100 for $3.60 each

100 AMP BRASS BUSS BAR

Bocatech® Inc BTMH-15B
Specifications:
• Rated voltage: 48 Volt DC / 300 Volt AC
• Two feed terminals 1/4-20 thread brass studs
• Ten distribution terminals 8-32 brass screws
• Solid brass on insulated base
• Dimensions: 5-3/4” (L) x 1-1/4” (W) x 1-1/16” (height at the stud)
• Two mounting holes: 5-1/4” center to center

CAT# BR-100 $6.95 ea. • 10 for $6.50 ea.

SPRING-LEVER TERMINAL STRIP

2.25” SQUARE BEZEL
Red and black spring-lever terminals in a recessed cup that fits a 50mm (1.95") diameter round cut out. 57mm (2.23") square bezel with countersunk mounting holes in each corner.

CAT# SWT-202 2 for $1.00 • 100 for 35¢ ea.

LCD CHARACTER DISPLAYS

Incredible Price!!!

24 CHARACTER X 1 LINE LCD

Wintek® WDC2401P-1GNNA.
Module size: 4.25” x 0.79” x 0.3”. Display size: 3.5” x 0.4”. Built-in driver.

CAT# LCD-111 2 for $1.00
100 for 25¢ each • 500 for 23¢ each
1000 for 20¢ each

8 CHARACTER X 2 LINE LCD

Crystalfontz® CFAH0802A-NYG-JT.
STN Positive, Yellow/Green, Reflective.
Module size: 58 x 32.0 x 8.9mm

CAT# LCD-8002 $1.75 ea. • 10 for $1.50 ea.

20 X 2 LCD W/ WHITE LED BACKLIGHT

Optrex® C51505NFI-SLW-AIN
Viewing area: 83.0 x 18.0 mm.
Overall size: 116.0 x 37.0 x 15.6mm

CAT# LCD-165 $2.85 ea. • 10 for $2.50 ea.

LCD CONTROLLER

SERIAL INTERFACE MODULE FOR 16 X 2 LCDs

Arduino compatible controller for 16 x 2 LCD modules. Output for LED backlight. 16-pin header solders into LCD. 42 x 19 x 8mm pc board (excluding header pins).

CAT# LCD-SI $3.00 each
DIGITAL PANEL METERS

DUAL DIGITAL LED PANEL METERS
Volts and Amps on the same compact digital meter. Built-in shunt. Bright 0.28" red LED. Snap-mounts into 46 x 27mm (1.80" x 1.05") rectangular cut-out. Black bezel, 47.5 x 28.5mm.

3.3-30 VDC AND 0-5A SCALES
3-wire, common ground, connection. Can monitor its own voltage.
CAT# PM-233 $12.00 each
0-100VDC AND 0-5A SCALES
5-wire connection. Can be used like CAT# PM-233 to monitor its own voltage (3.3-30 Vdc) or, using separate power source for display, can measure to 100 Vdc.
CAT# PM-20 $17.00 each

60-500 VAC DIGITAL PANEL METER
3-digit AC panel meter. Bright 0.57" high LED digits. 1.875" x 1.15" black bezel. Snap-mounts in 1.8" x 1.1" panel cut-out. Detachable connector w/ 5" leads.
CAT# PM-117 $8.75 each

3.3-30 VDC DIGITAL PANEL METERS
3-digit DC panel meter. Bright 0.57" high LED digits. 1.875" x 1.15" black bezel. Snap-mounts in 1.1" x 1.8" panel cut-out. Detachable connector w/ 5" leads.
Red CAT# PM-123 $8.35 each
Green CAT# PM-123G $8.35 each
Blue CAT# PM-123B $8.35 each

0-100V DC VOLTMETER
3-digit LED voltmeter for 0-100VDC range. 0.28" digits on a 0.89" x 0.39" display. Available with red or blue digits on black background. Three wire operation. Red-black for power; yellow-black for voltage being monitored. Will monitor its own voltage. Mounting ears with holes on 1.03" centers. Working current: 20mA. Operating voltage: 4-40 VDC. Measurement rate: 200mS /Times.
Red digits CAT# PM-126 $3.95 each
Blue digits CAT# PM-126B $3.95 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

PM89 SERIES

3.15” x 2.5” x 2” depth. 2.5% accuracy. Large clear scale, black lettering on white background.

DC MICROAMMETERS

<table>
<thead>
<tr>
<th>CAT#</th>
<th>EACH</th>
<th>10+</th>
</tr>
</thead>
<tbody>
<tr>
<td>0 - 50 µA</td>
<td>PMD-50UA</td>
<td>$12.00</td>
</tr>
<tr>
<td>0 - 100 µA</td>
<td>PMD-100UA</td>
<td>$12.00</td>
</tr>
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</table>

DC MILLIAMMETERS

<table>
<thead>
<tr>
<th>CAT#</th>
<th>EACH</th>
<th>10+</th>
</tr>
</thead>
<tbody>
<tr>
<td>0 - 1 mA</td>
<td>PMD-1MA</td>
<td>$12.00</td>
</tr>
<tr>
<td>0 - 25 mA</td>
<td>PMD-25MA</td>
<td>$12.00</td>
</tr>
<tr>
<td>0 - 50 mA</td>
<td>PMD-50MA</td>
<td>$12.00</td>
</tr>
<tr>
<td>0 - 100 mA</td>
<td>PMD-100MA</td>
<td>$12.00</td>
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<tr>
<td>0 - 300 mA</td>
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<tr>
<td>0 - 500 mA</td>
<td>PMD-500MA</td>
<td>$12.00</td>
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DC AMMETERS

<table>
<thead>
<tr>
<th>CAT#</th>
<th>EACH</th>
<th>10+</th>
</tr>
</thead>
<tbody>
<tr>
<td>0 - 1 A</td>
<td>PMD-1A</td>
<td>$12.00</td>
</tr>
<tr>
<td>0 - 3 A</td>
<td>PMD-3A</td>
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<td>0 - 5 A</td>
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<td>0 - 10 A</td>
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<td>0 - 15 A</td>
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<tr>
<td>0-25 A*</td>
<td>PMD-25A</td>
<td>$12.00</td>
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<tr>
<td>0-30 A*</td>
<td>PMD-30A</td>
<td>$12.00</td>
</tr>
<tr>
<td>0-50 A*</td>
<td>PMD-50A</td>
<td>$12.00</td>
</tr>
<tr>
<td>0-100 A*</td>
<td>PMD-100A</td>
<td>$12.00</td>
</tr>
<tr>
<td>0-200 A*</td>
<td>PMD-200A</td>
<td>$12.00</td>
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AC AMMETERS

<table>
<thead>
<tr>
<th>CAT#</th>
<th>EACH</th>
<th>10+</th>
</tr>
</thead>
<tbody>
<tr>
<td>0 - 1 A</td>
<td>PMA-1A</td>
<td>$12.00</td>
</tr>
<tr>
<td>0 - 3 A</td>
<td>PMA-3A</td>
<td>$12.00</td>
</tr>
<tr>
<td>0 - 5 A</td>
<td>PMA-5A</td>
<td>$12.00</td>
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<td>0 - 10 A</td>
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</tr>
<tr>
<td>0 - 15 A</td>
<td>PMA-15A</td>
<td>$12.00</td>
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</table>

AC VOLTMETERS

<table>
<thead>
<tr>
<th>CAT#</th>
<th>EACH</th>
<th>10+</th>
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<tbody>
<tr>
<td>0 - 10 V</td>
<td>PMA-10V</td>
<td>$12.00</td>
</tr>
<tr>
<td>0 - 15 V</td>
<td>PMA-15V</td>
<td>$12.00</td>
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<tr>
<td>0 - 30 V</td>
<td>PMA-30V</td>
<td>$12.00</td>
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<tr>
<td>0 - 50 V</td>
<td>PMA-50V</td>
<td>$12.00</td>
</tr>
<tr>
<td>0 - 100 V</td>
<td>PMA-100V</td>
<td>$12.00</td>
</tr>
<tr>
<td>0 - 150 V</td>
<td>PMA-150V</td>
<td>$12.00</td>
</tr>
</tbody>
</table>

SHUNTS
For use with DC Ammeters where external shunts are required. Adjusted for 50 mV drop.

<table>
<thead>
<tr>
<th>CAT#</th>
<th>EACH</th>
</tr>
</thead>
<tbody>
<tr>
<td>25 AMP</td>
<td>CAT# SNT-25</td>
</tr>
<tr>
<td>30 AMP</td>
<td>CAT# SNT-30A</td>
</tr>
<tr>
<td>50 AMP</td>
<td>CAT# SNT-50</td>
</tr>
<tr>
<td>100 AMP</td>
<td>CAT# SNT-100</td>
</tr>
<tr>
<td>200 AMP</td>
<td>CAT# SNT-200</td>
</tr>
</tbody>
</table>

ORDER TOLL FREE 1-800-826-5432 41
**DC FANS**

**12 VDC 38MM HIGH-SPEED FAN**
Delta Electronics FFB03812HHN. Tiny high speed fan, moves a lot of air for its size. 12 VDC. 0.57 A. 17.3 CFM. 1400 RPM. 58.5 dBA.
6.60 W. Plastic, 38mm square x 28mm brushless axial fan. Ball bearing. Four 12” wire leads. CE, UL, CSA, VDE.
CAT# CF-599 $4.00 each

**12 VDC 40MM**
Delta Electronics FFB0412SHN High-output mini brushless fan. 40mm square x 28mm plastic housing. Ball bearing. Rated: 12 Vdc. 0.60Amp. 51.5 dBA.
13,000 RPM, 24 CFM. Two 6-inch wire leads prepped with crimp pins. CSA, UL, VDE.
CAT# CF-502 $3.65 each
10 for $3.50 each

Adda Corp. # AD0412MS-G70 40mm square x 10mm plastic 7 blade fan. Sleeve bearing fan rated: 12 vdc 0.08A.
5.7CFM, 20 dBA, 4800 RPM. Two 2” wire leads. UL/CUL/TUV/CE.
CAT# CF-466 $3.75 each

**12 VDC 50 MM**
T & T # MW-510M12C. 50mm square x 10mm plastic CPU style fan. 7 blade ball bearing fan is rated: 12 vdc 0.11A.
9CFM, 27dB/A. Two 10” wire leads terminate to 3 pin connector. UL/TUV/CE.
CAT# CF-467 $3.95 each

**12 VDC 60 MM**
Adda AD0612MS-A70GL. 12 Vdc, 0.14A fan brushless sleeve bearing fan. 60 x 60 x 25mm. 3500 RPM, 18 CFM.
24 dB. Two 12” leads. UL, CSA, CE.
CAT# CF-583 $2.65 each

Mitsubishi # MMF 06D12DL. 12 Vdc @ 0.07 Amps.
60mm x 60mm x 25mm brushless seven blade fan. UL, CSA.
CAT# CF-427 $2.25 each
10 for $2.10 each
100 for $1.90 each

DC Tiny 25 III# TUDC1224F-022. 12 Vdc 0.14A.18W. 60 x 60 x 25mm. 19 CFM. 4300 RPM.
32 dBA. Two 5” leads prepped with heatshrink tubing and 2-pin female (0.1”) connector. UL, CSA, TUV.
CAT# CF-408 $2.75 each

**12 VDC 80 MM**
Adda #AD0812HB-A72GL 80 x 80 x 25mm brushless, ball bearing cooling fan. Thermoplastic frame and 7-blade impeller. 12Vdc.
0.25A. 38.6CFM, 3010RPM. 34 dB/A. Three 12” pigtail leads. CE.
CAT# CF-603 $3.25 each

**12 VDC 500 MM**
Delta Electronics # FFB0812VHE-H715 12 Vdc, 0.57Amp.
80 x 80 x 38mm. 57.21 CFM. 4200 RPM. 44.5 dB/A.
Ball-bearing. Three 9” wire leads to 3-pin connector (Molex 2510). Features speed sensor (Tach) / locked rotor alarm. CE, UL, CSA, VDE.
Note: May have some discoloration on metal parts due to storage conditions.
CAT# CF-590 $3.00 ea. • 10 for $2.75 ea.

**12 VDC 172 MM**
Comair Rotron Patriot DC Model# PD24B6TDNX. 24 Vdc 1.0 amp. 235 CFM.
52 dB. Ball Bearings. 172.00 dia. x 51.00 mm.
Three 4” leads. UL, CSA.
CAT# CF-481 $18.50 each

**AC FANS**

**115 VAC 80 MM**
EZ Fan# FP-108A-S-3. 3.13” square X 1.5”.
110/120 Vac, 50/60 Hz.
0.08/0.06 A. 6/5 W.
17 CFM. Zinc housing with seven blade thermoplastic impeller. Terminals accept standard fan plug or can be soldered.UL, CSA.
CAT# CF-117 $14.80 each

---

42  E-MAIL US - allcorp@allcorp.com
### PLastic Filter Kits

Plastic guard, filter and retainer. Foam filter can be removed and cleaned when necessary.

<table>
<thead>
<tr>
<th>Fan size</th>
<th>CAT#</th>
<th>each</th>
</tr>
</thead>
<tbody>
<tr>
<td>60mm</td>
<td>FF-60</td>
<td>$3.30</td>
</tr>
<tr>
<td>80mm</td>
<td>FF-80</td>
<td>$3.45</td>
</tr>
<tr>
<td>92mm</td>
<td>FF-92</td>
<td>$3.60</td>
</tr>
<tr>
<td>120mm</td>
<td>FF-120</td>
<td>$3.60</td>
</tr>
</tbody>
</table>

### Thermoelectric (PelTIER) Device

A solid-state heat pump that transfers heat from one side of the device to the other depending on the direction of the current. When current is applied one side gets hot and the other gets cool. Commonly used to cool, heat or regulate temperature, it can also take advantage of a temperature differential to generate electricity. The hot side should be attached to a heatsink.

- 40 x 40 x 3.6mm
- I_max - 7A • U_max - 15.4V
- Q_max - 62.2W • T_max - 69°C
- 1.7 Ohm resistance • 127 thermocouples
- Max Operating Temp: 180°C
- Min Operating Temp: -50°C

CAT# PJT-13 $4.95 ea. • 10 for $4.80 ea.

### Temperature Controller

Thermoelectric temperature controller from Wavelength Electronics. Modified for a specific application. For info on the original design and the modifications, see our online spec sheet. 2.5" x 1.4" x 0.7".

CAT# TRC-1500 $1.50 each

### Heat Sinks

TO-220

Aluminum heatsink, 19 x 14 x 9mm.

CAT# HS-317 $1.00 each

36 x 32 x 12MM

Copper heatsink with 4 notched fins.

CAT# HS-423 $1.00 each

COPPER HEATSINK FOR TO-220

THM 6030. Vertical mount, tin coated copper heatsink for TO-220 device. 30 x 25.5 x 12mm.

CAT# HS-6030 $1.50 each

TO-220 Clip-on Heatsink

Avid Thermalloy #7139D Copper heat sink with integrated slide-on mounting clip. Tin plated. 19.81 x 13.21 x 13.08mm (0.780" x 0.520" x 0.515").

CAT# HS-7139 $3.00 each
CLIP-ON HEATSINK reduced
For TO-220 / TO-202
CAT# HS-6047 $1.00 each
5 for $1.00 • 100 for 18¢ each

42 X 25 X 38MM
Aavid Thermalloy # 52901B02500G.
Black anodized aluminum heat sink with mounting posts on 25mm centers.
CAT# HS-234 $1.00 each

CPU HEATSINKS
Aluminum heatsink.
Square patch of thermal compound on bottom. Removable hold-down clip.
85 x 83 x 45MM
CAT# HS-580 $3.50 each
50 X 50 X 45MM
CAT# HS-585 $1.75 each

THERMAL COMPOUND
1.5 GRAM SYRINGE
For a wide range of applications including high-power CPUs, GPUs and high-performance heatsinks or water-cooling solutions.
CAT# TG-215 $2.00 each

MX2 THERMAL COMPOUND
Arctic MX-2 is a metal-free & non-electrically conductive thermal compound. Its high thermal conductivity and low thermal resistance guarantees efficient thermal dissipation making it ideal for CPU & GPU cooling. It is also non-capacitive, non-curing, non-corrosive and non-bleeding.
4 Gram Syringe CAT# MX2-4 $5.25 each
8 Gram Syringe CAT# MX2-8 $7.50 each

SMILE-FACE POST-IT-NOTES®
You can't get Post-it® sticky note pads at this price anywhere.
These have a light-grey emoji-style smiley face in the center and some efax company info along one side, but they're just as useful as the ones you'd pay a lot more for. 3" x 4" pads of 50 sheets. Buy them individually or in packages of 40, or in cases of 240 pads.
CAT# PIN-40 25¢ each
40 for 19¢ each • 240 for 15¢ each

3ML PLASTIC SYRINGE
Re-usable 3ml plastic syringe, with luer lock tip type.
CAT# SYR-31 50¢ each

14’ 6-CONDUCTOR CABLE
Color-coded 22 AWG stranded leads.
Black 0.25” diameter PVC jacket.
8” tipped pigtail leads on one end.
CAT# HW-25 $2.50 each

8Ω 15 WATT SPEAKER IN ENCLOSURE
3.5” speaker in break-resistant wall-mount enclosure. Durable poly cone for indoor and sheltered outdoor use. White enclosure, 4.25” square x 2.20” deep. 10” color-coded pigtail leads.
New, individually boxed with mounting screws.
CAT# SK-350 $4.50 each

PAGING HORN
Unisalf# SP-20B. Horn-type communication speaker.
20 Watt 8 Ohms. 5.25” dia. x 6” long. 3-hole adjustable mounting bracket. 12” leads.
CAT# PHS-20 $4.95 each
24 for $4.25 each

TELESCOPING MAGNET
Facilitates retrieval of small metal parts. Adjustable. Extends to 23” overall length.
CAT# MAG-31 $2.50 each

1/2” BLACK RUBBER FEET, 4 PIECES
Shank presses or glues into 3/8” diameter hole.
CAT# RF-54 4 for 50¢

VIBRATION SHOCK MODULE
Vibration and shock detecting module sends out a low level signal when a force is detected. Sensitivity can be modified by moving switch closer or farther away from area of interest. Operates on 5V. 28mm x 15mm.
CAT# SE-53 $1.50 each

MINI-TONE TRANSDUCER
MG Electronics# SBT-1612.
6-18 Vdc mini-tone transducer.
Max current 40mA @ 12Vdc. 85db/10cm. 2048Hz. 1150Ω ± 12Ω coil resistance. 200Ω coil impedance. 16mm diameter x 14mm. 7.5mm high PC pins with 6mm spacing.
CAT# PE-419 2 for $1.00
100 for 40¢ each

NYLON SPRING CLAMPS
Hold down your work-in-progress with these rugged nylon spring clamp. Swivel jaws stay parallel on materials of varying thickness.
3.75” long CAT# SCL-20 2 for $1.00
4.75” long CAT# SCL-40 $1.00 each
6.50” long CAT# SCL-60 $1.50 each

NO HASSLE RETURN POLICY
# RECHARGEABLE BATTERIES

## RECHARGEABLE NICKEL METAL HYDRIDE

Nickel Metal Hydride batteries have double the capacity of standard nickel cadmium cells and can be charged faster without the “memory problems” associated with nickel cadmium batteries.

<table>
<thead>
<tr>
<th>Battery Type</th>
<th>Details</th>
<th>Price</th>
<th>Quantity Offer</th>
</tr>
</thead>
<tbody>
<tr>
<td>AAA CELL W/ SOLDER TABS</td>
<td>1.2V 600 mAh</td>
<td>$2.75 ea.</td>
<td>10 for $25.00</td>
</tr>
<tr>
<td>AAA CELL</td>
<td>1.2 Volt, 1000 mAh</td>
<td>$2.60 ea.</td>
<td>10 for $22.00</td>
</tr>
<tr>
<td>AA CELL W/ SOLDER TABS</td>
<td>1.2 Volt, 2000 mAh</td>
<td>$3.40 ea.</td>
<td></td>
</tr>
<tr>
<td>AA CELL, 2500 mAh</td>
<td>Ultra-high capacity. 1.2 Volt, 2500 mAh. 43mm x 23mm x 22mm diameter.</td>
<td>$12.75 each</td>
<td></td>
</tr>
<tr>
<td>C-CELL, 5000 mAh</td>
<td>1.2V. Standard charge, 16 Hours @ 300mA. Rapid charge, 2 Hours @ 3000mA.</td>
<td>$6.37 each</td>
<td></td>
</tr>
<tr>
<td>D-CELL, 10,000 mAh</td>
<td>1.2V. 33mm dia. x 60mm long. Standard charge, 15 Hours @ 800mA. Rapid charge, 3 Hours @ 4000mA. Weight, 0.36 lbs per cell.</td>
<td>$12.00 each</td>
<td></td>
</tr>
<tr>
<td>9V 250 mAh</td>
<td>$6.50 each</td>
<td>10 for $6.00 each</td>
<td></td>
</tr>
<tr>
<td>3.6V 1500 mAh, PACK</td>
<td>Three rechargeable AA cells. 3.6V 1500mAh. 3-pin female connector, 0.1” centers.</td>
<td>$3.75 each</td>
<td>10 for $3.50 each</td>
</tr>
</tbody>
</table>

## LITHIUM - RECHARGEABLE

<table>
<thead>
<tr>
<th>Battery Type</th>
<th>Details</th>
<th>Price</th>
<th>Quantity Offer</th>
</tr>
</thead>
<tbody>
<tr>
<td>3.7V 2600mAh</td>
<td>Button-top 18650 Lithium-Ion rechargeable battery. High energy density and capacity. Long life-span. Built-in protective circuitry prevents voltages outside of 2.5-4.25V. 2.70” long x 0.71” diameter.</td>
<td>$10.50 each</td>
<td></td>
</tr>
<tr>
<td>3.7V 2200 MAH</td>
<td>2.67’’ 1.33’’ x 0.36’’. Three 3’’ leads with three-conductor socket connector. 1.5mm spacing. Charging protection circuit keeps the battery voltage from over-charging or going too low when being used. It will also protect against output shorts.</td>
<td>$6.95 each</td>
<td></td>
</tr>
</tbody>
</table>

## BATTERY CHARGER BOARD LI-ION / LI-POLYMER

Originally a conditioning charger for a 14.4V 2600 mAh Li-Ion/LiPolymer battery. The circuit board has a 100uh, 4.3A inductor, CCTX100-2-52M, that is well worth the price of the board. With a little effort you can remove the inductor, 3 sets of header connectors, a MOSFET, two voltage regulators, two TO-220 aluminum heatsinks, three 330 uf 35v radial electrolytic capacitors.

<table>
<thead>
<tr>
<th>Battery Type</th>
<th>Details</th>
<th>Price</th>
<th>Quantity Offer</th>
</tr>
</thead>
<tbody>
<tr>
<td>TP4056</td>
<td>charger for up to 1A Lithium Ion rechargeable battery. Input: 4.5-5.5Vdc. Suitable for USB-powered charger. Mini-USB input jack. 1.05” x 0.75” x 0.20”.</td>
<td>$3.75 ea.</td>
<td>2 for $2.75 each</td>
</tr>
</tbody>
</table>

## NOTE

- Even with the protection on these batteries, it is very important to only use a LiIon/LiPoly constant-voltage/constant-current charger to recharge them and at a rate of 500mA or less. Also note shipping restrictions: Ground Shipping Only.
- Reduced Price

---

ORDER TOLL FREE 1-800-826-5432
**CHARGERS FOR NIMH / NICAD**

**INTELLIGENT 4-BAY UNIVERSAL CHARGER**

Tenergy T4S. An automatic smart-charger that is compatible with almost all rechargeable batteries, Li-ion, Ni-MH and Ni-Cd, thus eliminating the need to own several chargers. Capable of charging 4 batteries simultaneously.

**CAT# BC-650** $33.95 each

**DUAL-STAGE CHARGERS**

Regulated current control prevents damage to battery. "Fast-charge" brings battery to fully charged state at which point the float-charge takes over, maintaining the battery at a constant voltage. LED indicates charge state. All have screw terminals, except BC-215* which has 6' output cable with 2.5mm coax plug. UL.

<table>
<thead>
<tr>
<th>Voltage</th>
<th>Charge Rate</th>
<th>CAT#</th>
<th>Each</th>
</tr>
</thead>
<tbody>
<tr>
<td>6V</td>
<td>500 mA</td>
<td>BC-612</td>
<td>$14.00</td>
</tr>
<tr>
<td>12V</td>
<td>350 mA</td>
<td>BC-215*</td>
<td>$9.75</td>
</tr>
<tr>
<td>12V</td>
<td>500 mA</td>
<td>BC-212</td>
<td>$14.00</td>
</tr>
<tr>
<td>12V</td>
<td>1A</td>
<td>BC-201</td>
<td>$19.00</td>
</tr>
</tbody>
</table>

**4A BATTERY CHARGER / MAINTAINER**

For charging and maintaining 10-40 Amp-Hour sealed lead acid batteries. 3 stage charger for safe, reliable charging and maintenance. Short-circuit, over-current, over-voltage protection. Includes harness with alligator clips and ring terminals.

**CAT# BC-84** $44.95 each

**CHARGERS FOR LEAD ACID**

**DURACELL® PROCCELL®**

**INDUSTRIAL ALKALINE**

**BATTERIES NON-RECHARGEABLE**

**ALKALINE BATTERIES**

**MAINTENANCE-FREE, RECHARGEABLE**

Maintenance-free, rechargeable sealed lead-acid batteries. Can be used in any position and can be trickle charged for long periods of time. Excellent for alarms, communications and back-up applications. WILL NOT LEAK.

<table>
<thead>
<tr>
<th>V</th>
<th>AH</th>
<th>Size</th>
<th>Lb.</th>
<th>CAT#</th>
<th>Each</th>
</tr>
</thead>
<tbody>
<tr>
<td>6</td>
<td>1.2</td>
<td>3.8 x 1.0 x 2.2&quot;</td>
<td>0.7</td>
<td>GC-612</td>
<td>8.65</td>
</tr>
<tr>
<td>6</td>
<td>4.5</td>
<td>2.8 x 1.9 x 4.2&quot;</td>
<td>1.8</td>
<td>GC-64</td>
<td>10.00</td>
</tr>
<tr>
<td>6</td>
<td>7</td>
<td>6.0 x 1.3 x 3.7&quot;</td>
<td>2.9</td>
<td>GC-67</td>
<td>16.00</td>
</tr>
<tr>
<td>6</td>
<td>12</td>
<td>6.0 x 2.0 x 3.8&quot;</td>
<td>4.1</td>
<td>GC-610</td>
<td>21.50</td>
</tr>
<tr>
<td>12</td>
<td>1.2</td>
<td>3.8 x 1.7 x 2.1&quot;</td>
<td>1.3</td>
<td>GC-1212</td>
<td>12.50</td>
</tr>
<tr>
<td>12</td>
<td>2.3</td>
<td>7.0 x 1.4 x 2.5&quot;</td>
<td>2.2</td>
<td>GC-1223</td>
<td>15.75</td>
</tr>
<tr>
<td>12</td>
<td>3.4</td>
<td>5.3 x 2.6 x 2.4&quot;</td>
<td>3.2</td>
<td>GC-1234</td>
<td>21.00</td>
</tr>
<tr>
<td>12</td>
<td>5</td>
<td>3.5 x 2.8 x 4.2&quot;</td>
<td>3.1</td>
<td>GC-125</td>
<td>17.50</td>
</tr>
<tr>
<td>12</td>
<td>7.5</td>
<td>5.9 x 2.6 x 3.9&quot;</td>
<td>5.0</td>
<td>GC-1270</td>
<td>23.50</td>
</tr>
<tr>
<td>12</td>
<td>12</td>
<td>5.9 x 3.9 x 4.0&quot;</td>
<td>8.4</td>
<td>GC-1214</td>
<td>43.00</td>
</tr>
<tr>
<td>12</td>
<td>18</td>
<td>7.1 x 3.0 x 6.6&quot;</td>
<td>12</td>
<td>GC-217</td>
<td>59.00</td>
</tr>
</tbody>
</table>

**VOLTAGE**

**CHARGERS FOR LEAD ACID BATTERIES**

**MAINTENANCE-FREE, NON-RECHARGEABLE**

**CHARGERS FOR ALKALINE BATTERIES**

**TRICKLE CHARGERS**

Regulated current control prevents damage to battery. "Fast-charge" brings battery to fully charged state at which point the float-charge takes over, maintaining the battery at a constant voltage. LED indicates charge state. All have screw terminals, except BC-215* which has 6' output cable with 2.5mm coax plug. UL.

<table>
<thead>
<tr>
<th>Voltage</th>
<th>Charge Rate</th>
<th>CAT#</th>
<th>Each</th>
</tr>
</thead>
<tbody>
<tr>
<td>6V</td>
<td>500 mA</td>
<td>BC-612</td>
<td>$14.00</td>
</tr>
<tr>
<td>12V</td>
<td>350 mA</td>
<td>BC-215*</td>
<td>$9.75</td>
</tr>
<tr>
<td>12V</td>
<td>500 mA</td>
<td>BC-212</td>
<td>$14.00</td>
</tr>
<tr>
<td>12V</td>
<td>1A</td>
<td>BC-201</td>
<td>$19.00</td>
</tr>
</tbody>
</table>

**4A BATTERY CHARGER / MAINTAINER**

For charging and maintaining 10-40 Amp-Hour sealed lead acid batteries. 3 stage charger for safe, reliable charging and maintenance. Short-circuit, over-current, over-voltage protection. Includes harness with alligator clips and ring terminals.

**CAT# BC-84** $44.95 each

**WE PURCHASE EXCESS INVENTORIES. CALL, WRITE, E-MAIL or FAX your list.**
**HEAVY-DUTY CARBON ZINC**

The economical choice for low drain devices like remote controls, clocks, smoke alarms, radios and flashlights.

<table>
<thead>
<tr>
<th>CAT#</th>
<th>Each</th>
</tr>
</thead>
<tbody>
<tr>
<td>HD-AAA</td>
<td>$1.00</td>
</tr>
<tr>
<td>HD-AA</td>
<td>$1.00</td>
</tr>
<tr>
<td>HD-9V</td>
<td>$0.85</td>
</tr>
</tbody>
</table>

**LITHIUM BATTERIES**

**LITHIUM BATTERY CR123A**

3V, 1300 mAh. Long-life power source used in high-performance flashlights, cameras and digital electronics. 1.34” long x 0.65” diameter. Replaces: Energizer EL123APB2, Duracell DL202, Panasonic CR123A, Kodak K123LA, GE Sanyo CR123A.

- **Cat# LBAT-123**: $2.65 each
- 10 for $2.50 each

**LITHIUM BATTERY WITH LEADS**

1/2 AA size.

- 3.6V, 1200mAh, 14mm dia. x 24mm long. **Cat# LBAT-125**: $6.50 each
- AA size.
  - 3.6V, 2400mAh, 14mm dia. x 51mm long. **Cat# LBAT-124**: $6.60 each

**1.5V BUTTON CELLS**

- **AG-13**: 11.5mm diameter x 5.5mm. Cross to 357, AG-13, A-76, LR-44, V13GA and RW-82. Alkaline. **Cat# BAT-7**: 75¢ each • 10 for $5.00
- **AG10/L1131**: L1131. Cross to LR54, 189, RW89, AG10. 11.6mm diameter x 3mm high. **Cat# BAT-11**: 75¢ each • 10 for 50¢ each
- **AG-3**: Cross to AG-3, 392A, SR41, CX41, LR41W & others. 7.9mm dia. x 3.6mm. Alkaline. **Cat# BAT-3**: 50¢ each • 10 for 40¢ each
- **SG-4**: replaces AG-4, 626A, 377A, CX66W & others. 6.8mm dia. x 2.6mm. Silver oxide. **Cat# BAT-4**: 95¢ each • 10 for 65¢ each
- **386S** (silver oxide) replaces SG12/ G12/ SR43/ 386/ 546/6/RW24, 44 button cell. 0.45” diameter x 0.15” thick. For watches, cameras, games etc. **Cat# BAT-8**: 95¢ each • 10 for $7.00

**3V LITHIUM BUTTON CELLS**

Lithium batteries have a very long shelf life, typically 10 years or more. These are not rechargeable.

