

**CHANNEY ELECTRONICS, INC.**

Educational &amp; Affordable Electronic Kits for All Skill Levels

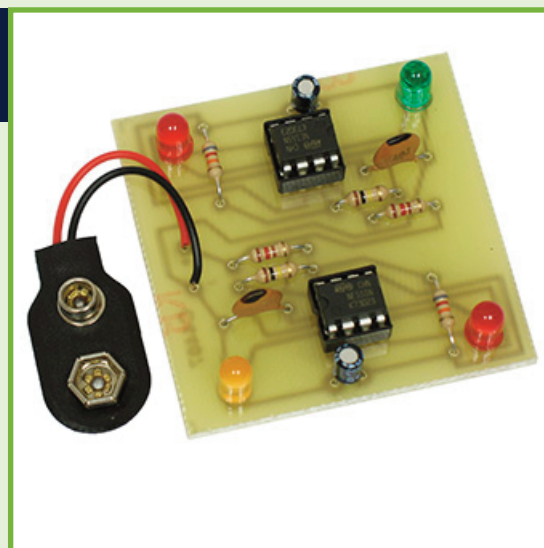
## SUPER LED FLASHER KIT

**Item Number: C4407****Unit Price: \$4.69**

### Detailed Description

One of our most popular display kits, this kit is perfect for use in robot projects, space models, warning lights, etc. Features a two IC circuit which alternately flashes 4 LEDs: 2 red, 1 yellow and 1 green. Produces a bright and colorful display. Operates from one 9V battery (not included). Size of board: 2" x 2". Complete with all parts, PC board and instructions. Skill Level 1. This kit requires soldering of components to the PC board while building.

**Video:** <https://youtu.be/GePWPocvCvw>



**CHANEY ELECTRONICS, INC.**

Educational &amp; Affordable Electronic Kits for All Skill Levels

## RACING ROBOT LEARN-TO-SOLDER KIT

**Item Number: C6927****Unit Price: \$11.96**

### Detailed Description

The Racing Robot Learn to Solder Kit features a three wheel motorized chassis and a colorful robot face that flashes on and off as the robot races out of control. Race this robot against others to see which robot is the fastest. Kit features 18 components that you install first to learn good soldering techniques. Once you have mastered soldering you then install the one IC circuitry, Face circuit, motor and mechanical assembly. Operates from one 9V battery (not included). Size of Face PC board about 1.5" x 2". Size of main chassis PC board 2" x 4". Complete with all parts, PC boards, motor and instructions. Skill Level 1.

**Video:** <https://youtu.be/SgodD4ECzGo>

**CHANNEY ELECTRONICS, INC.**

Educational &amp; Affordable Electronic Kits for All Skill Levels

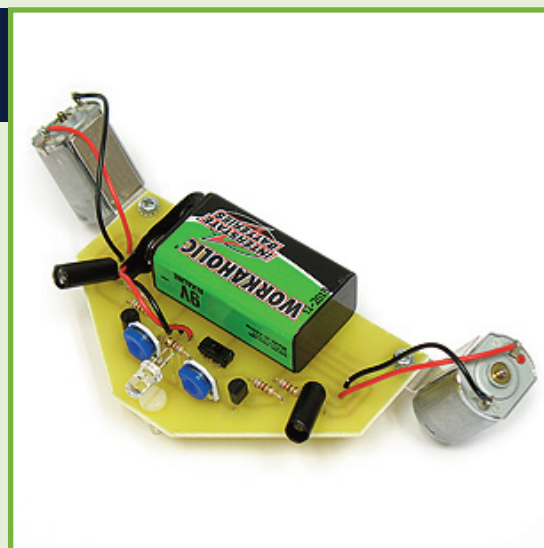
## THE LIGHT SPIDER ROBOT II KIT

**Item Number: C7049****Unit Price: \$11.21**

### Detailed Description

Our new and improved Light Spider Robot II Kit can now be used with any LED or Incandescent Flashlight! Using its electronic brain to find or follow a light source, this amazing robot quickly scoots across any smooth, hard surface (such as a linoleum floor or a wooden table top). While searching for light, one colorful and bright, flashing rainbow LED, lights up and blinks on the front of the robot. Operates from one 9V battery (not included) and uses a transistor brain to control its 2 motors. The PC board and motors can be customized by painting them before assembly. Size of PC board is approximately 3.50" x 2.25". Comes complete with all parts, PC board & instructions. Skill Level 2.

**Video:** <https://youtu.be/IgwBmDYWNf4>



**CHANNEY ELECTRONICS, INC.**

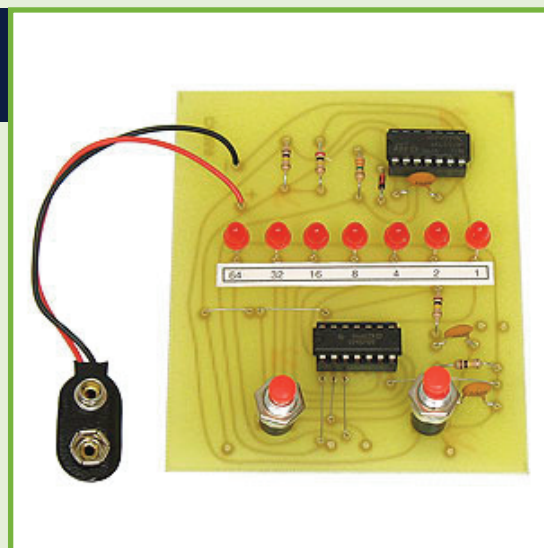
Educational &amp; Affordable Electronic Kits for All Skill Levels

## BINARY COUNTER KIT

**Item Number: C6359****Unit Price: \$10.69**

### Detailed Description

One of the most basic building blocks of computers is the binary number system. This kit counts in binary numbers and displays the binary number by red LEDs. A LED turned on is a 1 and off is a 0. This kit provides an easy to understand display of the binary number. The counter increases by 1 number each time the button is pushed. It also can count automatically by holding the button down. Teaches logic principles and binary counting. This kit features 7 red LEDs, count button, clear button and 2 IC circuit. Counts from 0 up to 127 in binary numbers. Can be used alone or can be connected to the C6360 Decimal Display Kit which displays the decimal number equivalent of the binary number. Operates from 9V battery (not included). Size of circuit board: 3.6" x 3". Complete with all parts, PC board and instructions. Skill Level 3.

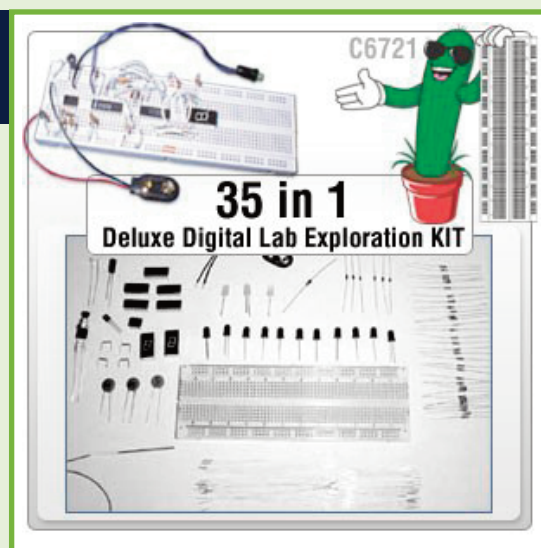




**CHANNEY ELECTRONICS, INC.**

Educational &amp; Affordable Electronic Kits for All Skill Levels

## 35 IN 1 DIGITAL LAB

**Item Number: C6721****Unit Price: \$31.88**

### Detailed Description

This lab does not require soldering, is reusable, and contains 5 lessons and 30 meaningful and exciting digital experiments. The booklet is fully illustrated with easy-to-follow pictorial diagrams and schematics. It is designed so that the teacher does not need to be involved (unless he or she desires to be). It is applicable for use in junior high grades up through college. All experiments operate on one 9V battery (not included) so there are no dangerous voltages involved. Compared to other similar digital labs, you will find that this lab is far superior in that it contains a wider variety of digital components, including a double binary counter and two 7-segment displays, allowing the students to build "0 to 99" digital counters instead of only "0 to 9". This lab also includes LEDs of three different colors (red, green, and yellow), and uses a uniform prewired breadboard system which is applied in each experiment, along with reverse polarity protection and a switch wire to prevent damage to the ICs or battery snap.

