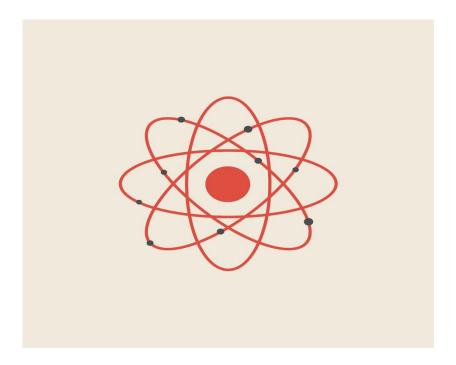
### Jameco Electronic Technology Science & Learning Kits

(Age Group – All Ages)

### **Jameco Electronic & Science Kits**







### Voice Changer Solder-Assembly Kit Change Pitch Add Vibrato Effect



Jameco Part no.: 2130731 Manufacturer: Velleman Manufacturer p/n: WSAH171 HTS code: 8543909500 Data Sheet (current) [441 KB]

# \$13.95 ea 634 In Stock More Available - 7 weeks Qty 1 Add to cart + Add to my favorites # of units Price (USD) 1+ \$13.95 5+ \$12.95 Request a Large Quantity Quote WARNING: Proposition 65

### View larger image



### **Voice Changer Kit**

35 Solderable Pieces

### **Features**

- · Make your voice sound like a robot
- · Add vibrato effect
- · Use the 'pitch'-buttons and make your voice sound lower or higher
- · Built-in microphone and power amplifier with volume control
- Just add a speaker (We recommend our flat 8Ω speaker, P/N: 2234134)
- · Hours of fun!
- · Great for parties, plays, recordings, games, costumes, etc.

- · Speaker / line output terminals
- On/off switch
- Max. output power: 1.5W (4 ohm)
- Power supply: 9VDC / 300mA (or 9V battery, P/N: 198731)
- Dimensions: 3.0" x 1.8"

### Learn to Solder Practice Kit (Soldering Iron not Included)



Jameco Part no.: 2161617 Manufacturer: Elenco Electronics Manufacturer p/n: SP-1A HTS code: 8542310000 Data Sheet (current) [2.2 MB] \$12.95 ea
749 In Stock
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Qty 1

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5+	\$11.95			
25+	\$10.95			
100+	\$9.95			
Request a La	orge Quantity Quote			
WARNING	: Proposition 65			

### Learn to Solder Practice Kit

Without soldering iron and wire cutters, see P/N 2124218 for the kit with everything.

Soldering skills rusty or non-existent? Build this kit and learn basic soldering techniques. Toy will learn how to solder on a state-of-the-art printed circuit board. All electronic components are supplied. You will build a European siren with flashing lights and learn how the circuit works. Lesson manual included.

The European Siren with flashing lights can be used as an intruder alarm, bicycle siren, or just a plain attention getter. If you never soldered before, or just want to sharpen your skills, this "Learn by Doing®" module makes soldering fun! If you need a few pointers, you can **watch a video on how to solder with this kit**.

### Features:

- · Become an expert in soldering
- · No previous soldering knowledge required
- · Gain practical knowledge of electronics
- Build a flashing European siren
- Recommended for ages 12 and up
- Requires one 9V battery (not included, we recommend Jameco P/N 198731)

### Kit Includes:

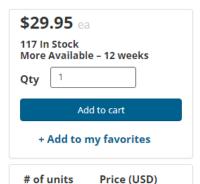
Otv	Description
Qty.	-
1	¼W, 5% resistor, <b>68</b>
2	¼W, 5% resistor, <b>470</b>
1	¼W, 5% resistor, <b>1K</b>
2	¼W, 5% resistor, <b>10K</b>
2	¼W, 5% resistor, <b>22K</b>
1	¼W, 5% resistor, <b>47K</b>
2	¼W, 5% resistor, <b>56K</b>
1	200 Trim Pot
2	Capacitor, Disc, 0.02µF (203) or 0.022µF (223)
3	Capacitor, Electrolytic, 10µF
1	Capacitor, Electrolytic, 100µF
2	NPN Transistor, 2N3904
1	Timer, IC, 555 or 1455
2	Red LED
1	PC Board
1	Solder Wick
1	Battery Snap
1	Speaker
3	Wire, 22AWG, Blue, 12"
1	Lead-free solder tube
4	