- **CR1220**: 40 mAh, 12.5mm dia. x 2mm thick. **Cat# LBAT-62**: $1.50 each
- **CR1616**: 50 mAh, 16mm dia. x 1.6mm thick. **Cat# LBAT-28**: $1.00 each

**9 VOLT BATTERY SNAPS**

- **I-TYPE**: 5” leads. **Cat# BST-51**: 2 for $1.00
- 100 for $30.00
- **T-TYPE**: 6” leads. **Cat# BST-61**: 2 for $1.00
- 100 for $30.00
- **DUAL**: 6” leads. **Cat# BH-29**: 70¢ each • 100 for $55.00

**LIP-O BATTERY LEVEL METER**

Prevent complete battery drain, increase battery life and preserve performance with this Li-Po battery voltage tester with low voltage buzzer alarm. Instantly outputs the voltage of individual cells and the total voltage of the battery pack to the digital LED meter by simply connecting to battery balance plug. Also onboard is a loud buzzer with flashing LED to indicate when the voltage of any individual cell drops below the adjustable threshold. For use with 1-8S Li-Po/Li-Ion/Li-Mn/Li-Fe. Board dimensions 40 x 25 x 10mm. **Cat# LBT-79**: $4.75 each

**COIN CELL HOLDERS, PC LEADS**

<table>
<thead>
<tr>
<th>Dia.</th>
<th>Cat#</th>
<th>Each</th>
</tr>
</thead>
<tbody>
<tr>
<td>20mm</td>
<td>BH-21</td>
<td>$1.00</td>
</tr>
<tr>
<td>20mm vert</td>
<td>BH-211</td>
<td>$1.00</td>
</tr>
<tr>
<td>20mm top load</td>
<td>BH-25</td>
<td>$1.00</td>
</tr>
<tr>
<td>25mm</td>
<td>BH-23</td>
<td>$1.00</td>
</tr>
</tbody>
</table>

**386S** (silver oxide) replaces SG12/ G12/ SR43/ 386/ 546/6/RW24, 44 button cell. 0.45” diameter x 0.15” thick. For watches, cameras, games etc. **Cat# BAT-8**: 95¢ each • 10 for $7.00
# Battery Holders

## AAA Battery Holders

<table>
<thead>
<tr>
<th># of Cells</th>
<th>Cat#</th>
<th>Termination</th>
<th>Style</th>
<th>Single</th>
<th>Double</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>BH-41</td>
<td>6&quot; wire</td>
<td>Single</td>
<td>$1.10</td>
<td>$0.95</td>
</tr>
<tr>
<td>2</td>
<td>BH-42</td>
<td>6&quot; wire</td>
<td>Single</td>
<td>$0.95</td>
<td>$0.80</td>
</tr>
<tr>
<td>3</td>
<td>BH-431</td>
<td>5.5&quot; wire</td>
<td>Single</td>
<td>$0.80</td>
<td>$0.70</td>
</tr>
<tr>
<td>4</td>
<td>BH-442</td>
<td>6&quot; wire</td>
<td>Double</td>
<td>$0.95</td>
<td>$0.80</td>
</tr>
</tbody>
</table>

## AA Battery Holders

<table>
<thead>
<tr>
<th># of Cells</th>
<th>Cat#</th>
<th>Termination</th>
<th>Style</th>
<th>Single</th>
<th>Double</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>BH-31</td>
<td>Solder tabs</td>
<td>Single</td>
<td>$0.75</td>
<td>$0.65</td>
</tr>
<tr>
<td>1</td>
<td>BH-311</td>
<td>6&quot; wire</td>
<td>Single</td>
<td>$0.75</td>
<td>$0.65</td>
</tr>
<tr>
<td>2</td>
<td>BH-32</td>
<td>6&quot; wire</td>
<td>Single</td>
<td>$0.85</td>
<td>$0.75</td>
</tr>
<tr>
<td>2</td>
<td>BH-321</td>
<td>9V battery snaps</td>
<td>Double</td>
<td>$0.85</td>
<td>$0.75</td>
</tr>
<tr>
<td>2</td>
<td>BH-322</td>
<td>2 cells / pc leads</td>
<td>Single</td>
<td>$0.85</td>
<td>$0.75</td>
</tr>
<tr>
<td>2</td>
<td>BH-421</td>
<td>Solder lugs</td>
<td>Single</td>
<td>$0.95</td>
<td>$0.85</td>
</tr>
<tr>
<td>4</td>
<td>BH-342</td>
<td>6&quot; wire</td>
<td>Double</td>
<td>$1.10</td>
<td>$0.95</td>
</tr>
<tr>
<td>4</td>
<td>BH-341</td>
<td>6&quot; wire</td>
<td>Single</td>
<td>$1.10</td>
<td>$0.95</td>
</tr>
<tr>
<td>4</td>
<td>BH-443</td>
<td>9V battery snaps</td>
<td>Double</td>
<td>$1.20</td>
<td>$1.00</td>
</tr>
<tr>
<td>4</td>
<td>BH-446</td>
<td>9V battery snaps</td>
<td>Double</td>
<td>$1.20</td>
<td>$1.00</td>
</tr>
<tr>
<td>6</td>
<td>BH-361</td>
<td>9V battery snaps</td>
<td>Double</td>
<td>$1.75</td>
<td>$1.55</td>
</tr>
<tr>
<td>8</td>
<td>BH-38</td>
<td>9V battery snaps</td>
<td>Double</td>
<td>$2.25</td>
<td>$2.10</td>
</tr>
<tr>
<td>8</td>
<td>BH-448</td>
<td>9V battery snaps</td>
<td>Single</td>
<td>$2.30</td>
<td>$2.15</td>
</tr>
</tbody>
</table>

## C Battery Holders

<table>
<thead>
<tr>
<th># of Cells</th>
<th>Cat#</th>
<th>Termination</th>
<th>Style</th>
<th>Single</th>
<th>Double</th>
</tr>
</thead>
<tbody>
<tr>
<td>4</td>
<td>BH-241</td>
<td>8&quot; wire</td>
<td>Single</td>
<td>$1.90</td>
<td>$1.75</td>
</tr>
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</table>

## D Battery Holders

<table>
<thead>
<tr>
<th># of Cells</th>
<th>Cat#</th>
<th>Termination</th>
<th>Style</th>
<th>Single</th>
<th>Double</th>
</tr>
</thead>
<tbody>
<tr>
<td>2</td>
<td>BH-142</td>
<td>8&quot; wire leads</td>
<td>Single</td>
<td>$1.95</td>
<td>$1.75</td>
</tr>
<tr>
<td>2</td>
<td>BH-143</td>
<td>9V battery snaps</td>
<td>Single</td>
<td>$1.85</td>
<td>$1.70</td>
</tr>
<tr>
<td>4</td>
<td>BH-141</td>
<td>6&quot; wire leads</td>
<td>Single</td>
<td>$2.00</td>
<td>$1.80</td>
</tr>
<tr>
<td>4</td>
<td>BH-144</td>
<td>6&quot; wire leads</td>
<td>Single</td>
<td>$2.00</td>
<td>$1.80</td>
</tr>
</tbody>
</table>

## CR123A Battery Holder

<table>
<thead>
<tr>
<th># of Cells</th>
<th>Cat#</th>
<th>Termination</th>
<th>Style</th>
<th>Single</th>
<th>Double</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>BH-123</td>
<td>PC leads</td>
<td>Single</td>
<td>$0.80</td>
<td>$0.70</td>
</tr>
</tbody>
</table>

## 18650 Battery Holder

<table>
<thead>
<tr>
<th># of Cells</th>
<th>Cat#</th>
<th>Termination</th>
<th>Style</th>
<th>Single</th>
<th>Double</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>BH-18650</td>
<td>6&quot; wire leads</td>
<td>Single</td>
<td>$1.95</td>
<td>$1.80</td>
</tr>
</tbody>
</table>

## 9 Volt Battery Drawer

Easy to remove and reload standard 9V battery. Mounts in 34.5 x 24.5mm rectangular cut out. Behind-panel depth, 60mm. Flange mount. Holes on 43mm centers. Solder lug terminals.

**Cat# BH-59** $3.60 each 100 for $3.15 each

## 9 Volt Battery Clips

Holds one 9V battery. Nickel plated steel.

**Cat# BH-9H** 40¢ each 100 for 35¢ each

Holds battery edgewise.

**Cat# BH-9V** 35¢ each • 100 for 25¢ each

## Battery Tester

SE BT20. Test AAA, AA, C, D, 9V and button cell batteries. Features easy-to-read, color-coded reading meter. Separate scale for button cells. 4-3/8" x 2-3/8".

**Cat# BC-22** $5.95 each

## Battery Level Meter

Monitor battery usage in lead-acid and lithium-ion batteries. LCD displays percentage of voltage remaining in numerical and graphic format. Designed for use with 12, 24, 36 or 48V lead-acid batteries or 3 to 15 cell (8-63V) lithium-ion batteries. Battery symbol flashes when level reaches 5%. Backlight flashes with blue backlight. Display size: 1.7" x 0.4". Includes instructions.

**Cat# BT-3** $7.75 each

---

48 FAX YOUR ORDER 24 HOURS A DAY (818) 781-2653
CABLES, CONNECTORS AND ADAPTERS

VIDEO CABLES W/ RCA PLUGS

Special Price for 6' long cables!
CAT# VMC-6 3 for 99¢ • 100 for 25¢ each

<table>
<thead>
<tr>
<th>length</th>
<th>CAT#</th>
<th>each</th>
<th>10</th>
<th>100</th>
</tr>
</thead>
<tbody>
<tr>
<td>25'</td>
<td>VMC-25</td>
<td>$3.50</td>
<td>$4.00</td>
<td>$2.60</td>
</tr>
</tbody>
</table>

CABLES W/ F CONNECTORS

75 Ohm, RG-6U high-definition cable. AWG 18 solid copper-clad steel center. Double Aluminum foil shield plus 67% tinned-copper braid shield. UL-AWM style 1354 80° C, 300V.

<table>
<thead>
<tr>
<th>FEET</th>
<th>COLOR</th>
<th>CAT#</th>
<th>each</th>
<th>10</th>
<th>100</th>
</tr>
</thead>
<tbody>
<tr>
<td>3'</td>
<td>Black</td>
<td>VHR-3B</td>
<td>1.20</td>
<td>1.00</td>
<td>0.80</td>
</tr>
<tr>
<td>6'</td>
<td>Black</td>
<td>VHR-6B</td>
<td>2.25</td>
<td>2.00</td>
<td></td>
</tr>
<tr>
<td>25'</td>
<td>White</td>
<td>VHR-25W</td>
<td>5.50</td>
<td>5.25</td>
<td></td>
</tr>
<tr>
<td>50'</td>
<td>Black</td>
<td>VHR-50B</td>
<td>8.00</td>
<td>7.00</td>
<td>6.20</td>
</tr>
</tbody>
</table>

HDMI CABLES & ADAPTERS

State-of-the-art connectivity for HDTV sets, DVD players/recorders.

3’ Special CAT# HDM-3 $2.50 each
6’ CAT# HDM-6 $8.50 each
10’ CAT# HDM-10 $10.50 each
15’ CAT# HDM-15 $12.00 each
30’ CAT# HDM-30 $24.95 each

HDMI FEMALE-FEMALE COUPLER
Join two HDMI cables. Female to female cord coupler.
CAT# AD-57 $6.95 each

HDMI MALE TO FEMALE RIGHT-ANGLE ADAPTER
For tight fits behind TVs & monitors.
CAT# AD-62 $4.50 each

RG6 COAX COMPRESSION TOOL KIT
Includes a crimping tool, a coax cable stripper and 20 compression F-connectors for RG6 coaxial cable. More info online.
CAT# CTK-6 $21.95 each

F CONNECTORS & ADAPTERS

<table>
<thead>
<tr>
<th>CAT#</th>
<th>price</th>
<th>100</th>
</tr>
</thead>
<tbody>
<tr>
<td>F-56</td>
<td>$26.00</td>
<td></td>
</tr>
<tr>
<td>F-56R</td>
<td>$26.00</td>
<td></td>
</tr>
</tbody>
</table>

COAX CONNECTORS

50 OHM, RG-58 MALE-MALE

<table>
<thead>
<tr>
<th>length</th>
<th>CAT#</th>
<th>each</th>
<th>10</th>
<th>100</th>
</tr>
</thead>
<tbody>
<tr>
<td>3 foot</td>
<td>CBL-27</td>
<td>3.00</td>
<td>2.75</td>
<td>2.25</td>
</tr>
<tr>
<td>6 foot</td>
<td>CBL-28</td>
<td>3.25</td>
<td>2.75</td>
<td>2.25</td>
</tr>
<tr>
<td>15 foot</td>
<td>CBL-29</td>
<td>4.25</td>
<td>4.00</td>
<td>3.75</td>
</tr>
<tr>
<td>25 foot</td>
<td>CBL-25</td>
<td>6.50</td>
<td>6.00</td>
<td>5.20</td>
</tr>
<tr>
<td>50 foot</td>
<td>CBL-45</td>
<td>8.65</td>
<td>8.30</td>
<td>7.50</td>
</tr>
</tbody>
</table>

75 OHM, RG-59 MALE-MALE

<table>
<thead>
<tr>
<th>length</th>
<th>CAT#</th>
<th>each</th>
<th>10</th>
<th>100</th>
</tr>
</thead>
<tbody>
<tr>
<td>6 foot</td>
<td>CBL-30</td>
<td>3.25</td>
<td>2.75</td>
<td>2.25</td>
</tr>
<tr>
<td>15 foot</td>
<td>CBL-157</td>
<td>3.50</td>
<td>3.25</td>
<td>2.75</td>
</tr>
<tr>
<td>25 foot</td>
<td>CBL-35</td>
<td>5.50</td>
<td>5.00</td>
<td>4.25</td>
</tr>
</tbody>
</table>
RGB video signal breakout cable for all high-frequency displays. Allows direct conversion of a 5 BNC, RGBHV cable to VGA HD-15 pin connector for HDTV, video projector applications. True 75 ohm connectors and cable for accurate video and sync signal transfers. CAT # VGA-5 $6.99 ea. • 10 for $6.00 ea.

**BNC ADAPTERS**

<table>
<thead>
<tr>
<th>CAT#</th>
<th>#1-9</th>
<th>10-99</th>
<th>100+</th>
</tr>
</thead>
<tbody>
<tr>
<td>UG-914</td>
<td>MALE COUPLER</td>
<td>Female both ends</td>
<td>1.90 \</td>
</tr>
<tr>
<td>UG-914</td>
<td>BNC COUPLER thru chassis</td>
<td>Female both ends</td>
<td>2.10 \</td>
</tr>
<tr>
<td>UG-491A/U</td>
<td>FEMALE COUPLER</td>
<td>Males both ends</td>
<td>1.80 \</td>
</tr>
<tr>
<td>UG-306</td>
<td>RT. ANGLE ADAPTER</td>
<td>BNC-2</td>
<td>2.10 \</td>
</tr>
<tr>
<td>UG-274</td>
<td>BNC SPLITTER</td>
<td>BNC-T</td>
<td>1.50</td>
</tr>
<tr>
<td>BNC-T ADAPTER</td>
<td>(3 female fittings)</td>
<td>BNC-T2</td>
<td>2.10</td>
</tr>
<tr>
<td>50 OHM BNC TERMINATOR</td>
<td>With tether chain</td>
<td>BNC-50C</td>
<td>1.50</td>
</tr>
<tr>
<td>75 OHM BNC TERMINATOR</td>
<td>BNC-75</td>
<td>1.20</td>
<td>1.00</td>
</tr>
</tbody>
</table>

**ADAPTERS**

<table>
<thead>
<tr>
<th>CAT#</th>
<th>1-9</th>
<th>10-99</th>
<th>100+</th>
</tr>
</thead>
<tbody>
<tr>
<td>F FEMALE to RCA MALE</td>
<td>F-RCA</td>
<td>.75</td>
<td>.65</td>
</tr>
<tr>
<td>F FEMALE to BNC MALE</td>
<td>F-BNC</td>
<td>1.30</td>
<td>1.10</td>
</tr>
<tr>
<td>RCA FEMALE to F MALE</td>
<td>RCA-F</td>
<td>1.00</td>
<td>.80</td>
</tr>
<tr>
<td>RCA FEMALE to BNC MALE</td>
<td>RCA-BNC</td>
<td>.80</td>
<td>.70</td>
</tr>
<tr>
<td>UHF FEMALE to BNC MALE</td>
<td>UHF-BNC</td>
<td>1.80</td>
<td>1.25</td>
</tr>
<tr>
<td>BNC FEMALE to F MALE</td>
<td>BNC-F</td>
<td>1.50</td>
<td>1.25</td>
</tr>
<tr>
<td>BNC FEMALE to RCA MALE</td>
<td>BNC-RCA</td>
<td>1.00</td>
<td>.80</td>
</tr>
<tr>
<td>BNC FEMALE to UHF MALE</td>
<td>BNC-UHF</td>
<td>2.00</td>
<td>1.75</td>
</tr>
</tbody>
</table>

**UHF CONNECTORS**

<table>
<thead>
<tr>
<th>CAT#</th>
<th>1-9</th>
<th>10-99</th>
<th>100+</th>
</tr>
</thead>
<tbody>
<tr>
<td>PL-259 PLUG</td>
<td>PL-259</td>
<td>1.65</td>
<td>1.55</td>
</tr>
<tr>
<td>REDUCER</td>
<td>for RG-58 cable (Fits PL-259)</td>
<td>UG-175</td>
<td>.55</td>
</tr>
<tr>
<td>MALE COUPLER PL-258</td>
<td>UHF-UHF</td>
<td>1.50</td>
<td>1.25</td>
</tr>
<tr>
<td>SO-239 CHASSIS MOUNT</td>
<td>SO-239</td>
<td>1.50</td>
<td>1.30</td>
</tr>
</tbody>
</table>

**AUDIO, POWER, SIGNAL, PLUGS AND JACKS**

**RCA PLUGS**

<table>
<thead>
<tr>
<th>CAT#</th>
<th>1-9</th>
<th>10-99</th>
<th>100+</th>
</tr>
</thead>
<tbody>
<tr>
<td>SHIELDED, METAL MPRP</td>
<td>.85</td>
<td>.75</td>
<td>.60</td>
</tr>
</tbody>
</table>

Gold-plated RCA audio plugs with red and black color bands. Spring strain relief. Sold in pairs, one each black and red.

**RCA JACKS**

<table>
<thead>
<tr>
<th>CAT#</th>
<th>1-9</th>
<th>10-99</th>
<th>100+</th>
</tr>
</thead>
<tbody>
<tr>
<td>ECONOMY - 6mm mounting hole</td>
<td>RCJ-65</td>
<td>.20</td>
<td>.15</td>
</tr>
</tbody>
</table>

With N.C. switch. Plain bushing.

**3.5mm PLUGS**

<table>
<thead>
<tr>
<th>CAT#</th>
<th>1-9</th>
<th>10-99</th>
<th>100+</th>
</tr>
</thead>
<tbody>
<tr>
<td>MONO, PLASTIC</td>
<td>PMP</td>
<td>.85</td>
<td>.75</td>
</tr>
<tr>
<td>MONO, PLASTIC -- SPECIAL</td>
<td>PMP-35</td>
<td>.70</td>
<td>.60</td>
</tr>
<tr>
<td>MONO, METAL</td>
<td>MMP</td>
<td>1.00</td>
<td>.85</td>
</tr>
<tr>
<td>AMPHENOL, MONO, DIECAST</td>
<td>MPP-2</td>
<td>2.78</td>
<td>2.50</td>
</tr>
<tr>
<td>STEREO, PLASTIC</td>
<td>SMP</td>
<td>1.25</td>
<td>1.15</td>
</tr>
<tr>
<td>STEREO, METAL</td>
<td>SMPM</td>
<td>1.50</td>
<td>1.35</td>
</tr>
<tr>
<td>AMPHENOL, STEREO, DIECAST</td>
<td>SMP-3</td>
<td>3.10</td>
<td>2.79</td>
</tr>
<tr>
<td>4-CONDUCTOR</td>
<td>MPP-4</td>
<td>1.30</td>
<td>1.20</td>
</tr>
</tbody>
</table>
### 3.5mm JACKS

<table>
<thead>
<tr>
<th>CAT#</th>
<th>1-9</th>
<th>10-99</th>
<th>100+</th>
</tr>
</thead>
<tbody>
<tr>
<td>3.5MM MONO JACK W/ SWITCH</td>
<td>1-9</td>
<td>10-99</td>
<td>100+</td>
</tr>
<tr>
<td>MMJ-S</td>
<td>.80</td>
<td>.72</td>
<td>.65</td>
</tr>
<tr>
<td>MONO JACK</td>
<td>Two-conductor, 6mm diameter threaded bushing.</td>
<td>MMJ-J</td>
<td>.75</td>
</tr>
<tr>
<td>MONO PLASTIC, IN-LINE</td>
<td>MJ</td>
<td>.90</td>
<td>.80</td>
</tr>
<tr>
<td>MONO 3.5MM JACK</td>
<td>6mm plain bushing. PC mount.</td>
<td>SMJ-8</td>
<td>.25</td>
</tr>
<tr>
<td>3.5MM STEREO JACK W/ SWITCH</td>
<td>Chassis mount 3-conductor jack w/ n.c. switch, opens when plug is inserted.</td>
<td>SMJ-J</td>
<td>.10</td>
</tr>
<tr>
<td>3.5MM STEREO JACK 6mm dia. threaded bushing. Solder loop terms.</td>
<td>SMJ-2</td>
<td>.85</td>
<td>.75</td>
</tr>
<tr>
<td>3.5MM STEREO JACK, Amphenol. Vertical PCB mount. Threaded bushing M6 x 0.5 hex nut.</td>
<td>MMJ-3</td>
<td>1.20</td>
<td>1.08</td>
</tr>
<tr>
<td>3.5MM STEREO JACK W/ SWITCHES, Amphenol. Two normally closed switches open when plug is inserted. Vertical PCB mount. Threaded bushing M6 x 0.5 hex nut.</td>
<td>MMJ-3S</td>
<td>1.20</td>
<td>1.08</td>
</tr>
<tr>
<td>STEREO 3.5MM MINI-PHONE JACK</td>
<td>Two normally-closed shunts - open when plug is inserted. 6mm diameter threaded bushing. PC leads - can be wrapped and soldered.</td>
<td>SMJ-6</td>
<td>.85</td>
</tr>
<tr>
<td>STEREO 3.5MM MINI-PHONE JACK 6mm dia. plain (non-threaded) bushing. With two normally-closed shunts that open when plug is inserted. PC mount.</td>
<td>SMJ-7</td>
<td>.30</td>
<td>.25</td>
</tr>
<tr>
<td>STEREO PLASTIC, IN-LINE</td>
<td>SJI</td>
<td>1.00</td>
<td>.90</td>
</tr>
</tbody>
</table>

### 1/4" PLUGS

<table>
<thead>
<tr>
<th>CAT#</th>
<th>1-9</th>
<th>10-99</th>
<th>100+</th>
</tr>
</thead>
<tbody>
<tr>
<td>MONO, METAL</td>
<td>MPM</td>
<td>1.35</td>
<td>1.20</td>
</tr>
<tr>
<td>Amphenol MONO, DIECAST</td>
<td>PHM-2</td>
<td>2.58</td>
<td>2.32</td>
</tr>
<tr>
<td>MONO, METAL Gold plated plug and solder terminals</td>
<td>MPH-11</td>
<td>1.50</td>
<td>1.35</td>
</tr>
<tr>
<td>STEREO, PLASTIC</td>
<td>PHPS</td>
<td>.75</td>
<td>.65</td>
</tr>
<tr>
<td>STEREO, METAL</td>
<td>MPH</td>
<td>1.50</td>
<td>1.35</td>
</tr>
</tbody>
</table>

### 3.5mm JACKS - Chassis mount 2-conductor jack with normally closed switch, opens when plug is inserted.

- **MMJ-S**
  - 3.5mm STEREO JACK
  - Chassis mount 3-conductor jack w/ n.c. switch, opens when plug is inserted.
  - Vertical PCB mount. Threaded bushing M6 x 0.5 hex nut.
  - CAT#: SMJ-J
  - Price: $0.10 each, $0.05 each in bulk (100+)
- **SMJ-2**
  - 3.5mm STEREO JACK 6mm dia. threaded bushing. Solder loop terms.
  - CAT#: SMJ-6
  - Price: $0.85 each, $0.75 each in bulk (100+)
- **SMJ-3**
  - 3.5mm STEREO JACK, Amphenol. Vertical PCB mount. Threaded bushing M6 x 0.5 hex nut.
  - CAT#: MMJ-3
  - Price: $1.20 each, $1.08 each in bulk (100+)
- **SMJ-3S**
  - 3.5mm STEREO JACK W/ SWITCHES, Amphenol. Two normally closed switches open when plug is inserted. Vertical PCB mount. Threaded bushing M6 x 0.5 hex nut.
  - CAT#: MMJ-3S
  - Price: $1.20 each, $1.08 each in bulk (100+)
- **SJI**
  - STEREO PLASTIC, IN-LINE
  - CAT#: SJI
  - Price: $1.00 each, $0.90 each in bulk (100+)

### BANANA PLUGS

<table>
<thead>
<tr>
<th>CAT#</th>
<th>1-9</th>
<th>10-99</th>
<th>100+</th>
</tr>
</thead>
<tbody>
<tr>
<td>RED PLASTIC</td>
<td>BPL-R</td>
<td>.50</td>
<td>.45</td>
</tr>
<tr>
<td>BLACK PLASTIC</td>
<td>BPL-B</td>
<td>.50</td>
<td>.45</td>
</tr>
<tr>
<td>Heavy-duty with set screw</td>
<td>RED PLASTIC</td>
<td>BP-26R</td>
<td>.90</td>
</tr>
<tr>
<td>BLACK PLASTIC</td>
<td>BP-26B</td>
<td>.90</td>
<td>.75</td>
</tr>
</tbody>
</table>

### BANANA JACKS / BINDING POSTS

<table>
<thead>
<tr>
<th>CAT#</th>
<th>1-9</th>
<th>10-99</th>
<th>100+</th>
</tr>
</thead>
<tbody>
<tr>
<td>RED PLASTIC CHASSIS MOUNT</td>
<td>BJL-R</td>
<td>.60</td>
<td>.50</td>
</tr>
<tr>
<td>BLACK PLASTIC CHASSIS MOUNT</td>
<td>BJL-B</td>
<td>.60</td>
<td>.50</td>
</tr>
<tr>
<td>Heavy-duty, banana-jack binding posts. No lower insulator. Must fasten through a non-conductive material. Gold-plated.</td>
<td>RED PLASTIC CHASSIS MOUNT</td>
<td>BJL-RT</td>
<td>.60</td>
</tr>
</tbody>
</table>

### RCA / PHONE PLUG ADAPTERS

- **RCA jack to RCA jack**
  - CAT#: AD-3
  - Price: 75¢ each
- **Dual RCA Jack Couplers**
  - CAT#: AD-203
  - Price: $1.50 each
- **RCA plug to RCA plug**
  - CAT#: AD-33
  - Price: 75¢ each
- **RIGHT-ANGLE RCA JACK ADAPTER, Gold-plated.**
  - CAT#: RCA-RT
  - Price: $1.00 each

For orders of 10 for 85¢ each, 100 for 75¢ each.

**Amphenol STEREO, DIECAST**

- **PHM-3**
  - Price: 2.98 each, 2.68 each
- **PHM-3R**
  - Price: 300 each, 2.75 each

**Amphenol stereo, solder lug, metal nut and insert.**

- **PHJS-3**
  - Price: 1.37 each, 1.23 each

**Stereo. 3 PC leads. Threaded mounting bushing w/ hardware.**

- **PHJS-4**
  - Price: 0.75 each, 0.70 each, 0.65 each

**RCA / PHONE PLUG ADAPTERS**

- **RCA jack to RCA jack**
  - CAT#: AD-3
  - Price: 75¢ each
- **Dual RCA Jack Couplers**
  - CAT#: AD-203
  - Price: $1.50 each
- **RCA plug to RCA plug**
  - CAT#: AD-33
  - Price: 75¢ each
- **RIGHT-ANGLE RCA JACK ADAPTER, Gold-plated.**
  - CAT#: RCA-RT
  - Price: $1.00 each

For orders of 10 for 85¢ each, 100 for 75¢ each.
RCA plug to two RCA jacks
CAT# AD-4        $1.00 each

RCA jack to two RCA plugs
CAT# AD-4M       $1.00 each

RCA jack to 3.5mm mono plug
CAT# RCA-3.5     75¢ each

3.5mm stereo plug to
1/4” stereo jack
CAT# ADMP-2      75¢ each

3.5mm mono plug to
3.5 mm stereo jack
CAT# ADMP-4      75¢ each

2.5mm stereo plug to
3.5mm stereo jack.
CAT# AD-21       $1.75 each

1/4” mono jack to RCA plug
CAT# 54-421      $1.00 each

1/4” mono plug to RCA jack
CAT# AD-5        75¢ each

1/4” stereo plug to
3.5 mm stereo jack
CAT# ADMP-1      75¢ each

3.5mm stereo plug to 2 RCA jacks
CAT# CB-52       $1.25 each

3.5mm stereo jack to 2 RCA plugs
CAT# AD-18       $1.25 each

1/4” stereo plug to 2 RCA plugs
CAT# AD-66       $1.50 each

1/4” PLUG TO XLR JACK

Length   CAT#     each   10
11’ cable CB-306  $3.50   3.25
16’ cable CB-289  $6.25   $6.00
20’ cable CB-290  $6.95   $5.95

MICROPHONE EXTENSION CABLES


Length   CAT#     each   10
6’ Cable   CAT# CB-303 $4.95   4.25
20’ Cable  CAT# CB-295 $8.50   7.50
50’ Cable  CAT# CB-105 $12.95  11.35

SCREW-LOCK CONNECTORS

Male-female pair. Solid, screw-together connection. Panel-mount female with threaded bushing. Mounts in 0.61” (15mm) diameter hole. Solder-cup connections. Cable-mount male has solder-cup connections and cable clamp for up to 0.22” diameter cable.

3-pin connectors
CAT# CON-433    $3.50 pair

4-pin connectors
CAT# CON-434    $3.50 pair

4-COND TWIST-LOCK MIC CONNECTOR WITH COIL CORD

Good-quality coil cord, stretches to 6 ft. Terminated with 4-contact female microphone connector. Three-conductors with braided copper shield. 6mm od. Removed from new equipment.

CAT# CB-232     $4.95 each
10 for $4.65 each

CABLES WITH 1/4” PHONE PLUGS

MONO 1/4” PLUGS BOTH ENDS

10’ SPECIAL
CAT# MCB-10     $2.75 each • 10 for $2.50 each

25’ CABLE
CAT# MCB-25     $4.50 each • 10 for $4.25 each

STEREO 1/4” PLUGS BOTH ENDS

6’ CABLE
CAT# MCB-6S     $4.00 each • 10 for $3.60 each

15’ CABLE
CAT# MCB-15S    $6.00 each • 10 for $5.40 each

30 DAY MONEY-BACK GUARANTEE
<table>
<thead>
<tr>
<th>5-PIN DIN PLUGS/JACKS 180°</th>
<th>5-PIN DIN PLUGS/JACKS 240°</th>
</tr>
</thead>
<tbody>
<tr>
<td>CAT#</td>
<td>each</td>
</tr>
<tr>
<td>MALE PLUG, Din-5</td>
<td></td>
</tr>
<tr>
<td>FEMALE JACK, Din-SSC</td>
<td></td>
</tr>
<tr>
<td>5 PIN JACK, CHASSIS MOUNT, Din-SC</td>
<td></td>
</tr>
<tr>
<td>5 PIN DIN JACK, VERTICAL, SNAP-INS, Din-SCS</td>
<td></td>
</tr>
</tbody>
</table>

**MIDI CABLE**

3’ cable, 5 pin male DIN connectors (180°) each end.
CAT# CB-439 $1.50 each

**2.5MM PLUG**

**CAT# PMMP** 40¢ each
10 for 35¢ each • 100 for 30¢ each

**2.5MM JACKS**

Mono. 4mm (0.15”) threaded bushing. Normally-closed shunt (shunt opens when plug is inserted). Solder/pc terminals.
CAT# MJS-2 50¢ each
10 for 45¢ each • 100 for 50¢ each

Mono. 4mm (0.15”) threaded bushing. Normally-closed shunt (shunt opens when plug is inserted). Solder terminals.
CAT# MJS-3 75¢ each
10 for 65¢ each • 100 for 50¢ each

Mono. 4mm (0.15”) threaded bushing. Chassis mount 2-conductor jack.
CAT# SMMJ 65¢ each
10 for 57¢ each • 100 for 46¢ each

For 3-conductor stereo, 2.5mm sub-mini phone plug, 5mm diameter, plain, non-threaded bushing. PC leads.
CAT# MJS-1 4 for $1.00 • 100 for $15.00

**3.5MM STEREO PLUG TO 2 RCA PLUGS**

Commonly used to connect portable audio players to home stereos and to connect speakers to computers.

<table>
<thead>
<tr>
<th>Length</th>
<th>CAT#</th>
<th>1-9</th>
<th>10</th>
<th>100</th>
</tr>
</thead>
<tbody>
<tr>
<td>5 feet</td>
<td>CB-42</td>
<td>1.50</td>
<td>1.25</td>
<td>1.00</td>
</tr>
<tr>
<td>6 feet</td>
<td>CB-390</td>
<td>1.75</td>
<td>1.55</td>
<td>1.30</td>
</tr>
<tr>
<td>12 feet</td>
<td>CB-406</td>
<td>2.25</td>
<td>2.05</td>
<td>1.55</td>
</tr>
</tbody>
</table>

**CABLES W/ 3.5MM STEREO PLUGS**

For connecting iPods, MP3 players and other audio devices.

**MOLDED PLASTIC PLUGS**

<table>
<thead>
<tr>
<th>CAT#</th>
<th>each</th>
<th>10</th>
<th>100+</th>
</tr>
</thead>
<tbody>
<tr>
<td>CB-424</td>
<td>$1.20</td>
<td>$1.05</td>
<td>90¢</td>
</tr>
<tr>
<td>CB-452</td>
<td>$1.35</td>
<td>$1.20</td>
<td>95¢</td>
</tr>
<tr>
<td>CB-121</td>
<td>$1.50</td>
<td>$1.25</td>
<td>$1.05</td>
</tr>
<tr>
<td>CB-389</td>
<td>$2.00</td>
<td>$1.65</td>
<td>$1.35</td>
</tr>
</tbody>
</table>

**6’ CABLE W/ 3.5MM STEREO PHONE PLUG**

3-conductor, 24 AWG cable. Right-angle 3.5mm stereo phone plug. Strain-relief at end.
CAT# CB-220 2 for $1.50
100 for 60¢ each

6 foot, flexible, good-quality cable, made for Motorola (MOT# SKN6393A).
Straight plug on one end, right-angle on other.
CAT# CB-453 $1.40 • 100 for $15.00

**EXTENSION CORDS, 3.5MM STEREO PHONE PLUGS**

3.5mm stereo plug to 3.5mm stereo jack.

**6’ CABLE**

CAT# CB-333 $1.60 each
10 for $1.45 each • 100 for $1.25 each

**10’ CABLE**

CAT# CB-371 $2.00 each
10 for $1.80 each 100 for $1.60 each

**25’ CABLE**

CAT# CB-188 $3.50 each

**METAL SHELL**

3.5mm gold-plated stereo male to female connectors with metal shell on a 6’ long, flexible PVC cable.
CAT# CB-87 $3.25 each

**10’ COILED EXTENSION CORD**

CAT# CB-185 $2.65 each
10 for $2.20 each 100 for $1.80 each

**Y-CABLE, 6 INCH**

3.5mm stereo phone plug to two 3.5mm stereo phone jacks.
CAT# AD-54 $1.35 each
CABLES W/ 3.5MM MONO PLUGS

3.5 MM MONO PLUG BOTH ENDS
Shielded cables with molded plugs.

<table>
<thead>
<tr>
<th>Item</th>
<th>CAT#</th>
<th>Price 1</th>
<th>Price 10</th>
<th>Price 100</th>
</tr>
</thead>
<tbody>
<tr>
<td>2 ft</td>
<td>CB-352</td>
<td>1.15</td>
<td>1.05</td>
<td>.90</td>
</tr>
<tr>
<td>6 ft</td>
<td>CB-3561</td>
<td>1.60</td>
<td>1.35</td>
<td>1.15</td>
</tr>
<tr>
<td>10 ft</td>
<td>CB-3510</td>
<td>2.00</td>
<td>1.75</td>
<td>1.45</td>
</tr>
</tbody>
</table>

3.5 MM MONO PLUG TO RCA PLUG
6 foot shielded cable.

<table>
<thead>
<tr>
<th>Item</th>
<th>Price 10</th>
<th>Price 100</th>
</tr>
</thead>
<tbody>
<tr>
<td>CAT# CB-364</td>
<td>$1.55 each</td>
<td>10 for $1.40 each • 100 for $1.05 each</td>
</tr>
</tbody>
</table>

SHIELDED AUDIO RCA CABLES

SINGLE RCA CABLES
Shielded one conductor audio cable with RCA style phone plug both ends.