This lab also covers more digital topics such as Boolean algebra, timing diagrams, frequency and duty cycle formulas, troubleshooting techniques. C6721 Cover The lab includes a 96 page, fully illustrated manual, a large solderless breadboard, 6 integrated circuits, a CDS photocell, plus all other parts necessary to perform each experiment. Just supply a fresh 9V battery and nothing else is required to perform all the experiments in the book. The Complete 35 in 1 Deluxe Digital Lab Exploration Kit is self-contained and ready-to-use! Optional Logic Probe: Although the 35 in 1 Deluxe Digital Lab includes a simple logic probe section built on the breadboard, you may wish to purchase the very inexpensive Chaney C6722 CMOS/TTL Logic Probe Kit. Although this is totally optional you will find that this logic probe is very useful to test and troubleshoot all kinds of digital circuits.

**Table****The Universal Solderless Breadboard**

1 Lesson 1	Introduction To Digital Electronics
2 Lesson 2	Components, Gates and IC's
3 Lesson 3	Combinational & Sequential Circuits, Boolean Algebra And Timing Diagrams
4 Lesson 4	The Binary Numbering System
5 Lesson 5	Troubleshooting Techniques
6 Experiment 1	The Logic Probe: "The Tool"
7 Experiment 2	The YES Logic Circuit: "The Buffer"
8 Experiment 3	The NOT Logic Circuit: "The Inverter"
9 Experiment 4	The AND Logic Gate
10 Experiment 5	The OR Logic Gate
11 Experiment 6	The NAND Logic Gate
12 Experiment 7	The NOR Logic Gate
13 Experiment 8	Building The Six Basic Logic Gates Using Only NOR Gates
14 Experiment 9	"The Clock" - A Stable Multivibrator
15 Experiment 10	The 555 Timer IC
16 Experiment 11	"The Timer" - Monostable Multivibrator
17 Experiment 12	"The Flip-Flop" - Bistable Multivibrator
18 Experiment 13	Reaction Challenge Game
19 Experiment 14	The Binary Counter/Divider
20 Experiment 15	Manual Binary Counter & Switch Debouncing
21 Experiment 16	The BCD Counter (Decade Counter)
22 Experiment 17	Touch Activated ON/OFF Switch
23 Experiment 18	Seven Segment Display Decoder
24 Experiment 19	"0 to 9" Counter With Display
25 Experiment 20	Lucky Number Generator
26 Experiment 21	Electronic Die Game
27 Experiment 22	0 To 9 Photoelectric Counter
28 Experiment 23	Sequential LED Flasher
29 Experiment 24	Triple Answer Decision Maker
30 Experiment 25	"10 by 10" Reaction Game
31 Experiment 26	Brightness Control Touch Switch
32 Experiment 27	Macho Meter
33 Experiment 28	"Go for the Gold" Game
34 Experiment 29	0 To 99 Counter With Display
35 Experiment 30	0 To 99 Photoelectric Counter

**CHANNEY ELECTRONICS, INC.**

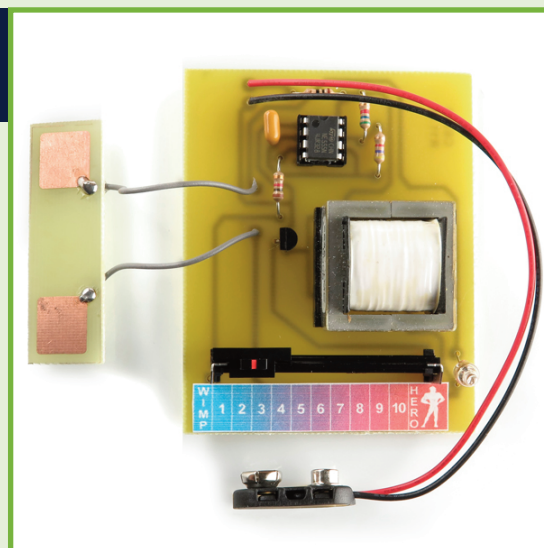
Educational &amp; Affordable Electronic Kits for All Skill Levels

## THE TINGLER KIT

**Item Number: C6740****Unit Price: \$8.96**

### Detailed Description

Just set the slide control to the "Wimp" position and place your fingers on the touch pads. You'll then receive a "tingling" sensation from the mild electrical voltage. If you can leave your fingers on the touchpads the neon lamp will go out. Now slide the control towards the "Hero" position and you'll find it's much more difficult to extinguish the lamp (as the tingling sensation becomes much greater). This kit is fun to build and fun to use. Operates from 9V battery (not included). Size of board: 2 1/2" x 1 1/2". Complete with all parts, PC board and instructions. Skill Level 1.



**CHANNEY ELECTRONICS, INC.**

Educational &amp; Affordable Electronic Kits for All Skill Levels

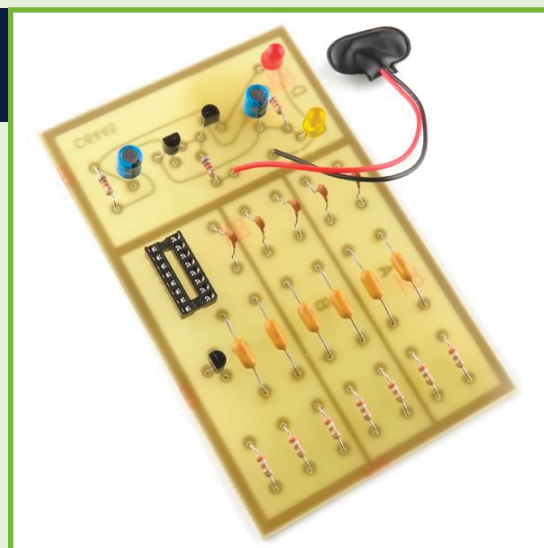
## LEARN-TO-SOLDER KIT

**Item Number: C6445****Unit Price: \$6.71**

### Detailed Description

Special kit designed for the student who has not had any experience with soldering. This kit has 30 components to solder in giving the student ample soldering experience. The first 20 components to be soldered are used to gain soldering experience, but the last 10 components, when soldered in, make up a bright red and yellow alternating LED flasher! The LED flasher portion is built after the student has soldered in the 20 practice components, which include: capacitors, a transistor, resistors, and an IC socket. When the student completes this kit, they should have developed good soldering techniques and have a functioning LED flasher to show for his/her efforts. This kit requires one 9V battery (not included). Size of board: 4.75" x 3". Complete with all parts (including practice parts for soldering) and complete soldering instructions. Skill Level 1.

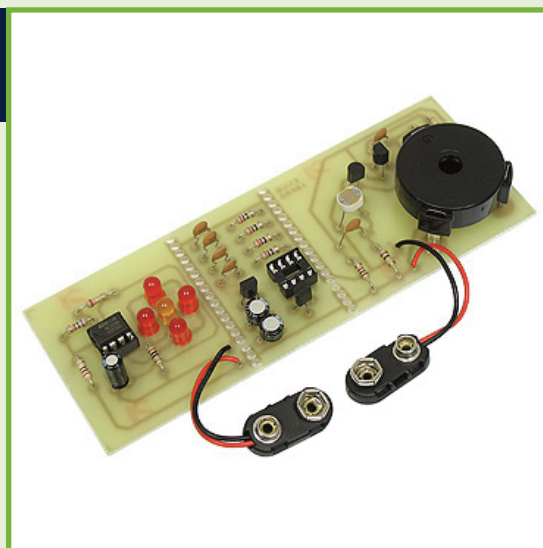
**Video:** <https://youtu.be/H0wfON8xTko>



**CHANNEY ELECTRONICS, INC.**

Educational &amp; Affordable Electronic Kits for All Skill Levels

## DELUXE LEARN-TO-SOLDER KIT

**Item Number: C6491****Unit Price: \$8.96**

### Detailed Description

This special kit is similar to the regular "Learn To Solder Kit" (C6445), however, this kit has some very unique features. Not only does it have a special non-functioning "Learn To Solder" section, it also has two additional kits on one circuit board. You get a bright yellow and red "Jewel" LED Flasher Kit and also an Insanity type Alarm Kit. The deluxe learn to solder kit uses a specially designed circuit board that allows you to build all three kits. After construction and testing, you simply snap the main circuit board into the 3 separate individual kits.