### Oscilloscope Tutor Kit



Jameco Part no.: 2175568 Manufacturer: Velleman Manufacturer p/n: WSEDU06 HTS code: 8542310000

Data Sheet (current) [1.5 MB]
Data Sheet (current) [2.2 MB]



\$29.95

\$27.95

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1+

### 

### Oscilloscope Tutor Kit

Learn how to get the most out of your digital oscilloscope. The board generates a number of safe 'real-world' signals, which we will use to perform measurements. Get familiarized with AC, DC and frequency measurements, sine and square waves, power supply ripple, full and half wave rectifiers, oscillators etc.

Learn what terms such as V/div, Time/div, trigger level, auto-setup etc. mean. Most experiments can be done with any digital storage scope. Some experiments can be performed with an analog scope.

### **Features**

- Signals:
- Alternating current (AC)
- Adjustable AC
- · Full- and half wave rectified AC
- Smoothed direct current (DC)
- Ripple
- Astable oscillator
- Assembled and tested, no soldering required

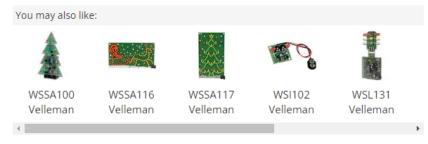
- Power supply: 9-12VAC / min.100mA (adapter not included, recommend P/N 100061)
- Dimensions: 116 x 74 x 24mm / 4.6 x 2.9 x 0.9 inch

### 3D LED Christmas Tree Kit



Jameco Part no.: 211781 Manufacturer: Velleman Manufacturer p/n: WSSA130 HTS code: 8542390000 Data Sheet (current) [196 KB]

### View larger image





# of units	Price (USD)
1+	\$12.95
5+	\$11.95
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### **3D LED Christmas Tree Soldering Kit**

### Features

- Level 1 kit (beginner)
- 16 flashing red LEDs
- · Extra green and yellow LEDs provided to customize your tree
- Can be hung and fed through wires

- · Low power consumption: 8mA
- Power supply: 9V battery, not included (recommend P/N 198731 or 198791)
- Will operate on 12VDC (e.g. in cars, external power supply, etc.)
- Dimensions: 3.1" x 3.5" x 4"

### Build a 6502 Computer by Ben Eater lameco Part no.: 2295015 \$89.95 ea Manufacturer: Jameco KitPro/Eater.net 145 ship on Aug. 11 call 1-800-831-4242 for more Manufacturer p/n: KIT-BENEAT-6502 HTS code: 8542310000 Schematic [465 KB] Qty Add to cart + Add to my favorites # of units Price (USD) View larger image \$89.95 You may also like: Request a Large Quantity Quote **WARNING: Proposition 65** KIT-BENEAT2 KIT-BENEAT1 KIT-BENEAT3 Iameco KitPro/Eater.net Jameco KitPro/Eater.net Jameco KitPro/Eater.

### Build a 6502 Computer by Ben Eater

Learn how computers work by building and programming a computer with the classic 6502 microprocessor. This was the first truly low-cost microprocessor that started the personal-computing revolution. Versions of 6502 found their way into the Atari 2600, Apple II, Nintendo Entertainment System, Commodore 64, Atari Lynx, BBC Micro and many other computers and game consoles of the era.

In this **video series**, I'll build a basic 6502 computer with an LCD display and a few buttons, explain how to program it in assembly, and write a game or two.