<table>
<thead>
<tr>
<th>Item</th>
<th>CAT#</th>
<th>Price 1</th>
<th>Price 10</th>
<th>Price 100</th>
</tr>
</thead>
<tbody>
<tr>
<td>6 ft</td>
<td>ACB-6</td>
<td>1.10</td>
<td>1.00</td>
<td>.70</td>
</tr>
<tr>
<td>10 ft</td>
<td>ACB-10</td>
<td>1.50</td>
<td>1.30</td>
<td>1.10</td>
</tr>
<tr>
<td>25 ft</td>
<td>ACB-25</td>
<td>2.50</td>
<td>2.25</td>
<td>2.00</td>
</tr>
</tbody>
</table>

DUAL SHIELDED RCA CABLES
Shielded cables with molded color-coded RCA pin plugs both ends. Used for stereo/audio hook-up.

<table>
<thead>
<tr>
<th>Item</th>
<th>CAT#</th>
<th>Price 1</th>
<th>Price 10</th>
<th>Price 100</th>
</tr>
</thead>
<tbody>
<tr>
<td>3 FT</td>
<td>DCB-36</td>
<td>$1.00</td>
<td>85¢</td>
<td>75¢</td>
</tr>
<tr>
<td>6 FT</td>
<td>DCB-72</td>
<td>$1.30</td>
<td>$1.10</td>
<td>85¢</td>
</tr>
<tr>
<td>12 FT</td>
<td>DCB-144</td>
<td>$2.50</td>
<td>$2.00</td>
<td>$1.50</td>
</tr>
<tr>
<td>25 FT</td>
<td>DCB-300</td>
<td>$3.50</td>
<td>$3.00</td>
<td>$2.60</td>
</tr>
<tr>
<td>50 FT</td>
<td>DCB-600</td>
<td>$7.35</td>
<td>$7.00</td>
<td>$6.75</td>
</tr>
</tbody>
</table>

COAX POWER PLUGS AND JACKS

RETROFIT 2.1MM PLUG & SOCKET
Screw terminals provide an easy, no-solder way to add a 2.1mm coax plug or jack.

Plug CAT# SDP-P $2.00 ea.
Socket CAT# SDP-S $2.20 ea.

COAX POWER PLUGS

<table>
<thead>
<tr>
<th>Item</th>
<th>CAT#</th>
<th>Price 1</th>
<th>Price 10-99</th>
<th>Price 100+</th>
</tr>
</thead>
<tbody>
<tr>
<td>2.1mm I.D. – 5.5mm O.D.</td>
<td>DCSID</td>
<td>1.25</td>
<td>1.10</td>
<td>.95</td>
</tr>
<tr>
<td>2.5mm I.D. – 5.5mm O.D.</td>
<td>DCLID</td>
<td>1.25</td>
<td>1.10</td>
<td>.95</td>
</tr>
<tr>
<td>1.7mm I.D. – 5.0mm O.D.</td>
<td>DCP-17</td>
<td>1.25</td>
<td>1.10</td>
<td>.95</td>
</tr>
<tr>
<td>1.3mm I.D. – 3.5mm O.D.</td>
<td>DCP-13</td>
<td>1.25</td>
<td>1.10</td>
<td>.95</td>
</tr>
</tbody>
</table>

2.1MM COAX POWER JACKS
Mates with CAT# DCSID. All jacks have a normally closed shunt that opens when plug is inserted.

<table>
<thead>
<tr>
<th>Item</th>
<th>CAT#</th>
<th>Price 1</th>
<th>Price 10-99</th>
<th>Price 100+</th>
</tr>
</thead>
<tbody>
<tr>
<td>panel mount. Threaded bushing fits in 0.45” mounting hole.</td>
<td>DCJ-36</td>
<td>1.10</td>
<td>1.00</td>
<td>.85</td>
</tr>
<tr>
<td>solder lugs.</td>
<td>DCJ-1</td>
<td>.35</td>
<td>.30</td>
<td>.19</td>
</tr>
<tr>
<td>500 for 16¢ each • 1000 for 12¢ each</td>
<td>Panel mount</td>
<td>DCJ-21</td>
<td>1.75</td>
<td>1.60</td>
</tr>
</tbody>
</table>

2.5MM COAX POWER JACKS
Mates with CAT# DCLID. All jacks have a normally closed shunt that opens when plug is inserted.

<table>
<thead>
<tr>
<th>Item</th>
<th>CAT#</th>
<th>Price 1</th>
<th>Price 10-99</th>
<th>Price 100+</th>
</tr>
</thead>
<tbody>
<tr>
<td>Panel mount</td>
<td>DCJ-25</td>
<td>2.20</td>
<td>2.00</td>
<td>1.70</td>
</tr>
<tr>
<td>Solder lugs.</td>
<td>DCJ-34</td>
<td>.60</td>
<td>.55</td>
<td>.45</td>
</tr>
<tr>
<td>PC pins.</td>
<td>DCJ-33</td>
<td>.60</td>
<td>.55</td>
<td>.45</td>
</tr>
</tbody>
</table>

1.3MM SOCKET
Normally closed shunt opens when plug is inserted. Fits coax plugs with 3.5mm od, 1.3mm id. CAT# DCJ-27 35¢ each 10 for 30¢ each • 100 for 20¢ each

CABLES W/ 2.1MM PLUGS & SOCKETS
Plug. 10" color-coded leads. CAT# CB-213 $1.65 each
Jack. 10" color-coded leads. CAT# CB-209 $1.75 each

Y-Adapter. Use one power source for two devices. Two plugs to one jack. CAT# CB-207 $2.25 each • 100 for $2.00 each

Power four cameras or other devices with a single power supply. One 2.1mm female coax connector to four 2.1mm male connectors. 12" length. CAT# CB-210 $4.50 each

2.1MM ID COAX PLUG WITH 9V BATTERY SNAP
2.1mm ID co-ax plug on two 4" wire leads terminate to 9 volt T-type battery snap. CAT# CB-239 $1.30 each 10 for $1.15 each
### Universal Connectors

- Male to female
- Very flexible, 22 AWG stranded wire
- Black, red, white silicone rubber insulation

<table>
<thead>
<tr>
<th>Length</th>
<th>CAT#</th>
<th>Price 1</th>
<th>Price 10-99</th>
<th>Price 100</th>
</tr>
</thead>
<tbody>
<tr>
<td>4&quot;</td>
<td>CON-404</td>
<td>$1.25</td>
<td>$1.10</td>
<td></td>
</tr>
<tr>
<td>8&quot;</td>
<td>CON-408</td>
<td>$2.00</td>
<td>$1.80</td>
<td></td>
</tr>
<tr>
<td>12&quot;</td>
<td>CON-412</td>
<td>$2.75</td>
<td>$2.50</td>
<td></td>
</tr>
<tr>
<td>24&quot;</td>
<td>CON-424</td>
<td>$3.00</td>
<td>$2.75</td>
<td></td>
</tr>
</tbody>
</table>

12" long. Universal, Fits both Futaba and Hi-Tec/Jr connectors. Brown, red, orange leads.

**CAT# CON-412B** $2.85 each
- 10 for $2.50 each

### Multi-Pin Connectors

#### Mating Connectors

- Male / female ends connected with 10" wires.
- All have flat pins, except CON-104 has round.

<table>
<thead>
<tr>
<th># of Cond</th>
<th>CAT#</th>
<th>Price 1</th>
<th>Price 10-99</th>
<th>Price 100</th>
</tr>
</thead>
<tbody>
<tr>
<td>2</td>
<td>CON-200</td>
<td>$2.00</td>
<td>$1.75</td>
<td>$1.30</td>
</tr>
<tr>
<td>3</td>
<td>CON-30</td>
<td>$2.40</td>
<td>$2.10</td>
<td>$1.50</td>
</tr>
<tr>
<td>4</td>
<td>CON-40</td>
<td>$2.50</td>
<td>$2.25</td>
<td>$1.60</td>
</tr>
<tr>
<td>4</td>
<td>CON-104</td>
<td>$3.25</td>
<td>$3.00</td>
<td>$2.85</td>
</tr>
<tr>
<td>6</td>
<td>CON-60</td>
<td>$2.65</td>
<td>$2.40</td>
<td>$2.00</td>
</tr>
<tr>
<td>9</td>
<td>CON-90</td>
<td>$3.00</td>
<td>$2.75</td>
<td>$2.20</td>
</tr>
<tr>
<td>12</td>
<td>CON-1200</td>
<td>$3.70</td>
<td>$3.45</td>
<td>$2.85</td>
</tr>
</tbody>
</table>

#### Locking Connectors

Mating pairs 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.

<table>
<thead>
<tr>
<th>CAT#</th>
<th>Price 1</th>
<th>Price 10-99</th>
<th>Price 100</th>
</tr>
</thead>
<tbody>
<tr>
<td>CON-240</td>
<td>$1.35 ea.</td>
<td>10 for $1.20 ea.</td>
<td>100 for $95¢ ea.</td>
</tr>
<tr>
<td>CON-340</td>
<td>$1.45 ea.</td>
<td>10 for $1.30 ea.</td>
<td>100 for $1.05 ea.</td>
</tr>
<tr>
<td>CON-440</td>
<td>$2.10 ea.</td>
<td>10 for $1.85 ea.</td>
<td>100 for $1.35 ea.</td>
</tr>
<tr>
<td>CON-540</td>
<td>$2.40 ea.</td>
<td>10 for $2.10 ea.</td>
<td>100 for $1.85 ea.</td>
</tr>
<tr>
<td>CON-640</td>
<td>$2.60 ea.</td>
<td>10 for $2.20 ea.</td>
<td>100 for $1.85 ea.</td>
</tr>
</tbody>
</table>
PRE-WIRED CONNECTORS WITH MATING HEADERS

Nylon connectors and mating pc mount, snap-lock headers. Female socket connector is pre-wired with 11” long color-coded stranded wire.

Cat# SKT-31S 1.5” leads, 22 gauge stranded wire.

Cat# SKT-31 1.5” leads, 22 gauge stranded wire.

Mas-Con CE100F26-3-D 3 pin IDC wire-to-board connector, 0.1” with tin-plated copper alloy contacts.

Cat# CON-103 4 for $1.00

100 for 20¢ each

3-CONDUCTOR HEADERS W/ LEADS

Pre-wired 3-conductor female connector. Mates with standard 0.1" spacing headers.

10” leads, stranded 22 gauge wire, stripped and tinned.

Cat# SKT-31 2 for $1.00

1.5” leads, 22 gauge stranded wire.

Cat# SKT-31S 4 for $1.00

5" JUMPER W/ TWO 8-CONDUCTOR FEMALE HEADER SOCKETS

Amp/ Tyco MTA-1 IDC socket connectors on each end of 5" wire leads. Female connector, 0.1” spacing. Removed from new equipment.

Cat# SKT-82 50¢ each

0.1” SNAPPAIBLE HEADERS

.025” square header pins on 0.1” centers

Double Row

Description Cat# 1-9 10-99 100+
2 X 6 straight DHS-6 25¢ 20¢ 15¢
2 X 40 straight DHS-40 $1.50 $1.35 $1.20

Single Row

Description Cat# 1-9 10-99 100+
3 pin straight SHS-3 5 for 50¢ .08
36 pin straight SHS-36 .75 .65 .50
40 pin straight SHS-40 .85 .75 .60
40 pin, .56” pins SHS-40L .15 .10 .05
40 pin r-angle SHR-40 1.50 1.32 1.20

SHORTING JUMPERS FOR HEADERS

Designed for use with above double and single row headers. Used to short out adjoining posts on headers.

Positions Cat# 1-9 10-99 100+
1 SJ-1 .10 .08 .07
6 SJ-6 .30 .25 .15

Mas-Con® IDC CONNECTOR, 0.1”

Pancon CE100F26-3-D 3 pin IDC wire-to-board connector, 0.1” with tin-plated copper alloy contacts.

Cat# CON-103 4 for $1.00

100 for 20¢ each

0.10” SNAPPAIBLE SIP SOCKETS, .100” CENTERS

Single-row, machine-contact socket. Pins on 0.10” centers.

30-pin Cat# SIP-30 $1.20 ea. 10 for $1.05 ea.

40-pin Cat# SIP-40 $2.35 ea. 10 for $2.05 ea.

SNAPPAIBLE 48-PIN DUAL-ROW MACHINED PIN SOCKET

0.10” matrix. 48 contact (2 x 24).

Cat# DHP-48 $2.45 ea. • 100 for $2.15 ea.

STACKABLE HEADERS, 0.1”

6 pin HDR-06 36 .36
8 pin HDR-08 48 .43
10 pin HDR-10 60 .50

Jumper wires

Male - light duty

Female

Jumpers for breadboarding or permanent connection to header strips. Assorted colors.

26 AWG

M-M 6” 10 JMM6-10 $2.00 $1.75
M-F 6” 10 JFF6-10 $2.00 $1.75
M-M (*) 7” 30 JMM7-30 $3.25 $3.00
M-M 12” 10 JMM12-10 $3.00 $2.75
M-F 12” 10 JMF12-10 $3.00 $2.75
F-F 12” 10 JFF12-10 $3.00 $2.75

(*) Light duty pins on JM7-30, fine for breadboarding and temporary applications.

D-SUBMINIATURE CONNECTORS

Solder Style

Description Cat# each 100
9 pin plug DB-9P .45 .35 .27
9 pin socket DB-9S .49 .39 .29
Hood for DB-9 DB-9H .39 .29 .22
15 pin plug DB-15P .59 .45 .35
15 pin socket DB-15S .69 .49 .38
Hood for DB-15 DB-15H .39 .29 .22
25 pin plug DB-25P .69 .50 .36
25 pin socket DB-25S .75 .55 .40
Hood for DB-25 DB-25H .39 .29 .25

Straight PC Mount

Amp# 754596B-2 25 pin plug.

Cat# DB25P-PC $2.50 each

New Item
I.D.C. D-SUB CONNECTOR
Insulation Displacement Connector
Press fit on flat ribbon cable.

<table>
<thead>
<tr>
<th>DESCRIPTION</th>
<th>CAT#</th>
<th>Each</th>
<th>10</th>
<th>100</th>
</tr>
</thead>
<tbody>
<tr>
<td>9 pin PLUG</td>
<td>IDC-9P</td>
<td>$2.25</td>
<td>$2.00</td>
<td>$1.65</td>
</tr>
<tr>
<td>9 pin SOCKET</td>
<td>IDC-9S</td>
<td>$2.25</td>
<td>$2.00</td>
<td>$1.65</td>
</tr>
<tr>
<td>15 pin SOCKET</td>
<td>IDC-15S</td>
<td>$2.00</td>
<td>$1.75</td>
<td>$1.55</td>
</tr>
</tbody>
</table>

Special - All plastic body
15 pin SOCKET IDC-15SP $1.25 $1.10 95¢

IDC SOCKET CONNECTORS
Mates with double row posts on 0.100” centers. 0.100” x 0.100” for 0.050” pitch cables. Press mount on standard flat ribbon cable.

<table>
<thead>
<tr>
<th>DESCRIPTION</th>
<th>CAT#</th>
<th>1-9</th>
<th>10+</th>
</tr>
</thead>
<tbody>
<tr>
<td>10 pin (2 X 5)</td>
<td>RCSC-10</td>
<td>.55</td>
<td>.35</td>
</tr>
<tr>
<td>14 pin (2 X 7)</td>
<td>RCSC-14</td>
<td>.65</td>
<td>.55</td>
</tr>
<tr>
<td>16 pin (2 X 8)</td>
<td>RCSC-16</td>
<td>.75</td>
<td>.65</td>
</tr>
<tr>
<td>20 pin (2 X 10)</td>
<td>RCSC-20</td>
<td>.75</td>
<td>.65</td>
</tr>
<tr>
<td>26 pin (2 X 13)</td>
<td>RCSC-26</td>
<td>.75</td>
<td>.65</td>
</tr>
<tr>
<td>50 pin (2 X 25)</td>
<td>RCSC-50</td>
<td>1.00</td>
<td>.90</td>
</tr>
</tbody>
</table>

3-POLE BULLET CONNECTOR SET
3.5mm gold-plated bullet connectors.
Polarized, tough plastic (Nylon) connectors that fit securely together. Solder cups for up to AWG12 wire. Includes sleeves to hide solder connections. 46 x 12 x 12mm.
CAT # CON-37 $3.25 set

WEATHER-RESISTANT CONNECTORS
SCREW-LOCK CONNECTORS
Male and female screw-together connectors in weather-tight plastic housings with rubber O-ring seals. VW-1 cables rated 80° w/ color-coded 18 AWG stranded conductors. Suitable for indoor or outdoor use.

2-CONDUCTOR – Male and female – 2.1mm coax connectors on 15” cables, stripped and tinned ends. Mates with WTC-482 extension cable.
CAT# WTC-152 $5.75 / pair

2-CONDUCTOR EXTENSION CABLE, 48”
CAT# WTC-482 $5.95 each

3-CONDUCTOR – Male and female connectors on 15” cables, stripped and tinned ends. Mates with WTC-483 extension cable.
CAT# WTC-153 $6.25 / pair

3-CONDUCTOR EXTENSION CABLE, 48”
CAT# WTC-483 $6.40 each

BULLET CONNECTORS
Mating, weather-resistant polarized connectors. 12” red and black. Stranded wire leads.

10 gauge CAT# CON-321 $3.00 each
10 for $2.75 each • 100 for $2.25 each

14 gauge CAT# CON-319 $2.40 each
10 for $2.20 each • 100 for $1.75 each

18 gauge CAT# CON-320 $1.85 each
10 for $1.70 each • 100 for $1.25 each

WEATHERPACK IN-LINE CONNECTOR KITS
Pictured is 3-conductor kitWP3-(XX)

Delphi Weatherpack Connectors are environmentally sealed electrical connections designed to withstand exposure to extreme temperatures and moisture. Terminals are tin plated and have special core wings which allow crimp-only connections, eliminating the need for solder. The connector and cavity seals are triple-ribbed and made of self-lubricating silicone. Cavity plugs are available to fill unused cavities. Pin and sleeve-type terminals rated 0.5 - 16V @ 20A. Designed for automotive, marine and heavy industrial use. See our website for refills or individual connectors.

155 PIECE KIT
includes 2 each male and female connectors, 1, 2, 3, 4, 6-contact with pins, seals, plugs, insertion tool and storage box.
CAT# CKT-155 $80.00 each

1104 PIECE KIT
includes the following male and female connectors, 10 1-contact, 8 2-contact, 6 3-contact, 4 4-contact, 3 5-contact, 4 6-contact with pins, seals plugs, insertion tool & storage box.
CAT# CKT-1104 $180.00 each

CRIMP TOOL FOR WEATHERPACK CONNECTORS
Durable, hardened crimp stations and steel parallel jaws eliminate faulty crimps on a wide range of gauge wire terminations. These tools work well with our Weatherpack kits.
CAT# CT-18 $29.00 each
USB CABLES & ADAPTERS

MINI AND MICRO USB CABLES

- Used with many digital cameras & cellphones.

**MINI-USB to USB**

<table>
<thead>
<tr>
<th>Length</th>
<th>CAT#</th>
<th>each</th>
<th>10</th>
</tr>
</thead>
<tbody>
<tr>
<td>3'</td>
<td>CB-422</td>
<td>$2.25</td>
<td>$2.10</td>
</tr>
<tr>
<td>5'</td>
<td>CB-378</td>
<td>$2.95</td>
<td>$2.75</td>
</tr>
</tbody>
</table>

**MICRO-USB to USB**

<table>
<thead>
<tr>
<th>Length</th>
<th>CAT#</th>
<th>each</th>
<th>10</th>
</tr>
</thead>
<tbody>
<tr>
<td>8&quot;</td>
<td>CB-429</td>
<td>$1.50</td>
<td>$1.25</td>
</tr>
<tr>
<td>3'</td>
<td>CB-427</td>
<td>$1.50</td>
<td>$1.25</td>
</tr>
<tr>
<td>6'</td>
<td>CB-416</td>
<td>$3.25</td>
<td>$3.00</td>
</tr>
<tr>
<td>10'</td>
<td>CB-417</td>
<td>$3.75</td>
<td>$3.50</td>
</tr>
<tr>
<td>15'</td>
<td>CB-434</td>
<td>$4.00</td>
<td>$3.75</td>
</tr>
</tbody>
</table>

**MICRO-USB (OTG) to USB**

<table>
<thead>
<tr>
<th>Length</th>
<th>CAT#</th>
<th>each</th>
<th>10</th>
</tr>
</thead>
<tbody>
<tr>
<td>6&quot;</td>
<td>CB-438</td>
<td>$2.95</td>
<td></td>
</tr>
</tbody>
</table>

**USB GENDER CHANGER**

- A (F) to A(F)
- CAT# AD-532 $2.75 each
  10 for $2.25 each
- Velleman# CV051
- USB female to 5 screw terminals.
  CAT# USB-F $8.70 $5.00 2-pack
  Reduced Price

**USB EXTENSION CABLES**

- USB 2.0 A Male – Female extension cables.
  3'  | CAT# CB-407 | $2.75 each
  6'  | CAT# CB-408 | $3.00 each
  10' | CAT# CB-409 | $3.25 each
- USB 3.0 A Male – Female extension cable.
  10' | CAT# CB-3010| $3.00 each

**USB 5V POWER BREAK-OUT CABLE**

- Allows you to tap into the USB 5V power supply in your computer. USB plug on one end - to three common power connectors on the other end: 2.1mm coax power plug (center+), JST and Alligator Clips. **Note:** Low power use only. Most USB ports provide 100-500 mA. 6' cord.
- CAT# USB-65 $4.95 each

**USB BREAKOUT CONNECTOR, FEMALE, 2-PACK**

- Velleman# CV051.
- CAT# USB-F $9.00 $5.35 2-pack
  Reduced Price

**USB BREAKOUT CONNECTOR, MALE, 2-PACK**

- Velleman# CV052.
- CAT# USB-M $8.70 $5.00 2-pack
  Reduced Price

**USB CHARGER / POWER MODULE**

- Output: 5Vdc 1.75A max.
- Tiny DC-DC converter to charge and power devices that get their power from a USB connection. 1.05” x 0.59” x 0.34”
- CAT # USB-5V $2.50 each

**PANEL MOUNT USB SOCKET**

- USB socket mounted in a 13 x 21mm black plastic rectangular housing that will mount in an 11 x 18mm cutout in a 2mm thick panel.
- Prepped with five 1.3” leads terminating to a 5-pin female connector, 2mm spacing. Two of the wires are twisted. Includes 5-pin header.
- CAT # USB-9 $2.00 ea. • 10 for $1.80 ea.

**RUGGED MINI-USB RECEPTACLE**

- Amphenol Canada MUSB-E151
- Right-angle pc-board mount. 5 contact female connector. 1.5A current rating.
- Die-cast zinc alloy outer shell. Rear mount.
- Front gasket. Threaded mounting holes on 15mm centers. 10 x 20mm mounting faceplate.
- CAT # MUSB-151 $6.00 each

**USB EXTENSION CABLES**

- Panasonic # WM-063
  6mm diameter x 5mm. Solder spot connections.
  CAT# MIC-063 75¢ each
  Reduced Price

**ELECTRET MICROPHONES**

The electret microphones listed below require a low current voltage of 1.5 - 10 Vdc to operate. They will not function in applications that are not specifically wired for electret microphones.

**ELECTRET MICROPHONE**

- Hosiden# KUB6133-010070.
  6mm diameter x 2.7mm element with 30mm red and black leads.
  CAT# MIC-613 75¢ each

**ELECTRET MICROPHONE**

- Panasonic # WM-063
  6mm diameter x 5mm. Solder spot connections.
  CAT# MIC-063 2 for $1.00
  10 for 45¢ each • 100 for 40¢ each

**ELECTRET MICROPHONE, 15’ CORD**

- Durable rubberized housing, 13mm dia. x 31mm long. Mounting plate with adjustable ball-joint.
  CAT# MIC-12 $1.15 each
  50 for 95¢ each
INTEGRATED CIRCUITS

VOLTAGE REGULATORS

<table>
<thead>
<tr>
<th>CAT#</th>
<th>DESCRIPTION</th>
<th>CASE</th>
<th>each</th>
</tr>
</thead>
<tbody>
<tr>
<td>7805T</td>
<td>+5 VOLT 1 AMP (LM340T-5)</td>
<td>TO-220</td>
<td>.50</td>
</tr>
<tr>
<td>7865T</td>
<td>+6 VOLT 1 AMP (LM340T-6)</td>
<td>TO-220</td>
<td>.50</td>
</tr>
<tr>
<td>7885T</td>
<td>+8 VOLT 1 AMP (LM340T-8)</td>
<td>TO-220</td>
<td>.50</td>
</tr>
<tr>
<td>7812T</td>
<td>+12 VOLT 1 AMP (LM340T-12)</td>
<td>TO-220</td>
<td>.50</td>
</tr>
<tr>
<td>7815T</td>
<td>+15 VOLT 1 AMP (LM340T-15)</td>
<td>TO-220</td>
<td>.50</td>
</tr>
<tr>
<td>LM2940CT-12</td>
<td>+12 VOLT</td>
<td>TO-220</td>
<td>1.10</td>
</tr>
<tr>
<td>78L05</td>
<td>+5 VOLT 100 MA</td>
<td>TO-92</td>
<td>.40</td>
</tr>
<tr>
<td>78L12</td>
<td>+12 VOLT 100 MA</td>
<td>TO-92</td>
<td>.40</td>
</tr>
<tr>
<td>S81250</td>
<td>+5 VOLT 100 MA</td>
<td>TO-92</td>
<td>.25</td>
</tr>
<tr>
<td>78M12-SM</td>
<td>+12 VOLT 500MA, Surface-mt.</td>
<td>.35</td>
<td></td>
</tr>
<tr>
<td>CJ78M05</td>
<td>+5 VOLT 500MA, Surface-mt.</td>
<td>.35</td>
<td></td>
</tr>
<tr>
<td>L4940V05</td>
<td>+5 VOLT 1.5 AMP</td>
<td>TO-220</td>
<td>.60</td>
</tr>
</tbody>
</table>

NEGATIVE REGULATORS

<table>
<thead>
<tr>
<th>CAT#</th>
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<tbody>
<tr>
<td>7905T</td>
<td>-5 VOLT 1 AMP (LM320T-5)</td>
<td>TO-220</td>
<td>.50</td>
</tr>
<tr>
<td>7908T</td>
<td>-8 VOLT 1 AMP</td>
<td>TO-220</td>
<td>.65</td>
</tr>
<tr>
<td>7912T</td>
<td>-12 VOLT 1 AMP (LM320T-12)</td>
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<td>.50</td>
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ADJUSTABLE REGULATORS

<table>
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<tbody>
<tr>
<td>LM317T</td>
<td>ADJ. POSITIVE (1.2-37V)</td>
<td>TO-220</td>
<td>.70</td>
</tr>
<tr>
<td>LM317LZ</td>
<td>ADJ. POSITIVE (1.2-37V)</td>
<td>TO-92</td>
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<tr>
<td>LM337T</td>
<td>ADJ. NEGATIVE (2-37V)</td>
<td>TO-220</td>
<td>1.50</td>
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<tr>
<td>LM337T</td>
<td>ADJ. POSITIVE 5 AMP</td>
<td>TO-220</td>
<td>2.75</td>
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<tr>
<td>LM2941S</td>
<td>5-20V, Surface-mount</td>
<td>TO-263-12.5</td>
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<tr>
<td>TP573601</td>
<td>1.2-5.5V, Surface-mount</td>
<td>SOT223</td>
<td>1.00</td>
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LOGIC

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<tr>
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<tr>
<td>74LS244</td>
<td>TRI-STATE OCTAL LINE DRIVER</td>
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<tr>
<td>74HC574</td>
<td>OCT D FLIP FLOP</td>
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</tr>
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<td>4013</td>
<td>FLIP FLOP</td>
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<tr>
<td>4017</td>
<td>DECADE COUNTER / DIVIDER</td>
<td>16</td>
<td>.60</td>
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<td>4027</td>
<td>FLIP FLOP</td>
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<td>4040</td>
<td>12 STAGE BI. RIP. COUNTER</td>
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<tr>
<td>MC14049</td>
<td>HEX INVERTING BUFFER</td>
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<td>MC14050BCP</td>
<td>HEX NON-INV. BUFF./CON.</td>
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<td>.50</td>
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<td>4052</td>
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<td>4084</td>
<td>8 INPUT NAND GATE</td>
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<td>.40</td>
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<tr>
<td>4071</td>
<td>QUAD OR GATE</td>
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<td>.35</td>
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<tr>
<td>4093</td>
<td>QUAD NAND SCHMITT TRIG.</td>
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<td>.70</td>
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<td>4511</td>
<td>LATCH/DECODER/DRIVER</td>
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LOGIC - SMOOTH MOUNT

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<tr>
<td>74AHC574PWR</td>
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<tr>
<td>74HC08DR</td>
<td>QUAD 2-IN POS-AND GATES</td>
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LINEAR SERIES

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<tr>
<td>TL082</td>
<td>J-FET IN DUAL OP AMP</td>
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<td>.70</td>
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<tr>
<td>ADM202EAN</td>
<td>LINE DRIVER RECEIVER</td>
<td>16</td>
<td>.75</td>
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<tr>
<td>LM311</td>
<td>COMPARATOR</td>
<td>8</td>
<td>.60</td>
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<tr>
<td>LM324</td>
<td>QUAD OP AMP</td>
<td>14</td>
<td>.50</td>
</tr>
<tr>
<td>LM339</td>
<td>QUAD COMP</td>
<td>14</td>
<td>.60</td>
</tr>
<tr>
<td>LF353</td>
<td>DUAL BI-FET OP AMP</td>
<td>8</td>
<td>.50</td>
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<tr>
<td>LM358</td>
<td>DUAL OP AMP</td>
<td>8</td>
<td>.30</td>
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<tr>
<td>LM386N</td>
<td>AUDIO AMP. 25 W</td>
<td>8</td>
<td>1.25</td>
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<tr>
<td>LM553</td>
<td>LOW POWER DUAL COMP</td>
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<td>.30</td>
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<tr>
<td>LM555</td>
<td>TIMER</td>
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<td>.75</td>
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<tr>
<td>IC7555</td>
<td>CMOS TIMER “555”</td>
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<td>LM556</td>
<td>DUAL (555) TIMER</td>
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<td>LM567</td>
<td>TONE DECODER</td>
<td>8</td>
<td>.90</td>
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<tr>
<td>LM741</td>
<td>OP AMP (MC1741)</td>
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<td>MC1458</td>
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<td>LM2900</td>
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<td>MC1498</td>
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<tr>
<td>ULN2003</td>
<td>DARLINGTON ARRAY</td>
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</tr>
<tr>
<td>75452</td>
<td>DUAL PERIP. NAND DR.</td>
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<td>.40</td>
</tr>
<tr>
<td>75453</td>
<td>DUAL PERIP. OR DRIVER</td>
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<td>.40</td>
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LINEAR - SURFACE MOUNT

<table>
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<th>DESCRIPTION</th>
<th>pins</th>
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<tbody>
<tr>
<td>TL082C</td>
<td>DUAL OP AMP</td>
<td>8</td>
<td>.25</td>
</tr>
<tr>
<td>TL084C</td>
<td>J-FET QUAD OP AMP</td>
<td>14</td>
<td>.20</td>
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<tr>
<td>LM311D</td>
<td>COMPARATOR</td>
<td>8</td>
<td>.50</td>
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<tr>
<td>LMV324MX</td>
<td>OP AMP, SMD</td>
<td>14</td>
<td>.50</td>
</tr>
<tr>
<td>LM339D</td>
<td>QUAD COMPARATOR</td>
<td>14</td>
<td>.30</td>
</tr>
<tr>
<td>LM361M</td>
<td>HI-SPEED DIFF. COMP.</td>
<td>14</td>
<td>1.20</td>
</tr>
<tr>
<td>MC33079D</td>
<td>LOW NOISE DUAL OP-AMP</td>
<td>14</td>
<td>.35</td>
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</table>

SMPS CONTROLLER

16 pin DIP.
CAT# KA3525A 55¢ each
10 for 45¢ each

IC SOCKETS

SOLDERTAIL

<table>
<thead>
<tr>
<th>CAT#</th>
<th>PINS</th>
<th>1-49</th>
<th>50-99</th>
<th>100+</th>
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<tbody>
<tr>
<td>6</td>
<td>ICS-6</td>
<td>.20</td>
<td>.15</td>
<td>.10</td>
</tr>
<tr>
<td>8</td>
<td>ICS-8</td>
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<td>14</td>
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<td>18</td>
<td>ICS-18</td>
<td>.30</td>
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<td>.20</td>
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<td>24</td>
<td>ICS-24</td>
<td>.50</td>
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<td>.35</td>
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<td>28</td>
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<td>.45</td>
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<td>40</td>
<td>ICS-40</td>
<td>.55</td>
<td>.50</td>
<td>.45</td>
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HIGH RELIABILITY (MACHINED PINS)

<table>
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<tr>
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<th>PINS</th>
<th>1</th>
<th>10</th>
<th>100+</th>
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<tbody>
<tr>
<td>8</td>
<td>HRIC-8</td>
<td>.50</td>
<td>.45</td>
<td>.35</td>
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<tr>
<td>14</td>
<td>HRIC-14</td>
<td>.65</td>
<td>.60</td>
<td>.50</td>
</tr>
<tr>
<td>16</td>
<td>HRIC-16</td>
<td>.75</td>
<td>.70</td>
<td>.60</td>
</tr>
<tr>
<td>22</td>
<td>HRIC-22</td>
<td>.50</td>
<td>.45</td>
<td>.35</td>
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<tr>
<td>40</td>
<td>HRIC-40</td>
<td>1.20</td>
<td>1.15</td>
<td>1.05</td>
</tr>
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</table>

PHOTO DIODE

BPW34. Tiny general purpose PIN photodiode. Sensitive to a wide range of light wavelengths (430-1100nm). The rated open circuit voltage is 350mV (900nm, 1mW/cm² light source), short circuit current is 47µA. Ideal for a variety of light sensing applications.