1. The Learn to Solder middle section is constructed first to give your student ample soldering experience.
2. Next, the student constructs the Insanity type Alarm Kit section. This unique kit is equivalent in operation to our most popular selling Insanity Alarm Kit (C6240). It emits a piercing tone when the lights go out, but stays perfectly silent when they turn on the lights to look for it.
3. Finally, the student completes the more complicated "Jewel" LED Flasher Kit section. This IC circuit kit alternately flashes 4 bright red LEDs with one bright yellow LED. This unique kit is more challenging to build and is the perfect "wrap up" to test the student's skill in making kits. Remember, you get all three kits listed with all parts and PC board. Requires two 9V batteries (not included), one for each functional kit. Overall size of circuit board before snapping it apart is 5.5" x 1.75". Order this unique kit now for a complete solution to your kit building needs! Skill Level 1.



**CHANNEY ELECTRONICS, INC.**

Educational &amp; Affordable Electronic Kits for All Skill Levels

## 33 IN 1 DELUXE ELECTRONIC LAB

**Item Number: C6709****Unit Price: \$23.81**

### Detailed Description

This exciting breadboard kit requires no soldering or previous electronic experience. The kit enables any student to build 33 different electronic experiments and activities. The kit is meant to be used over and over again to save money. Not only is this kit complete with everything the student needs, but also the instruction booklet is designed so that the teacher does not need to be involved (unless he or she desires to be). The student builds and studies the first 11 instructional circuits which include theory and data facts along with a simple pencil activity quiz. The remaining 22 experiments for the student are fun to build electronic circuits that have a parts list, schematic and parts placement drawing.

These give the student an ample introduction to electronic components and circuitry. Breadboard type kits have been around for years, however, ours is the first to incorporate an introduction to Ohm's law, electromagnet circuitry, motor circuitry, transistor circuitry, IC circuitry and 7 segment display circuitry all in one kit. There is now no need to have several different breadboard kits to learn basic electronic concepts. One kit covers almost all aspects of basic electronic concepts and components.

**C6709 Cover:** Not only does our 33 in 1 Deluxe Electronic Exploration Kit introduce various electronic educational concepts but it is also a fun and interesting motivational activity for your student. Complete with all electronic parts, breadboard and instruction booklet. Requires one 9V battery (not included). If the student has already built the 33 in 1 Deluxe Electronic Exploration Kit, you may wish to purchase our 35 in 1 Deluxe Digital Lab Exploration Kit so that the student can gain digital electronics fundamentals.

**Video:** <https://youtu.be/2YHnpG9oaZw>





**CHANNEY ELECTRONICS, INC.**

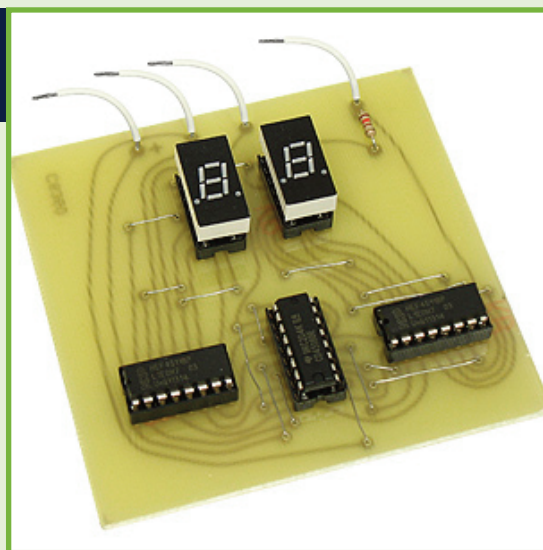
Educational &amp; Affordable Electronic Kits for All Skill Levels

## DECIMAL DISPLAY KIT

**Item Number: C6360****Unit Price: \$11.44**

### Detailed Description

The Decimal Display Kit counts and displays decimal numbers from 0 to 99. Its primary function is to be connected to the Binary Counter Kit to display the decimal number equivalent of the binary number shown on the Binary Counter Kit - C6359. Can also be used in conjunction with several of our kits to provide "Next Number To Be Served Display", people counter, lap timer, event counter, etc. Features IC circuitry and two bright 7 segment LED displays. Operates from one 9V battery (not included). Size of board: 3" x 3.25". Complete with all parts, PC board and instructions. Skill Level 3.



**CHANNEY ELECTRONICS, INC.**

Educational &amp; Affordable Electronic Kits for All Skill Levels

## JAM MAN KIT

**Item Number: C6987****Unit Price: \$21.94**

### Detailed Description

Sure to be a Sold Out show! Jam Man and band are coming to rock your town. Uses a preprogrammed PIC16F88 micro-controller and a sensitive IC amplifier with an electric microphone to drive a 5X7 green LED matrix display. Jam Man is happy and sings along to the music. When its quiet for awhile he takes 5 (frowns and then goes to sleep) until he hears sounds again, then he gets back on stage! Operates on one 9V battery (not included). Size of PC board 2.8" X 1.25". Complete with all parts, PC board and instructions. Requires soldering. Skill Level 2.

**Video:** <https://youtu.be/P49nYhVdJhE>

**CHANNEY ELECTRONICS, INC.**

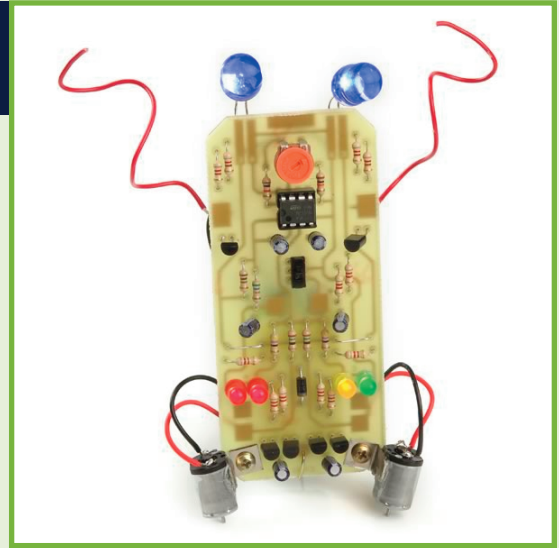
Educational &amp; Affordable Electronic Kits for All Skill Levels

## ELECTRIC SLIDER LEARN-TO-SOLDER

**Item Number: C7012****Unit Price: \$8.96**

### Detailed Description

Stand up Electric Slider Learn to Solder Robot, not only allows students to learn good soldering techniques, but also provides them with a bright colorful sliding, scooting robot. Operates on one 9V battery (not included) and uses 2 powerful motors and a 1 IC circuit to move in a weird pattern on any smooth surface. Features colorful flashing LEDs which make this kit a real attention getting project. Overall size of PC board is 1.8" x 4". Complete with all parts, PC board and instructions. Skill level 1.