Please note: In addition to the base kit, you will need:

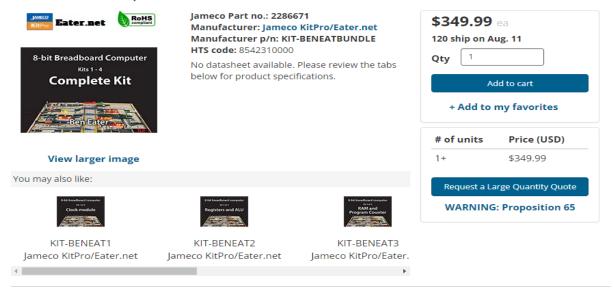
- A 5-volt power supply
- An EEPROM programmer (P/N: 2297823)

Also, if you want to follow all the experiments and debugging in the videos, I recommend the clock module kit and an Arduino Mega. The **clock module kit** (P/N: 2286623) also happens to include a 5-volt power supply.

### Kit Includes:

Part No.	Qty.	Description	
149948	8	vitch Push Button Tactile SPST OFF-(ON) 15 VDC @ 20mA Actuator Height 0.13 Inch	
151116	10	Capacitor Ceramic Disc 0.1µF 25V ±20%	
2143591	1	Versatile Interface Adapter (via) 8 Bit I/O Ports 14 MHz 40 Pin PDIP CMOS 5 Volt	
2143638	1	MPU 8-Bit 14MHz 65KB Memory 40 Pin PDIP	
2260738	1	ZipWire 40 Piece 20cm Male to Male Colored Jumper Wires	
2283767	3	0 Point Solderless Plug-in Breadboard with 4 Power Rails 21-26AWG ABS	
2295023	1	lire bundle	
27861	1	1 MHz Full Can Crystal Oscillator	
333973	10	LED Red Diffused 5mm (T-1 3/4) 643nm 75mcd 36VA	
45161	1	IC 74HC00 QUAD 2-INPUT NAND GATE	
690700	10	Carbon Film Resistor 220 Ohm 1/4 Watt 5%	
690865	10	Resistor Carbon Film 1k Ohm 1/4 Watt 5%	

### Build An 8-Bit Breadboard Computer from Scratch by Ben Eater - Complete Kit (Parts 1-4)



### Build An 8-Bit Breadboard Computer from Scratch by Ben Eater - Complete Kit (Parts 1-4)

If you're interested in following along with Ben Eater's 8-bit breadboard computer videos and building your own, we've assembled kits that include all of the components used in the videos, including the Arduino EEPROM programmer and a 5 volt power supply. It's a challenging but extremely rewarding project. Be sure to view each of the kits below for all of the informational and build videos.

I broke the whole thing into four kits if you want to take things slow. There's no right way to do this project. There are many substitutions and other approaches that will work just as well (or better), so if you want to build something similar and can't find all the parts, try to figure out what the missing part does and find a different way of doing it. It may not work the first time, but you'll learn a lot from trying to figure out why.

### Kit Contains

- Kit 1: Clock Module (P/N: 2286623)
- Kit 2: Registers & Arithmetic Logic Units (ALU) (P/N: 2286631)
- Kit 3: Random Access Memory (RAM) Module & Program Counter (PC) (P/N: 2286639)
- Kit 4: Output Register & CPU Control Logic (P/N: 2286647).

### Resources & Downloads

- · About the author, Ben Eater
- Eater.net (off-site)
- Sub reddit for Ben Eater (off-site)
- High-Performance Programmer (P/N: 2297823)
- 5V 2A plug-in US power supply 2.1mm plug (P/N: 2217772)

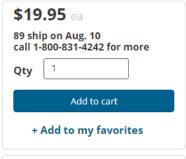
### Easy Laser Alarm Kit



Jameco Part no.: 2169580 Manufacturer: Jameco Kitpro Manufacturer p/n: CJKIT-20829 HTS code: 8543909500 Kit Instructions [113 KB] Schematic [185 KB]

View larger image





# of units	Price (USD)
1+	\$19.95
5+	\$17.95
25+	\$15.95
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### Easy Laser Alarm Kit

Experience Level: Beginner

Protect your home with the Easy Laser Alarm kit. It uses a 741 op-amp and 4017 decade counter as the brain and is powered by a 9V battery. If you like, connect a 9V wall transformer to the power connections to save your batteries. The kit works by sensing the light from the laser hitting the photoresistor which lowers the resistance, once the beam is broken the resistance increases and the 741 chip sends a pulse to the 4017 which sets off the buzzer. To reset the circuit the laser must be back on the photoresistor and then you push the reset button.

