**POWER STRIP - SPECIALS**

Chatworth Products.
Matte-black aluminum housing. Includes vertical mounting cabinet hardware. Power indicator lamp. 10' power cord. cULus.

**38" 10-OUTLET STRIP**
Equipped with NENA 5-20R sockets and NEMA 5-20P power plug. See note below.
CAT# PST-0423P $31.00 each

**66" 20-OUTLET STRIP**
15A circuit breaker. Equipped NEMA 5-15 sockets and twist-lock L5-20P power plug. See note below.
CAT# PST-1403P $39.95 each

Note: Both strips above are equipped with AC power plugs that may be considered non-standard. Because of this we include a standard Leviton 3-prong plug as a replacement.

**7 WATT MONO AMPLIFIER KIT**
Velleman # K4001.
Small amplifier constructed around a TDA2003 IC, capable of delivering 4 Watts RMS at 4 Ohms. Music power: 7 W @ 4 ohms. Operates on 15 Vdc.
CAT# MK-4001 $19.95 each

**STEREO AMPLIFIER MODULES**
High-quality 3W stereo amplifier based on the PA8403 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

Based on the PA8610 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

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CAT# AMP-8610 $7.95 each

**STEREO AMPLIFIER**
20W per channel, stereo amplifier designed for use in a portable outdoor music system. The speakers connect to pigtail leads and a 3.5mm phone plug is provided for input from phone, MP3 or other music source. There are no external controls; volume is controlled from the music source. Using an iPhone or comparable source, you get plenty of volume adjustment, from silent to quite loud. Also has a 120Vac output cord for connection of other auxiliary equipment. Heavy-duty metal cabinet, 9.5" x 8.5" x 2".
CAT# AMP-15 $25.95 each

**MOD PHONE CONNECTORS**

CRIMP-ON MODULAR PLUGS
For use with flat telephone wire. 8 pin plugs are for flat cable or CAT5/5E round cable.
CAT# CMP-4 10 for $ 2.50
50 for $ 10.00 • 100 for $18.00

CAT# CMP-6 10 for $3.00
50 for $12.50 • 100 for $20.00

8 PIN RJ-45 MODULAR PLUGS
CAT# CMP-8 10 for $ 3.50
50 for $ 15.00 • 100 for $22.50

**MODULAR CORD COUPLER**
CAT# MT-104 75¢ each
10 for $6.50 • 100 for $45.00
1000 for $300.00

**SURFACE MOUNT MOD WALL JACKS**
Includes mounting screws and double-sided tape. For new construction or retrofitting.

4 Conductor CAT# MT-103 65¢ each
10 for 50¢ each • 100 pcs for 40¢ each

6 Conductor CAT# MT-111 75¢ each
10 for 60¢ each • 100 pcs for 46¢ each

8 Conductor CAT# MT-181 $1.25 each

**T-ADAPTER FOR MOD JACK**
CAT# MT-101 $1.10 each
10 for $9.00 • 100 for $70.00

**MOD PHONE CORD SPLITTER**
T-adapter for 4-conductor modular telephone cord.
CAT# MT-118 50¢ each
100 for 35¢ ea. • 500 for 25¢ ea.

**TELEPHONE PICK-UP**
Suction cup attaches to the earpiece side of a telephone handset and picks up both sides of the conversation. Terminates to a 3.5 mm plug.
CAT# TPX-1 $2.00 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

**RJ-11 KEYSTONE JACK**
6-conductor jack for RJ-11 mod phone plugs. Use with Keystone wall plates, CAT# KSJ-1,2,3 or 4. White.
CAT# KSJ-7 $1.50 each

84 ORDER TOLL FREE 1-800-826-5432
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 KIT
Two potentiometers adjust the flash rate of two LEDs.
9V operation. Bc. 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

STEAM ENGINE SOUND GENERATOR W/ WHISTLE
Generates sound of a vintage steam engine. Adjustable 'speed' and volume. Great for model railroads, radio plays, stage, as gadget. With 'steam whistle'-push button.
Power supply: 9V battery (not included)
• Comes with 8 ohm/0.5W miniature speaker
• Dimensions: 3.9” x 3.3”
CAT# MK-134 $15.95 each