CAT# BPW34 $1.50 each

PHOTO-TRANSISTOR

Ledtech # LT9593-91-0125. Water-clear T 1 3/4 w/ flat face.
CAT# PTR-1 2 for $1.30
50 for 50¢ each

FULL WAVE BRIDGE RECTIFIERS

MINI-DIPS Fits 8-pin DIP socket.
<table>
<thead>
<tr>
<th>Amps</th>
<th>Volts</th>
<th>CAT#</th>
<th>Each</th>
</tr>
</thead>
<tbody>
<tr>
<td>1/2</td>
<td>400</td>
<td>FWB-48</td>
<td>.35</td>
</tr>
<tr>
<td>1</td>
<td>100</td>
<td>FWB-11</td>
<td>.35</td>
</tr>
</tbody>
</table>

1/2 AMP BRIDGES
TO-5 case 3/8" diameter.
1.5A 400V CAT# FWB-15 50¢ each
**DOlDES**

**RECTIFIER DIOIDES**

<table>
<thead>
<tr>
<th>CAT#</th>
<th>VOLT</th>
<th>AMP</th>
<th>PRICE</th>
<th>100</th>
<th>1000</th>
</tr>
</thead>
<tbody>
<tr>
<td>1N4001</td>
<td>50</td>
<td>1</td>
<td>15/1.00</td>
<td>5.00</td>
<td>40.00</td>
</tr>
<tr>
<td>1N4002</td>
<td>100</td>
<td>1</td>
<td>12/1.00</td>
<td>5.50</td>
<td>45.00</td>
</tr>
<tr>
<td>1N4003</td>
<td>200</td>
<td>1</td>
<td>10/1.00</td>
<td>6.00</td>
<td>50.00</td>
</tr>
<tr>
<td>1N4004</td>
<td>400</td>
<td>1</td>
<td>9/1.00</td>
<td>6.50</td>
<td>55.00</td>
</tr>
<tr>
<td>1N4005</td>
<td>600</td>
<td>1</td>
<td>8/1.00</td>
<td>7.00</td>
<td>60.00</td>
</tr>
<tr>
<td>1N4007</td>
<td>1000</td>
<td>1</td>
<td>10/1.00</td>
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<tr>
<td>1N4395</td>
<td>200</td>
<td>2</td>
<td>20¢ ea.</td>
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<tr>
<td>1N4396</td>
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<td>1</td>
<td>15/1.00</td>
<td>4.00</td>
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<tr>
<td>1N4397</td>
<td>600</td>
<td>1</td>
<td>10/90¢</td>
<td>6.00</td>
<td>45.00</td>
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<tr>
<td>HER203</td>
<td>200</td>
<td>2</td>
<td>10/1.00</td>
<td>6.00</td>
<td>50.00</td>
</tr>
<tr>
<td>1N4500</td>
<td>50</td>
<td>3</td>
<td>3/60¢</td>
<td>12.50</td>
<td>100.00</td>
</tr>
<tr>
<td>1N4501</td>
<td>100</td>
<td>3</td>
<td>3/65¢</td>
<td>13.00</td>
<td></td>
</tr>
<tr>
<td>1N4502</td>
<td>200</td>
<td>3</td>
<td>3/70¢</td>
<td>15.00</td>
<td>110.00</td>
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<tr>
<td>1N4504</td>
<td>400</td>
<td>3</td>
<td>3/80¢</td>
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<td>1N4506</td>
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<td>4/1.00</td>
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<td>1N5408</td>
<td>1000</td>
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<td>5/1.00</td>
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<td>D610</td>
<td>100</td>
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<td>35¢</td>
<td>31.00</td>
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<td>D620</td>
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<td>2/90¢</td>
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<td>350.00</td>
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<tr>
<td>D660</td>
<td>600</td>
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<td>P600M</td>
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<td>GI851</td>
<td>100</td>
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<td>4/1.00</td>
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<tr>
<td>GI756</td>
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Surface mount SMA/DO214AC. Cut tape.

**SPECIAL, 1N4003 DIODES (1A 200V)**

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<thead>
<tr>
<th>CAT#</th>
<th>VOLT</th>
<th>AMP</th>
<th>PRICE</th>
<th>100</th>
<th>1000</th>
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<tbody>
<tr>
<td>1N4003-TR</td>
<td>100</td>
<td>100</td>
<td>$3.00</td>
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<td>5500</td>
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1000 for $20.00 • 5500 for $55.00

**HIGH-VOLTAGE RECTIFIER**

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<th>1000</th>
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<tr>
<td>R6000</td>
<td>6000</td>
<td>.2</td>
<td>.50</td>
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**SCHOTTKY DIODES**

<table>
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<tbody>
<tr>
<td>1N5817</td>
<td>1</td>
<td>20</td>
<td>3/1.00</td>
<td>27.00</td>
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<tr>
<td>1N6819</td>
<td>1</td>
<td>40</td>
<td>3/1.00</td>
<td>27.00</td>
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<tr>
<td>1N5822</td>
<td>3</td>
<td>40</td>
<td>3/1.25</td>
<td>35.00</td>
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<tr>
<td>STPS140A</td>
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<td>40</td>
<td>4/1.00</td>
<td>17.00</td>
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<tr>
<td>S310</td>
<td>3</td>
<td>100</td>
<td>4/1.00</td>
<td>22.00</td>
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</table>

**2 AMP 800 VOLT BRIDGE**

2W08G, round epoxy case.

**IN-LINE BRIDGE RECTIFIERS**

Four leads on 0.2” centers.

<table>
<thead>
<tr>
<th>Amps</th>
<th>Volts</th>
<th>CAT#</th>
<th>Each</th>
<th>100</th>
</tr>
</thead>
<tbody>
<tr>
<td>6</td>
<td>600</td>
<td>FWB-66</td>
<td>.90</td>
<td>$65.00</td>
</tr>
<tr>
<td>8</td>
<td>1000</td>
<td>FWB-810</td>
<td>1.35</td>
<td>$100.00</td>
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**25 AMP BRIDGES**

1 1/8” square.

200 P.I.V. CAT# FWB-252 $2.50 ea.
400 P.I.V. CAT# FWB-254 $3.00 ea.
600 P.I.V. CAT# FWB-256 $3.50 ea.

**35 AMP BRIDGES**

1 1/8” square.

200 P.I.V. CAT# FWB-352 $3.25 ea.
10 for $30.00 • 100 for $260.00
400 P.I.V. CAT# FWB-354 $4.00 ea.
600 P.I.V. CAT# FWB-356 $4.50 ea.
800 P.I.V. CAT# FWB-358 $4.75 ea.

**ULTRAFAST DIODES**

<table>
<thead>
<tr>
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<th>Volt</th>
<th>CAT#</th>
<th>price</th>
<th>100</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>400</td>
<td>1N4936</td>
<td>15 for $1.00</td>
<td>4.00</td>
</tr>
<tr>
<td>3</td>
<td>1000</td>
<td>UFS408</td>
<td>10 for $3.00</td>
<td>25.00</td>
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**TO-220 case.**

<table>
<thead>
<tr>
<th>Amp</th>
<th>Volt</th>
<th>CAT#</th>
<th>price</th>
<th>100</th>
</tr>
</thead>
<tbody>
<tr>
<td>10</td>
<td>200</td>
<td>BYG28X-200</td>
<td>50¢ ea.</td>
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</table>

**TO-218AC case.**

<table>
<thead>
<tr>
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<th>Volt</th>
<th>CAT#</th>
<th>price</th>
<th>100</th>
</tr>
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<tbody>
<tr>
<td>15</td>
<td>400</td>
<td>RURH1540C</td>
<td>85¢ ea.</td>
<td>65.00</td>
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</table>

**TO-247AD case.**

<table>
<thead>
<tr>
<th>Amp</th>
<th>Volt</th>
<th>CAT#</th>
<th>price</th>
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<tbody>
<tr>
<td>30</td>
<td>200</td>
<td>MUR3020PT</td>
<td>90¢ ea.</td>
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**SWITCHING DIODES**

<table>
<thead>
<tr>
<th>CAT#</th>
<th>P.WATTS</th>
<th>VOLTS</th>
<th>PRICE</th>
<th>100</th>
<th>1000</th>
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<tbody>
<tr>
<td>1N914</td>
<td>15</td>
<td>1.00</td>
<td>$5.00</td>
<td>35.00</td>
<td></td>
</tr>
<tr>
<td>1N916</td>
<td>15</td>
<td>1.00</td>
<td>$5.00</td>
<td>35.00</td>
<td></td>
</tr>
<tr>
<td>1N4148</td>
<td>15</td>
<td>1.00</td>
<td>$5.00</td>
<td>35.00</td>
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**5 WATT ZENER DIODES**

<table>
<thead>
<tr>
<th>CAT#</th>
<th>VOLTS</th>
<th>PRICE</th>
<th>100</th>
</tr>
</thead>
<tbody>
<tr>
<td>1N5349B</td>
<td>12V</td>
<td>4 for $1.00</td>
<td>$20.00</td>
</tr>
<tr>
<td>1N5366B</td>
<td>39V</td>
<td>4 for $1.00</td>
<td>$20.00</td>
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</tbody>
</table>

**1 WATT ZENER DIODES**

<table>
<thead>
<tr>
<th>CAT#</th>
<th>VOLTS</th>
<th>PRICE</th>
<th>100</th>
</tr>
</thead>
<tbody>
<tr>
<td>1N4728</td>
<td>3.3</td>
<td>1N4734</td>
<td>5.6</td>
</tr>
<tr>
<td>1N4729</td>
<td>3.6</td>
<td>1N4735</td>
<td>6.2</td>
</tr>
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<td>1N4730</td>
<td>3.9</td>
<td>1N4737</td>
<td>7.5</td>
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<td>1N4731</td>
<td>4.3</td>
<td>1N4739</td>
<td>9.1</td>
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<td>1N4733</td>
<td>5.1</td>
<td>1N4740</td>
<td>10</td>
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**TRANSISTORS**

<table>
<thead>
<tr>
<th>CAT#</th>
<th>AMP</th>
<th>VOLT</th>
<th>CASE</th>
<th>Each</th>
<th>100</th>
</tr>
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<tbody>
<tr>
<td>MAC223A8</td>
<td>25</td>
<td>600</td>
<td>TO-220</td>
<td>1.85</td>
<td>1.75</td>
</tr>
<tr>
<td>Q6025P</td>
<td>25</td>
<td>600</td>
<td>TO-3 base</td>
<td>3.00</td>
<td>2.50</td>
</tr>
</tbody>
</table>

**SCR**

8A 200V TO-202 SCR. 200 uA gate current.

**N-CHANNEL J-FET**

50V 350MW. TO-92 package.

| CAT#    | 2N5638 | 5 for $1.00 | 100 for $15 for $1.00 |

**NO HASSE1 RETURN POLICY**

60
MOST ORDERS SHIPPED WITHIN 24-48 HOURS

N-CHANNEL MOSFETS, TO-220

BUZ71A  ST Micro. 50V, < 0.12 Ohms, 13A.
CAT# BUZ71A  75¢ each
10 for 65¢ each  •  100 for 53¢ each

IRF734  1.2 Ohms (max.), 450 V (min.). 4.9 A (max.). 62 deg C.
CAT# IRF734  65¢ each
10 for 55¢ each  •  100 for 45¢ each

IRFZ40  50 Amp 50 Volt
CAT# IRFZ40  $1.25 each
10 for $1.10 each

MTP75N03HDL  75Amp 25V power
CAT# MTP75N03HDL  $1.75 each
10 for $1.50 each

IRFB20  500V, 3.0 Ohm, 2.5A.
CAT# IRFB20  85¢ each
10 for 75¢ each  •  100 for 65¢ each

IRFBG30  1000V, 3.1A, 5.0 Ohms.
CAT# IRFBG30  $1.00 each
10 for 90¢ each  •  100 for 85¢ each

N-CHANNEL MOSFETS, SURFACE MOUNT

IRF540NS  100V, 33A, 44M Ohms.
CAT# IRF540NS  95¢ each
10 for 85¢ each  •  100 for 70¢ each

RF1S640  18A, 200V, 0.180 Ohm
CAT# RF1S640  65¢ each
10 for 60¢ each  •  100 for 45¢ each

CAT# BUK92150  4 for $1.00
100 for 19¢ each

TRANSISTORS

<table>
<thead>
<tr>
<th>CAT#</th>
<th>Description</th>
<th>Price</th>
<th>Ea</th>
</tr>
</thead>
<tbody>
<tr>
<td>2N2222A</td>
<td>NPN, TO-18</td>
<td>2 for $1.00</td>
<td>.20</td>
</tr>
<tr>
<td>2N2906</td>
<td>NPN, TO-18</td>
<td>2 for $1.00</td>
<td>.35</td>
</tr>
<tr>
<td>2N3904</td>
<td>NPN, TO-92</td>
<td>$2.00 each</td>
<td>.13</td>
</tr>
<tr>
<td>2N3909</td>
<td>NPN, TO-92</td>
<td>5 for .75</td>
<td>.80</td>
</tr>
<tr>
<td>2N4082</td>
<td>NPN, TO-92</td>
<td>5 for .75</td>
<td>.65</td>
</tr>
<tr>
<td>2N4092</td>
<td>NPN, TO-92</td>
<td>5 for .50</td>
<td>.50</td>
</tr>
<tr>
<td>2N4097</td>
<td>NPN, TO-92</td>
<td>5 for .75</td>
<td>.45</td>
</tr>
<tr>
<td>2N4403</td>
<td>NPN, TO-92</td>
<td>10 for .80</td>
<td>.05</td>
</tr>
<tr>
<td>2N5401</td>
<td>NPN, TO-92</td>
<td>.25 each</td>
<td>.20</td>
</tr>
<tr>
<td>2N5416</td>
<td>NPN, TO-39</td>
<td>$1.95 each</td>
<td>.16</td>
</tr>
<tr>
<td>2SP2352</td>
<td>NPN, TO-92</td>
<td>3 for 1.00</td>
<td>.29</td>
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<tr>
<td>2SC3457</td>
<td>NPN, TO-220</td>
<td>.65 each</td>
<td>.50</td>
</tr>
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<td>2SC5511</td>
<td>NPN, TO-220</td>
<td>.95 each</td>
<td>.50</td>
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<tr>
<td>2SC556B</td>
<td>NPN, TO-92</td>
<td>5 for .75</td>
<td>.75</td>
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<td>D33D30</td>
<td>NPN, TO-92</td>
<td>5 for .75</td>
<td>.16</td>
</tr>
<tr>
<td>D45HS</td>
<td>NPN, TO-220</td>
<td>.75 each</td>
<td>.65</td>
</tr>
<tr>
<td>KSP8599</td>
<td>NPN, TO-92</td>
<td>5 for .50</td>
<td>.08</td>
</tr>
<tr>
<td>MJA1302A</td>
<td>NPN, TO-264</td>
<td>$3.00 each</td>
<td>.35</td>
</tr>
<tr>
<td>MPS8599</td>
<td>NPN, TO-92</td>
<td>5 for .50</td>
<td>.08</td>
</tr>
<tr>
<td>PN2222A</td>
<td>NPN, TO-92</td>
<td>5 for .80</td>
<td>.15</td>
</tr>
<tr>
<td>TIP31C</td>
<td>NPN, 3A 100V, TO220</td>
<td>.45 each</td>
<td>.35</td>
</tr>
<tr>
<td>TIP32C</td>
<td>NPN, 3A 100V, TO220</td>
<td>.35 each</td>
<td>.30</td>
</tr>
<tr>
<td>ZTX651</td>
<td>NPN, 2A, 80V, TO-92</td>
<td>.35 each</td>
<td>.30</td>
</tr>
</tbody>
</table>

BILATERAL TRIGGER (DIAC)

CAT# DB-3  28-36 volt  3 for $1.00  100/$27.00

DARLINGTON TRANSISTORS

CAT# Description  1  10  100+
GES-5307  NPN, TO-92  5 for 50¢ | .08 |
MPSA13  NPN, TO-92  5 for 50¢ | .08 |
TIP112  NPN, TO-220  .50 | .40 |
TIP120  NPN, 5A 60V, TO-220  .75 | .65 |
TIP142  NPN, TO-220  1.10 | .95 |

OPTOISOLATORS

6 pin DIP package

CAT# Description  1  10  100+
4N25  NPN transistor output  .45 | .40 | .35 |
4N26  NPN transistor output  .40 | .35 | .30 |
4N27  NPN transistor output  .45 | .40 | .35 |
4N33  NPN darlington output  .50 | .45 | .40 |
4N35  NPN transistor output  .60 | .50 | .40 |
4N38  NPN transistor output  .40 | .37 | .35 |
MOC3011 Triac output  .50 | .45 | .40 |

Surface mount. 3.4 x 2.7 x 1.5mm.

PI-721 Photo interrupter  2 for $1.00

SOLAR CELLS

SOLAR BATTERY CHARGERS

Water-proof, corrosion-proof solar cell arrays with adjustable mounting stands and alligator clip leads. UV-proof polycarbonate plastic case. Built-in blocking diode to prevent discharge at night.

12 VOLT

1260 Mw max power.
Max voltage, 18 Volts (no-load).
Current, 60-70 mA.
6.8" x 6.2" x 0.68".

CAT# SPL-6012 $27.95 each

DC VOLTAGE CONTROLLER FOR SOLAR PANELS

10 Amp 12 Vdc output.
4.04" x 3.75" x 1.50".
Prevents battery from being over-charged and over-discharged.
Coordinates the functioning of solar panel, battery and load.

CAT# SCN-3 $29.95 each

2V 200MA SOLAR CELL

Epoxycapsulated module. Ideal for solar-powered battery chargers and other projects.
9.23" x 1.41" x 0.75".

CAT# SOL-4N $4.00 each

ROOKIE SOLAR RACER v2

Owiki® OWI-MK681
Great little solar powered racing car kit for kids ages 8+.
Easy and fast to assemble.
No batteries required.
Assembled size: 2.62" x 2.17" x 2.40" high.
20 pieces.

CAT# MSK-681 $11.95 each
TRANSFORMERS

10V / 5V @ 5VA TRANSFORMER
Triad # VPL10-500
Primary: 115/230V 50-60Hz
Secondary: Series: 10Vct @ 0.5A
Parallel: 5V @ 1A
36.52 x 44.00 x 36.52mm h.
8" wire leads. ULus.
CAT# TX-105 $6.85 ea. • 10 for $6.65 ea.

24V @ 30VA
Part# YD5719-001.
Primary: 128 Vac, 60 Hz.
2.33" x 1.96" x 1.78".
Mounting holes on
3.10" centers. Four 5.5" wire leads. UL.
CAT# TX-2434 $7.95 each

COUPLING TRANSFORMERS

Midcom 671-1538.
Designed to reflect 600 Ohms
on primary with 536 Ohms on
secondary. 1.12" x 0.75" x 0.47".
CAT# TCTX-18 $2.75 each

Datatronc # SM501-1.
600:600 Ohms.
12.50 x 9.60 x 7.36mm. Surface-mount.
UL60950-1. Cut-tape (tape and reel) packaging.
CAT# TCTX-501 $2.00 each
10 for $1.80 each • 100 for $1.65 each

IMPEDEANCE MATCHING TRANSFORMER

Current Controls Inc. CC030517.
Primary: 60 Ohms, 10mH/0.8Q.
Secondary: 1K Ohms,
127k Ohms. 2.8H/1Q @ 1KHz.
0.78" x 0.66" x 0.48" high. PC pins.
CAT# MTX-4 $1.00 each

VARIABLE TRANSFORMERS

Input: 110 Vac
Output: 0 - 130 Vac
Fully enclosed variable transformers in ventilated steel cases with 6" power cord, 3 prong grounded receptacle, output voltage meter, on/off switch, fuse and power cord.

<table>
<thead>
<tr>
<th>Amps</th>
<th>Size</th>
<th>Weight</th>
<th>CAT# Each</th>
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</thead>
<tbody>
<tr>
<td>3</td>
<td>5.35&quot; x 4&quot; 5.5&quot;</td>
<td>6.5 lbs.</td>
<td>SC-3M 64.00</td>
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<tr>
<td>5</td>
<td>4.75&quot; x 7&quot; x 6&quot;</td>
<td>8 lbs.</td>
<td>SC-5M 120.00</td>
</tr>
<tr>
<td>10</td>
<td>6.75&quot; x 8&quot; x 8&quot;</td>
<td>21 lbs.</td>
<td>SC-10T 175.00</td>
</tr>
<tr>
<td>20</td>
<td>6.5&quot; x 9&quot; x 7.5&quot;</td>
<td>22 lbs.</td>
<td>SC-20M 198.00</td>
</tr>
</tbody>
</table>

CURRENT TRANSFORMER

5A CURRENT SENSOR
MODULE ZHT103
A simple and effective way of monitoring current in your project. Accurate AC current measurement up to 5 Amps. A proportional voltage signal is provided on the output pin, at a 1000:1 ratio.
CAT# TXC-4 $3.85 each

DC-DC UP/DOWN REGULATORS

1.2 AMP
Input: 4-32V, 1.2A continuous current. 3A max.
Output: 1.25-35V adjustable. 1.90" x 0.98" x 0.5". Mounting holes.
CAT# UDC-5 $7.50 each

7 AMP
Input: 5-32 Vdc.
Output: 1-30 Vdc, continuously adjustable.
Output current: 7A continuous, 10A peak.
Output power: 80W continuous, 130W peak.
Output ripple: 50Mv. 1.83" x 3.05" x 0.58".
CAT# UDC-10 $27.50 each

2A STEP-UP VOLTAGE CONVERTER
Step-up voltage "Boost" converter based on the MT3608 chip.
1.47" x 0.69" x 0.25" pc board with solder spots for input and output voltage. On-board trimmer for adjustment.
• Input: 2-24 Vdc
• Output: up to 28 Vdc @ 2A
CAT# UDC-2 $4.60 each

STEP-UP VOLTAGE CONVERTER
XL6009 DC-DC UP voltage regulator (boost driver).
Input: 4-32V, 1.2A continuous current. 3A max.
Output: 5-35V adjustable. 1.90" x 0.98" x 0.5". Mounting holes.
CAT# UDC-3 $4.50 each

DC STEP-DOWN REGULATORS

Circuit based on LM2596 Step-Down regulator (buck driver).
Input: 4-40V.
Output: 1.25-37V adjustable, 1.5A continuous current. 3A max.
With LED digital display and screw terminals. 2.6" x 1.4"

CAT# DCC-3M $12.50 • 10 for $11.95 each
CAT# DCC-3 $7.95 each

VISIT OUR WEBSITE - WWW.ALLELECTRONICS.COM
## A.C. WALL TRANSFORMERS

<table>
<thead>
<tr>
<th>VOLTS</th>
<th>AMPS</th>
<th>TERMINATION</th>
<th>STYLE</th>
<th>CAT#</th>
<th>PRICE</th>
</tr>
</thead>
<tbody>
<tr>
<td>9 Vac</td>
<td>500 ma</td>
<td>2.1mm coax</td>
<td>A</td>
<td>ACTX-951</td>
<td>4.85</td>
</tr>
<tr>
<td>9 Vac</td>
<td>1 amp</td>
<td>2.1mm coax</td>
<td>A</td>
<td>ACTX-912</td>
<td>11.00</td>
</tr>
<tr>
<td>9 Vac</td>
<td>400 ma</td>
<td>2.1mm coax</td>
<td>A</td>
<td>ACTX-940</td>
<td>3.75</td>
</tr>
<tr>
<td>10 Vac</td>
<td>2.4 amp</td>
<td>2.5mm coax</td>
<td>A</td>
<td>ACTX-1024</td>
<td>12.75</td>
</tr>
<tr>
<td>12 Vac</td>
<td>1200 ma</td>
<td>2.1mm coax</td>
<td>A</td>
<td>ACTX-1222</td>
<td>9.75</td>
</tr>
<tr>
<td>12 Vac</td>
<td>1.67 amp</td>
<td>Screw terminals</td>
<td>C</td>
<td>ACTX-12167</td>
<td>14.00</td>
</tr>
<tr>
<td>12 Vac</td>
<td>5 amp</td>
<td>2.1mm coax</td>
<td>B</td>
<td>ACTX-1250</td>
<td>21.95</td>
</tr>
<tr>
<td>12 Vac</td>
<td>40 VA</td>
<td>Screw terminals</td>
<td>C</td>
<td>ACTX-1243</td>
<td>12.95</td>
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<tr>
<td>16 Vac</td>
<td>20 VA</td>
<td>Screw terminals</td>
<td>C</td>
<td>ACTX-1620</td>
<td>10.05</td>
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<tr>
<td>16 Vac</td>
<td>40 VA</td>
<td>Screw terminals</td>
<td>C</td>
<td>ACTX-1640</td>
<td>14.25</td>
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<tr>
<td>24 Vac</td>
<td>830 mA (20 VA)</td>
<td>Screw terminals</td>
<td>C</td>
<td>ACTX-2420</td>
<td>8.35</td>
</tr>
<tr>
<td>24 Vac</td>
<td>1.6 amp (40 VA)</td>
<td>Screw terminals</td>
<td>C</td>
<td>ACTX-2440</td>
<td>12.82</td>
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</table>

## D.C. WALL TRANSFORMERS

<table>
<thead>
<tr>
<th>VOLTS</th>
<th>AMPS</th>
<th>TERMINATION</th>
<th>CENTER</th>
<th>STYLE</th>
<th>CAT#</th>
<th>PRICE</th>
</tr>
</thead>
<tbody>
<tr>
<td>9 Vdc</td>
<td>300 ma</td>
<td>1.3 mm coax</td>
<td>positive</td>
<td>A</td>
<td>DCTX-936</td>
<td>2.85</td>
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<tr>
<td>9 Vdc</td>
<td>1 amp</td>
<td>2.5mm coax</td>
<td>positive</td>
<td>A</td>
<td>DCTX-9111</td>
<td>6.00</td>
</tr>
<tr>
<td>12.5 Vdc</td>
<td>410 ma</td>
<td>2.5mm coax</td>
<td>positive</td>
<td>A</td>
<td>DCTX-1241</td>
<td>4.00</td>
</tr>
<tr>
<td>18 Vdc</td>
<td>600 ma</td>
<td>2.1mm coax</td>
<td>positive</td>
<td>A</td>
<td>DCTX-1860</td>
<td>11.00</td>
</tr>
</tbody>
</table>

## SINGLE OUTPUT SWITCHING POWER SUPPLIES

**Ideal for scanners, cameras and sensitive equipment requiring a constant, regulated output.**

<table>
<thead>
<tr>
<th>3 VDC 1.67 AMP (Style A)</th>
<th>Model FRA05-SO3-U</th>
<th>5’ cable with 2.5mm coax plug, center positive. CE, cULus, RoHS.</th>
<th>CAT# PS-316</th>
<th>$5.50 each</th>
</tr>
</thead>
<tbody>
<tr>
<td>5.5 VDC 0.75 A (Style A)</td>
<td>Model: MTP051UL-055075</td>
<td>6’ cable with 2.5mm coax plug, center+. cULus.</td>
<td>CAT# PS-5575</td>
<td>$3.75 each</td>
</tr>
<tr>
<td>5 VDC 1 AMP (Style A)</td>
<td>3’ cable with 1.3mm coax plug, center+.</td>
<td>CAT# PS-581</td>
<td>$4.25 ea. • 100 for $3.75 ea.</td>
<td></td>
</tr>
<tr>
<td>5 VDC 1 AMP (Style A)</td>
<td>5’ cord, with unknown/custom coax connector, center positive. cULus, CE.</td>
<td>CAT# PS-517</td>
<td>$4.00 ea. • 100 for $3.50 ea.</td>
<td></td>
</tr>
<tr>
<td>5 VDC 1 AMP (Style A)</td>
<td>HONR# ADS-5N-06 05005G</td>
<td>5’ cable with ferrite bead and 2.5mm coax plug, center+. UL.</td>
<td>CAT# PS-582</td>
<td>$4.00 ea.</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>5 VDC 2 AMP (Style A)</th>
<th>Ktec# KSAC050020W1UV-1.</th>
<th>6’ cable with ferrite bead and 2.5mm coax plug, center positive. Includes three snap-on / snap-off AC plugs for use in USA, Europe and the UK. CE, cULus, TUV.</th>
<th>CAT# PS-528</th>
<th>$7.50 ea. • 100 for $6.75 ea.</th>
</tr>
</thead>
<tbody>
<tr>
<td>5 VDC 2A (Style A)</td>
<td>Model# ZB-06-5020US. 4’ long cable with 2.1mm coax plug, center+. FCC, CE, cULus.</td>
<td>CAT# PS-529</td>
<td>$6.85 each</td>
<td></td>
</tr>
<tr>
<td>5 VDC 3 AMP (Style A)</td>
<td>44” cord with ferrite bead and 2.5mm coax plug, center positive. cULus. FCC.</td>
<td>CAT# PS-534</td>
<td>$7.50 each</td>
<td></td>
</tr>
<tr>
<td>9 VDC 600 MA (Style A)</td>
<td>2.1mm x 5.5mm coax power plug. Center+. UL.</td>
<td>CAT# PS-961</td>
<td>$10.95 each</td>
<td></td>
</tr>
<tr>
<td>9 VDC 0.66 AMP (Style A)</td>
<td>Globtek, Inc® Medical Power Supply, Class 2 Power Supply. Model: GTM41076-0609. 6” cord with ferrite EMI suppression bead. Custom coax plug on output. cULus, RoHS.</td>
<td>CAT# PS-966</td>
<td>$3.75 ea. • 20 for $3.50 ea.</td>
<td></td>
</tr>
<tr>
<td>9 VDC 600 MA (Style A)</td>
<td>2.1mm x 5.5mm coax power plug. Center+. UL.</td>
<td>CAT# PS-961</td>
<td>$10.95 each</td>
<td></td>
</tr>
<tr>
<td>9 VDC 0.66 AMP (Style A)</td>
<td>Globtek, Inc® Medical Power Supply, Class 2 Power Supply. Model: GTM41076-0609. 6” cord with ferrite EMI suppression bead. Custom coax plug on output. cULus, RoHS.</td>
<td>CAT# PS-966</td>
<td>$3.75 ea. • 20 for $3.50 ea.</td>
<td></td>
</tr>
</tbody>
</table>

ORDER TOLL FREE 1-800-826-5432

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**A Note on Wall Transformers:** A.C. and D.C. Wall Transformers are not regulated unless otherwise stated. They provide a specified voltage at a specified load. If the load is lower than specified, the voltage will be higher than specified. With a higher load, the voltage will drop below that specified. For example, a 12 volt 500 ma. wall transformer may read 20 volts with no load or 9 Volts with a 600 ma. load.

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**Ideal for scanners, cameras and sensitive equipment requiring a constant, regulated output.**

<table>
<thead>
<tr>
<th>VOLTS</th>
<th>AMPS</th>
<th>TERMINATION</th>
<th>CENTER</th>
<th>STYLE</th>
<th>CAT#</th>
<th>PRICE</th>
</tr>
</thead>
<tbody>
<tr>
<td>3 VDC 1.67 AMP (Style A)</td>
<td>Model FRA05-SO3-U</td>
<td>5’ cable with 2.5mm coax plug, center positive. CE, cULus, RoHS.</td>
<td>CAT# PS-316</td>
<td>$5.50 each</td>
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<tr>
<td>5.5 VDC 0.75 A (Style A)</td>
<td>Model: MTP051UL-055075</td>
<td>6’ cable with 2.5mm coax plug, center+. cULus.</td>
<td>CAT# PS-5575</td>
<td>$3.75 each</td>
<td></td>
<td></td>
</tr>
<tr>
<td>5 VDC 1 AMP (Style A)</td>
<td>3’ cable with 1.3mm coax plug, center+.</td>
<td>CAT# PS-581</td>
<td>$4.25 ea. • 100 for $3.75 ea.</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>5 VDC 1 AMP (Style A)</td>
<td>5’ cord, with unknown/custom coax connector, center positive. cULus, CE.</td>
<td>CAT# PS-517</td>
<td>$4.00 ea. • 100 for $3.50 ea.</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>5 VDC 1 AMP (Style A)</td>
<td>HONR# ADS-5N-06 05005G</td>
<td>5’ cable with ferrite bead and unknown coax plug, center positive. cULus, FCC, CE.</td>
<td>CAT# PS-582</td>
<td>$4.00 ea.</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>5 VDC 2 AMP (Style A)</th>
<th>Ktec# KSAC050020W1UV-1.</th>
<th>6’ cable with ferrite bead and 2.5mm coax plug, center positive. Includes three snap-on / snap-off AC plugs for use in USA, Europe and the UK. CE, cULus, TUV.</th>
<th>CAT# PS-528</th>
<th>$7.50 ea. • 100 for $6.75 ea.</th>
</tr>
</thead>
<tbody>
<tr>
<td>5 VDC 2A (Style A)</td>
<td>Model# ZB-06-5020US. 4’ long cable with 2.1mm coax plug, center+. FCC, CE, cULus.</td>
<td>CAT# PS-529</td>
<td>$6.85 each</td>
<td></td>
</tr>
<tr>
<td>5 VDC 3 AMP (Style A)</td>
<td>44” cord with ferrite bead and 2.5mm coax plug, center positive. cULus. FCC.</td>
<td>CAT# PS-534</td>
<td>$7.50 each</td>
<td></td>
</tr>
<tr>
<td>9 VDC 600 MA (Style A)</td>
<td>2.1mm x 5.5mm coax power plug. Center+. UL.</td>
<td>CAT# PS-961</td>
<td>$10.95 each</td>
<td></td>
</tr>
<tr>
<td>9 VDC 0.66 AMP (Style A)</td>
<td>Globtek, Inc® Medical Power Supply, Class 2 Power Supply. Model: GTM41076-0609. 6” cord with ferrite EMI suppression bead. Custom coax plug on output. cULus, RoHS.</td>
<td>CAT# PS-966</td>
<td>$3.75 ea. • 20 for $3.50 ea.</td>
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<td>9 VDC 0.66 AMP (Style A)</td>
<td>Globtek, Inc® Medical Power Supply, Class 2 Power Supply. Model: GTM41076-0609. 6” cord with ferrite EMI suppression bead. Custom coax plug on output. cULus, RoHS.</td>
<td>CAT# PS-966</td>
<td>$3.75 ea. • 20 for $3.50 ea.</td>
<td></td>
</tr>
</tbody>
</table>
9 VDC 1 AMP W/ INTERNATIONAL PLUG SET (Style A)
4' cable with 2.1mm coax plug, center positive. Includes five snap-on/ snap-off AC plugs for use in the USA, Europe, UK, Asia and Australia. cULus, CE.
CAT# PS-914 $7.75 each

12 VDC 500 MA (Style A)
reduced
5' cable with 2.1mm coax plug. Center+. cULus.
CAT# PS-1251 $8.00 $4.75 each

12 VDC 1 AMP (Style A)
Flypower# PS12K1201000UE.
4' long cord with 2.1mm coax power plug, center positive. cULus, FCC.
CAT# PS-121 $7.20 ea. $10 for $6.85 ea.