If you add mirrors to reflect the laser you can protect multiple entrances at once.

Please note: Due to inventory packaging methods, you may receive extra components for some products.

### Four Way LED Traffic Light Kit



Jameco Part no.: 2136964 Manufacturer: Velleman Manufacturer p/n: WSL131 HTS code: 8542390000

Data Sheet (current) [211 KB]

WSSA100

Velleman

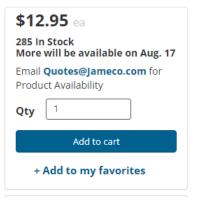
WSSA101

Velleman



WSSA200

Velleman



# of units	Price (USD)
1+	\$12.95
5+	\$11.95
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### 4-Way LED Traffic Light Kit

WSI102

Velleman

- Simulates a real traffic light.
- Adjustable delay
- ON/OFF switch

WSSA130

Velleman

- Soldering required
- Requires a 9 Volt battery (recommend P/N: 198731)
- Size: 2 x 1.4 x 4.5"

### Arduino Beginner Kit the Best Beginner Kit

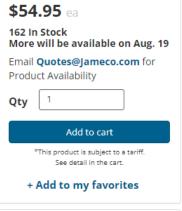


View larger image

PEROBOT ROHS

Jameco Part no.: 2213261 Manufacturer: DFRobot Manufacturer p/n: DFR0100 HTS code: 8542310000

No datasheet available. Please review the tabs below for product specifications.



### You may also like: K000007 DFR0107 KK6 Arduino DFRobot Jameco Valuepro

# # of units Price (USD) 1+ \$54.95 5+ \$49.95 Request a Large Quantity Quote WARNING: Proposition 65

### **Beginner Kit for Arduino**

We have upgraded the Beginner Kit for Arduino! Now the latest v3.0 kit comes with more useful components, more handy projects and higher quality parts. And most importantly, still the same price.

Welcome to the electronic interaction world! DFRobot proudly presents the Arduino beginner kit for those who are interested in learning about Arduino. Starting from basic LED control to more advanced environmental sensing, monitoring and actuators. This kit will guide you through the world of microcontrollers and physical computing.

A DFRduino UNO R3 (Compatible with Arduino Uno), the most stable and commonly used Arduino processor, together with DFRobot's best-selling prototype shield are included in this kit.

The latest version of Beginner kit has upgraded all the details based on previous version. Besides premium quality jumper wires, double resistors, more LEDs, 9g servo, IR remote transmitter and receiver, 4 more useful components are added: relay, motor, fan and potentiometer. Now you can make more fantastic projects!

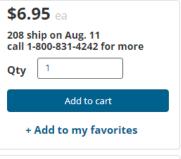
We also created project reference tabs with wiring guides of each project for you, so you can make it faster and minimize errors. All the components package inside are extremely easy to locate and relocate quickly with our customized black labels. We've listened all your requests and worked to provide better quality kits, even for beginner kits.

### Jumbo Red & Blue LED Emergency Flasher Solder Kit



Jameco Part no.: 2246645 Manufacturer: Jameco Kitpro Manufacturer p/n: JE250-EMPCB HTS code: 8542390000

Kit Instructions [319 KB]



View la	rger image				
You may also like	e:				
秦秦					
WSSA130 Velleman	WSI102 Velleman	WSL131 Velleman	WSSA200 Velleman	WSSA100 Velleman	
4					- ▶

# # of units Price (USD) 1+ \$6.95 5+ \$6.49 25+ \$5.95 Request a Large Quantity Quote WARNING: Proposition 65

### Jumbo Red & Blue LED Emergency Flasher - Solder Kit

This is the PCB/solder version of the Jumbo Dual LED Emergency Flasher kit. We also offer a **breadboard-friendly Jumbo LED Flasher kit** (P/N: 2246637). This is an easy to assemble solder kit that is great for beginners or someone looking to add a flashing signal to their scale model projects, and this kit in particular is ideal if your scale model is an emergency vehicle because of the flashing red and blue LEDs. You can also use **different color LEDs** of your choice (sold separately). The flashing rate is adjustable with the two trimmer potentiometers.