**CHANNEY ELECTRONICS, INC.**

Educational &amp; Affordable Electronic Kits for All Skill Levels

## ALIEN ATTACK KIT

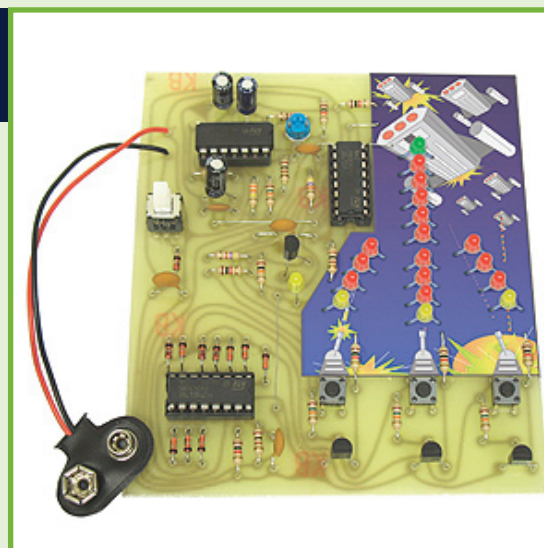
**Item Number: C6727****Unit Price: \$12.94**

### Detailed Description

Aliens are invading with their warships and are dropping bombs on you! The only way to defend yourself is by neutralizing their bombs before they reach the ground. The bombs fall at different speeds and in different directions and are indicated by colorful LEDs.

This kit includes 19 LEDs of three different colors (red, yellow and green), 3 action switches, a circuit board, three ICs, and other components.

Operates from 9V battery (not included). Size of board: 4 1/2" x 3 3/4". Complete with all parts, PC board and instructions. Skill Level 3.



**CHANNEY ELECTRONICS, INC.**

Educational &amp; Affordable Electronic Kits for All Skill Levels

## DELUXE SMD LEARN-TO-SOLDER

**Item Number: C6719****Unit Price: \$8.21**

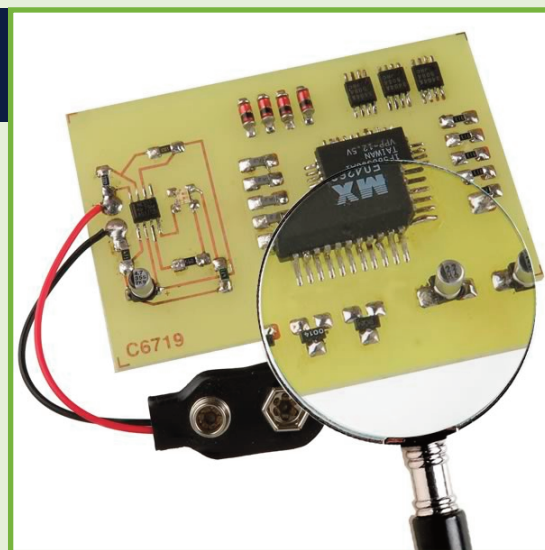
### Detailed Description

Here's the perfect way to gain experience in soldering, identification and use of Surface Mount Device (SMD) technology. This kit features 32 SMD components, including 3 SMD 8 pin ICs, microprocessor IC, capacitors, resistors, transistors and a LED.

The first 24 components are parts used to gain ample soldering experience with SMD parts as the student solders the various parts onto the practice section of the PC board. The last 8 SMD components are used to make an IC type dual LED flasher. This section of the kit flashes a dual color SMD LED. It flashes red then green from the same LED.

Not only does the student learn to solder SMD parts but in the end the student has an attractive and functional SMD dual color LED flasher to show for his/her effort.

Operates on one 9V battery (not included). Size of PC board: 2" x 3". Complete with all parts, PC board and instructions. A super value! Skill Level 2.





**CHANNEY ELECTRONICS, INC.**

Educational &amp; Affordable Electronic Kits for All Skill Levels

## 21 IN 1 ELECTRONIC DISCOVERY KIT

**Item Number: C7089****Unit Price: \$17.62**

### Detailed Description

This is the perfect lab for anyone interested in discovering basic electronic components and electronic circuitry.

This kit consists of a re-usable no solder breadboard and various electronic components including a buzzer, motor, capacitor, CDS cell, resistors and LEDs. Not only do you discover circuits that use these components, you'll also make many fun functional projects.

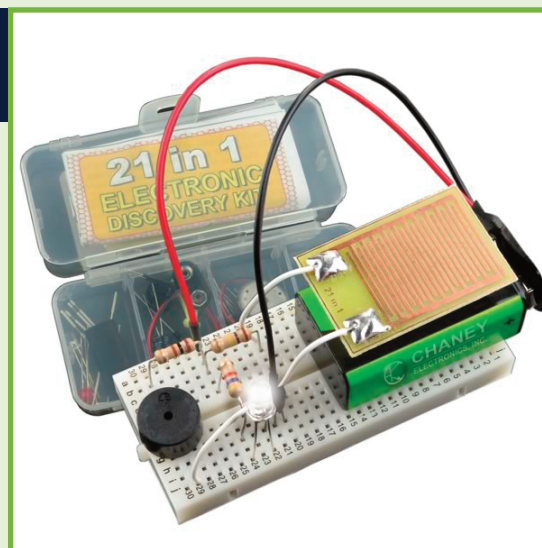
This kit does not require any soldering and is self contained in a reclosable 5.75" x 2.5" x 2" plastic storage box with small booklet.

### Explore Components and Build Fun Experiments

Resistor Color Code

Switches and LEDs

Motors



In-series Circuits

Parallel Circuits

Diode Action

Flashing LEDs

Capacitor Storage

Electronic Buzzers

Transistors

Rain Detector

Flood Alarm

Burglar Alarm

Light Sensitive CDS Cells

Automatic Night Light

People Detector

Pulsating Motor

Insanity Alarm

Automated Match Blower

Super Sensitive Conductor Identifier

Surface Mount Devices



**CHANNEY ELECTRONICS, INC.**

Educational &amp; Affordable Electronic Kits for All Skill Levels

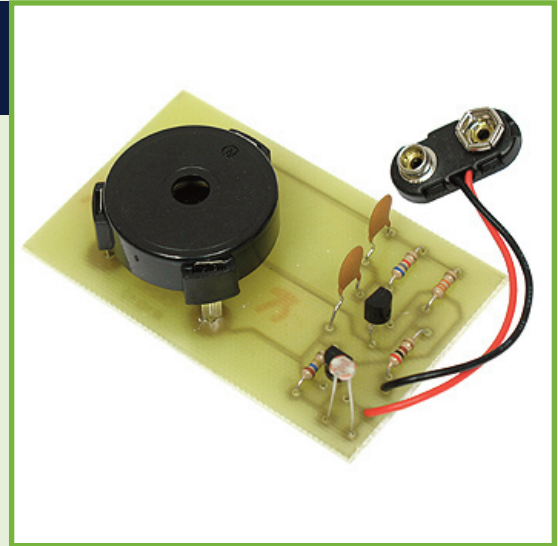
## INSANITY ALARM KIT

**Item Number: C6240****Unit Price: \$4.88**

### Detailed Description

Set this kit in an inconspicuous place with light shining on it and it remains perfectly silent, however, as soon as the light is turned off the kit emits a high pitched irritating tone! When they turn the light on again to look for the culprit it keeps silent again! Easy to build and loads of fun to use. Operates from one 9V battery (not included). Size of board: 2.9" x 1.8". Complete with all parts, PC board and instructions.

Skill Level 1. This kit requires soldering of components to the PC board while building.



**CHANEY ELECTRONICS, INC.**

Educational &amp; Affordable Electronic Kits for All Skill Levels

## BRIGHT STAR COLOR ORGAN KIT

**Item Number: C6815****Unit Price: \$6.71**

### Detailed Description

This small super sensitive color organ kit features 5 bright LEDs that flash to the beat of the music. Circuit features a miniature electret microphone and a high gain 3 transistor circuit so no connections to your stereo are needed! Simply place the kit in the general vicinity of your speakers, adjust the gain control and you are ready for bright Star flashes of light as your music plays. Operates on one 9V battery (not included). Size of PC board is 1 13/16" square. Complete with all parts, PC board and instructions. Skill Level 1.