12 VDC 2 AMP (Style A)
reduced
4' cord with 2.1mm coax power plug. Tip+.
CAT# PS-1227 $10.75 $10.50 each

12 VDC 2 AMP - SPECIAL (Style A)
6' cord with 2.1mm coax plug, center positive. cULus. New Item
CAT# PS-1292 $5.75 each

12 VDC 2.5 AMP, USED (Style A)
Model: DC1202500. 6' cable with 2.1mm coax plug, center+. cULus.
CAT # PS-1295 $4.95 each

12 VDC 3 AMP (Style B)
Model: PS-2.1-12-3-DC-U-S
4.42” x 2.12” x 1.35” high. Detachable power input cord. 6” output cable with 2.1mm coax plug, center+. cULus.
CAT# PS-1272 $6.95 each 50 for $6.45 each 100 for $6.00 each

12 VDC 5 AMP (Style B)
2.1mm coax power plug, center+.
CAT# PS-1273 $18.75 each

12 VDC 8 AMP (Style B)
Model: PS-D1208.
5.52” x 2.39” x 1.36” high. Detachable IEC power input cord. 3.5’ output cable with 2.5mm coax power plug, center positive. cULus.
CAT# PS-1280 $24.85 each

24 VDC 1 AMP (Style A)
Triad WSU240-1000.
6” cord with 2.1mm coax plug, center+. cULus.
CAT# PS-2414 $8.45 each

24 VDC 4.2AMP
EOS™ Model LFVLT100-1003
Input: 100-240V 50-60Hz 2.2A
Output: 24Vdc @ 4.2A
Standard 3" x 5" x 1" thick configuration. Removed from new equipment. 2 capacitors are soldered to the pc board between the ground and power input terminals of the board. Input and output header connectors included. cULus, CE, DVE.
CAT# PS-2443 $12.00 each

29.4 VDC 2 AMP (Style B)
4.28” x 1.79” x 1.24”.
6’ cable with 2.5mm coax plug, center+.
Detachable 2-conductor power cord.
CAT# PS-294 $9.00 ea. $10 for $8.25 ea.

48 VDC 0.38A (Style B)
Phihong #PSC18U-480. 5’ cord with molded 2.5mm coax power plug, center+. Includes detachable IEC power cord. cULus, CE. RoHS.
CAT# PS-480 $3.50 each 10 for $3.00 each

48 VDC 0.625A (Style B)
DVR# DSA-0421S-501. 6’ cord with 2.1mm coax plug, center+. Detachable 3-conductor power cord. CE, cULus, TUV.
CAT# PS-4830 $4.50 each 100 for $3.50 each

SELECTABLE OUTPUT SUPPLIES
Regulated switching power supplies with selectable voltages, 3, 5, 6, 7.5, 9, 12 Vdc. For portable electronics and bread boarding. Includes a variety of connectors.

1A Max. current
CAT# PS-10 $15.95 each
2.2A Max current
CAT# PS-22 $24.95 each

DC LAB POWER SUPPLIES
0-30VDC/0-5 A MAX
• Input voltage: 110 VAC 60 Hz 1.5 A 210W
• Output: 0-30 VDC adjustable max.
• Output current: 0-5 A adjustable max.
• Ripple: 200 mVp-p
• Weight: 3.6 lbs
CAT# PS-3005 $119.50 each

0-30 VDC/0-10 A MAX
DC LAB POWER SUPPLY
• Input voltage: 110 VAC 60 Hz 2.4 A 420W
• Output voltage: 0-30 VDC adjustable max.
• Output current: 0-10 A adjustable max.
• Ripple: <=< 100mVp-p
• 3.35 x 6.3 x 9.06 in • Weight: 3.7 lbs
CAT# PS-3010 $165.00 each

MULTIPLE OUTPUT SUPPLIES
12V/5.6A, 5V/0.5A
Skyenet #SNP-Z077
Input: 100-250 Vac, 2-1A, 47-63Hz.
Output: +12Vdc/5.6A. +5Vdc/0.5A. 75 watt.
0.156” header pins.
5” x 3” x 1.18”. cULus, CE.
CAT# PS-Z077 $9.85 each
FERRITES

**FERRITE SPLIT BEAD WITH SNAP SLEEVE**

Used to suppress RFI, EMI and unwanted spurious signals. Self-locking plastic snap sleeve. 7mm (0.27") I.D. snap-bead. 32.5 x 19.0 x 19.5mm case.
CAT# FB-103  40¢ each 10 for 35¢ each • 540 for 25¢ each

**TOROIDS**

**12.5MM O.D. X 7.5MM I.D. X 5.0MM**
Epcos B64290L R12.5x7.5 N49.
CAT# TOR-76  4 for $1.00

**19.5MM O.D. x 13MM I.D. x 7MM**
Magnetic Metals D 4602 B42
CAT# TOR-64  5 for $1.00

**12.5MM OD x 5MM ID x 25.5MM**
Fair-Rite# 2643480009. 43 ferrite shield bead for EMI suppression. Epoxy coated.
CAT# FB-109  2 for $1.00
100 for 45¢ each

**100 µH, 2.7A CHOKE**
Dale IHA 203. High current axial leaded 100 µh, 2.7A choke coil. 12.7mm diameter x 23.37mm length. 1.25” long pre-tinned leads. Can be used for noise filtering for switching regulators, power amplifiers, power supplies, and SCR and triac control circuits.
CAT# IHA-203  1.25 each

**345 µH 4.3A PC MOUNT INDUCTOR**
CTX100-2-52M on battery charger board with other useful parts. Requires desoldering.
CAT# EX-57  $1.50 each • 10 for $1.20 each

**345 µH TOROIDAL INDUCTOR**
0.6" diameter x 0.415" high. Two pc leads on 0.38" centers. 345 µH. Max. DCR: 0.2. Large quantity available.
CAT# CR-345  3 for 99¢ • 240 for 20¢ each 480 for 15¢ each • 1680 for 10¢ each

**CIGARETTE LIGHTER CORDS**

**12'** 2-conductor AWG 20 zip cord.
CAT# CLP-99  $3.00 each

**INDUCTORS**

**0.676 µH ADJUSTABLE CHOKE**
0.375” x 0.375” x 0.75” high coil with adjustable ferrite. PC leads on 0.38” (10mm) centers.
CAT# RC-676  3 for $1.00 • 100 for $25.00

**10 µH INDUCTOR**
Gowanda #GA30-102K 10µH 3.2A axial choke. 0.4” dia. x 0.8” long.
CAT# CC-102K  $1.15 each 10 for $1.05 each • 100 for 90¢ each

**47 µH 10% AXIAL CHOKE**
Coilcraft # PCH-27-473 0.50” x 0.22” diameter. SRF typ.: 6Mhz. DCR max.: 0.094 Ohms.
CAT# ACB-473  75¢ ea. • 10 for 65¢ ea.

**470 µH 10% AXIAL CHOKE**
RFE International # LGA-X1123-101K. 0.43” dia. x 0.79” long.
CAT# ACB-101  $1.00 ea. • 100 for 70¢ ea.

**CIGARETTE LIGHTER SOCKETS**

In-line, cable-mount 12V cigarette lighter/ power socket. Strain relief is 0.275” and accepts up to 16 gauge zip cord.
CAT# CLS-7  $1.95 each

**CIGARETTE LIGHTER POWER CORDS**

**4.5'** good-quality, UL rated, shielded cable. Replaceable fuse. Terminated with right-angle 1.3mm coax power plug (1.3mm id x 2.3mm od x 10mm), center positive. Output rated 12Vdc, 3 Amps.
CAT# CLP-302  $3.00 ea. • 10 for $2.70 ea.

**ORDER TOLL FREE 1-800-826-5432**
## BUZZERS, BEEPERS, AUDIO ALARMS

### SIRENS

#### EXTRA-LOUD MINI PIEZO SIREN
Small, painfully-loud two-tone piezo siren for auto or home security devices. Operates 6-12 Vdc, 110 ma. 108dB output (30 cm). 1.81" x 1.55" x 0.88" high black plastic body. Two mounting holes on diagonal 1.80" centers. 3" wire leads.

**CAT# PE-60**
- $1.00 each • 10 for 90¢ each

#### 12 VDC ALARM SIREN
Extremely loud 12 VDC car alarm siren. Distinctive siren pattern cycles through 6 different sounds every 30 seconds. Overall dimensions: 3.20" x 2.85 x 3.75" high including mounting bracket. Two 66" wire leads. 2.55" mounting centers on adjustable metal base.

**CAT# ES-10**
- $5.85 ea. • 10 for $5.65 ea.

### PIEZO AUDIO ALERTS

#### High pitched piezo alarm signals with built-in oscillator circuitry. Low power consumption. Used in alarms, smoke-detectors, games, cameras and telephones.

#### 3-28 VDC PIEZO BEEPER
Continuous tone. 103 db sound pressure. 1.14" dia. x 0.93" ABS plastic housing. Can be bulkhead mounted with tabs on 1.31" mounting centers, or can be mounted through a panel hole of 0.77" diameter via threaded bushing and panel nut. 5" wire leads. Black housing.

**CAT# SBZ-100**
- $5.95 each
- 10 for $5.75 each

#### 3-18 VDC PIEZO BUZZER
FY14-G. Emits a medium-loud, high-pitched tone when energized. 80 dB. 12Vdc, 7mA, 4KHz. 13.8mm dia. x 7.5mm high. PC pins.

**CAT# SBZ-204**
- $1.45 each
- 10 for $1.35 each • 100 for $1.15 each

### ELECTRO-MAGNETIC BEEPERS

#### 1.5 - 3 VDC BEEPER
Tiny 9mm diameter, pc mount beeper. 5mm high. PC leads on 5mm center.

**CAT# PE-71**
- 10 for 80¢ each • 100 for 70¢ each

#### 8-15 VDC BEEPER, PC MOUNT
MG Electronics

**CAT# SBZ-420**
- 10 for 50¢ each

#### 4-7 VDC BEEPER
Chinasound # CEB12A-05BP

**CAT# SBZ-493**
- 10 for 70¢ each • 100 for 65¢ each

#### PIEZO ELEMENTS

#### 12MM DIAMETER
1" leads. **CAT# PE-60**
- $1.00 each • 10 for 90¢ each

#### 14MM PIEZO WAFER
Part# 64PE140660. 14mm diameter. Frequency: 6600 ± 500. No leads.

**CAT# PE-62**
- 2 for $1.00 • 10 for 45¢ ea.

#### 35MM PIEZO ELEMENT
2" pigtail leads. Note: the wire is quite small gauge AWG 26-28, and has a tendency to break at the solder joint. It is fairly easy to solder a new, larger piece of wire to the spot.

**CAT# PE-63**
- 3 for 99¢
- 100 for 20¢ each • 1000 for 15¢ each

### ENCASED PIEZO ELEMENTS

Plastic encased piezo elements are more resonant and louder than non encased piezo elements. They require external signal to produce sound.

#### 16.5MM DIA. X 4MM
East Electronics# TFM-23. 80dB 4KHz. 4" pigtail leads.

**CAT# PE-59**
- 75¢ each

#### 22MM DIA. X 8MM PLASTIC CASE
Murata # PKM22EPE-40. PC pins on 10mm centers. 4KHz.

**CAT# PE-57**
- 3 for $1.00
- 100 for 25¢ each • 1000 for 20¢ each

**ORDER TOLL FREE 1-800-826-5432**
HC49/U (HC18/U) case. 0.89” DIA. X 0.13”
Matsushita #WM-71A111M
1” wire leads.  CAT# PE-54
75¢ each • 100 for 50¢ each

0.86” DIA. X 0.1”
Plastic housing with a ring of self-adhesive neoprene padding on the front face. 1.25” long leads.
CAT# PE-49  50¢ each • 10 for 35¢ each

MINI TONE TRANSDUCERS
Used in paging, warning signals, metal detectors and alarm clocks. Miniature magnetic transducers require external signal source to produce sound.
RDI # DMT-1206. 48 Ohm audio tone transducer. 0.47” dia. x 0.34” high.
PC pins on 0.25” centers.
CAT# PE-52  3 for 99¢
100 for $15.00 • 1000 for $125.00

DBX-01PN.
0.47” dia. x 0.36” high. 16Ω impedance.
Requires external signal to produce a tone. PC pins on 0.25” spacers. 80 dB @ 10 cm. 2040 Hz. Operating voltage: 1.5V.
Current rating: 30 mA.
CAT# PE-61  3 for 99¢
100 for 125¢ each

Intervox #BRT1209L-03. 16 Ohm.
12mm diameter x 8.5mm high.
3.6Vdc (1.5 – 5Vdc), 70mA max current. 90 db @ 10 cm. 2048Hz. Two 3.5” leads.
CAT# PE-58  3 for 99¢
100 for $3.50 each • 1000 for $25.00 each

AVX/Kyocera # PCRT21BGX
Black plastic front, vented metal back. Solder loop terminals.
0.82” diameter x 0.15”
CAT # PE-38  3 for 99¢
100 for $15.00 • 1000 for $125.00

CRYS TALS
HC49/U (HC18/U) case. 0.52” x 0.43” x 0.18”. 0.2” lead spacing.
3.579545 MHz  CAT# CRY-318
3.6864  CAT# CRY-3686
6.144 MHz  CAT# CRY-6144
12.9 MHz  CAT# CRY-129
14.7456 MHz  CAT# CRY-1474
16 MHz  CAT# CRY-16
20 MHz  CAT# CRY-20
24.576 MHz  CAT# CRY-245
40.320 MHz  CAT# CRY-4032

All of one value 5 for $1.00 • 100 for $15.00

50.000 MHz CRYSTAL OSCILLATOR
KDS# DOC-702A, KDS-3F
50.000 MHz. 0.8” x 0.5” x 0.21” h.
Four pc leads on 0.3” x 0.6” centers.
CAT# CRX-503  50¢ each

RUBBER BUMPERS / FEET
CLEAR BUMPERS / FEET
Self-adhesive polyurethane bumpers apply quickly and easily wherever protection is needed against scratches, slippage or noise.
0.8” diameter x 0.4” high clear feet with 0.35” dia. recessed center.
Sold in sheets of 50 pcs.
CAT# RF-32
1 sheet (25 pcs) for $4.50 per sheet
12 sheets (288 pcs) for $3.80 per sheet

Solid cylindrical clear bumper, 0.4” dia. x 0.25” high. Sold in sheets of 50 pcs.
CAT# RF-33
1 sheet (50 pcs)
$3.50 per sheet
10 sheets (500 pcs) $2.65 per sheet

1.46” DIA. RUBBER FEET
Hard rubber equipment foot. Countersunk, metal reinforced hole for #8 screw. Black.
1.46” diameter x 0.59” high
CAT# RF-615  4 for $1.80 • 100 for $30.00
1.46” diameter x 0.41” high
CAT# RF-605  4 for $1.70 • 100 for $28.00

NYLON SPACERS, NON-THREADED

HOOK & LOOP SPECIAL!
Hook and loop strips with strong adhesive backing. For indoor/outdoor use. Water resistant. Includes both hook and loop.

3” x 1” - Package of 10
CAT# HL-310
65¢ per pack
10 packs for 60¢ each
100 packs for 50¢ each
500 packs for 35¢ each
1000 packs for 25¢ each

4” x 1” - Package of 12
CAT# HL-412
85¢ per pack
10 packs for 75¢ each
100 packs for 65¢ each
500 packs for 45¢ each
1000 packs for 30¢ each

EMAIL US - allcorp@allcorp.com
PC MATERIALS

MAKE PC BOARDS IN MINUTES
From PHOTOCOPIER or LASER PRINTER

PRESS-N-PEEL by Techniks.
The easiest and quickest way to transfer pc board patterns to copper-clad board. Works great with CAD and PCB layouts as well as artwork from magazines and books.

No need for photochemicals or darkroom; use a photocopier or laser printer to transfer your design onto a clean copper-clad board with a household iron. Peel off the film, and the board is ready for etching (etchant solution not included).

Note: We are getting reports that PnP isn’t working well with later model Brother brand copiers and laser printers.

PRESS-N-PEEL consist of five 8 1/2” x 11” sheets of transfer film & complete instructions.

CAT# TEK-5 $11.95
2 packs (10 sheets) $17.50
5 packs (25 sheets) $37.50

COPPER CLAD BOARD

Single sided copper clad board. Glass fiber laminate. 6” x 4” x 1/16” thick.

CAT# CP-150 $3.00 each

ETCH-RESIST PENS

Use to touch-up artwork or manually add a trace on copper pc boards. Lacquer ink resists etching. May also be used on clear films for positives. Black ink.

FINE POINT PEN
CAT# ER-15 $3.15 each

EXTRA FINE POINT PEN
CAT# ER-25 $3.50 each

LOW RESISTANCE CONDUCTIVE PAINT

Chip Quik conductive paint. Excellent for repairing and modifying printed circuit boards. Dries at room temperature. Apply by dot, line or brush. Cleans with water or isopropyl alcohol. Shelf life: > 12 months.

5g syringe with plunger and two tips.
CAT# CP-05 $15.95 each

10g syringe with plunger and two tips.
CAT# CP-010 $21.95

PURETRONICS CLEANERS & SPECIALTY PRODUCTS

Aerosol chemicals, ground shipments only

CONTACT CLEANER
Quick penetrating, zero residue contact cleaner removes oils, greases, grime, dirt, silicones, fluxes and other contaminants. Evaporates quickly. Safe on plastics and metal materials. Ozone friendly containing no CFCs or HCFCs.

5.5 oz CAT# PTR-3000 $7.10 each
13.25 oz CAT# PTR-3500 $9.25 each

CONTACT CLEANER AND LUBRICANT, 13 OZ
Removes oils, dirt and other contaminants and leaves a thin coating of silicone to lubricate and protect. Safe on plastics. Ozone friendly. 13 oz aerosol can.

CAT# PTR-5000 $10.50 each

CIRCUIT FREEZE
Helps locate thermal intermittent defective resistors, capacitors and semiconductors. Helps locate cold solder joints and pc board cracks. 10 oz trigger-control spray can.

CAT# PTR-7400 $14.25 each

FLUX REMOVER, 13 OZ CAN
Removes most types of flux including rosin and rosin based no-clean flux. Dissolves and flushes away fluxes, oils, grease, grime, dirt, silicones and other contaminants. Evaporates quickly. Safe on plastic and metal surfaces. 13 oz aerosol can.

CAT# PTR-6000 $10.25 each

VALUE DUSTER, 10 OZ CAN
Moisture free, zero residue dusting gas. Removes dust, dirt, lint and other contaminants. Up to 70 psi. For general purpose applications. Excellent preventative maintenance tool for electronics, optical and mechanical components. Blend of 134A and DME. 10 oz trigger-control aerosol can.

CAT# PTR-7000 $9.95 each

CONDUCTIVE GLUE

An all-purpose, electrically conductive glue ideal for bonding all kinds of low-voltage connections. Makes a permanent bond without heat. Lead-free. 0.3 fl.oz. jar.

CAT# WG-1 $3.98 each

MANUFACTURERS
We Purchase Excess Inventories.
CALL, WRITE, E-MAIL or FAX your list.
**CAIG CLEANERS, CHEMICALS & COATINGS**

**CONDUCTIVE SILVER/CARBON COATING CAIKOTE 44™**
1 oz. Repair membrane buttons and keypads and other carbon and silver based surfaces. EMI/ESD shielding. Use on rubber, epoxy, glass and plastic surfaces. No mixing required.
CAT# CK-44 $12.00 each

**DEOXIT® CONNECTION CLEANER**
A fast-acting deoxidizing solution that cleans, lubricates, protects and improves conductivity on metal connectors, contacts and surfaces. It is ideal for stationary and moving contact connectors. Stabilizes connections between similar and dissimilar metals.
1.6mL bottle with mini-brush applicator. DeoxIT® D-Series D100L-16BX.
CAT# D100L $6.95 each
5 oz. spray can. DeoxIT® D5
CAT# D5S-6 $18.95 each

**DEOXIT® GOLD CONNECTION CLEANER**
DeoxIT® G-Series G100L-16BX. Formulated to improve conductivity, lubricate and protect plated connectors and contacts for maximum performance & protection. It deoxidizes minor amounts of surface contamination, penetrates plated surfaces and molecularly bonds to the base metals - NO OTHER PRODUCT DOES THIS. 1.6mL bottle with mini-brush applicator.
CAT# G100L $7.95 each

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**SUREHOLD® PYTHON GLUE**
A high strength adhesive used to bond tough projects including wood, ceramics, stone, metal, brick, foam, fiberglass and more. Fully cures 72 hours. 2 fl. oz.
CAT# SH-352 $4.25 each

**SUPER GLUE DOUBLE PACK**
Bonds non-porous surfaces in seconds. Works on artificial nails, ceramics, crafts, china, jewelry, rubber, leather, wood, metal, many plastics and more. Two tube net weight 0.14 oz (4g) total.
CAT# SH-375 $1.99 pack

**SUREHOLD® PERMANENT STRENGTH THREADLOCKER**
CAT# SH-481 $1.99 each

**90 SECOND EPOXY HARDENER**
Surehold® 90 second epoxy. Self-mixing applicator tube dispenses with one push. Perfect for bonding glass, metal, china, glass, fiberglass, ceramics, etc. No mess, no spilling and no dried out tubes.
Net volume: 24 mL.
CAT# SH-335 $3.95 each

**TAPE AND SEALERS**

**3/4" X 60' ELECTRICAL TAPE**
Vinyl electrical tape, 3/4 inch x 60 feet. Suitable for use at not more than 600V and not more than 80ºC (176ºF). UL.
BLACK CAT# PET-1 $1.25 each • 10 for $10.00
COLORS CAT# PET-XX (XX=color) $1.25 ea. i.e. orange (OR), green (GN), brown (BR), blue (BL), grey (GY), red (RD), white (WT), yellow (YL)

**COAX SEAL**
A hand-moldable plastic material which quickly and effectively seals all types of coax fittings from moisture and corrosion. Stays flexible for years. Allows you to disconnect fittings and reseal them with the same material. Non-conductive. Adheres to vinyl and poly-vinyl insulation. 60" x 1/2" wide roll suitable for 9 fittings.
CAT# COS-1 $3.65 each

**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. Can be removed easily without leaving any residue. 1" x 16.4' roll. (0.8mm x 25mm x 5m).
CAT# SFT-5 $4.50 each

**THERMISTORS**

NTC – Negative Temperature Coefficient. Resistance drops as temperature increases.

**10K OHM NTC THERMISTOR**
5mm epoxy coated disc. 500mW max power rating. -20 to 125ºC operating temperature.
CAT# TNR-103 65¢ each • 10 for 55¢ each • 100 for 40¢ each

**10K NTC TEMPERATURE SENSOR**
Gold-plated 3mm dia. x 14.5mm long probe compresses, with spring-return, into a 4.2mm dia. x 9mm long collar. Removed from new equipment in excellent condition.
CAT# THM-43 $1.00 each

**INRUSH CURRENT SUPPRESSOR, 3.9 OHM**
Murata # NTPAD39LDB0. 3.9 Ohm NTC thermistor. Current rating: 3.3A. Voltage: 264V.
CAT# TNR-3.9 65¢ ea. • 150 for 40¢ ea.
**POTENTIOMETERS**

### POTS WITH 6MM DIA. SHAFT

#### LINEAR TAPER POTS
6mm x 10mm long slotted knurled shaft and 7mm threaded bushing.
Solder lugs.
Available values: 500 OHM, 1K, 2K, 5K, 10K, 20K, 50K, 100K, 200K, 500K, 1M, 1.5M and 2M.
**CAT# NLTP-XX** (no mixing values) XX=value in ohms, i.e. NLTP-200K
75¢ each • 10 for 65¢ each

#### AUDIO TAPER POTS
6mm diameter knurled shaft.
7mm threaded bushing.
Solder terminals. Available values: 1K, 10K, 50K, 100K, 500K and 1M.
**CAT# NATP-XX** (no mixing values) XX=value in ohms, i.e. NATP-100K
2 for $1.50 • 10 for 65¢ each

#### 10K LINEAR PRECISION POT
Tokos / Cosmos#
RV Q24YN 15F B 103
High-quality, 10K Ohm, 1/4W carbon film potentiometer designed for long-life. Very smooth, precise rotation, designed for 500,000 cycles.
6mm dia. x 5mm long flatted shaft.
9mm threaded bushing, 24mm dia. body.
Solder-lug terminals.
**CAT# LPT-10K** $2.00 each
10 for $1.75 each • 100 for $1.60 each

#### 100K LINEAR TAPER POT
Two built in switches, a rotary on-off switch and a momentary push-switch. Also has multiple detents across entire rotation. Knurled split shaft.
7mm threaded bushing mount. PC pins.
9.5 x 11mm body, 30mm overall length. Tocos.
**CAT# PWS-104** 85¢ ea. • 10 for 70¢ ea.

#### 20K LINEAR POT
With 6mm x 10mm long slotted knurled shaft and 7mm threaded bushing.
PC mount.
**CAT# TPL-20K** 50¢ each
10 for 45¢ each

#### 50K LINEAR TAPER POT
Alpha #B50K with ON-OFF switch.
6mm dia. split knurled shaft. 7mm threaded bushing. S.P.S.T. switch is off at full counter-clock-wise direction.
**CAT# TPL-50K** 85¢ each

#### 10K X 2 AUDIO TAPER
1/8” diameter half-moon shaft.
7mm threaded bushing.
PC mount.
**CAT# APT-10KD** $1.00 each

### LINEAR POTS W/ 1/4” DIA. SHAFT

#### 10K BOURNS POT, PRE-WIRED
Bourns 82A1AC28BA0728.
2W, single-turn cermet. New pot, prepped with three 6” wire leads.
**CAT# PTW-10K** $2.75 each

#### 10 OHM 5W WIREFOUND POT
CTS #026TA20R100B1A3.
Solder-lugs.
**CAT# PT-10** $2.50 each
100 for $2.25 each

#### 15 MEG
Solder-lugs.
**CAT# LTP-15M** 75¢ each • 10 for 65¢ each

#### 2.5 MEG
Bourns 3852A-242-255A
2W single-turn Cermet pot. 0.35” long shaft. Solder lugs.
**CAT# LTP-255** $2.00 each

#### 10K OHM PRECISION MULTITURN POT
3590S-2-103L.
10K Ohm, 10-turn linear potentiometer ±0.25%. 1/4” diameter x 1/2” long shaft.
3/8-32 threaded bushing.
Solder turret terminals.
**CAT# PP-10K** $4.50 each

### PRECISION POTS, USED
Removed from equipment. May have short wires soldered to terminals.
1/4” half-moon shafts,

#### 10K OHM LINEAR TAPER
Spectrol/ Vishay Model 157
1-piece aluminum housing. Ceramic sealed back. 1 Watt power rating. Conductive plastic element. May have writing or test marks.
**CAT# PPT-10KLU** $1.00 each • 10 for 80¢ each

### BALANCE CONTROL

#### 10K AUDIO TAPER BALANCE CONTROL, 6MM SHAFT
Stereo balance control.
Two-channel mirror-reversed audio taper pot. Not for volume or tone. 6mm flatted shaft.
7mm threaded bushing.
**CAT# DPA-10K** 65¢ each
**PRECISION MULTI-TURN TRIMMERS**

**RECTANGULAR TRIMMER**
0.75" X 0.19" high. 3/4 watt.
Comparable to Bourns 3006P, Beckman 89PR, Weston 830P, AB 94P.
Available values: 2K, 2.2K, 5K, 10K, 100K, 500K
CAT# RTP-XXX $1.25 each
XXX=values in ohms, ie RTP-2.2K

**MULTI-TURN TRIMMERS**

- **1/4W cermets trimmers.**
  - 6 x 7 x 4mm. Triangle pc pin pattern.
  - Top Adjust 500 Ω TPR-500 $1.25 each
  - Top Adjust 10K TPR-10K $1.25 each
  - Side Adjust 1M TPS-1M $1.25 each

**MULTI-TURN TRIMMER POT**
Precision 20-turn trim pot. 3/8" square, top-adjust. Leads in straight row on 0.10" centers.
Available values: 500, 50K, 1MEG
CAT# MTPS-XXX $1.25 each
XXX=values in ohms, ie MTPS-1MEG

**1K OHM MULTI-TURN TRIMMER**
Vishay T93YB 1K 10% multiturn trimmer.
10 x 10 x 5.5mm. Triangle lead pattern, outer legs on 5mm centers.
CAT# MTP-1K $1.25 each

**SINGLE TURN TRIMMERS**

- **10K ALLEN BRADLEY TRIMMER**
  - Allen Bradley Type E. 10K Ω, single-turn trimmer potentiometer. 10mm square.
  - PC leads in triangular pattern, 5mm centers w/ wiper lead in middle.
  - CAT# TRP-10K 2 for $1.00

- **1K VERTICAL ADJUXT**
Pihler #PT10LVO 1K 20%.
10mm diameter cermets trimmer. Outer PC pins on 5mm centers.
CAT# TPR-1K 5 for $1.00 • 100 for 15¢ ea.

**TOP ADJUST**
3/8" square x 3/16" high. 1/2 watt.
Comparable to Bourns 3386P, Beckman 72PR and Spectrol 63P.

- **Ohms**
  - 500 STP-500 50¢ 40¢
  - 2K STP-20K 50¢ 40¢
  - 50K STP-50K 50¢ 40¢

**SINGLE TURN TRIMMER POTS**

- 7mm square trimmer. Two leads on 5mm centers. Middle (wiper) lead is 5mm from the center of the other leads.
- Available values: 500, 5K, 10K, 20K, 100K, 150K, 500K
- **CAT# TPS-XXX** (no mixing values)
- XXX=values in ohms, ie TPS-10K
- 4 for $1.00 • 100 for 18¢ each

**1 MEG Ω THUMBWHEEL TRIM POT**
0.7" dia., old-style trim pot. PC leads on 0.4 centers. Center wiper terminal is on opposite side from other leads.
CAT# TPT-1M 10 for $1.00
100 for 6.5¢ each • 500 for 4¢ each

**SLIDE POTS**

**SLIDE POTS, 65MM TRAVEL**
Slide potentiometers with mounting holes on 80mm centers.
Slide travel, 65mm. Single-element if not otherwise noted. “C-detent” indicates a center-detent.

- **Res.**
- 2K Audio SLP-2KA
- 20K Linear C-detent SLP-20KS
- 50K Linear 2-ele.,C-detent SLP-50KS
- 100K Audio 4-element SLP-100K4A

- **2 for $1.00 • 100 for 35¢ each**

**KNOBS**

**KNOBS FOR 1/4” SHAFT**
Black aluminum instrument knob.
Serrated circumference.
0.50" diameter x 0.79" high.
White pointer line. Two set screws.
CAT# KNB-231 $1.50 each
25 for $1.35 each • 100 for $1.15 each

**KNOBS FOR 1/8” SHAFT**
Black, machined aluminum control knob.
0.5” diameter x 0.59” high.
White pointer line. One set screw.
CAT# KNB-283R, G, BL, Y $1.00 each
50¢ each • 10 for 45¢ each

**1/16” ALLEN WRENCH**
Fits CAT# KNB-284 and other knobs with hex-head set screws.
CAT# AW-2 2 for $1.00
4 for $1.00 • 100 for $15.00

**VISIT OUR WEBSITE - WWW.ALLELECTRONICS.COM**
BLACK PLASTIC POINTER KNOBS
With raised colored face, serrated circumference and raised white pointer line down one side. 0.50" diameter x 0.60" high. Brass insert and set screw. Available with blue (BL), black (BK), red (RD), green (GN) & yellow (YL) faces.
CAT# KNB-267XX (XX=color i.e KNB-267BL) 75¢ each • 10 for 65¢ each

SERRATED BLACK KNOB
18mm dia. x 15mm high plastic knob. Serrated circumference. Flat, plain face.
CAT# KNB-248 55¢ each

RUBBERIZED POINTER KNOB
White raised pointer line. 0.40" dia. top, 0.53" dia. skirt, 0.63" high.
CAT# KNB-269 65¢ ea. • 10 for 55¢ ea.