Note: Due to internal packaging methods, you may receive extra components.

### You Will Need

- 9V battery
- Soldering iron & solder
- Angle cutters

### Available Add-Ons

• Other LED colors: Orange, Yellow, Green, Blue.

### Kit Includes:

Part No.	Qty.	Description	
109154	1	V battery snap with 6" wire leads	
254801	2	Transistor, BC547B, TO-92	
254044	2	500k Ω potentiometer 3362P series	
1946367	2	0μF 25V readial capacitor	
2152155	1	Super red jumbo 10mm LED	
2152147	2	Super blue jumbo 10mm LED	
690865	1	1k Ω 1/4 watt resistor	
691104	2	$10k\Omega1/4$ watt resistor	
	1	PCB for Flasher Kit	

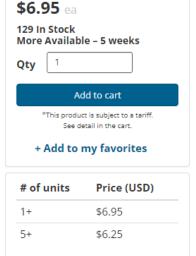
### **DIY Spider Robot Chassis**



Jameco Part no.: 2190717 Manufacturer: DFRobot Manufacturer p/n: ROB0103 HTS code: 8542390000 Kit Instructions [1443 KB]

### View larger image





Request a Large Quantity Quote

**WARNING: Proposition 65** 

### **DIY Spider Robot Chassis**

Here is the cute DIY Spider Robot chassis making your robotic dreams come true. With the DIY Spider Robot, you can design and manufacture a robotic creature as your wish and under your control! Battery (1.2V) is included. Turn on the switch, you'll find the little robotic creature is full of energy! The vivid DIY robotic spider with eight multi-jointed legs accurately duplicates the walking movement of real spider. There are two assembly choices for you to change the stride length and gait of the spider.

Want the Spider Robot to become smarter and more powerful? Now it's your turn to be its master and DIY! Add a brain (microcontroller and programming) so your robotic spider can automatically avoid barriers. Recommended for ages 10+.

### You may need:

- Arduino Uno microcontroller (or equivalent, ATmega328-based)
- Sharp IR Distance Sensor (GP2Y0A21YK0F)

DIY Spider Robot gives you a great chance to learn about robotic science, regardless of your age. You'll never run out of ways to have fun as a child with the Spider. Children also can experience the joy and achievement with the assembly, which can help to cultivate their innovation and intelligence.

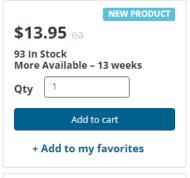
WARNING: CHOKING HAZARD -- Small parts. Not for children under 3 years.

- Attractive color
- Package size:18\*24\*6cm
- . Two assembly choices for you to change the stride length and gait of the spider
- · The robotic creature designed by you!

### Electronic Cicada Bug Soldering Kit



Jameco Part no.: 2325383 Manufacturer: Velleman Manufacturer p/n: WSAK204 HTS code: 8543909500 Data Sheet (current) [1124 KB] Schematic [135 KB]



### You may also like: WSG105 AA-1D WSAH136 WSAH190 WSAH1 MadLab Electronic Rainbow Velleman Velleman Velleman

# of units	Price (USD)
1+	\$13.95
10+	\$12.59
Request a La	arge Quantity Quote
WARNING	: Proposition 65
WARNING	: Proposition 65

### **Electronic Cicada Bug Soldering Kit**

Get ready for Brood-X! Ring in the summer with this beautiful electronic cicada soldering kit. The cicada consists out of three PCBs to mimic the shape of this popular insect as best as possible. The body is matte-black and the two wings are shiny yellow with golden tracks. To finish off the design, you can use the included components to add legs to the cicada bug making it look more realistic.