**CHANNEY ELECTRONICS, INC.**

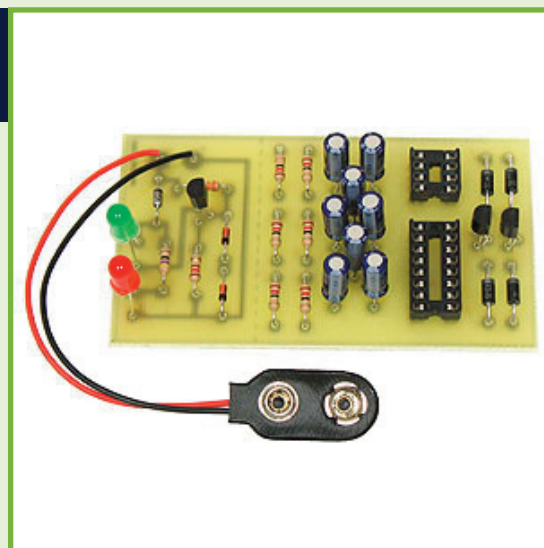
Educational &amp; Affordable Electronic Kits for All Skill Levels

## LEARN-TO-SOLDER 9V BATTERY TESTER

**Item Number: C6972****Unit Price: \$8.06**

### Detailed Description

This is the perfect kit learn to solder! Not only does it give the first years student ample soldering experience with 22 practice components, it allows the student to create a very useful 9VDC battery analyzer/tester. Accurate and handy to have around, the tester lights up 2 LEDs to indicate whether the battery is in new/fresh condition, has some life left (about 7.5V to 8V) or is dead (under 7V). Size of PC board 1.9" x 3.4". Complete with all parts (including practice parts for soldering) and complete soldering instructions. Skill Level 1.



**CHANNEY ELECTRONICS, INC.**

Educational &amp; Affordable Electronic Kits for All Skill Levels

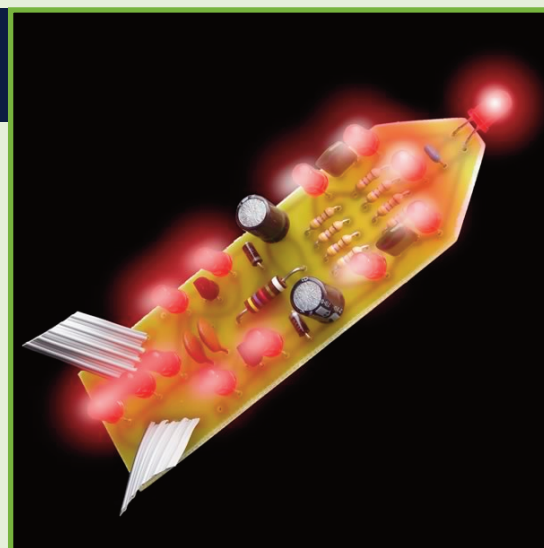
## LEARN-TO-SOLDER ROCKET KIT

**Item Number: C6864****Unit Price: 8.21**

### Detailed Description

This special kit is the perfect kit to introduce students to good soldering techniques. When completed, the 4" tall rocket flashes 13 bright red LEDs and will stand upright on a desk or shelf. The student learns to solder by following the detailed instructions showing how to solder the 22 practice components. These include cable, capacitors, diodes, resistors, and transistors. With the knowledge and skills obtained from soldering the practice components, the student then finishes the rocket by installing the 13 bright LEDs that flash when a 9V battery is connected (battery not included). Size of rocket PC board is 4 3/8" tall x 1 1/4" wide. Complete with all parts, PC board and instructions. Skill Level 1.

**Video:** <https://youtu.be/G04GkfBTfp0>



**CHANEY ELECTRONICS, INC.**

Educational &amp; Affordable Electronic Kits for All Skill Levels

## SECRET ALARM KIT

**Item Number: C6455****Unit Price: \$7.13**

### Detailed Description

This is the perfect device to scare off someone who opens your desk, dresser, file cabinet, lunch box, etc. Simply turn the arming switch to the on position. You have a couple of seconds to put your Secret Alarm in a desk and close the drawer. The next time someone opens it, a loud obnoxious noise comes from the horn until unit is reset.

Uses sensitive CDS and SCR circuit to respond to light. As long as it is kept in the dark it is quiet, but when light hits the sensor, WATCH OUT! Size of board: 3.75" x 2.25". Operates from one 9V battery (not included).

Complete with all parts, PC board and instructions. Skill Level 1.



**CHANNEY ELECTRONICS, INC.**

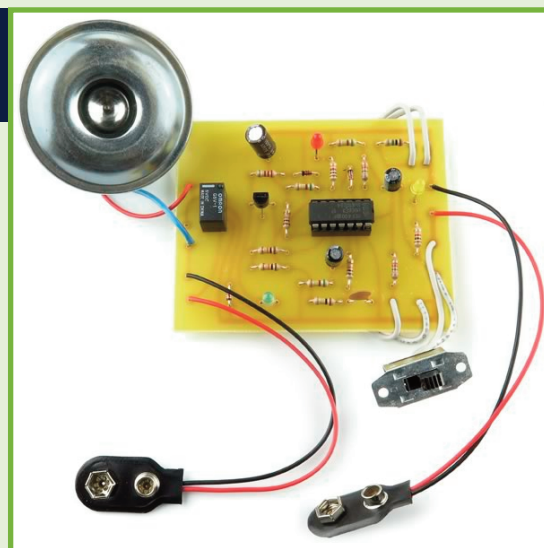
Educational &amp; Affordable Electronic Kits for All Skill Levels

## PROFESSIONAL BURGLAR ALARM KIT

**Item Number:** C6785**Unit Price:** \$10.46

### Detailed Description

This useful kit includes all the features you would expect from a professional burglar alarm. It uses an IC circuit and has an exit time delay to allow you to leave your home before the unit is armed, an entrance delay to allow you to disarm the unit when you return home, an automatic horn cutoff after a period of time, an automatic reset circuit, and of course, N.O. and N.C. loops to allow you to use your choice of optional sensor switches, such as reed switches, snap action switches, etc. Operates from two 9V batteries (not included). Comes with 9V horn alert, but if you wish, you can activate your own horn alarm if you have one. Size of PC board: 3 1/4" x 2 5/8". Complete with all parts (except sensor switches), PC board and instructions. Skill Level 2.





**CHANNEY ELECTRONICS, INC.**

Educational &amp; Affordable Electronic Kits for All Skill Levels

## UNIVERSAL LEARN-TO-SOLDER KIT

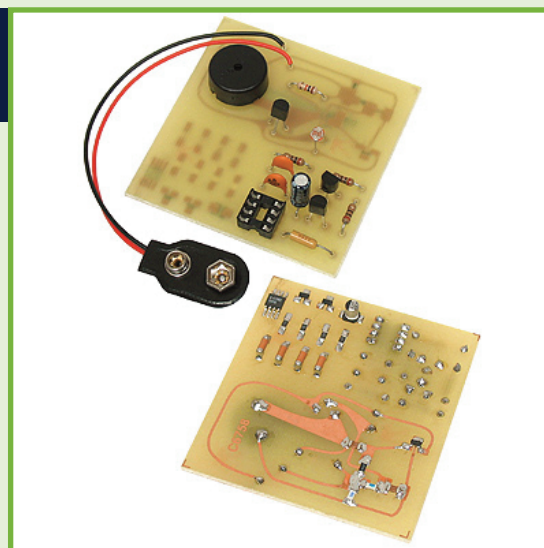
**Item Number: C6758****Unit Price: \$7.69**

### Detailed Description

Here's the perfect kit to give students experience in learning soldering techniques for both standard and SMD components. The student begins by soldering various standard lead components such as transistors, capacitors and an IC socket. The student then progresses to SMD sections (on the reverse side of board) where the student practices soldering various SMD parts such as transistors, diodes, resistors, capacitors and an IC.

Finally, the student builds a functional Insanity Alarm Kit (C6240) which is constructed using both regular and SMD components so that some parts are on each side of the board. The Insanity Alarm operates on one 9V battery (not included).