ADJ. INTERVAL TIMER KIT
Velleman # MK111. For intermittent operation of circuits and equipment. Use for blinking light control, slide projector control etc. Pulse time adjustable between 0.5 and 5 seconds. Pause time adjustable between 2.5 and 60 seconds. 3 Amp output relay.
Power supply 12-15 Vdc @ 100 mA (not included).
CAT# MK-111
$9.95 each

BRAIN GAME - FOLLOW THE LIGHTS
Simple DIY kit. Use the four pushbuttons to repeat a randomly generated pattern shown on the 4 LEDs.
The pattern is played both visually & audible or visually only (selectable). 4 difficulty levels. Replay speed gradually increases.
CAT# MK-112
$9.95 each

2-DIGIT COUNTER KIT
Large, two digit counter assembly. Advances one digit at a time, from 0 to 99 each time button is pushed (ideally to be used with any of our SPST normally-open momentary pushbuttons).
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. Resettable to zero. Five 4” pigtail wires, 24AWG stranded. Requires 9 Vac power (we recommend our CAT# ACTX-940) and two momentary pushbutton switches.
CAT# CTR-20 $2.50 each
10 for $2.25 each • 80 for $2.00 each

10-LED SPINNING WHEEL
Push the button to start spinning action. 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 Lab --- eTron Circuit Labs. An immersive, hands-on curriculum of fun and illustrative electronics projects that teaches the fundamentals of electronics. Designed to be STEM Compliant for use in school curriculum. Beautiful color photos and illustrations lead you through a wide variety of labs covering a lot of electronic fundamentals.
Projects are designed to be breadboarded, taken apart and reused.
Complete Lab includes The Basics manual (88 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
$14.95 each

DIGITAL THEORY 35 LABS KIT
Digital Theory by ETron Circuit Labs is electronic education curriculum featuring 35 exciting labs.
STEM compliant. Digital Theory picks up where The Basics leaves off teaching the necessary digital theory needed to be competitive in a technology based job market.
Complete Lab includes the 80 page, full-color, Digital Theory manual, plus all the parts you need to complete the experiments in the book, including a solderless circuit board and 9-Volt battery.
CAT# KT-35
$41.95 each
If you only wish to purchase the book, use CAT# BK-97
$14.95 each
**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.

**Sparkfun "RedBoard" with Arduino**

Sparkfun # DEV-13975. An economical alternative to the Arduino Uno, has most of the features of the Uno with the added benefit of an ISP header & FTDI interface. The RedBoard can be programmed over a USB Mini-B cable using the Arduino IDE: Plug in the board, select “Arduino Uno” from the board menu and you’re ready to upload code. SDA, SCL and IOREF pins will be compatible with future shields. This version adds an SMD ISP header for use with shields. You can power the RedBoard over USB or through the barrel jack. The on-board power regulator can handle anything from 7-15 Vdc.

**Cat# ARD-22** $19.95 each

**Arduino Protoshield Kit**

The ProtoShield mates with the Arduino USB board and gives the user a small soldering area, two general LEDs, access to a BlueSMiRF socket, a general pushbutton switch, and most important of all - the Arduino reset switch is brought to the top level.

**Cat# APS-14** $9.95 ea. • 10 for $8.95 ea.

**Mega 328 Microcontroller Board**

Based on the ATMega2560, it has 54 digital input/output pins (of which 15 can be used as PWM outputs), 16 analog inputs, 4 UARTs (hardware serial ports), a 16MHz crystal oscillator, a USB connection, a power jack, an ICSP header, and a reset button. It contains everything needed to support the microcontroller; simply connect it 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.

**Cat# ARD-21** $24.20 • 10 for $24.20

**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 above).

**Cat# ARD-14** $9.95 • 10 for $4.75 each

**Atmega328 w/ arduino Optiboot (Uno), Dip**

Pre-loaded with the Arduino Optiboot (Uno 16MHz) Bootloader, to use Arduino code in a custom embedded project w/o using an actual Arduino board.

**Cat# ARD-24** $5.50 ea. • 10 for $4.95 ea.

**Sparkfun Inventor’s Kit V4.0the**

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.