ALUMINUM POINTER KNOB
Black aluminum instrument knob for 6mm serrated shaft. White pointer line. Plastic insert is recessed about 0.3" so pot shaft needs to stand at least 0.6" out from panel. 15mm diameter x 17mm high.
CAT # KNB-286 60¢ each
10 for 50¢ each

BLACK PLASTIC POINTER KNOBS
Raised face, serrated circumference and raised white pointer line. Brass insert with set screw.
19MM DIAMETER x 16.5MM HIGH
Red face CAT# KNB-281R
Black face CAT# KNB-281B
85¢ each • 10 for 75¢ each

25MM DIAMETER x 16.5MM HIGH
Red face CAT# KNB-282R
Black face CAT# KNB-282B
95¢ each • 10 for 85¢ each

KNOBS FOR 6MM KNURLED SHAFT
Black plastic knob with serrated circumference. Bronze face with pointer dot. 0.9” dia. at base, 0.8” dia. at top. 0.54” high. Shank, 0.38” long x 0.43” dia. Note: Removed from equipment. Good condition, but shanks show signs of wear.
CAT# KNB-260 35¢ each
10 for 30¢ each • 100 for 20¢ each

THUMBSCREWS
8-32 x 5/8 KNURLED THUMB SCREW
Stainless steel screw, 8-32 x 5/8”. 1/2” diameter knurled knob.
CAT# SC-58 4 for $1.00

8-32 x 1 1/4 KNURLED THUMB SCREW
Stainless steel screw, 8-32 x 1 1/4”. 1/2” diameter knurled knob.
CAT # SC-114 3 for $1.00

RED LASER MODULES
Class IIIA lasers, ≤5mW
Wavelength: 650mM, red
3-5Vdc operation, < 40mA

LASER DIODE
LiteOn # LTLD505T. 6mm diameter. Gold-plated heat-sink base and leads.
CAT# DLM-6 85¢ each
100 for 40¢ each

LASER ASSEMBLY W/ PINS
Mounted on pc board with header pins for use with Arduino and other projects. Can be used as a trip wire for theft detection or for optical effects. 26 x 16 x10mm.
CAT# ST-1172 $2.80 each

MODULE WITH ADJUSTABLE LENS
Metal enclosed module. 12mm diameter x 35mm long. 5” pigtail leads.
CAT# DLM-8 $4.55 each
10 for $4.00 each

RED X MODULE
Projects a red X. Visible approximately 10’ in daylight. Metal enclosed module, 12mm diameter x 35mm long. 5” pigtail leads.
CAT# LL-6 $5.00 each

RED LASER MODULE
6 x 10mm metal module with heat-shrink covered circuitry attached. Overall length 19mm. 7” pigtail leads.
CAT# DLM-7 $4.15 each
10 for $4.00 each

RASPBERRY PI 3 MODEL B
Single-board computer with wireless LAN and Bluetooth connectivity (released February 2016).
• Quad Core 1.2GHz Broadcom BCM2837 64bit CPU
• 1GB RAM • 40-pin extended GPIO
• 4 USB 2 ports • Full size HDMI
• 4 Pole stereo output and composite video port
• CSI camera port for Pi camera
• DSI display port for touchscreen display
• Micro SD port for loading your operating system and storing data
CAT # RP-3 $39.95 each

FREE SHIPPING on orders over $75.00 in the Continental US
$8.00 shipping on all other Continental US orders
1/4 & 1/2 WATT RESISTORS
5% CARBON FILM

1/4 WATT RESISTORS
1/2 WATT RESISTORS
Minimum order is 10 PIECES OF
ONE VALUE.
10 PCS of 1 VALUE 65¢
100 PCS of 1 VALUE $3.75
200 PCS of 1 VALUE $6.00
1,000 PCS of 1 VALUE $14.00
CAT# = 291-VALUE
CAT# = 293-VALUE
for example...to create CAT# for resistors...
5.6K ohm 1/4 watt = CAT# 291-5.6K
10 ohm 1/2 watt = CAT# 293-10

610 PIECE 1/4 WATT RESISTOR ASSORTMENT
10 each of 61 resistance values from 10Ω to 1 Meg. 5% tolerance.
CAT# RES-61
$11.50 per package

ROTARY ENCODERS
30 DETENT W/ SWITCH
Alps mechanical rotary encoder with momentary-on push switch. 30 detents.
6mm diameter aluminum shaft. 12mm square body. 7mm dia. x 10mm high
plain bushing. PC pins. 2 terminals for switch. 3 terminals for encoder.
CAT# RE-30
$1.35 ea. • 50 for $1.15 ea.

20 DETENT
EC11L. 6mm diameter flattened shaft.
7mm threaded bushing.
CAT# RE-66
$1.00 each
10 for 85¢ each

DECADE BOXES
CAPACITANCE 100PF – 9.999µF
25V, X7R capacitors, non-polarized. Five pushbutton decade switches.
Banana plug binding posts. 4.0" x 2.0" x 1.5"
CAT# CBX-2
$42.55 each

CAPACITANCE 0.1 – 9.999µF
Electrolytic capacitors, 20% tolerance. Six pushbutton decade switches.
Banana plug binding posts. 4.0" x 2.5" x 2.0"
CAT# CBX-3
$73.00 each

RESISTANCE 1-9,999,999 Ohms
1/4W 1% resistors. Seven pushbutton decade switches.
Banana plug binding posts. 4.0" x 2.5" x 2.0"
CAT# RBX-1
$49.75 each

10W RESISTIVE LOAD 1-999 Ohms
Three rotary decade switches. Banana plug binding posts.
6.0" x 3.5" x 2.5"
CAT# RBX-2
$67.55 each

POWER RESISTORS

RESISTANCE    1-9,999,999 Ohms
ohms   watts   style   ohms   watts   style
.1   5   axial   100   10   vert. mt.
.33   3   axial   100   25   ceramic
.5   3   axial   120   40   ceramic
.5   4   axial   300   5   sand
.5   15   sand   330   5   sand
.51   5   axial   400   20   sand
.7   10   sand   510   5   sand
.75   5   axial   1K   3   axial
.75   5   sand   1K   5   sand
1   5   sand   1K   15   sand
1.3   5   axial   1.2K   5   sand
1.5   2   axial   1.4K   22   sand
3.3   15   sand   1.6K   3   sand
5   40   axial   2K   18   sand
12   3   sand   2.2K   3   axial
22.5   5   axial   12K   5   axial
47   7   radial

POWER 1 - 5 watts
1 - 5 watts
3 for $1.00
6 - 10 watts
2 for $1.00
11 - 30 watts
$1.00 each
PRICING 31-50 watts
$2.00 each

26.7 OHM 10 WATT DALE RESISTOR
Dale NH-10. 26.7 Ohm, 1%, 10 Watt precision aluminum power resistor.
0.75" x 0.42" x 0.38". Solder-loop terminals. Attach to heatsink for rated power.
CAT# 26.7-10
2 for $1.50

MOST ORDERS SHIPPED WITHIN 24-48 HOURS
### RADIAL ELECTROLYTIC CAPACITORS

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<td>3300</td>
<td>35</td>
<td>1.45</td>
<td>1.30</td>
<td>1.20</td>
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<td>4700</td>
<td>10</td>
<td>.60</td>
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<td>.45</td>
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<td>4700</td>
<td>25</td>
<td>1.25</td>
<td>1.10</td>
<td>.95</td>
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<tr>
<td>4700</td>
<td>35</td>
<td>1.80</td>
<td>1.70</td>
<td>1.50</td>
</tr>
</tbody>
</table>

* indicates 105°C

Use CAT# µF R V i.e. 10uf @ 35V = CAT# 10R35

### SNAP-IN CAPACITORS

<table>
<thead>
<tr>
<th>UF</th>
<th>Volts</th>
<th>1+</th>
<th>10+</th>
<th>100+</th>
</tr>
</thead>
<tbody>
<tr>
<td>47</td>
<td>250</td>
<td>.45</td>
<td>.35</td>
<td>.30</td>
</tr>
</tbody>
</table>

PC leads. 10mm spacing.

- **47 UF 250 V**
  - 25mm x 22mm diameter. 105°C.
  - CAT# EC-47250  35µF each
  - 100 for 20µF each
- **150 MFD 350 V**
  - 31mm x 26mm diameter. 105°C.
  - CAT# EC-1535  $1.55 each
  - 10 for $1.35 each
- **330 UF 200 V**
  - 25mm high x 25mm diameter. 85°C.
  - CAT# EC-3320  65µF each
  - 10 for 60µF each • 100 for 50µF each
- **330 UF 250 V**
  - Teapo LX 85°C. 22mm dia.x 46mm high.
  - CAT# EC-3325  75µF each • 10 for 65µF each

### MEMORY BACK-UP “SUPERCAPS”

High-capacitance capacitors. Slowly release charge to provide back-up power in temporary shut-down situations.

- **0.47 FARAD 5.5V**
  - Elna DB-5R5D474. 20mm diameter x 7.5mm. PC leads on 5mm centers.
  - CAT# CBC-23  $1.65 each
- **1 FARAD 2.5V**
  - 8mm dia. x 10.5mm long.
  - Crimped radial leads on 5mm centers.
  - CAT# CBC-22  65µF each
  - 100 for 50µF each
- **1 FARAD, 5.5 V**
  - 20mm dia. x 7mm high.
  - 5mm lead spacing.
  - CAT# CBC-25  $2.00 ea. • 10 for $1.80 ea.

### PHOTOFLASH CAPACITOR

- **150 UF 330 V** Rubycon.
  - 0.64" diameter x 1.17".
  - CAT# PPC-150  85µF each
  - 10 for 75µF each • 100 for 40µF each

### 6.8 µF 25V MOLDED TANTALUM

- **6.8 µF 25V**
  - Kemet #T340C685M035AS
  - 7 x 4 x 10mm. 5mm lead spacing.
  - CAT# RMT-685  2 for $1.00 • 100 for 35¢ ea.

### MOTOR CAPACITORS

- **3.5uF, 250V**
  - 50/60Hz, CBB61. Max temp 85°C.
  - 3.5µF, 250V
  - 0.64" diameter x 1.17".
  - CAT# MPC-3.5  $1.30 each
- **11UF 170 VAC**
  - Tcet #M72535.
  - 25°C/+85°C. 25mm dia. x 60mm long. 4” pigtail leads. UL.
  - CAT# MPC-11  $1.35 each
### CERAMIC DISC CAPS

<table>
<thead>
<tr>
<th>CAT #</th>
<th>Value</th>
<th>Volts</th>
<th>10</th>
<th>100</th>
<th>1000</th>
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</thead>
<tbody>
<tr>
<td>5DS0</td>
<td>5 pf</td>
<td>50</td>
<td>.08</td>
<td>.065</td>
<td>.055</td>
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<tr>
<td>5D3K</td>
<td>5 pf</td>
<td>3000</td>
<td>.10</td>
<td>.08</td>
<td>.06</td>
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<tr>
<td>100D50</td>
<td>10 pf</td>
<td>50</td>
<td>.08</td>
<td>.065</td>
<td>.055</td>
</tr>
<tr>
<td>220D50</td>
<td>22 pf</td>
<td>50</td>
<td>.08</td>
<td>.065</td>
<td>.055</td>
</tr>
<tr>
<td>330D1K</td>
<td>33 pf</td>
<td>1000</td>
<td>.10</td>
<td>.08</td>
<td>.06</td>
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<tr>
<td>390D1K</td>
<td>39 pf</td>
<td>1000</td>
<td>.10</td>
<td>.08</td>
<td>.06</td>
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<tr>
<td>470D50</td>
<td>47 pf</td>
<td>50</td>
<td>.08</td>
<td>.065</td>
<td>.055</td>
</tr>
<tr>
<td>470D1K</td>
<td>47 pf</td>
<td>1000</td>
<td>.10</td>
<td>.08</td>
<td>.06</td>
</tr>
<tr>
<td>101D50</td>
<td>100 pf</td>
<td>50</td>
<td>.08</td>
<td>.065</td>
<td>.055</td>
</tr>
<tr>
<td>101D1K</td>
<td>100 pf</td>
<td>1000</td>
<td>.10</td>
<td>.08</td>
<td>.06</td>
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<tr>
<td>151D50</td>
<td>150 pf</td>
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<td>.08</td>
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<td>221D50</td>
<td>220 pf</td>
<td>50</td>
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<td>.065</td>
<td>.055</td>
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<tr>
<td>201D1K</td>
<td>200 pf</td>
<td>1000</td>
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<td>.08</td>
<td>.06</td>
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<tr>
<td>221D1K</td>
<td>220 pf</td>
<td>1000</td>
<td>.10</td>
<td>.08</td>
<td>.06</td>
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<td>270 pf</td>
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<tr>
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<td>330 pf</td>
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<td>.065</td>
<td>.055</td>
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<td>471D50</td>
<td>470 pf</td>
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<tr>
<td>471D2.5K</td>
<td>470 pf</td>
<td>2500</td>
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<td>561D50</td>
<td>560 pf</td>
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<td>.065</td>
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<td>821D50</td>
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<td>.08</td>
<td>.07</td>
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<tr>
<td>102D50</td>
<td>.01 uf</td>
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<td>.08</td>
<td>.065</td>
<td>.055</td>
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<tr>
<td>152D50</td>
<td>.015 uf</td>
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<td>.08</td>
<td>.065</td>
<td>.055</td>
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<tr>
<td>222D50</td>
<td>.02 uf</td>
<td>50</td>
<td>.08</td>
<td>.065</td>
<td>.055</td>
</tr>
<tr>
<td>332D1K</td>
<td>.033 uf</td>
<td>1000</td>
<td>.10</td>
<td>.08</td>
<td>.06</td>
</tr>
<tr>
<td>472D50</td>
<td>.047 uf</td>
<td>50</td>
<td>.08</td>
<td>.065</td>
<td>.055</td>
</tr>
<tr>
<td>103D50</td>
<td>.01 uf</td>
<td>50</td>
<td>.08</td>
<td>.065</td>
<td>.055</td>
</tr>
<tr>
<td>103D100</td>
<td>.01 uf</td>
<td>100</td>
<td>.07</td>
<td>.055</td>
<td>.04</td>
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<tr>
<td>223D50</td>
<td>.022 uf</td>
<td>50</td>
<td>.10</td>
<td>.09</td>
<td>.08</td>
</tr>
<tr>
<td>473D50</td>
<td>.047 uf</td>
<td>50</td>
<td>.08</td>
<td>.07</td>
<td>.06</td>
</tr>
<tr>
<td>104D50</td>
<td>.1 uf</td>
<td>50</td>
<td>.12</td>
<td>.10</td>
<td>.085</td>
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</tbody>
</table>

10 piece per item minimum

### RADIAL CERAMIC CAPACITORS

Minimum order, 10 pieces of one value.

<table>
<thead>
<tr>
<th>Value</th>
<th>Volt</th>
<th>CAT#</th>
<th>each</th>
<th>100</th>
<th>500</th>
<th>1000</th>
</tr>
</thead>
<tbody>
<tr>
<td>22 pf</td>
<td>50</td>
<td>RM-220</td>
<td>.06</td>
<td>.04</td>
<td>.03</td>
<td>.025</td>
</tr>
<tr>
<td>100 pf</td>
<td>50</td>
<td>CM-101</td>
<td>.04</td>
<td>.03</td>
<td>.02</td>
<td>.025</td>
</tr>
<tr>
<td>680 pf</td>
<td>50</td>
<td>RM-681</td>
<td>.065</td>
<td>.045</td>
<td>.035</td>
<td>.03</td>
</tr>
<tr>
<td>1000 pf</td>
<td>100</td>
<td>CM-102</td>
<td>.08</td>
<td>.07</td>
<td>.06</td>
<td>.05</td>
</tr>
<tr>
<td>2200 pf</td>
<td>100</td>
<td>RM-222</td>
<td>.08</td>
<td>.07</td>
<td>.06</td>
<td>.05</td>
</tr>
<tr>
<td>0.01 uf</td>
<td>50</td>
<td>CM-103</td>
<td>.08</td>
<td>.07</td>
<td>.06</td>
<td>.05</td>
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<tr>
<td>0.1 uf</td>
<td>50</td>
<td>RM-104</td>
<td>.08</td>
<td>.07</td>
<td>.06</td>
<td>.05</td>
</tr>
<tr>
<td>1 uf</td>
<td>50</td>
<td>RM-105</td>
<td>.25</td>
<td>.18</td>
<td>.16</td>
<td>.15</td>
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</table>

### DIPPED TANDEMAL

<table>
<thead>
<tr>
<th>MFD</th>
<th>VDC</th>
<th>CAT#</th>
<th>Price</th>
<th>Each</th>
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</thead>
<tbody>
<tr>
<td>1</td>
<td>35</td>
<td>DT-25</td>
<td>3 for $1.00</td>
<td>.25</td>
</tr>
<tr>
<td>2.2</td>
<td>16</td>
<td>DT-20216</td>
<td>4 for $1.00</td>
<td>.17</td>
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<tr>
<td>3.3</td>
<td>16</td>
<td>DT-303</td>
<td>4 for $1.00</td>
<td>.17</td>
</tr>
<tr>
<td>4.7</td>
<td>10</td>
<td>DT-40710</td>
<td>5 for $1.00</td>
<td>.15</td>
</tr>
<tr>
<td>4.7</td>
<td>16</td>
<td>DT-40710</td>
<td>4 for $1.00</td>
<td>.17</td>
</tr>
<tr>
<td>4.7</td>
<td>25</td>
<td>DT-40725</td>
<td>35¢ each</td>
<td>.25</td>
</tr>
<tr>
<td>10</td>
<td>16</td>
<td>DT-1016</td>
<td>3 for $1.00</td>
<td>.25</td>
</tr>
<tr>
<td>10</td>
<td>25</td>
<td>DT-1025</td>
<td>2 for 80¢</td>
<td>.30</td>
</tr>
<tr>
<td>10</td>
<td>35</td>
<td>DT-1035</td>
<td>90¢ each</td>
<td>.65</td>
</tr>
<tr>
<td>15</td>
<td>25</td>
<td>DT-1525</td>
<td>2 for $1.00</td>
<td>.40</td>
</tr>
<tr>
<td>22</td>
<td>16</td>
<td>DT-2216</td>
<td>50¢ each</td>
<td>.40</td>
</tr>
<tr>
<td>33</td>
<td>10</td>
<td>DT-3310</td>
<td>50¢ each</td>
<td>.40</td>
</tr>
<tr>
<td>47</td>
<td>10</td>
<td>DT-4710</td>
<td>2 for 80¢</td>
<td>.30</td>
</tr>
<tr>
<td>100</td>
<td>10</td>
<td>DT-101</td>
<td>$1.25 each</td>
<td>1.10</td>
</tr>
</tbody>
</table>

### AXIAL CERAMIC CAPS

<table>
<thead>
<tr>
<th>CAT#</th>
<th>Price</th>
</tr>
</thead>
<tbody>
<tr>
<td>150pF</td>
<td>100V</td>
</tr>
<tr>
<td>820pF</td>
<td>100V</td>
</tr>
<tr>
<td>0.01uF</td>
<td>50V</td>
</tr>
<tr>
<td>0.015uF</td>
<td>100V</td>
</tr>
<tr>
<td>0.1uF</td>
<td>25V</td>
</tr>
<tr>
<td>0.1uF</td>
<td>50V</td>
</tr>
</tbody>
</table>

### 10 µF 10V AXIAL TANTALUM

| CAT# | AT-1010 | 4 for $1.00 • 100 for $20.00 |

### RADIAL MYLAR CAPACITORS

<table>
<thead>
<tr>
<th>MFD</th>
<th>VOLT</th>
<th>CAT#</th>
<th>EACH</th>
<th>100</th>
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</thead>
<tbody>
<tr>
<td>0.01 uf</td>
<td>630V</td>
<td>RMC-103</td>
<td>.20</td>
<td>.12</td>
</tr>
<tr>
<td>0.1 uf</td>
<td>400V</td>
<td>RMC-104A</td>
<td>.40</td>
<td>.30</td>
</tr>
<tr>
<td>0.1 uf</td>
<td>400V</td>
<td>RMC-105A</td>
<td>.65</td>
<td>.55</td>
</tr>
<tr>
<td>1 uf</td>
<td>250V</td>
<td>CP-105M</td>
<td>.55</td>
<td></td>
</tr>
<tr>
<td>1 uf</td>
<td>275V</td>
<td>CP-21</td>
<td>.65</td>
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</table>

### 100 VOLT RADIAL POLYESTER

<table>
<thead>
<tr>
<th>MFD</th>
<th>VOLT</th>
<th>CAT#</th>
<th>Price</th>
<th>100</th>
</tr>
</thead>
<tbody>
<tr>
<td>0.01 uf</td>
<td>250V</td>
<td>AMC-10</td>
<td>.10</td>
<td></td>
</tr>
<tr>
<td>0.047</td>
<td>400V</td>
<td>AMC-72</td>
<td>.10</td>
<td></td>
</tr>
<tr>
<td>0.022</td>
<td>400V</td>
<td>AMC-233</td>
<td>.12</td>
<td></td>
</tr>
<tr>
<td>0.033</td>
<td>400V</td>
<td>AMC-333</td>
<td>.15</td>
<td></td>
</tr>
<tr>
<td>0.047</td>
<td>400V</td>
<td>AMC-473</td>
<td>.15</td>
<td></td>
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<tr>
<td>0.068</td>
<td>400V</td>
<td>AMC-683</td>
<td>.17</td>
<td></td>
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<tr>
<td>0.082</td>
<td>400V</td>
<td>AMC-823</td>
<td>.17</td>
<td></td>
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<td>250V</td>
<td>AMC-224</td>
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<td>0.47</td>
<td>250V</td>
<td>AMC-473</td>
<td>.40</td>
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</table>

### NO HASSLE RETURN POLICY

75
**REMOTE CONTROLS**

**1-CHANNEL**

Keychain RF remote controls for 12Vdc applications but can be adapted for home use with the addition of a 12Vdc relay. Black-box receiver is 2.5” x 1.8” x 0.9”. Includes two keychain transmitters with batteries (VR22/CN22/CN23A) and hook-up diagram.

- 6 Amp  
  **CAT# RC-10** $18.75 each
- 15 Amp  
  **CAT# RC-11** $21.75 each

**4-CHANNEL**

Each channel operates 12Vdc 6A max. load and can be used in either “Latch” or “Momentary” modes.

- 4-output receiver is 3.25” x 2.57” x 1.22”. Key fob transmitter includes 12Vdc (27A) battery.  
  **CAT# RC-14** $39.95 each

---

**HEADPHONES**

**LIGHTWEIGHT STEREO HEADPHONES**

These are your classic, basic, lightweight stereo headphones for audio and computer applications. Adjustable headband. Small foam pads that sit very lightly on ear. 3.5mm right-angle phone plug with 4' cord.

- **CAT# HP-97** $1.75 ea. • 100 for $1.50 ea.

---

**MICRO-SD MEMORY**

<table>
<thead>
<tr>
<th>Size</th>
<th>CAT#</th>
<th>Price</th>
</tr>
</thead>
<tbody>
<tr>
<td>16 GB</td>
<td>MSD-16</td>
<td>$9.45</td>
</tr>
<tr>
<td>32 GB</td>
<td>MSD-32</td>
<td>$14.00</td>
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</tbody>
</table>

---

**MICRO-SD ADAPTER**

Enables use of MicroSD card with devices equipped with a standard SD card slot. Adapter has a write protection switch.

- **CAT# SDR-6** $1.25 each

---

**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** $9.50 • $7.50 each

---

**POLYPROPYLENE FILM CAPS**

<table>
<thead>
<tr>
<th>Value</th>
<th>Volts</th>
<th>CAT#</th>
<th>Price</th>
</tr>
</thead>
<tbody>
<tr>
<td>100 pF</td>
<td>250V</td>
<td>FC-100</td>
<td>$1.00 each</td>
</tr>
<tr>
<td>1500 pF</td>
<td>100V</td>
<td>FC-152</td>
<td>10 for $0.80</td>
</tr>
<tr>
<td>2700 pF</td>
<td>2KV</td>
<td>FC-272</td>
<td>15¢ each</td>
</tr>
<tr>
<td>5600 pF</td>
<td>2000V</td>
<td>FC-562</td>
<td>15¢ each</td>
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---

**VARIABLE CAPACITORS**

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<th>Value</th>
<th>CAT#</th>
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<tr>
<td>5nF</td>
<td>2000V</td>
<td>TCP-320</td>
</tr>
</tbody>
</table>

---

**MINI-METALLIZED POLYESTER CAPACITORS**

Tape and reel packaging.

<table>
<thead>
<tr>
<th>Value</th>
<th>Volts</th>
<th>CAT#</th>
<th>Price</th>
</tr>
</thead>
<tbody>
<tr>
<td>0.001 µF</td>
<td>100</td>
<td>MMC-102</td>
<td>6 for $1.00</td>
</tr>
<tr>
<td>0.1 µF</td>
<td>100</td>
<td>MMC-104</td>
<td>4 for $1.00</td>
</tr>
</tbody>
</table>

---

**0.1µF 100V ORANGE DROP CAP**

225PW ± 10%, 0.65” x 0.25” x 0.40”, 0.35” lead spacing.  
**CAT# RMC-104D** $1.25 each

10 for $1.00 each

---

**POLYESTER FILM CAPS**

1000 µF 225V 5%  
**CAT# RPC-405** 95¢ each • 10 for 85¢ each

---

**POLYESTER FILM CAPS**

100 pf 250V  
**CAT# FC-100** 10 for $1.00

100 for $0.80

---

**POLYESTER FILM CAPS**

1500 pF 100V  
**CAT# FC-152** 10 for 8¢ each

100 for 6¢ each • 1000 for 5¢ each

---

**POLYESTER FILM CAPS**

2700 pF 2KV  
**CAT# FC-272** 15¢ each

10 for 10¢ each

---

**POLYESTER FILM CAPS**

5600 pF 2000V  
**CAT# FC-562** 15¢ each

100 for 10¢ each

---

**POLYESTER FILM CAPS**

1 UF 630V  
**CAT# CP-105** $1.00 each

10 for 90¢ each

---

**POLYESTER FILM CAPS**

4 UF 225V 5%  
**CAT# RPC-405** Reduced Price

10 for 45¢ each • 100 for 30¢ each

---

**POLYESTER FILM CAPS**

4 UF 250V 5%  
**CAT# RPC-405S** Reduced Price

95¢ ea. • 10 for 85¢ ea.
# Nickel-plated Neodymium Rare Earth Magnets

Nickel-plated neodymium (NdFeB) magnets have ratings into the 45MGOe range far exceeding the Samarium Cobalt in the 32MGOe range and Alnico or Ceramics in the 8MGOe range.

**CAUTION!** Because of the high strength of Neodymium magnets, and to prevent injury to people or equipment, care must be taken when handling these around other magnets or metal objects.

<table>
<thead>
<tr>
<th>Description</th>
<th>Dimensions</th>
<th>Cat#</th>
<th>Price</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>SQUARE</strong></td>
<td>4.6 x 4.6 x 2mm</td>
<td>MAG-82</td>
<td>$1.20 each</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>100 for $12.00</td>
</tr>
<tr>
<td><strong>BAR</strong></td>
<td>5 x 10.2 x 2.7mm</td>
<td>MAG-74</td>
<td>$1.00 each</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>100 for $35¢</td>
</tr>
<tr>
<td><strong>DISC</strong></td>
<td>6 x 1.5mm</td>
<td>MAG-157</td>
<td>$1.00 each</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>100 for $10.00</td>
</tr>
<tr>
<td><strong>BAR</strong></td>
<td>25 X 15 X 2mm</td>
<td>MAG-144</td>
<td>$1.25 each</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>10 for $1.00</td>
</tr>
<tr>
<td><strong>BAR</strong></td>
<td>50 x 14.5 x 5.3mm</td>
<td>MAG-132</td>
<td>$3.95 each</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>10 for $3.65</td>
</tr>
<tr>
<td><strong>IRREGULARLY SHAPED</strong></td>
<td>28mm (longest dimension) x 16mm x 4.5mm thick</td>
<td>MAG-148</td>
<td>70¢ each</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>10 for 65¢ each</td>
</tr>
<tr>
<td><strong>FLAT ON ONE SIDE, CURVED ON OTHER</strong></td>
<td>18 x 19.5 x 5mm thick in center of arc</td>
<td>MAG-155</td>
<td>60¢ each</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>3 for 99¢ each</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>100 for 25¢ each</td>
</tr>
<tr>
<td><strong>TINY NEODYMIUM MAGNET</strong></td>
<td></td>
<td>MAG-161</td>
<td>5 for $1.00</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>100 for 10¢ each</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>500 for 7¢ each</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>1000 for 6¢ each</td>
</tr>
<tr>
<td><strong>CYLINDER</strong></td>
<td>6.35mm dia. x 5.1mm long</td>
<td>MAG-76</td>
<td>60¢ each</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>100 for 45¢ each</td>
</tr>
</tbody>
</table>

**POWERFUL NEODYMIUM RARE EARTH MAGNETS**

- **CYLINDER**: 0.25" dia. x 0.54" long  
  - **CAT# MAG-160**: 50¢ each  
  - 50 for 40¢ each • 100 for 35¢ each

- **BUTTON**: 9.5mm diameter x 5.1mm  
  - **CAT# MAG-80**: 75¢ each  
  - 15 for 65¢ each • 105 for 50¢ each

- **DISC**: 10mm diameter x 2mm thick.  
  - **CAT# MAG-143**: 5 for $1.00  
  - 100 for $16.00

- **CYLINDER W/ HOLE**: 12.1mm dia. x 9.5mm, 6.4mm hole.  
  - **CAT# MAG-116**: $1.75 each

- **DISC W/ HOLE**: 15mm diameter x 3mm, 4mm hole.  
  - **CAT# MAG-134**: $1.00 each  
  - 100 for 85¢ each

- **W/ HOLE FOR COUNTERSUNK SCREW**: 20mm diameter x 4mm thick.  
  - **CAT# MAG-149**: $1.85 each  
  - 100 for $1.50 each

- **ENCASED NEODYMIUM MAGNET**: Strong nickel-plated neodymium disc magnet, 1” dia. x 1/8” thick encased in a plastic shell. Shell splits apart when tapped gently on the edge with a hammer.  
  - **CAT# MAG-210**: $1.75 each  
  - 10 for $1.60 each

- **DISC**: 19mm diameter x 3mm thick.  
  - Red polarity dot on one side.  
  - **CAT# MAG-153**: $1.85 each  
  - 10 for $1.65 each

- **RING**: 50mm O.D. x 44mm I.D. x 9mm.  
  - **CAT# MAG-154**: $2.00 each  
  - 10 for $1.80 each

- **ARC-SHAPED**: 28mm (longest dimension) x 10mm wide overall x 3mm thick Plated. Some scratches.  
  - **CAT# MAG-147**: 75¢ each  
  - 10 for 65¢ each • 100 for 50¢ each

**MAGNETIC SHEET, FLEXIBLE**

Plastalloy rubber bonded strontium ferrite flexible magnet can be bent, twisted and flexed without loss of high magnetic energy. These sheets can easily be trimmed as needed. The white side can be readily written on with marker. 7-3/8” square with two corners trimmed. 0.065” thick.  
- **CAT# MAG-209**: $2.50 each
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.

<table>
<thead>
<tr>
<th>CAT#</th>
<th>Dimensions</th>
<th>w/o lid</th>
<th>1-9</th>
<th>10+</th>
</tr>
</thead>
<tbody>
<tr>
<td>1591-MSBK</td>
<td>3.3” x 2.2” x 0.8”</td>
<td>3.50</td>
<td>3.25</td>
<td></td>
</tr>
<tr>
<td>1591-ASBK</td>
<td>3.9” x 2.0” x 0.8”</td>
<td>3.75</td>
<td>3.50</td>
<td></td>
</tr>
<tr>
<td>1591-BSBK</td>
<td>4.4” x 2.4” x 1.1”</td>
<td>4.30</td>
<td>4.10</td>
<td></td>
</tr>
<tr>
<td>1591-CSBK</td>
<td>4.7” x 2.6” x 1.4”</td>
<td>4.65</td>
<td>4.35</td>
<td></td>
</tr>
</tbody>
</table>

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.

<table>
<thead>
<tr>
<th>CAT#</th>
<th>Dimensions</th>
<th>1-9</th>
<th>10+</th>
</tr>
</thead>
<tbody>
<tr>
<td>1598-ASGY</td>
<td>6.1” x 3.65” x 1.36”</td>
<td>9.10</td>
<td>8.50</td>
</tr>
<tr>
<td>1598-BSGY</td>
<td>5.26” x 5.3” x 2”</td>
<td>10.00</td>
<td>9.60</td>
</tr>
</tbody>
</table>

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.

<table>
<thead>
<tr>
<th>CAT#</th>
<th>Dimensions</th>
<th>1-9</th>
<th>10+</th>
</tr>
</thead>
<tbody>
<tr>
<td>1593-PBK</td>
<td>2.6” x 3.54” x 1.1”</td>
<td>4.15</td>
<td>3.95</td>
</tr>
<tr>
<td>1593-QBK</td>
<td>2.6” x 4.4” x 1.1”</td>
<td>4.75</td>
<td>4.55</td>
</tr>
<tr>
<td>1593-SBK</td>
<td>2.6” x 3.6” x 0.83”</td>
<td>4.10</td>
<td>3.85</td>
</tr>
<tr>
<td>1593-TBK</td>
<td>2.6” x 4.35” x 0.83”</td>
<td>4.50</td>
<td>4.30</td>
</tr>
<tr>
<td>1593-YBK</td>
<td>2.6” x 5.45” x 1.1”</td>
<td>5.10</td>
<td>4.85</td>
</tr>
</tbody>
</table>

ALUMINUM ENCLOSURE

Hammond# 1411HU. 102 x 56 x 56mm (4” x 2” x 2”) light grey aluminum box. Four self-tapping screws included. CAT# 1411-HU $7.50 each

DIECAST ALUMINUM ENCLOSURES

Aluminum enclosure with countersunk lid that machine screws into drilled and tapped holes. Lap joint construction provides protection from dust and water.

1.99” x 1.99” x 1.23” CAT# 1590-LB $7.25 each • 10 for $6.80 each
3.64” x 1.52” x 1.23” CAT# 1590-A $7.05 each • 10 for $6.65 each
4.39” x 2.34” x 1.23” CAT# 1590-B $8.40 each • 10 for $7.90 each
5.76” x 4.79” x 1.55” CAT# 1590-XX $11.20 each

Black smooth-gloss, polyester powder, finish. 4.4” x 2.4” x 1.2” CAT# 1590-BBK $10.20 each • 10 for $9.90 each

ALUMINUM BOXES W/ MOUNTING FLANGES

6.01” x 3.24” x 2.05” CAT# 1590-P1F $24.70 each
7.55” x 4.39” x 2.48” CAT# 1590-R1F $34.95 each
7.38” x 4.70” x 2.05 CAT# 1590-DF $28.00 each

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.