So how does it work? There's an on-board phototransistor that makes the buzzer sound when it's dark while an orange LED flickers along. You'll have everybody fooled!

The bug is powered by a 9 V battery (not incl.) which will last about 30 hours when constantly in use.

### **Features**

- · produces the typical cicada sound when dark
- buzzer
- on/off switch
- · phototransistor (NPN)
- orange LED that flashes to the sound
- · 3 PCBs: (1) black main body, (2) shiny yellow wings

- dimensions: 140 x 110 mm (feet incl.)
- power supply: 9 V battery (not incl.)
- · current consumption: 6.5 mA
- battery life: about 30 hours (when constantly in use)
- sound level: about 70 dB at 1 meter distance

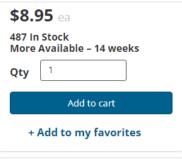
### Dual Flashing LEDs Soldering Kit Adjustable Flash Speed

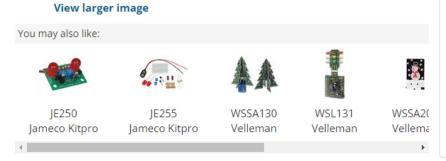


vellement

Jameco Part no.: 147580 Manufacturer: Velleman Manufacturer p/n: WSI102 HTS code: 8542390000

Data Sheet (current) [166 KB]





# of units	Price (USD)	
1+	\$8.95	
5+	\$7.95	
25+	\$7.49	
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### **Dual Flashing LEDs Kit**

For different applications (such as model construction) and recreational use. Flashing speed of the two 5mm red LEDs is adjustable with the two potentiometers.

### Specifications

• Consumption: ± 8mA

• Power supply: 9V battery (not incl.) • Dimensions: 1.3" x 1.25" x 0.6"

• Difficulty: Easy • Number of pieces: 23 · Soldering assembly required

### 6 Volts 150mA 0.9 Watt Solar Panel with Alligator Clips



Jameco Part no.: 2260041 Manufacturer: Jameco Valuepro Manufacturer p/n: G/S SOLAR PANEL HTS code: 8541406020

Data Sheet (current) [348 KB] Additional Files [304 KB]



### View larger image



# of units	Price (USD)	
1+	\$8.95	
10+	\$7.95	
50+	\$6.95	
250+	\$5.95	
1000+	\$4.95	

### 6 Volts 150mA 0.9 Watt Solar Panel with Alligator Clips

Each cell comes with pre-soldered 20" wire leads with alligator clip connectors to easily hook up and power anything. Typical applications include solar model cars, solar model boat, solar toys, solar scientific kits, solar experimental kits, solar construction kits. These panels can be connected in series or parallel to increase voltage or current output.

- 20" insulated alligator clip leads (1 red, 1 black)
- US dimensions: 3.5 x 3 inches
- Metric dimensions: 89 x 76mm
- Thickness: 0.1 inch (3mm)
- Solar cell type: polycrystalline
- · Power: 0.90 Watts

### Super Snooper Stereo Ear Kit



Jameco Part no.: 2130984 Manufacturer: Velleman Manufacturer p/n: WSAH136 HTS code: 8543909500 Data Sheet (current) [282 KB]

\$12.95 ea

48 In Stock
More Available – 14 weeks

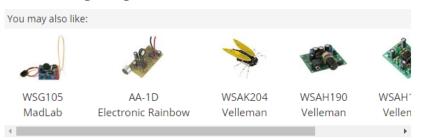
Qty

1

Add to cart

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## # of units Price (USD) 1+ \$12.95 10+ \$11.95 Request a Large Quantity Quote WARNING: Proposition 65

### Super Snooper Stereo Ear Kit

Stereo audio amplifier boosts sound up to 50 times. It's great for the-hearing impaired (e.g. when watching TV), as a gadget, science project. It has a volume control and on/off switch.