Size of PC board: 2 1/2" sq. Kit is supplied with 33 parts, PC board and instructions. Skill Level 1.



**CHANNEY ELECTRONICS, INC.**

Educational &amp; Affordable Electronic Kits for All Skill Levels

## SHIMMERING COLOR ORGAN KIT

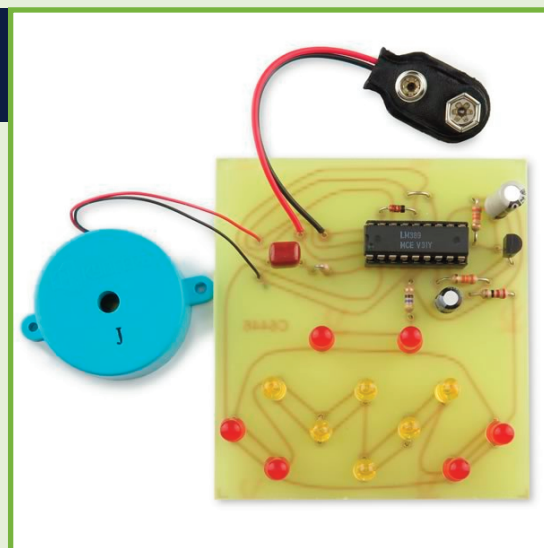
**Item Number: C6446****Unit Price: \$8.03**

### Detailed Description

Exciting portable color organ provides a colorful display in response to music. Display shimmers and flashes to your music without any connections. The kit uses 6 jumbo red LEDs and 6 jumbo yellow LEDs with a sensitive amplifier IC. No connection to your stereo is needed as the Shimmering Color Organ Kit uses a crystal microphone to pick up the sounds of your music!

Take your color organ with you anywhere, as it requires only one 9V battery (not included) to operate. Size of board: 2 3/4" x 3 1/8". Complete with all parts, PC board and instructions. Skill Level 2.

**Video:** <https://youtu.be/8PZzN81W418>



**CHANNEY ELECTRONICS, INC.**

Educational &amp; Affordable Electronic Kits for All Skill Levels

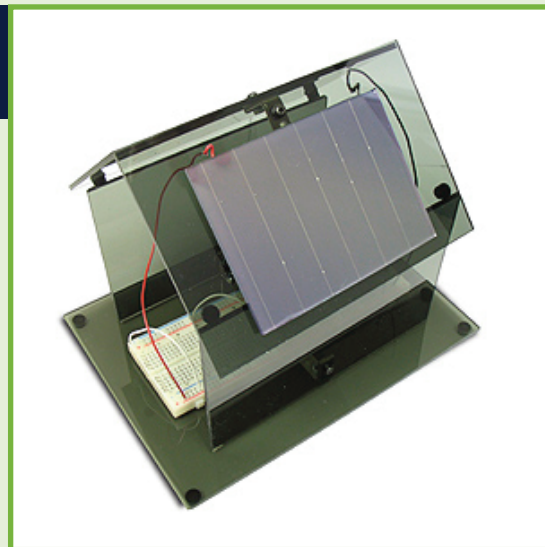
## 54 IN 1 SOLAR HOUSE GREEN ENERGY LAB

**Item Number: C7041****Unit Price: \$43.69**

### Detailed Description

Have you seen a house with a solar panel on the roof and wondered how it produces electricity? In response to increasingly high electricity costs and the overall well being of our environment, advanced technologies in solar energy has made it possible for home owners and businesses to install Photovoltaic Solar Panels to convert sunlight to usable electricity and heat. With this in mind, we have designed this course for the inquisitive student that wants to gain an understanding of how different technologies using green or alternate energy can be used in the home.

In this course, we will create our own model house made of Plexiglas and install an amorphous silicon glass solar panel to simulate how we can harness the sun's energy into one's house. The solar panel that we will be using will provide the energy used for all of our experiments. We will perform most experiments with solar energy stored in a battery that has been charged from our solar



panel along with a re-useable solderless breadboard.

The fully illustrated and detailed manual included in this course will introduce the student to some basic technology and fundamental concepts used in common house hold devices such as lighting, thermostats, fire alarms, and burglar alarms. In order to study these technologies, we are going to study solar panels, motors, fans, resistors, diodes, LEDs, switches, lamps and batteries. The easy-to-follow pictorial diagrams will guide the student through 26 chapters containing a variety of activities and useful experiments along with fun and interesting facts relating to solar energy.

This course offers a hand on approach that is applicable for use in grades junior high up through college. All parts to create the model house, along with the necessary components, wires, breadboard, solar panel, and de-

tailed instruction manual are included. No soldering or additional batteries required. Re-usable and safe to use. Skill Level 1

### Lab Contents:

Chapter 1 Energy Sources  
Chapter 2 Constructing the Solar House  
Chapter 3 Solar Systems  
Chapter 4 Solar Cells  
Chapter 5 Solar Panels  
Chapter 6 Inverters  
Chapter 7 Grid-Tied vs Off-Grid  
Chapter 8 Batteries  
Chapter 9 Metering  
Chapter 10 Disconnect  
Chapter 11 Charging Batteries with Solar Power  
Chapter 12 Resistors  
Chapter 13 Switches  
Chapter 14 Ceiling Fans  
Chapter 15 Diodes  
Chapter 16 LEDs  
Chapter 17 Lighting  
Chapter 18 Series Circuit vs Parallel Circuits  
Chapter 19 Outdoor Lighting  
Chapter 20 Transistors  
Chapter 21 Conductors  
Chapter 22 Water Flood Alarm  
Chapter 23 Doorbell  
Chapter 24 Thermostats  
Chapter 25 Burglar Alarm  
Chapter 26 Fire Alarm

Experiment 1 Battery Charging with solar Power  
Experiment 2 Switches  
Experiment 3 Fans  
Experiment 4 Diodes  
Experiment 5 LEDs  
Experiment 6 LED Lighting Color Temperature  
Experiment 7 Incandescent Lamps vs LEDs  
Experiment 8 Parallel Circuits  
Experiment 9 Series Circuits  
Experiment 10 Automatic Outdoor Lighting  
Experiment 11 Transistors  
Experiment 12 Conductors  
Experiment 13 Water Flood Alarm  
Experiment 14 Doorbell  
Experiment 15 Thermostat  
Experiment 16 Burglar Alarm  
Experiment 17 Fire Alarm  
Experiment 18 Electronic Candle  
Activity 1 Energy Activity  
Activity 2 Solar Systems Activity  
Activity 3 Solar Cells Activity  
Activity 4 Solar Panels Activity  
Activity 5 Batteries Activity  
Activity 6 Resistors Activity  
Activity 7 Ceiling Fans Activity  
Activity 8 Diodes Activity  
Activity 9 LEDs Activity  
Activity 10 Conductors Activity

**CHANNEY ELECTRONICS, INC.**

Educational &amp; Affordable Electronic Kits for All Skill Levels

## WHEEL OF FORTUNE KIT

**Item Number: C3806****Unit Price: \$10.46**

### Detailed Description

ery popular game device! Push the start button and a bright red “ball” (LED) appears to spin around ten numbers gaining speed as you hold the button down. When you release the button, the electronic ball appears to slow down and finally comes to a stop on one number.

As the ball spins, a small speaker emits a ticking sound in synchronization. Features colorful faceplate and jumbo red LEDs.

Operates from one 9V battery (not included). Size: 2 5/8" x 2 7/8". Complete with all parts, PC board and instructions. Skill Level 3.