<table>
<thead>
<tr>
<th>Dimensions</th>
<th>CAT#</th>
<th>1-9</th>
<th>10+</th>
</tr>
</thead>
<tbody>
<tr>
<td>2.51” x 1.73” x 1.25”</td>
<td>MB-131</td>
<td>3.00</td>
<td>2.75</td>
</tr>
<tr>
<td>2.53” x 1.75” x 1.37”</td>
<td>MB-133</td>
<td>2.65</td>
<td>2.45</td>
</tr>
<tr>
<td>2.96” x 1.94” x 1.05”</td>
<td>MB-173</td>
<td>3.00</td>
<td>2.75</td>
</tr>
<tr>
<td>3.95” x 3.02” x 1.60”</td>
<td>MB-173G</td>
<td>3.00</td>
<td>2.75</td>
</tr>
<tr>
<td>4” x 3” x 1.6”</td>
<td>MB-132</td>
<td>3.00</td>
<td>2.75</td>
</tr>
<tr>
<td>4.33” x 2.24” x 0.83”</td>
<td>MB-420</td>
<td>3.70</td>
<td>3.40</td>
</tr>
<tr>
<td>5.3” x 3” x 1.9”</td>
<td>MB-113</td>
<td>4.50</td>
<td>4.00</td>
</tr>
<tr>
<td>3.97” x 2.12” x 1.72”</td>
<td>MB-113G</td>
<td>4.50</td>
<td>4.00</td>
</tr>
</tbody>
</table>

PROJECT BOXES W/ MOUNTING FLANGES

High-impal 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.

<table>
<thead>
<tr>
<th>Dimensions</th>
<th>CAT#</th>
<th>Each</th>
</tr>
</thead>
<tbody>
<tr>
<td>3.25” x 2.10” x 1.20”</td>
<td>MFB-20</td>
<td>2.75</td>
</tr>
<tr>
<td>5.12” x 2.68” x 1.72”</td>
<td>MFB-22</td>
<td>3.50</td>
</tr>
<tr>
<td>6.18” x 3.78” x 2.10”</td>
<td>MFB-24</td>
<td>5.45</td>
</tr>
</tbody>
</table>
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.
Table:<br>
<table>
<thead>
<tr>
<th>Dimensions</th>
<th>CAT#</th>
<th>Single</th>
<th>10+</th>
</tr>
</thead>
<tbody>
<tr>
<td>2.7&quot; x 1.7&quot; x 1.2&quot; H</td>
<td>TB-1</td>
<td>1.90</td>
<td>1.75</td>
</tr>
<tr>
<td>3.3&quot; x 2.1&quot; x 1.4&quot; H</td>
<td>TB-2</td>
<td>2.50</td>
<td>2.30</td>
</tr>
<tr>
<td>4.2&quot; x 2.7&quot; x 1.6&quot; H</td>
<td>TB-3</td>
<td>2.95</td>
<td>2.75</td>
</tr>
<tr>
<td>5.3&quot; x 3.3&quot; x 1.6&quot; H</td>
<td>TB-4</td>
<td>3.75</td>
<td>3.50</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.

### SOLDERABLE PERF BOARD WITH SOLDER PADS AND BUSS STRIPS
Multilayer epoxy boards. Holes on 0.1" centers for SIP and DIP components.

<table>
<thead>
<tr>
<th>Single Hole Pads</th>
<th>CAT#</th>
<th>Single</th>
<th>10+</th>
</tr>
</thead>
<tbody>
<tr>
<td>50 x 80mm</td>
<td>CAT# SB-24</td>
<td>$4.00</td>
<td>$4.00</td>
</tr>
<tr>
<td>80 x 100mm</td>
<td>CAT# SB-48</td>
<td>$6.60</td>
<td>$6.60</td>
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</tbody>
</table>

<table>
<thead>
<tr>
<th>Two Hole Pads</th>
<th>CAT#</th>
<th>Single</th>
<th>10+</th>
</tr>
</thead>
<tbody>
<tr>
<td>copper pads one side</td>
<td>SB-2H1</td>
<td>$3.25</td>
<td>$3.25</td>
</tr>
<tr>
<td>50 x 80mm</td>
<td>CAT# SB-2H1</td>
<td>$3.25</td>
<td>$3.25</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Solid Line Pattern</th>
<th>CAT#</th>
<th>Single</th>
<th>10+</th>
</tr>
</thead>
<tbody>
<tr>
<td>copper pads one side</td>
<td>SB-ST1</td>
<td>$3.15</td>
<td>$3.15</td>
</tr>
<tr>
<td>100 x 80mm</td>
<td>CAT# ECS-6</td>
<td>$4.00</td>
<td>$4.00</td>
</tr>
<tr>
<td>160 x 100mm</td>
<td>CAT# ECS-4</td>
<td>$6.95</td>
<td>$6.95</td>
</tr>
</tbody>
</table>

SOLDERABLE BREADBOARDS
Solderable, double-sided breadboard that can be used as a single proto 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).

### SNAPPABLE BREADBOARD
Solderable, double-sided breadboard that can be used as a single proto 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).

### 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.

### SOLDERLESS BREADBOARDS
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 & components can be used & re-used many times without damage to board or components.

### 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.

<table>
<thead>
<tr>
<th>Dimensions</th>
<th>CAT#</th>
<th>Single</th>
<th>10+</th>
</tr>
</thead>
<tbody>
<tr>
<td>2.7&quot; x 1.7&quot; x 1.2&quot; H</td>
<td>1.90</td>
<td>1.75</td>
<td></td>
</tr>
<tr>
<td>3.3&quot; x 2.1&quot; x 1.4&quot; H</td>
<td>2.50</td>
<td>2.30</td>
<td></td>
</tr>
<tr>
<td>4.2&quot; x 2.7&quot; x 1.6&quot; H</td>
<td>2.95</td>
<td>2.75</td>
<td></td>
</tr>
<tr>
<td>5.3&quot; x 3.3&quot; x 1.6&quot; H</td>
<td>3.75</td>
<td>3.50</td>
<td></td>
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</table>

<table>
<thead>
<tr>
<th>Solderable perf boards</th>
<th>CAT#</th>
<th>Single</th>
<th>10+</th>
</tr>
</thead>
<tbody>
<tr>
<td>1/2&quot; x 1/3&quot;</td>
<td>PC-1</td>
<td>75¢ each</td>
<td></td>
</tr>
<tr>
<td>1 7/8&quot; x 2 1/4&quot;</td>
<td>PC-2</td>
<td>$1.00 each</td>
<td></td>
</tr>
<tr>
<td>2 1/2&quot; x 3 1/8&quot;</td>
<td>PC-3</td>
<td>$1.50 each</td>
<td></td>
</tr>
<tr>
<td>3&quot; x 4 1/4&quot;</td>
<td>PC-4</td>
<td>$2.00 each</td>
<td></td>
</tr>
</tbody>
</table>

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 alphabetically. 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 PCB. 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 |

### 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.

### 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.

<table>
<thead>
<tr>
<th>Dimensions</th>
<th>CAT#</th>
<th>Single</th>
<th>10+</th>
</tr>
</thead>
<tbody>
<tr>
<td>2.7&quot; x 1.7&quot; x 1.2&quot; H</td>
<td>1.90</td>
<td>1.75</td>
<td></td>
</tr>
<tr>
<td>3.3&quot; x 2.1&quot; x 1.4&quot; H</td>
<td>2.50</td>
<td>2.30</td>
<td></td>
</tr>
<tr>
<td>4.2&quot; x 2.7&quot; x 1.6&quot; H</td>
<td>2.95</td>
<td>2.75</td>
<td></td>
</tr>
<tr>
<td>5.3&quot; x 3.3&quot; x 1.6&quot; H</td>
<td>3.75</td>
<td>3.50</td>
<td></td>
</tr>
</tbody>
</table>

### SOLDERABLE BREADBOARDS
Solderable, double-sided breadboard that can be used as a single proto 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).

### SOLDERLESS BREADBOARDS
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 & 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

ORDER TOLL FREE 1-800-826-5432 79
3260 contacts. 4 terminal strips, 7 buss strips, 4 binding posts mounted on an aluminum back plate 7 7/8" x 8 3/4" x 3/8" high. CAT# BH-3260 $32.00 each

ARDUINO UNO PROJECT HOLDER W/ BREADBOARD
Keeps your Arduino Uno next to your bread-board so jumper wires stay in place when making changes. Includes 400 point breadboard with buss strips. Four threaded standoffs and screws securely mount Uno to plate. 160 x 106mm overall. CAT# PBH-1 $9.50 each

BATTERY BOXES FOR BREADBOARDING
Completely enclosed with slide-off cover. Integrated On-Off switch. 6" leads with machined male pins for use with solderless breadboards.

Holds three AAA batteries for 4.5Vdc power. 2.49" x 1.45" x 0.62". CAT # BH-33A $3.65 each

Holds three AA batteries for 4.5Vdc power. 2.69" x 1.90" x 0.72". CAT# BH-AA3 $4.50 each

TWEEZER TEST LEADS
A must for testing small, in-circuit components. Shrouded banana plugs fit most test meters. Tweezer marked with + and - symbols. 5.9" long tweezer probe. Overall length of leads, 24". CAT # TL-126 $6.95 each

JUMPER WIRE SETS
Pre-formed jumper wires for use with solderless breadboards. 14 color-coded lengths. AWG 22 solid wire. Unbreakable clear plastic storage case.

140 PIECE ASSORTMENT
10 of each size CAT # JW-140 $6.25 – $3.75 each

350 PIECE ASSORTMENT
25 of each size CAT # JW-350 $12.95 each

TEST CABLES & CLIPS
ECONOMY TEST LEADS
Red and black lead set with banana plug on one end & pin probe on other end. 3 ft. long. CAT# TL-100 $2.80 per set

10 for $2.55 per set

TEST LEADS WITH PIN PLUGS
Set of red and black test leads with pin plugs. 22" long cables. CAT# TL-112 $1.85 each

TEST LEAD: BNC TO ALLIGATOR CLIPS
7" Mueller test cable. BNC male plug to red and black alligator clips. CAT# TL-105 $6.95 each

MINI-HOOK JUMPERS & PROBES
Mini-hooks are great for connection to parts in high-density areas. They give a firm, insulated connection

SET OF TWO 1 1/2" MINI HOOK JUMPERS
Two 18" long mini-hook patch cords. One black, one red, with 1.5" long mini-hooks on each end. CAT# MTC-2 $3.25 each

2" MINI-HOOK JUMPERS
Five 18" long mini-hook patch cords. Black, red, white, green and yellow. CAT# MTC-5 set of 5 for $7.95
MINI-GRABBER TEST CLIPS, BLACK/RED
1.65" mini-clips. Mini-hooks provide a firm, insulated connection to small terminals and wires in high-density areas. CAT# MTC-7 $1.80 per pair

FLASHLIGHTS

170 LUMEN WORK LIGHT -- BRIGHT
Nebo 6327 LarryC. EXTREMELY BRIGHT! Equipped with new C-O-B LED technology, it outputs 170 lumens of intense light. The 180° rotating magnetic clip allows for hands-free lighting. The reinforced plastic body design is water and impact-resistant. Top-positioned, ON/OFF button. Powered by 3 AAA batteries (included). 6.375" long. Includes retail box. Comes in red, blue, black or yellow (no choice of color). CAT# FL-170 $8.99 each

MICRO FLASHLIGHT, 2.75" LONG
NEBO Micro REDLINE® OC™ High-quality. Small enough to fit in the palm of your hand, but bright enough for any situation. High-power 360 LUX LED. Anodized aircraft-grade aluminum; impact-resistant. 6x adjustable zoom. Steel belt/pocket clip. Magnetic base. Powered by 1 CR123A battery (included). CAT # FL-627 $14.95 each

PORTABLE LED LANTERN LIGHT
Battery operated, lightweight portable LED lantern light. Ultra-bright led light is useful for camping, hiking and emergency situations. Features: 360-degree illumination, adjustable light setting. Easily collapses to 5" high; expands to approximately 7.40" high. 3.4" dia. magnetic base conveniently attaches to metal fixtures. Requires 3 AA batteries (not included). CAT# FL-170 $8.99 each

NEBO TANGO WORK LIGHT
Features two high-power light sources, a 250 lumen spot light and 750 lumen C-O-B work light. Fully rechargeable and also serves as a power bank for your USB powered devices. A seven position 180° rotating arm functions as a hanging hook, carry handle, or a kickstand. And best of all, use Turbo Mode to combine the spot light and work light for 1,000 lumens of intense illumination. Non-slip rubber coating. Water and impact-resistant. Powered by rechargeable battery (included). 5.875" high x 5.875" wide x 1.75" deep. CAT # FL-665 $39.95 each

MINI JUMPERS
10 TEST LEADS 1" CLIPS
2 each of 5 colors. CAT# MTL-10 $2.95 per set

REGULAR JUMPERS
5 TEST LEADS 2" CLIPS CAT# HDTL-5 $2.75 each

TEST LEADS WITH SPRING-TYPE TEST CLIPS
10 jumpers, 5 colors, 32" long. 1.75" clips with stronger jaws. CAT# HDTL-10 $5.40 each

ALLIGATOR CLIPS
2" ALLIGATOR CLIP
Solid, spring-action clip with screw. 5mm cable access hole can connect to banana plug test lead. CAT# ALG-M 5 for $1.00 100 for 17¢ each • 1000 for 15¢ each

INSULATED ALLIGATOR CLIPS
Small, medium and large alligator clips with rubber boot. Sold in pairs, one red and one black.
1.07" alligator clips CAT# ALG-10 65¢ per pair • 100 for 50¢ per pair
1.4" alligator clips CAT# ALG-15 75¢ per pair • 100 for 60¢ per pair
1.75" alligator clips CAT# ALG-20 85¢ per pair • 100 for 70¢ per pair

INSULATION-PIERCING TEST CLIPS
JS Popper, Inc. #JP-8681. Famous "Bed-of-Nails" test clip designed for use with smaller gauge wires. Angled nose. 2.6" long. Includes rubber boots. These are new clips, removed from unused test leads. Includes two clips with one red and one black boot. CAT# ALG-34 $6.50 pair

New Item

ORDER TOLL FREE 1-800-826-5432
### TEST EQUIPMENT AND ACCESSORIES

**3 1/2 DIGIT LCD MULTIMETER**
Velleman# DVM890
An incredible array of features at a great price.
20A DC current, 1000 DC Volts.
20A AC current, 700 AC volts.
Resistance to 20 M. Capacitance from 2000pF to 20uF. Frequency measurement to 20kHz. Temperature measurement: -58°F to 1832°F with K-type thermocouple. Low battery indication, overload protection and auto power off function. Protective rubber shell, test leads and thermocouple included.
**CAT# DVM-890 $45.00 each**

**ECONOMY DIGITAL MULTIMETER**
Economical and compact multimeter with a 3 1/2 digit LCD for measuring DC and AC voltages, DC currents, resistance, diodes and transistors (hFE). Features overload protection. Ranges: DC and AC voltage, 500 volts, DC current, 0.2 A (fused), 10 A (not fused), resistance to 2M. Ideal for hobbyists, for use in the field and workshops. Test leads, instruction book included. 3.70" x 1.81" x 1.03" h.
**CAT# DVM-810 $7.95 each**

**CAPACITANCE / INDUCTANCE / RESISTANCE METER**
GME # LCR200.
Portable inductance, capacitance and resistance meter. Large four-digit LCD display. Auto zero adjustment. Over-range indicator.
Inductance ranges: 2mH, 20mH, 200mH, 2H, 20H.
Capacitance ranges: 2nF, 20nF, 200nF, 2uF, 20uF, 200uF, 1000 uF. Resistance ranges: 200Ω, 2kΩ, 20kΩ, 200kΩ, 2MΩ. Includes test leads, instructions and 9 Volt battery.
**CAT# LCR-200 $58.00 each**

**Laser Digital Tachometer**
This non-contact tachometer detects light reflected off an object and reads out RPM value. Micro computer technology with laser beam gives accurate & fast, once per second, readings. Stores & recalls the last, maximum and minimum RPM readings. Readings remain in memory until the next measurement. 2.5 to 99,999 RPM range. Large 5-digit LCD display. CE certified. Operates on 4 AA cells, included. Storage case included.
**CAT# TCH-4 $47.75 each**

### LCD Multimeter W/ Backlight
Velleman# DVM850BL
For features, accuracy and ruggedness, this is a great, inexpensive multimeter.
DC current (10 A), DC and AC voltage (600 V), resistance (2 M ohm), diode, transistor tester, audible continuity and hold button. Protective rubber shell and test leads included.
**CAT# DVM-850BL $17.95 each**

### Digital Multimeter
Dawson# DDM423
**Specifications:**
- AC/DC Voltage: 600V
- AC/DC Current: 10A
- Resistance: 2MΩ · Data hold
- Temperature (K-type): -4°F to 1832°F (-20°C to 1000°C)
- Diode test · Continuity with buzzer
- Includes: Test leads, 9V battery
**CAT# DDM-423 $31.99 each**

### Digital Multimeter W/ Logic Test
Dawson# DDM190D. Portable pen-type digital multimeter featuring 5V logic level test, DC/AC voltage and current measurement, auto/manual range, maximum and hold reading, auto power off, and LCD built in for easy reading. Slim, lightweight design w/ retractable probe is mobile and ideal for both professionals and hobbyists.
**Specifications:**
- Auto and Manual Range.
- Max. Voltage: 600V DC or AC
- Display: 0.79 In. (20mm) LCD
- Maximum Number: 1999
- Negative polarity indicator
- Overload Indication: Display ‘OL’
- Sampling Time: Approx. 0.4 second/time
- Low Battery Indication
- Auto Power Off: 15 min.
- Power Supply: 1.5V x 2 AAA battery
- 8.2 x 1.5 x 1.14” (208 x 38 x 29mm)
- Includes: Test Leads, Alligator Clip & cable, Two 1.5V AAA Battery, Case and User’s Manual
**CAT# DDM-190D $38.99 each**

### Scope Probe Set
60 mHz Probe with BNC connector. Comes with ground lead, retractable hook tip, pin tip with IC lead cover and standard cover.
**CAT# PR-60 $19.50 each**

### Continuity Tester
GB Instruments™ GCT-304A. Probe lights when continuity exists. Flexible 34” cable with alligator clip. Requires 2 AA batteries (not included).
**CAT# CT-19 $2.95 each**
### TOOLS

#### HEMOSTATS
Hemostats are great for clamping onto small components while soldering or desoldering. Stainless steel.

- **5" STRAIGHT TIP**
  - CAT# HM-1 $1.65 each

- **5" CURVED TIP**
  - CAT# HM-2 $1.65 each

#### CUT-N-STRIP TOOL
Platinum Tools 10503. Self-adjusting wire stripper and flush cutter. Patented stripper self-adjusts to wire sizes 26-14 AWG. Catch, hold and strip wire in one quick motion.

- CAT# GW-503 $13.50 each

#### WIRE STRIPPER / CUTTER
Stripper adjusts from 24 to 12 ga wire. Spring-loaded to open after each usage. Plastic grips.

- CAT# WS-150 $4.00 each

#### 5" FLUSH CUTTER
Trim leads on PC boards. Thin cutting edge for hard to reach areas. Insulated handle. Spring return.

- CAT# FC-14 $5.25 each

#### ECONOMY CRIMP TOOL
For insulated and uninsulated solderless terminals, butt connectors and end caps. Also crimps D-sub and other connector pins.

- CAT# CT-1 $8.75 each

#### CUTTER & STRIPPER TOOL
Impulse WS3: 22-10 AWG 5-in-1 precision cutter/stripper (wire stripper, wire cutter, crimper, plier ends, wire loop). Strips stranded and solid wire from 22-10 AWG. Lockable for safe handling and storage. Thick handled blade, made from hardened carbon steel with machined blade. 6.5" overall length.

- CAT# WS-30 $6.95 each

#### TWEEZERS, 6" LONG
Aven 18.426. 6" long straight tweezer with pointed serrated tips. Stainless steel. Includes plastic storage pouch.

- CAT# TW-9 $3.75 each

#### DRAWER LINER, 22" X 10.5"
22" x 10.5" x 0.06" thick textured black, soft-rubber foam pad. Easy to cut down to size to line your tool box. Perfect for protecting tools from scratches, rust and dents.

- CAT# DL-2 75¢ each • 10 for 60¢ each

#### LED ILLUMINATED JEWELER’S LOUPES
Tear drop shaped and has crystal clear viewing lens. On-Off LED slide light switch. Great for inspecting jewelry, diamonds, mineral, plants, and insects for identification. This tool is also used in geology, biology, and the laboratory. Comes with three AG7 batteries and a battery key to open/close the battery compartment. Plastic storage container for protecting and transporting your loupe when not in use.

- Magnification: 10x. Glass lens diameter: 21mm. CAT # MGL-11 $6.95 each
- Magnification: 10x. Glass lens diameter: 18mm. CAT # MGL-12 $5.95 each

#### JEWELER’S LOUPE, CHROME PLATED
Chrome plated round metal body eye loupe with swing-away metal cover. Glass lens. Magnification: 10x. Lens diameter: 18mm. Includes a custom fitted plastic case. 1-1/4" x 7/8" x 3/4".

- CAT# MGL-13 $2.95 each

#### HOT-MELT GLUE GUN
40W hot-melt glue gun. Ideal for occasional quick repairs & assembly. Uses standard 7/16" (11mm) diameter glue sticks, like our CAT#s HMG-5 and HMG-6 below. Includes two 4" long sticks. UL listed.

- CAT# GN-1 $8.75 each

#### MAGNETIC PARTS TRAY, 4" DIAMETER
Keeps work area tidy and allows for easy access to metal parts. Great for working on cars and keeping hardware close. 2.5" diameter rubberized magnet is powerful enough to hold hardware in any position. Stainless steel finish.

- CAT# MPT-2 $3.00 each

#### 10" LONG, 7/16" DIAM. GLUE STICKS

<table>
<thead>
<tr>
<th>Color</th>
<th>CAT#</th>
<th>EACH</th>
<th>10</th>
</tr>
</thead>
<tbody>
<tr>
<td>black</td>
<td>HMG-5</td>
<td>$1.00</td>
<td>85¢</td>
</tr>
<tr>
<td>translucent</td>
<td>HMG-6</td>
<td>$1.00</td>
<td>85¢</td>
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</tbody>
</table>

#### 60CC SYRINGE WITH THUMB RING
Re-usable 60CC plastic syringe, 1.30" diameter x 4.85" long, plus 1.47" long tip. Graduated up to 60cc / 2 oz. Includes cap.

- CAT# SYR-60 $1.85 each
**SOLDERING IRONS AND ACCESSORIES**

### VARIABLE TEMPERATURE 16-30 WATT SOLDERING IRON

Xytronic Model 258

Professional soldering iron with temperature control on handle. Temperature can be adjusted from 250-450°C (500-800°F), 16-30 Watts. LED hi/low temperature indicator. Includes long-lasting, chrome plated, iron-clad, pre-tinned tip (PL-404). 3-conductor grounded power cord. UL.

CAT# IR-258 \$24.50 each

**30 WATT SOLDERING IRON**


CAT# IR-230 \$18.50 each

### SOLDERING TIPS FOR XYTRONIC IRONS ABOVE

1.6 MM PENCIL TIP CAT# PL-404 \$8.00 ea.

5 MM CHISEL TIP CAT# PL-410 \$8.00 ea.

0.8 MM PENCIL TIP CAT# PL-401 \$8.00 ea.

3.2 MM CHISEL CAT# PL-405 \$8.00 ea.

### HOBBY SOLDERING IRONS

Pencil-style soldering iron ideal for students, craft and hobby repairs, occasional use.

30 Watt CAT# IR-330 \$7.95 each

60 Watt CAT# IR-60 \$8.95 each

### 12 VDC SOLDERING IRON

Nyleo# NL-001. 30W soldering iron. Good for a quick repair when AC power isn't nearby. Equipped with a XT60 power plug used on many hobby battery packs.

CAT# IR-112 \$11.95 each

### 50W TEMPERATURE-CONTROLLED SOLDER STATION

Veillemann # VTSSSU Adjustable solder station, 175-480°C. Protective iron holder with sponge. LED power indicator. Grounded power cord. 195 x 100 x 90mm. Includes CAT# PL-50 pointed tip. Other tips available. CE, RoHS.

CAT# IR-50 \$29.95 each

Extra Tips for IR-50 solder station

CAT# PL-50

CONICAL TIP, 2MM (included w/ IR-50) \$2.75 ea.

CAT# PL-51

CHISEL TIP, 3MM \$3.00 each

CAT# PL-52

CHISEL TIP, 2MM \$3.00 each

CAT# PL-53

CONICAL TIP, 1.5MM \$3.00 each

### ROsin-Core Solder

**Sn63/Pb37**

Water soluble, no-clean flux. Rosin Flux Core.

<table>
<thead>
<tr>
<th>Roll Dia.</th>
<th>CAT#</th>
<th>Price</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 oz 0.5mm</td>
<td>SMD-4</td>
<td>$5.85</td>
</tr>
<tr>
<td>2 oz 0.5mm</td>
<td>SMD-5</td>
<td>$8.95</td>
</tr>
<tr>
<td>4 oz 0.8mm</td>
<td>SOL-4637</td>
<td>$12.95</td>
</tr>
<tr>
<td>1/2 lb 0.8mm</td>
<td>SOL-5637</td>
<td>$19.60</td>
</tr>
<tr>
<td>1 lb 0.6mm</td>
<td>SOL-1637</td>
<td>$31.40</td>
</tr>
<tr>
<td>1 lb 1mm</td>
<td>SOL-0637</td>
<td>$24.00</td>
</tr>
<tr>
<td>1 lb 3mm</td>
<td>SOL-125</td>
<td>$25.00</td>
</tr>
</tbody>
</table>

### Sn60/Pb40

Water soluble, no-clean flux

<table>
<thead>
<tr>
<th>Roll Dia.</th>
<th>CAT#</th>
<th>Price</th>
</tr>
</thead>
<tbody>
<tr>
<td>1/2 lb 1mm</td>
<td>SOL-564</td>
<td>$16.65</td>
</tr>
<tr>
<td>1 lb 0.6mm</td>
<td>SOL-644</td>
<td>$29.00</td>
</tr>
</tbody>
</table>

Tube Dispenser 7’ 1mm diameter

CAT# TS-110 \$2.35 each 10 for \$2.15 each

### LEAD-FREE SOLDER 1/2 LB ROLL

SN99.3/CU 0.7. 1mm. Rosin-core, no-clean flux, compatible with leaded and lead-free solder. Suitable for hand-soldering electronic components and terminals.

CAT# LFS-532 \$26.60 each

### SOLDERING ACCESSORIES

**SOLDER STAND**

Spring steel soldering iron holder. Includes replaceable pad for cleaning iron tip.

CAT# 50B-205 \$5.00 each

**SOLDER SUCKER**

High performance cleaning tool which offers excellent suction for solder removal.

CAT# 50B-410 \$6.00 each
SOLDER SUCKER
Extra-powerful desoldering pump with Teflon nozzle. Lightweight, large capacity spring-loaded cleaning tool offers excellent suction for solder removal.
CAT# SSR-1 $4.50 each

VACUUM PICK UP TOOL FOR SMD COMPONENTS
For quick and easy pick up of light-weight components such as surface mount integrated circuits. Manually powered. The suction is created when button is pressed and released. 5.50” long x 0.50”. Includes hard shell plastic case for storage.
• Three vacuum Cup Rubbers: 3/8”, 1/4”, 3/32”
• Two vacuum tips, angled: 0.08” OD x 0.06” ID, 0.06” OD x 0.04” ID
• One vacuum tip, straight: 0.08” OD x 0.06” ID
CAT# VPU-1 $5.80 each

SOLDER SPONGES
Yellow sponge for removal of solder residue. 2” x 1.4” x 0.07” thick. Soak before using.
CAT# SPN-2 2 for $1.00

SOLDERING TIP CLEANER WITH METAL STAND
An effective method for cleaning solder iron tips quickly, without heat loss. Weighted stainless steel holder with low-abrasive brass shavings. Rubber foot pad stays put on the work bench.
CAT# TC-460 $9.00 each
Replacement tip cleaner element
CAT# TC-459 $3.00 each

DEOXIT® TIP TINNER
For cleaning and protection of soldering iron tips. Prevents oxidation of tips. 14.2 grams.
CAT# TPC-14 $8.95 each

TECHSPRAY® DE-SOLDERING WICKS
No-clean flux coated braid for easy removal of parts from PC boards. Top quality solder wick. Does not leave behind ionic flux residues. 5 feet per spool. RoHs compliant. Meets MIL-F-142560D. Techspray 1822-5F #3 Green. 0.075” wide.
CAT# SWK-3 $3.50 each 25 for $3.00 each

DE-SOLDERING WICK
For easy removal of parts from P.C. boards. Top quality solder wick. 5” per spool. 1/16” wide.
CAT# SWK $2.25 per spool

HELPING HAND with MAGNIFIER
Allow both hands freedom to work. Magnifying lens makes work easy to see.
CAT# HELPH-M $7.50 each

SOLDERING PASTE / FLUX
Water soluble, no-clean flux paste. ROHS compliant. 50G (1.75oz).
CAT# SP-44 $8.50 each

CHIPQUICK® SMD SOLDER / DESOLDER SUPPLIES

TACK FLUX IN SIX 2CC SQUEEZE TUBES
The same flux used in many of the other Chip Quik products. The squeeze tube has a neat applicator tip and a tight cap.
CAT# SMD-3 $14.95 each

63/37 SOLDER PASTE
Solder paste, no clean, 63Sn/37Pb in 5cc syringe. 15g. With plunger and tip.
CAT# SMD-6 $15.75 each

SOLDER PASTE, LEAD-FREE, LOW-TEMP -- 5CC SYRINGE
ChipQuik® SMDLTLPF Solder Paste Sn42/Pb58. No clean. Lead-free. Low temperature melting point. For lead and lead-free applications.
CAT# SMD-7 $17.50 each

FLUX PENS, 10ML
Ideal for all rework, solder and desolder applications. For Leaded and Lead-Free applications. 10ml pens with tip. Flux Type: No-Clean Liquid FluxChipQuik® CQ4LF. Flux Classification: INM0. VOC free.
CAT# LFP-4 $7.95 each

63/37 SOLDER PASTE, 50G JAR
ChipQuik® SMD291AX50T3 Alloy: Sn63/Pb37. Flux Type: Synthetic No-Clean. Flux Classification: REL0. Metal Content: 90.25% metal by weight. Particle Size: T3 (25-45 microns). Melting Point: 183C (361F)
CAT# SMD-291 $19.50 each
### DC MOTORS

<table>
<thead>
<tr>
<th>Voltage Range</th>
<th>Motor Type</th>
<th>Description</th>
<th>Shaft Dimensions</th>
<th>神仙价格</th>
<th>Reduced Price</th>
<th>Current Price</th>
<th>Quantity Discounts</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.5-3 VDC MINI-MOTOR</td>
<td>Tiny motor with offset weighted shaft. Designed to vibrate in mobile communications devices. Operates on 1.5-4.5 Vdc. Shaft: 4mm dia. without rubber. Rubber casing is 5 x 6.5 x 11mm. Gold contacts.</td>
<td>0.9&quot; diameter x 1.05&quot; long. Weight approx. 0.8 lb.</td>
<td>10 for $1.10 each</td>
<td>100 for $0.95 each</td>
<td>$1.25 each</td>
<td>$1.00 each</td>
<td>100 for $0.95 each</td>
</tr>
<tr>
<td>1.5-4.5 VDC VIBRATING MOTOR</td>
<td>Vibrating motor with offset weighted shaft. Fairly vigorous vibration at 3Vdc, 150mA. Works on 1.5-4.5Vdc. Motor is 0.9&quot; diameter x 1.05&quot; long. Weight is 0.81&quot; diameter half-moon x 0.22&quot; thick.</td>
<td>3mm diameter shaft. Weight is press-fit and can be removed fairly easily if not needed. Solder-loop terminals.</td>
<td></td>
<td></td>
<td>$1.25 each</td>
<td>$1.00 each</td>
<td>100 for $0.95 each</td>
</tr>
<tr>
<td>2-8 VDC MINI-MOTOR</td>
<td>Mabuchi #FF-030PA08250 Body: 15.5 x 12 x 20mm long. Shaft: 1.5mm diameter x 8mm long. Two tapped mounting holes on 10mm centers, ISO M2.0 x 0.4. No-load rating: 6Vdc, 10,500 RPM. Solder terminals.</td>
<td>1.5mm diameter x 9mm long splined shaft. No-load rating: 11,800 RPM @ 12Vdc, 0.56A. Push-in-style terminals. Push wire into slots to make connection.</td>
<td>10 for $0.85 each</td>
<td>70 for $0.50 each</td>
<td>$1.25 each</td>
<td>$1.00 each</td>
<td>100 for $0.95 each</td>
</tr>
<tr>
<td>6 VDC MOTOR</td>
<td>Nissei Denki. 29.4mm long x 20.0mm diameter. Shaft: 10mm long x 1.5mm long. No-load specs: 12,000 RPM @ 6 Vdc, 40mA. Operates on 1-8 Vdc range. Two threaded mounting holes on motor face on 12mm centers. Solder-lug terminals.</td>
<td>9&quot; leads</td>
<td></td>
<td></td>
<td>$1.35 ea.</td>
<td>100 for $1.05 ea.</td>
<td></td>
</tr>
<tr>
<td>6 VDC 13,000 RPM MOTOR</td>
<td>Relatively powerful little motor. 13,000 RPM @ 6Vac / 250 Ma. 1.08&quot; diameter x 1.83&quot; long. 2mm diameter shaft with a 9mm gear. Red and black 18 AWG wire leads with miscellaneous connectors.</td>
<td></td>
<td></td>
<td></td>
<td>$2.50</td>
<td>$1.50 each</td>
<td>10 for $1.25 each</td>
</tr>
<tr>
<td>6 VDC MINI-MOTOR</td>
<td>Mabuchi #RF-130CH12250. Body: 17mm dia. x 22.5mm long Shaft: 1.5mm dia. x 8.6mm long. Operates on 2-6 Vdc. No load Spec: 8100 RPM @ 6 Vdc, 0.036A. At max efficiency: 6600 RPM @ 6 Vdc, 0.16A. 0.76M-N-M (0.76 gcm) torque. Stall Torque 4.12mN-m (42 gcm) 0.7A</td>
<td></td>
<td></td>
<td></td>
<td>$1.00 each</td>
<td>50 for $0.90 each</td>
<td>100 for $0.80 each</td>
</tr>
<tr>
<td>6-12 VDC MOTOR</td>
<td>Johnson Motor HC613LG-6411 A fairly powerful motor, probably designed for 6-12Vdc. Operates as low as 2 Vdc. Requires about 1.5A @ 12Vdc, no load.</td>
<td>37mm long, 3mm dia. shaft.</td>
<td></td>
<td></td>
<td>$1.75 each</td>
<td>10 for $1.50 each</td>
<td></td>
</tr>
<tr>
<td>8-16 VDC MOTOR</td>
<td>Mabuchi #FC-280PT-20150 Body: 24.2 x 18.3 x 30.5mm long, excluding shaft. 2mm diameter x 9mm long splined shaft. No-load rating: 11,800 RPM @ 12Vdc, 0.56A. Push-in-style terminals. Push wire into slots to make connection.</td>
<td></td>
<td></td>
<td></td>
<td>$1.50 each</td>
<td>10 for $1.35 each</td>
<td>120 for $1.20 each</td>
</tr>
<tr>
<td>16MM PRECISION DC MOTOR</td>
<td>Namiki #SCL16-3424 Precision DC coreless motor. Quiet, smooth operation. The low inertia coil provides quick response, quiet operation, and no cogging. 16mm dia. x 34mm long. 1.5mm dual shaft. No-load measurements: 9000 RPM @ 18V @11mA. 9&quot; leads</td>
<td></td>
<td></td>
<td></td>
<td>$9.00 each</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**VISIT OUR WEBSITE - WWW.ALLELECTRONICS.COM**
**12 VDC MOTOR**  
Buehler# EC775596  
12 Vdc 200 mA, 5600 RPM, 34mm dia. x 55mm long, 3mm dia shaft with pulley.  
CAT# DCM-455 $2.00 each