**Cat# SFA-40** $99.95 each

**Atmega328 with USB port**

Nano V3.0 ATmega328P Microcontroller Board w/ on-board USB port and headers. Bootloader installed, ready to upload sketches from Arduino software. Operating Voltage: 5V. Input Voltage (recommended) 7V-12V

**Cat# ARD-20** $8.95 each

**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).

**Cat# LLC-46** $2.95 each

**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.

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**Cat# ARD-14** $9.95 • 10 for $4.75 each

**5V / 16MHZ Pro Mini 328**

**Cat# ARD-18** $9.95 • 10 for $4.75 each

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**Cat# ARD-20** $8.95 each

**Most Orders Shipped Within 24-48 Hours**
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 efx 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

QUARTZ CLOCK MECHANISM

Make a clock with this easy-to-install, battery-operated quartz mechanism. 5/16" dia. threaded bushing can be mounted through a surface up to 0.1" thick. Black hour and minute hands, red second hand. Radius of minute and second hand, 2." Operates on one AA cell (not included). Mechanism is 2.2" square x 0.64" thick. CE.

CAT# CKM-1 $4.00 each

21 SECTION PLASTIC STORAGE BOX

See-through ABS plastic storage container with dividers. For hardware, hobby, fishing, automotive. 15" x 12.25" x 2.3". 21 compartments with movable dividers.

CAT# SB-11 $12.95 each

12 VDC WATER PUMP

12Vdc submersible water pump. Small size, low power consumption, low noise. Shoots a stream of water to a height of approximately 6'. Operates on 12Vdc @ 470mA. Outlet port has a 1/4" i.d. hole, but most likely is designed for a 7/16" - 1/2" diameter tube over the outside, probably with a clamp. 0.66" o.d. inlet port. 8" pigtail leads, 22 AWG stranded. Overall dimensions 3.75" x 2.10" x 1.75". Mounting holes on 1.16" centers.

CAT# PMP-19 $7.95 each

33" FLEXIBLE ACTUATOR CABLE

Actuator cable designed for use in automotive application. Movement at one end of the cable produces movement over the same distance at the other end. Bullet cable ends prevent unraveling and keep the cable within conduit. Conduit is 33.5" long x 0.2" diameter. Cable travel, 2.8".

CAT# FAC-1 $1.50 each
10 for $1.25 each

3ML PLASTIC SYRINGE

Re-usable 3ml plastic syringe, with luer lock type tip.

CAT# SYR-31 50¢ each

14' 6-CONDUCTOR CABLE

14' cable. 6-conductor color-coded 22 AWG stranded leads. Black 0.25" diameter PVC jacket. 8" tinned pigtail leads on one end.

CAT# HW-25 $2.50 each

DUAL USB CAR CHARGER

Creates 2 USB charging ports in vehicle, 2.1 Amp capacity.

CAT# MT-802 $6.50 each

2.1 AMP DUAL USB WALL CHARGER

ZipKord PowerAC2AC.
Compact wall charger charges two devices at the same time. A perfect replacement or extra charger. Provides 2.1 Amps to charge most Smartphones, Ipads/Iphone, GPS and tablets. Body is 1.82 depth" x 1.13" wide x 2.40" high. Retractable prongs. Black with blue led indicator.

CAT# MT-302 $6.95 each

LIGHTNING CHARGE/SYNC CABLES FOR APPLE

Cables with 8-pin Lightning and USB connectors to charge and sync newer Apple iPhones, iPads and iPods.

3' cable
CAT# IPD-33 $7.50 each

6' cable
CAT# IPD-66 $14.50 each

25" TELESCOPING BATON

5-section telescoping wand. Collapses to 6.75". Textured neoprene handle. Cylindrical aluminum sleeve on end of wand, 0.23" interior diameter. Could be used to attach magnet or other device.

CAT# TES-1 $1.00 each • 10 for 90¢ each

NEW

3M SOFTBACK SANDING SPONGE

3M™ Microfine #02600. 4.5" X 5.5" flexible foam pad. Ranges from grade 1200 to 1500. Can be used wet or dry. Helps eliminate finger marks. Enables user to sand hard-to-reach areas such as headlight openings, around door handles, door jambs, etc.

CAT# ABR-1 $1.25 each
10 for $1.10 each

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CAT# ABR-1 $1.25 each
10 for $1.10 each

NEW

NYLON SPACERS, NON-THREADED

Length Dia. Hole CAT # 10 100 1000
0.25" 0.25" #8 SP-42 .80 5.00 35.00
0.50" 0.25" #8 SP-58 .90 5.50 40.00
0.6" 0.13" 18awg SP-58 .40 3.00 20.00
0.62" 0.25" #8 SP-66 .95 5.75 42.50

FAX YOUR ORDER 24 HOURS A DAY - 7 DAYS A WEEK 93