**Video:** <https://youtu.be/NBWFu66kh80>





**CHANNEY ELECTRONICS, INC.**

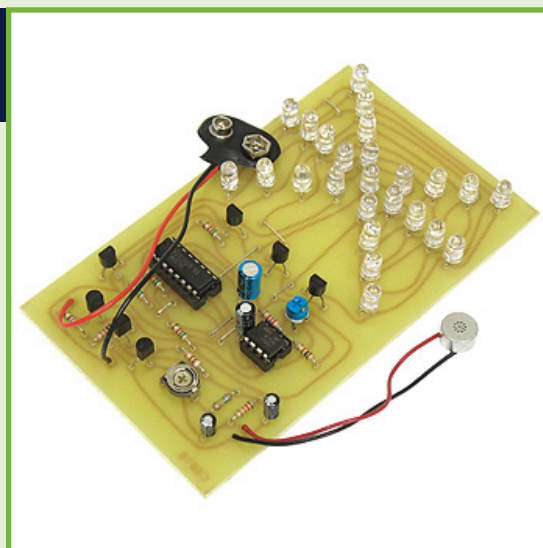
Educational &amp; Affordable Electronic Kits for All Skill Levels

## EXPLODING STAR COLOR ORGAN KIT

**Item Number: C6818****Unit Price: \$14.96**

### Detailed Description

This spectacular color organ kit will amaze and thrill anyone who has the pleasure of seeing it in action. Very colorful, bright and highly animated exploding star effect is controlled by the beat of the music and a 2 IC circuit. The display is like a firework that is in sync with your music. No connection to your sound source is necessary as this kit uses an ultra-sensitive electret microphone to pick up the sound. Kit uses blinding output LEDs in red, green and yellow colors (25 total), 6 transistors and 2 ICs. Operates on one 9V battery (not included). Size of PC board is 5 1/16" x 3". Complete with all parts, PC board and instructions. Skill Level 3. Be the first in your class to own this amazing electronic display and everyone else will want to borrow it for their next party!





**CHANNEY ELECTRONICS, INC.**

Educational &amp; Affordable Electronic Kits for All Skill Levels

## 17 IN 1 MICROCON- TROLLER LAB

**Item Number: C7043****Unit Price: \$127.46**

### Detailed Description

Are you looking for a way to introduce your students to the exciting world of microcontrollers? Have you been overwhelmed with the difficulty of finding everything you need in ONE convenient package? Well look no further as we have developed a COMPLETE microcontroller introduction course. Our new 17 in 1 Deluxe Microcontroller Exploration Lab was developed as an introduction to microcontrollers and requires no previous knowledge of microcontrollers or programming languages.

This is the perfect hands-on lab that gives your students valuable practical experience as they build each experiment. All of the source code (written in C) is provided on a CD rom and each experiment has a hex file (the compiled source code) that can be programmed onto the microcontroller using a Microchip PICkit™3 programmer. The PICkit™3 programmer plugs into a USB port on your computer and allows you to program your microcontroller with a hex file (the compiled source code). The PICkit™3 programmer is included with the complete version of the kit and is necessary to program the microcontroller. Advanced users or students that are familiar with the C programming language will be able to follow the source code that was used to generate the hex file for each experiment.\*

This lab requires no soldering as each experiment is built on a reusable solderless breadboard using the supplied electronic components. At the heart of this lab is a microcontroller that plugs directly into the breadboard.

**CHANNEY ELECTRONICS, INC.**

Educational &amp; Affordable Electronic Kits for All Skill Levels

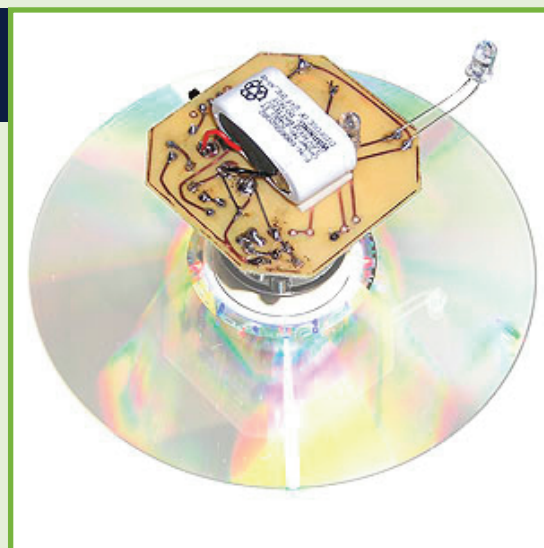
## ELECTRO SPINNER KIT

**Item Number: C6936****Unit Price: \$13.13**

### Detailed Description

This amazing kit features a brilliant neon like rainbow of spinning colors. The Electro Spinner Kit uses two special rainbow flashing LED's, a motor and a special electronic circuit to produce attractive and stunning ever changing rings of neon like colors. The Electro Spinner automatically turns on when it is in the dark and spins for almost an hour before needing to be recharged. Kit includes all parts, PC board, motor, rechargeable battery, charger and CD base. Overall size of PC board is about 2" square. Skill Level 2.

**Video:** [https://youtu.be/VR\\_AUo4FhJw](https://youtu.be/VR_AUo4FhJw)



**CHANNEY ELECTRONICS, INC.**

Educational &amp; Affordable Electronic Kits for All Skill Levels

## 8-NOTE ORGAN KIT

**Item Number: C4736****Unit Price: \$8.96**

### Detailed Description

Very unique synthesizer features 10 adjustable notes, variable pitch, variable speed, flashing LED and individual or flowing notes. Make "robot" sounds, space war, computer effects, etc. One of the most unusual kits! Circuit features three ICs and 12 trimmer resistors. Size of board: 2 13/16" x 4". Operates from 9V battery (not included). Complete with all parts, PC board and instructions. Skill Level 1. This kit requires soldering of components to the PC board while building.

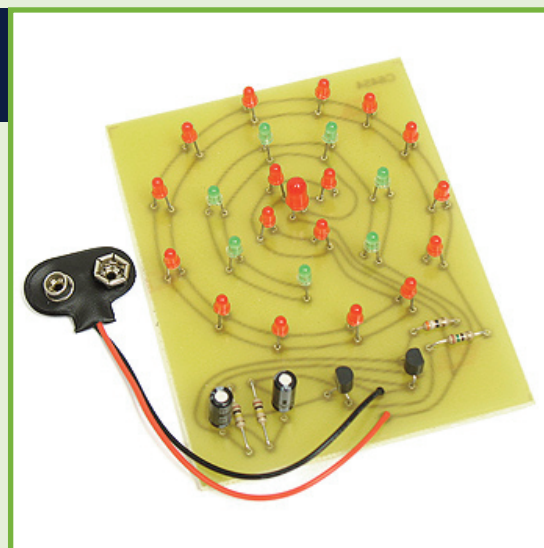
**Video:** <https://youtu.be/ApXYrIRl8YY>



**CHANEY ELECTRONICS, INC.**

Educational &amp; Affordable Electronic Kits for All Skill Levels

## ELECTRONIC FIREWORKS KIT

**Item Number: C6454****Unit Price: \$7.13**

### Detailed Description

Exciting kit electronically creates an exploding "firework" like display. Kit features 17 micro red LEDs, 7 green mini LEDs and 1 jumbo red LED. The circuit uses a 2 transistor multi-vibrator that alternates between the "rings" of LEDs, which cause a display like "sky rocket" type fireworks. Great attention getter in a darkened room. Attractive and makes an interesting intermediate project. Size of board: 3.875" x 3". Operates from one 9V battery (not included). Complete with all parts, PC board and instructions. Skill Level 2.

**Video:** [https://youtu.be/anKW\\_q1Uw\\_I](https://youtu.be/anKW_q1Uw_I)

**CHANEY ELECTRONICS, INC.**

Educational &amp; Affordable Electronic Kits for All Skill Levels

## "FLASH" THE ROBOT KIT (LEARN-TO-SOLDER)

**Item Number:** C7075**Unit Price:** \$8.06

### Detailed Description

What a fun kit to practice your solder techniques on. Plus, upon completing this kit, you will have created "Flash" The Robot. This kit features Flash's eyes that use two very bright and colorful, flashing rainbow LEDs that light up in colors of red, green, blue, violet, and yellow. The hands light up in green. Another feature that's really cool about this kit, is that there are no worries about finding batteries to keep Flash fueled up because your robot kit is powered by your computers USB port!

This kit is perfect for beginners learning to solder and stands 3.2" X 1". Complete with all parts, PC board. Requires soldering. Skill Level 1.