**6 - 24 VDC HIGH-SPEED MOTOR**  
Buehler# 13.65.36  
High-speed permanent magnet motor 6-24 VDC with tach output.  
7,000 RPM @ 12Vdc, 100mA (no-load). 34mm dia. x 55mm long, 3mm dia shaft with pulley. Four 90° leads with 4-pin female connector (0.1”).  
CAT# DCM-408 $2.00 each

**24 VDC MOTOR**  
Operates on 18-30 Vdc.  
24 Vdc, 0.2A no-load rating. 36mm dia. x 57mm long, 3mm dia. x 20mm long shaft. Solder/cool terminals and shaft on the same end.  
CAT# DCM-461 $1.25 each  
10 for $1.00 each

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## DC GEAR MOTORS

### SMALL 3-12VDC GEAR MOTOR  
Mini DC gear motor, ideal for robotics. Light weight, high torque, low RPM. 1" long gearhead motor with all metal gears. 1:10 reduction ratio. Rated 3-12Vdc. 100 RPM @ 6Vdc/0.07A. 80RPM with load.  
- Overall Dimensions: 26 x 12 x 10mm  
- Shaft: 3 x 10mm  
- Rated Torque: 2 kg/cm  
- Stall Torque: 16 kg/cm  
- Stall Current: 1A  
CAT# DCM-497 $5.00 each

### 3.7 VDC MOTOR WITH PROPELLER  
Tiny motor and gear-driven propeller for model airplanes or propeller driven cars. Overall propeller length, 75mm. Motor, 7mm diameter x 26mm long.  
CAT# DCM-498 $4.75 each

### 6 VDC, 25 RPM GEAR MOTOR  
New gear head motor prepped with an arm that rotates an offset axle in a 1" circle. Can be used to facilitate reciprocating action. Motor is 1.45" D x 3.00" L. No-load specs: 25RPM @ 6Vdc, 150mA. Prepped with wire leads and drive arm. Includes a custom mounting bracket and slotted metal link rod.  
CAT# DCM-470 $4.75 each  
10 for $4.25 each • 100 for $3.75 each

### 6 VDC GEAR MOTOR  
Power Electric Distribution  
21267-000 Rev.B. 6 Vdc gear motor. No-load rating: 80 RPM @ 6Vdc, 110mA. Works well down to 1.5Vdc (12RPM). 61mm L x 20mm D. 4mm diameter x 11mm flattened shaft. 280mm leads with 2-pin female connector.  
CAT# DCM-365 $5.95 each

---

**6-24 VDC GEAR MOTOR, 1:84 RATIO**  
Henkkwell# PZ22GR0120R-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

### 12 VDC GEAR MOTOR  
No-load measurements: 520 RPM @ 12Vdc, 250mA. Works as low as 3Vdc (approx. 100RPM). Overall length, 57mm. Gearbox, 27mm diameter x 23mm long. Motor, 24mm diameter x 30mm long. Flatted shaft, 6mm diameter x 20mm long. 48mm leads terminated with 2-conductor female connector, 2mm spacing (fits our connector CAT# SBH-1).  
CAT# DCM-475 $4.75 each  
25 for $3.75 each • 100 for $3.50 each

### 85 RPM 12 VDC GEAR MOTOR  
33JPF-15380-50. Quality 12Vdc gear-motor runs 85rpm @ 42mA (no-load), but has input voltage range from 2 - 20 Vdc. At 12 Vdc draws about 160mA typical under load. Overall length excluding shaft - 50mm. Overall dia. - 33mm. Flatted shaft length 6.5mm, shaft diameter 4.0mm. Solder lugs. Ideal for robotics, modelers, hobby projects.  
CAT# DCM-416 $5.50 each  
10 for $4.50 each

### SMALL DC GEAR MOTOR, 3V 20 RPM  
Mini DC motor w/ plastic/nylon gear assembly. 20 RPM @ 3Vdc, no load. Plastic gear housing, nylon gears. Body dimensions 42mm x 42mm x 17mm. 2mm shaft with square shaped extension. Overall shaft dimensions 36mm L x 5mm diameter.  
CAT# DCM-542 $3.00 each

### 24 VDC GEAR MOTOR W/ TURNTABLE  
Powerful, low-current DC motor and gearbox with a 4.9" diameter nylon turntable. Turntable can be removed from motor. Motor gearbox has a 3/8" diameter shaft that is flattened and splined.  
**Specifications:**  
45RPM @ 24 Vdc, 60mA - operates at 12Vdc at 1/2 speed.  
Mabuchi motor RS-380SH 1.1" dia. x 1.67".  
Molon gearbox# CHM-2435-1  
2.75" x 3.00" x 0.57"  
CAT# DCM-351 $9.75 each
6-12 VDC 40 RPM GEAR MOTOR WITH SWITCH
Gear motor with 1/4” shaft. 40 RPM @ 12Vdc. 20 RPM @ 6Vdc. Gear box contains a micro switch that switches on briefly every revolution. 3.0” x 2.4” x 0.70” plastic gear box.
CAT# DCM-493 $4.50 each

GEARMOTOR & WHEEL ASSEMBLY
4.5 - 10 Vdc gear motor with a 2.75” diameter x 1” wide hard plastic wheel and rubber tire. Wheel can be attached to either side of motor. Motor with gearbox is 2.5” long x 0.75” x 0.9” not including axle or wheel. Low current consumption, 120 RPM @ 6Vdc, 100Ma (no-load rating).
CAT# AC-32 $3.75

6-12 VDC 40 RPM GEAR MOTOR WITH SWITCH
For converting rotary to linear motion. 0.25” dia. x 0.80” long worm gear with nylon lead screw. Lead screw is 0.25” thick with arms that extend in both directions, 1.4” overall length.
CAT# SMT-387 $5.75 each

STEPPER WITH ROTATING MAGNET
Attached to the shaft is a small 6.3mm dia. x 6.3mm long cylindrical neodymium magnet. Ideal for applications that use hall effect sensors.
CAT# SMT-388 $3.50 each

3 AMP DC MOTOR SPEED CONTROLLER
Controls the speed of a DC motor using Pulse-Width-Modulation. An efficient method of changing the speed of a DC motor without changing voltage. Has a potentiometer with on-off switch and a four-position screw-terminal strip for easy connection to motor and power source. Can be used as a lighting dimmer and similar applications with DC loads up to 3A. 30 x 28mm pc board.
CAT # MSC-35 $5.75 each

STEPPER MOTORS
STEPPER / SPINDLE MOTOR
Seagate 73192-193MCCMAS. 45mm diameter x 20mm high stepper motor. 5mm diameter 10mm long shaft with aluminum bearing. 54mm mounting centers. Six 3” wire leads terminate to 6-pin socket.
CAT# SMT-379 $6.00 ea. • 10 for 50¢ ea.

STEPPER MOTOR & DRIVER BOARD
Includes our driver board, CAT# ME-16 (see below) and a 5-wire stepper motor that plugs directly into the board. Ideal for beginning robotics projects. Motor is a 4-phase, unipolar stepper, #28BYJ-48.
CAT# ME-125 $5.35 set

STEPPER MOTOR DRIVER BOARD
Four LEDs indicate the status of the stepper. Jumper for 5V / 12V use. 5-contact header mates with connector on some standard stepper motors. 32 x 34 x 11mm.
CAT# ME-16 $2.50 each

STEPPER W/ WORM GEAR & LEAD SCREW
New Item
For converting rotary to linear motion. 0.25” dia. x 0.80” long worm gear with nylon lead screw. Lead screw is 0.25” thick with arms that extend in both directions, 1.4” overall length.
CAT# SMT-387 $5.75 each

STEPPER MOTOR DRIVER
Dual H-Bridge driver using L298N chip. 5V logic. Operates on 5-35Vdc. 25W max power. 43 x 43 x 26mm.
CAT# SMD-298 $5.95 each

STEPPER / SERVO MOTOR CONTROLLER,
DK Electronics V1.0. Arduino compatible motor shield. The board has two STMicroelectronics L293D Motor H-Bridge IC’s which can drive up to 4 DC motors (or up to 2 stepper motors) with 0.6 A per bridge (1.2 A peak). 70 x 54 x 13mm.
CAT# SMD-293 $6.95 each

MICRO STEPPER W/ WORM SCREW
Tiny 2-phase, 4-wire stepper motor with worm screw. 3-5 Vdc. Working current: 200-350 mA. Step angle: 22.5° (16 pulses to a circle). Dimensions including mounting bracket, 65 x 14 x 5mm. Length of worm screw, 48mm. Does not have a drive sleeve.
CAT# SMT-597 $1.00 ea. • 5 for 85¢ ea.

12 VDC MOTOR-DRIVE ACTUATOR FOR AUTO DOOR LOCKS
Nylon plunger moves 0.75”. Push or pull, depending on polarity. Includes mounting hardware and a 10” metal extension rod which fits through the hole in the end of the plunger. Overall dimensions of actuator assembly (retracted): 8.42” x 2.35” x 1.15”. Rubber boot protects against moisture and dust. Pigtail leads.
CAT # DLA-1 $5.50 each
SERVOS

STANDARD SERVO
Digital high torque servo.
Metal gears and bushing, 180° rotation.
Servo arms and screws included. Dimensions: 40.7 x 19.7 x 42.9mm.
CAT# DCS-116 $9.20 each

SG92R MINI SERVO
TowerPro SG92R 9g digital servo. POM with Carbon fiber gears. 180° rotation.
Teflon bushing. Servo arms and screws included. Servo Plug fits JR and Futaba “S” type connector.
23 x 12.2 x 27mm
CAT# DCS-118 $5.25 each 10 for $4.95 each

CONTINUOUS ROTATION SERVO
Model DS04-NFC
360° rotation, standard size servo. For remote control projects.
40.8 x 20 x 39.5mm
Servo Plug fits JR and Futaba “S” type connector that fits most receivers.
CAT# DCS-117 $9.50 each

3-CHANNEL SERVO TESTER
Connect up to three servos simultaneously to test and compare speed and reaction time without use of transmitter/receiver. Three modes of operation are manual adjust - servo rotates in conjunction with rotation of pot, neutral position - servo centers itself in neutral or middle position, and automatic “window wiper” - servo independently cycles back and forth. Power input 4.8 - 6 Vdc. 1.3” x 1.1” x 0.5” h. Mode select button. Ideal for RC hobbyists.
CAT# STR-110 $8.00 each

12A RC MODEL MOTOR CONTROLLER
HobbyWing Skywalker Series 12A ESC.
This motor controller is good choice for general R/C applications such as Airplane/Heli/Multi-copter projects. Full Protection Features: Low voltage cutoff protection / Over-heat protection / Throttle signal lost protection. Output: Continuous 12A, Burst 15A up to 10 Secs. Can be used with our 3-phase brushless motors.
CAT# SC-112 $12.50 each

3-PHASE BRUSHLESS DC MOTOR
BEI # DIH23-30-0132. Smooth, quiet, high-torque brushless DC motor.
2.25” dia. x 3.0” long. 0.25” dia. x 1” long shaft. 5270 RPM with no load. Built in speed sensor. 7-15Vdc operating voltage.
Can be used with our controllers SC-112, SC-120, SC-130 and the servo tester STR-110. Spec sheet online.
CAT# DCM-459 $16.95 each

GEARS & ROTATING PARTS

92 PIECE ASSORTMENT OF GEARS, PULLEYS, AXLES
Large set of 92 various sized plastic gears, racks, wheel set, pulleys, belts and axles.
A lot of stuff at a nice price!
CAT# GR-53 $9.95 set

4 GEAR SET
Four matched unbreakable plastic gears.
The three larger gears are beveled on one side and can mesh at 90° as well as the normal 180° angle. They have 5mm bores. Inserts are supplied to reduce the bore size to 3mm. The smallest gear has a 2mm bore. Gears are 41, 31, 21 and 13mm.
CAT# GR-86 $2.25 each

26MM DIAMETER WHEEL
• Overall diameter: 26mm
• Hub outer diameter: 24mm
• Tire width: 9mm
• Central bore: 1.9mm, fits 2mm axles
• Product material: the center is ABS plastic, and the outer skin is hard rubber
CAT# WH-28 4 for $1.50

42MM DIAMETER RUBBER WHEEL
42mm diameter x 19mm thick rubber wheel with flatted 3mm diameter hole. Soft black rubber tire with hard white ABS plastic hub.
Fits our motor, CAT# DCM-497
CAT# WH-29 $1.10 each

GEARBOX 2 IN 1, MOTOR GEARS & ACCESSORIES
Velleman Kits # KNS7.
Fun with gears and motors.
Small 3 Vdc motor, metal bracket and axles, an assortment of small plastic gears and collars to produce a gear train of various ratios.
CAT# GR-84 $11.95 each
AC POWER CORDS

3-CONDUCTOR POWER CORDS

IEC POWER CORDS

Standard IEC (SHP-386) power cords.
IEC female connector one end, standard 3 prong grounded AC plug other end. UL, CSA.

<table>
<thead>
<tr>
<th>CAT#</th>
<th>Each</th>
<th>10</th>
<th>100</th>
</tr>
</thead>
<tbody>
<tr>
<td>LCAC-301</td>
<td>2.25</td>
<td>2.10</td>
<td></td>
</tr>
<tr>
<td>LCAC-325</td>
<td>2.35</td>
<td>2.15</td>
<td>1.65</td>
</tr>
<tr>
<td>LCAC-303</td>
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<td>LCAC-60</td>
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<td>2.45</td>
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<td>LCAC-435</td>
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<td>LCAC-667</td>
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</tr>
<tr>
<td>LCAC-310</td>
<td>4.50</td>
<td>4.00</td>
<td></td>
</tr>
</tbody>
</table>

18 AWG. 3-conductor. SVT. 300V. UL, CSA.

10' POWER SPLITTER CABLE

8' cable splits to pair of 2' cables with standard IEC female ends.
16 AWG 3-conductor SJT 105°C cable. UL, CSA.

CAT# LCAC-433 $5.50 each
25 for $5.00 each

3 CONDUCTOR LAPTOP POWER CORD

Black, 6 ft., Frequently used with lap-top computers.
SVT round cable. UL, CSA.

CAT# LCAC-187 $3.00 each

3-CONDUCTOR POWER CORD, 4.5'

18/3, SVT 105° black ac power cord.
Strain relief at one end, 4" pigtail leads with crimp connectors. UL, CSA.

CAT# LCAC-465 $1.65 each
100 for $1.50 each

POWER CORD Y-CABLE

3-conductor 16AWG Y-cable.
SJT 75C. Overall length, 14". UL.

CAT# LCAC-410 $4.35 each • 10 for $4.00 each

2-CONDUCTOR POWER CORDS

6' black 18AWG/2 SVT power cord.
0.23" nominal o.d. cable.
Molded polarized 2-conductor plug. Molded strain relief pigtail leads with 0.25" QC connectors. UL, CSA.

CAT# LCAC-419 $1.75 each
150 for $1.55 each

This cord without the strain relief.
CAT# LCAC-326 $1.60 each
100 for $1.40 each • 500 for $1.25 each

2 CONDUCTOR CHEATER CORDS

6' black cable. Rated 7A.
Non-polarized, black.

CAT# LCAC-390 $2.70 each • 10 for $2.50 each

Non-polarized, white.

CAT# LCAC-390W $2.70 each • 10 for $2.50 each

Polarized.

CAT# LCAC-400 $2.50 each • 10 for $2.25 each

AC POWER CORD W/ INLINE ROCKER SWITCH

70° two-conductor power cord with on-off rocker switch mid-way. Molded, polarized AC plug. Black SPT-2 18 AWG zip cord rated 300V, 105°C, cULus.

CAT# LCAC-456 $2.00 each
100 for $1.70 each • 1000 for $1.25 each

EXTENSION CORDS

Three-conductor, AWG 16 cord.
Black, SJT, UL, CSA.

<table>
<thead>
<tr>
<th>Length</th>
<th>CAT#</th>
<th>price</th>
</tr>
</thead>
<tbody>
<tr>
<td>1'</td>
<td>EXT-11</td>
<td>$3.00 each</td>
</tr>
<tr>
<td>3'</td>
<td>EXT-31</td>
<td>$2.00 each</td>
</tr>
<tr>
<td>6'</td>
<td>EXT-13</td>
<td>$3.00 each</td>
</tr>
<tr>
<td>10'</td>
<td>EXT-14</td>
<td>$7.65 each</td>
</tr>
</tbody>
</table>

15' 3-OUTLET 16 AWG EXTENSION CORD

Black 3-conductor, grounded extension cord with right-angle plug and 3 female outlets. SPT-3, 16AWG, 13Amps. NEMA 5-15P to NEMA 5-15R. UL, CSA.

CAT# EXT-105 $8.95 each
10 for $8.50 each

New Item
Prevent power cords from pulling, pushing, or twisting in chassis hole.

<table>
<thead>
<tr>
<th>CAT</th>
<th>WIRE TYPE</th>
<th>HEYCO or equiv</th>
<th>HOLE SIZE</th>
<th>PRICE</th>
</tr>
</thead>
<tbody>
<tr>
<td>SR-40</td>
<td>flat 18/2 SPT-1</td>
<td>4P-4</td>
<td>.45&quot;</td>
<td>10/ $1.00</td>
</tr>
<tr>
<td>SR-60</td>
<td>flat 18/2 SPT-2</td>
<td>4N-4</td>
<td>.50&quot;</td>
<td>10/ $1.00</td>
</tr>
<tr>
<td>SR-50</td>
<td>18/2, 18/3, SV</td>
<td>SVT round</td>
<td>5L-1</td>
<td>.50&quot;</td>
</tr>
<tr>
<td>SR-18</td>
<td>round, 0.2&quot; dia.</td>
<td>SP3-4</td>
<td>0.5&quot;</td>
<td>10/ $1.00</td>
</tr>
<tr>
<td>SR-59</td>
<td>round, 0.36&quot; - 0.43&quot; dia.</td>
<td>SR7P-7</td>
<td>0.66&quot;</td>
<td>65¢ each</td>
</tr>
<tr>
<td>SR-70</td>
<td>18/2, 18/3, 16/2, 6/3 SV,</td>
<td>6N-4</td>
<td>.65&quot;</td>
<td>10/ $1.50</td>
</tr>
<tr>
<td>SR-80</td>
<td>18/3, 18/3, SJ</td>
<td>SJT, SJO round</td>
<td>.625&quot;</td>
<td>10/ $1.50</td>
</tr>
<tr>
<td>SR-34</td>
<td>flat up to 0.29&quot; X 0.65&quot;</td>
<td>SR34-2</td>
<td>0.875&quot;</td>
<td>2/$1.00</td>
</tr>
<tr>
<td>SR-54</td>
<td>Right-angle. For flat SPT-1.</td>
<td>10/ $1.00</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**AC SOCKETS**

**3-PRONG GROUNDED SOCKET**
Leviton # 114. Heavy-duty 3 prong socket for AC power cords. For 0.396" to 0.562" dia. cords. 18-14 AWG stranded conductors. Rubberized shell resists chemicals & remains flexible even in low temperatures. UL, CSA. CAT# ACS-27 $4.60 ea. • 10 for $4.40 ea.

**HOSPITAL GRADE 3-CONDUCTOR IN-LINE GROUNDED SOCKET**
Cooper Wiring Devices# 8269 Hospital grade. 2-Pole, 3-Wire grounding receptacle. Meets federal WC-596 requirements. High-impact resistant thermoplastic housing. See-through terminal cover allows inspection of connections. Clamp for 0.250" - 0.690" diameter cord. NEMA construction and standard compliances. Color-coded screw terminals. 15 amp, 125 volt. Individually bagged. UL, CSA. CAT # ACS-72 $5.95 ea. • 10 for $5.50 ea.

**15 AMP GROUNDED OUTLET**
Leviton# 1374-001 or equiv. Black, three-conductor outlet. Snap-mounts in 1" square cutout. Rated 15 Amps @ 125Vac. Two 6" 14 AWG leads & one 6" 16 AWG ground lead. UL, CSA. CAT# ACS-31 $1.85 ea. • 100 for $1.50 ea.

**IEC POWER CONNECTOR**
Power Dynamics #43R01-2311 IEC female straight plug for up to 16 AWG wire. Integral cable clamp, strain relief and screw terminals. Rated 10A 250Vac. (15A for UL, CSA only) RoHs compliant. UL, CSA, VDE. CAT # ACS-430 $3.00 each 10 for $2.75 each • 100 for $2.50 each

**GROUNDED AC PLUG**
Leviton # 515PR Black 15 Amp grounding 3-wire AC plug. Rubber body is dirt and moisture resistant. Tough elastomeric husk. Built-in cord grip adjusts to 0.245” to 0.665” cords, 18-3 to 12-3. UL, CSA. CAT# ACP-8 $3.35 ea. • 10 for $3.00 ea.

**EASY INSTALL AC PLUGS AND RECEPCTACLES**
Snap-on plugs and sockets for quick installation on 18/2, SPT-1 zip cord. Non-polarized. No stripping required; makes contact through the insulation. Multiple female receptacles can be installed in a single line.

- Plug, black CAT# ACP-47 $1.10 each
- Plug, white CAT# ACP-47W $1.10 each
- Socket, black CAT# ACS-71 $1.20 each
- Socket, white CAT# ACS-71W $1.20 each

**AC ADAPTER**
Hard rubber, 3-way grounded power tap. Rated 15 Amps @ 125 Vac. UL, CSA. CAT# TPA-1 $2.00 each 10 for $1.85 each

**IEC POWER INPUT**
Mounting ears with holes on 1.575” (40mm) centers. 0.25” QC connector. Rated 15A 250Vac. UL, CSA. CAT# ACS-48 $1.25 each 10 for $1.10 each • 100 for 90¢ each
Same as ACS-48 above, but with solder-loops. CAT# ACS-70 $1.25 each 10 for $1.10 each • 100 for 90¢ each

**INTERNATIONAL PLUG ADAPTERS**
**EURO TO USA**
Converts 2-pin round European plugs to 2-pin flat power plugs. CAT# AP-USA $1.50 each • 10 for $1.25 each

**USA TO EURO**
Converts 2-pin flat USA plugs to 2-pin round Euro plugs. Can be used with 3-pin grounded USA plugs, but ground pin is voided. CAT# AP-EU $2.00 each
4-OUTLET POWER STRIP

15A circuit breaker/lighted power switch. Heavy-duty 10’ 14/3 power cord with space-saving right-angle plug. Keyhole slots in rear to allow wall or desk mounting.

CAT# PW-101 $5.95 each

SURGE PROTECTOR

6-OUTLET
Protect computers and other sensitive devices from electrical transients

CAT# PST-40 $7.95 each

MODULAR PHONE CONNECTORS

RJ-11 KEYSTONE JACK

CAT# KSF-7 $1.50 each

MODULAR LINE CORDS

4 WIRE - MOD PLUGS BOTH ENDS (RJ-11)
Cross wired for telephone-voice applications.

<table>
<thead>
<tr>
<th>DESCRIPTION</th>
<th>CAT#</th>
<th>1-9</th>
<th>10+</th>
<th>100+</th>
</tr>
</thead>
<tbody>
<tr>
<td>7 Feet</td>
<td>MT-260</td>
<td>.70</td>
<td>.50</td>
<td></td>
</tr>
<tr>
<td>15 Feet</td>
<td>MT-264</td>
<td>1.00</td>
<td>.85</td>
<td></td>
</tr>
<tr>
<td>25 Feet</td>
<td>MT-261</td>
<td>1.25</td>
<td>1.10</td>
<td></td>
</tr>
</tbody>
</table>

6 WIRE - MOD PLUGS BOTH ENDS
Straight-wired for data applications.

<table>
<thead>
<tr>
<th>DESCRIPTION</th>
<th>CAT#</th>
<th>1-9</th>
<th>10+</th>
<th>100+</th>
</tr>
</thead>
<tbody>
<tr>
<td>7 Feet</td>
<td>MT-363</td>
<td>1.25</td>
<td>1.10</td>
<td>.85</td>
</tr>
<tr>
<td>25 Feet</td>
<td>MT-369</td>
<td>2.20</td>
<td>1.65</td>
<td>1.30</td>
</tr>
</tbody>
</table>

12’ COILED HANDSET CORD, RJ22(4P4C) BLACK
12’ coiled RJ22 (4P4C) handset cord, black. For standard home telephone handsets. RJ22 connectors (4P4C). 25” coiled length.

CAT# MCT-12BK $2.95 each

NETWORKING PRODUCTS

CAT-5E/6 ACCESSORIES

CAT-5E SURFACE-MOUNT JACK
UL certified surface mount RJ45 jack for CAT5E cables. Hardware included.

CAT# MT-80 $3.85 each
10 for $3.50 each

RJ-45 DATA COUPLER
Connects two CAT-5/6 cables. Straight-through connection.

CAT# MT-88 $2.50 each

RJ-45 KEYSTONE JACKS
8-conductor jack for KSF-1.2,3,4 mounting plates. Can be used with CAT5E or CAT6 cable.

CAT5E JACK CAT# KSJ-5 $1.50 each
CAT6 JACK CAT# KSJ-6 $1.50 each

CAT 5E INLINE COUPLER W/ KEYSTONE LATCH WHITE
One RJ45 female to one RJ45 female connector.

CAT# KSJ-1 $3.45 each

SURFACE MOUNT BOXES FOR KEYSTONE JACKS, WHITE

1-PORT
CAT# KSP-1 $1.20 each

2-PORTS
CAT# KSP-2 $1.50 each

CATEGORY 6 CABLES
Standard, straight-through Ethernet patch cables. 4-pair, stranded copper terminated w/ 8-contact RJ45 modular plugs. Suitable for 350MHz high-speed data applications. All cables are CAT-6, UL, ETL.

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SPECIAL PRICE!
25FT CATEGORY 5E PATCH CABLE
Snagless molded RJ45, 350Mhz, UTP, Pure Bare Copper stranded 24AWG, Blue.

CAT# CB-525 $2.50 each
10 for $2.00 each • 100 for $1.70 each

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SPEAKERS

13MM 32 OHM SPEAKER
Possibly designed for headphones. Pin terminals.
CAT# SK-850 75¢ each

20 MM, 150 OHM SPEAKER
Hosiden HDR960. 20mm, 150 ohm dynamic element. 0.79" diameter x 0.1" thick. Large quantity available.
CAT# SK-215 2 for $1.00
100 for 40¢ each • 1000 for 25¢ each

8 OHM 40MM SPEAKER
40mm diameter x 6mm thick. 8 Ohm, general purpose speaker. 2" leads with 2-conductor female connector, 2mm centers. Large quantity available
CAT# SK-840 75¢ each
10 for 70¢ each • 100 for 60¢ each

8 OHM 57MM SPEAKER
Kobitone# 254-PS610-RO/ OBO # OBO-57008F-01
Great-sounding 2.24" mylar cone speaker. 2.24" diameter x 0.331" (57 x 8.40mm). NeFeB magnet. Solder spot connections.
Specifications:
• Power Rating: Normal 500mW Max. 1.0W
• Frequency Range: 350 - 13,000Hz
CAT# SK-224 $1.35 each
100 for $1.20 each • 600 for $1.00 each

MID-RANGE

2" 4 OHM SPEAKER
Boston Acoustics # 304-050001-00
2" cone with soft rolled edge. 4 Ohm impedance. Shielded magnet. Overall depth, 1.61".
CAT# SK-304 $2.00 each
10 for $1.75 each

5.25" 50W
5.25" diameter midrange speaker. 8 ohms. 0.75" voice coil. 10 oz magnet. Rolled foam edge. 50 Watts RMS
550 - 15 Khz. 92 dB @ 1W / 1m.
CAT# GM-658 $8.30 each

5.25" 60W
5.25" diameter midrange speaker. 8 ohms. 1" voice coil. 12 oz magnet. Poly-mica cone with rolled foam edge. 60 Watts RMS. 500 - 15 Khz.
96 dB @ 1W / 1m.
CAT# GM-858 $10.90 each

TWEETERS

3.5" ROUND PIEZO
3.5" dia., wide dispersion piezo tweeter. 60 Watts RMS @ 5 Khz. Frequency response, 3.5 - 30 Khz.
96 db @ 1W / 1m.
CAT# GT-1056 $3.50 each

3.25" SQUARE PIEZO TWEETER
3.25" square, wide dispersion tweeter. 50 Watts RMS. Frequency response, 3.5K - 27 Khz.
94 db @ 1W / 1m.
CAT# GT-1005 $3.75 each

WOOFERS

4" 40W SHIELDED WOOFER, 8 OHM
Rolled foam edge. Shielded for use with computers or video. 11 oz magnet. 1" voice coil. 40 Watts / 70 Watts max.
70 - 10 Khz frequency response. 83 dB @ 1W / 1m.
CAT# GW-2048 $11.50 each

5.25" 70W SHIELDED WOOFER, 8Ω
Rolled foam edge. Shielded for use with computers or video. 16 oz magnet. 1" voice coil. 70W / 130W max.
62 - 9 Khz frequency response. 84 dB @ 1W / 1m.
CAT# GW-2058 $13.50 each

10" 110W WOOFER, 8 OHM
Rolled foam edge with poly laminated cone. 20 oz magnet with vent and bumper plate. 1.5" voice coil. 110 Watts / 220 Watts max.
40 - 5 Khz freq. response. 90 dB @ 1W / 1m.
CAT# GW-2108 $25.40 each

8" 100W WOOFER, 8Ω
100 Watts RMS, 190 Watts Max. 25 - 6000Hz frequency response. 90 dB SPL.
1.5" aluminum voice coil. 20oz magnet. Poly mica cone. Butyl rubber surround. Stamped steel frame. Fits enclosure hole size of 7.25". Mounting depth is 3.25".
CAT # GW-8024 $29.75 each

New Item

8" 100W WOOFER, 8Ω
100 Watts RMS, 190 Watts Max. 25 - 6000Hz frequency response. 84 dB / reference 8 Ohm / 85 Vrms.
1.5" aluminum voice coil. 20oz magnet. Poly mica cone. Butyl rubber surround. Stamped steel frame. Fits enclosure hole size of 7.25". Mounting depth is 3.25".
CAT # GW-8028 $29.75 each

New Item
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Mail Orders - and correspondence should be sent to
ALL ELECTRONICS CORP.
14928 Oxnard St.
Van Nuys, CA 91411-2610

FAX - You may FAX your order to 1-818-781-2653

Walk-In - Our Van Nuys, California store stocks all of the items in this catalog as well as many which are not of sufficient quantity to be included. Van Nuys store, 818-997-1806.

Internet - E-mail us at allcorp@allcorp.com
Shop ON-LINE wwwallelelectronics.com

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Open Accounts - Government or State educational institutes and agencies can submit written formal purchase order forms (verbals are not accepted) for immediate acceptance. All others must submit proper credit information and await approval. Normal credit approval takes up to three weeks and credit terms are extended only to highly rated accounts. Our terms are NET 30 with a $20.00 minimum. All open account orders are shipped F.O.B. Van Nuys, CA (minimum shipping charge is $8.00)

COD Orders - We do not accept COD orders.

California Customers - Orders delivered within the state of California require us to collect California State Sales Tax unless we have a resale card on file. Please add applicable state sales tax for your county.

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Continental United States (not including Alaska or Hawaii) must include a $8.00 shipping and handling fee. This will cover shipping via U.P.S. (GROUND) or U.S. mail whichever is less (our choice). Shipments requiring special handling for residential delivery, P.O. Box delivery, lift gates or advance notification may incur extra charges. Alaska, Hawaii, Puerto Rico, and the U.S. Territories must include full shipping with the order (a $8.00 minimum shipping charge applies per order). Please check with your local post office regarding charges.

Shipping Charges - INTERNATIONAL
Customers outside the United States are responsible for all shipping and handling charges including but not limited to duties, import or export fees etc. Please check with your local agencies regarding rates. We will ship as per your instructions and will assist you in any way we can. If insufficient shipping is not included, your order will be returned.

Shipping Charges - RUSH ORDERS
We recommend UPS Next Day Air Service or UPS Second Day if express shipping is requested. We will also use Federal Express or other express freight companies if requested. We try to ship these orders the day they are placed. We charge the normal U.P.S. Red, U.P.S. Blue, FED EX or specified express carrier fee plus a $8.00 handling fee for any order where special shipping or handling is requested.

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Customer Service Department
ALL ELECTRONICS CORP
14928 Oxnard St.
Van Nuys, CA 91411-2610

No Return Authorization is necessary. Let us know what the problem is and please return any paperwork you receive with your order. Please include a phone number. We will rectify any problems promptly. Please make all claims within 30 days of receipt of your order.

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- Others see instructions

### California Only - Sales tax for your county

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**SUB TOTAL**

**California Only - Sales tax for your county**

**Less**

**REFUND Slip**

**Shipping & Handling**
- 48 Continental States $16.00
- Orders over $175.00 Free Shipping
- Others see instructions

**TOTAL**

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**Any Special Instructions?**

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**State/Zip**

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**NAME OF CARDHOLDER**

**CARD NUMBER**

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**SIGNATURE**

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