**CHANNEY ELECTRONICS, INC.**

Educational &amp; Affordable Electronic Kits for All Skill Levels

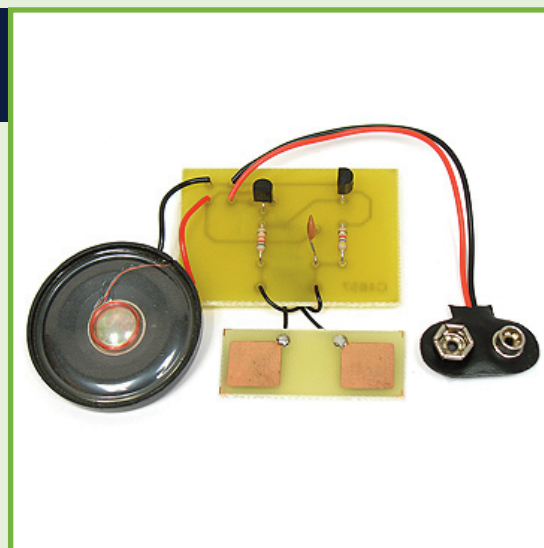
## LIE DETECTOR KIT

**Item Number: C4657****Unit Price: \$4.88**

### Detailed Description

Simple to build kit emits a tone which changes with amount of skin resistance between two fingers. If you are relaxed, a lower pitched tone will be heard. Fun to use and great for parties. Features 2 copper touch plates on circuit board and small speaker. A fun "Poor man's Lie Detector"!

Operates from 9V battery (not included). Size of circuit board: 1 1/2" x 2". Complete with all parts, PC board and instructions. Skill Level 1.



**CHANNEY ELECTRONICS, INC.**

Educational &amp; Affordable Electronic Kits for All Skill Levels

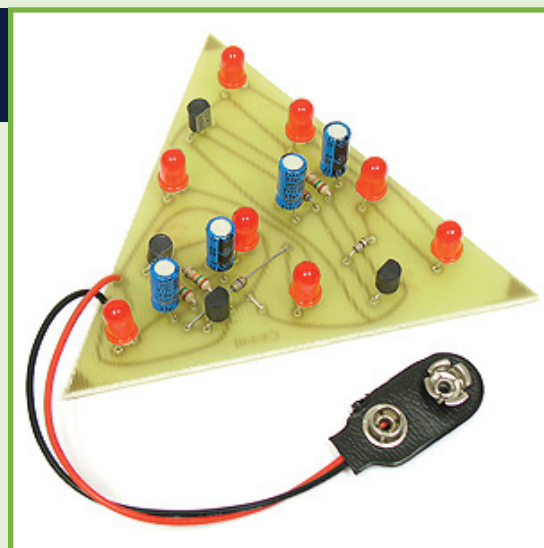
## FLASHING TRIANGLE KIT

**Item Number: C6440****Unit Price: \$5.21**

### Detailed Description

This triangle shaped LED flasher has 8 jumbo red LEDs that flash brightly. Kit is divided into two independent LED flasher groups with one group of LEDs flashing at a faster rate than the other. This difference produces an exciting display. The circuit consists of two independent multi-vibrator transistor circuits each driving four LEDs. Although this kit is a little more complicated than many of our Skill Level 1 kits, it can be built by a Skill Level 1 student if the teacher gives some supervision. Size of board: 3.8" x 3.8" x 3.8". Operates from one 9V battery (not included).

Complete with all parts, PC board and instructions. Skill Level 1.

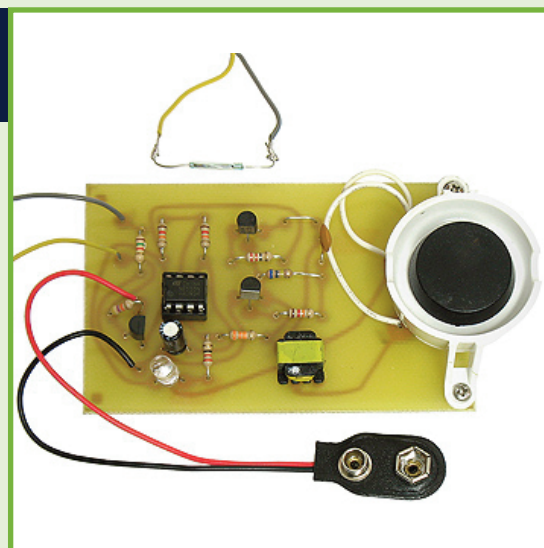


**Video:** <https://youtu.be/oP3XHW1uZ38>

**CHANNEY ELECTRONICS, INC.**

Educational &amp; Affordable Electronic Kits for All Skill Levels

## WINDOW/DOOR BURGLAR ALARM KIT

**Item Number: C6703****Unit Price: \$8.06**

### Detailed Description

This kit makes a great burglar alarm for your home. Whenever anyone attempts to open your window, this kit produces a loud pulsating electronic sound from the built in piezo speaker and it also flashes a bright red LED. The sound won't stop, even if the window is closed again. Only you can shut it off. The kit will protect a window or door. It is very simple to install as only a small magnet (included) needs to be attached (glued) to the movable window or door.

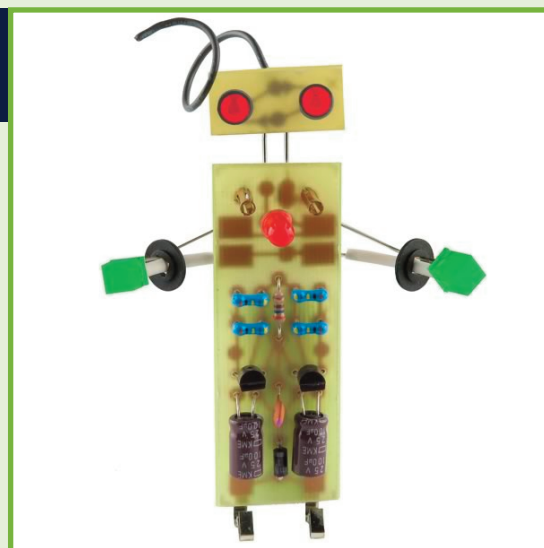
Uses IC, SCR and transistor circuitry. Operates on a 9V battery (not included). Size of PC board: 2 1/8" x 3 7/8".

Complete with all parts, PC board, reed switch, magnet and instructions. Skill Level 2.

**CHANNEY ELECTRONICS, INC.**

Educational &amp; Affordable Electronic Kits for All Skill Levels

## LEARN-TO-SOLDER ROBOT KIT

**Item Number: C6845****Unit Price: \$8.21**

### Detailed Description

This unique flashing robot will not only help you learn to solder but will also be the center of attention wherever it is placed! The eyes, center LED and both hand LEDs flash brightly for weeks continuously. Consists of 2 circuit boards and various electronic parts that you solder to the boards. You first solder the non-functional components to learn good soldering techniques, then you progress to the functional LEDs. Simple to build and can be customized to make unlimited variations (you can paint the boards before assembly, pose the arms and eyes, change the appearance of the antenna, etc.)! The 3 1/2" tall x 7/8" wide Learn to Solder Robot uses one 9V battery (not included). Unique design incorporates the battery into the robot to allow it to stand on just about anything (keyboards, monitors, desks, books, etc.). Skill Level 1.

**CHANAY ELECTRONICS, INC.**

Educational &amp; Affordable Electronic Kits for All Skill Levels

## BRILLIANT STROBE KIT

**Item Number: C4823****Unit Price: \$12.71**

### Detailed Description

Good medium priced strobe light kit which features variable speed and brilliant flashes of white light from a horseshoe shaped xenon flashtube. Great for parties, discos, dances, etc. Reliable design circuit has control to vary flash rate from about 120 to 200 flashes per minute. Another very popular strobe kit which will be the hit of the party. Operates from standard 120VAC.

Size of board: 3" x 5". Complete with all parts, PC board and instructions. Skill Level 2.