- Power supply: (3) 1.5V AA battery (not included, we recommend our AA batteries, P/N: 198707)
- Dimensions: 2.4 x 2.1 x 1.7"
- 35 pieces

### 2x5 Watt Amplifier for Portable Audio Player Kit 6-14VDC/1A

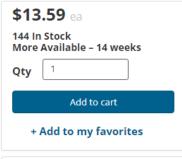


Jameco Part no.: 2196588 Manufacturer: Velleman Manufacturer p/n: WSAH190 HTS code: 8543909500

Data Sheet (current) [482 KB] Schematic [25 KB]

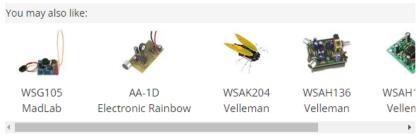
Schematic [25 KB]

Kit Instructions [3.3 MB]



# of units	Price (USD)
1+	\$13.59
5+	\$12.59
Request a La	rge Quantity Quote
WARNING: Proposition 65	

### View larger image



### 2x5 Watt Amplifier Kit for MP3 Player

### **Features**

- big sound from a small unit
- · low distortion
- input: stereo 3.5mm jack
- volume adjust complete with attractive knob
- · slide on/off switch
- · blue indicator led

- 2 x 5Wrms (10% THD @ 4ohm / supply 14V)
- sensitivity: 400mVrms for full output
- freq. response: 30Hz 100kHz (-3dB / 8 ohm)
- power supply: 6-14VDC / 1A max. (example Jameco 252824)
- speaker impedance: 4-32 ohm
- dimensions (W x D x H): 66 x 53 x 25 mm / 2.59 x 2.08 x 0.98"

### Build a VGA Video Card by Ben Eater



### **Build a VGA Video Card by Ben Eater**

Let's build a video card! In **these videos**, Ben will talk about how VGA signals work and build a circuit that provides the correct timing of sync signals, so a monitor will recognize the signal and display an image stored on an EEPROM. If you're interested in building your own "World's worst video card", this kit includes all the components used in my video series.

**Please note:** In addition to the VGA kit, you will want some way to program the EEPROM that holds the image to be displayed. The easiest way to do this is with an **EEPROM programmer** (PN: 2297823). Alternately you may want to investigate building your own programmer with an Arduino or similar.

### Kit Includes:

Part No.	Qty.	Description	
2292431	1	Wall Adapter Switching Power Supply 5V DC 3A 15W 2.1mm Plug	
2227209	1	2.1mm x 5.5mm Male DC Jack to Screw Terminal (Single)	
2283767	5	830 Point Solderless Plug-in Breadboard with 4 Power Rails 21-26AWG ABS	
2294887	1	DB15 Female D-Sub 3 Row 15Pin VGA Plug Breakout to Screw Terminal Block Connector	
27887	1	10 MHz Full Can Crystal Oscillator	
690700	10	Carbon Film Resistor 220 Ohm 1/4 Watt 5%	
690822	5	Resistor Carbon Film 680 Ohm 1/4 Watt 5%	
690902	5	Resistor Carbon Film 1.5k Ohm 1/4 Watt 5%	
693901	10	LED Green Diffused 5mm (T-1 3/4) 565nm 12.5mcd 60VA	
46252	3	IC 74LS00 Quad 2-Input Positive NAND Gate DIP-14	
46316	4	IC 74LS04 Hex Inverter	
46818	6	IC 74LS161 4-Bit Synchronous Binary Counter DIP-16	
47458	8	IC 74LS30 8-Input NAND Gate	
74843	1	IC 28C256-15 EEPROM 256K-Bit CMOS Parallel	
45031	3	IC 74HCT245 Tri-State Octal Bus Transceiver	
45137	1	IC 74HCT74 DUAL D-TYPE FLIP-FLOP	
44901	1	IC 74HCT08 QUAD 2-INPUT POSITIVE AND GATE	

### AM/FM IC & Transistor Radio Kit

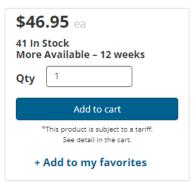


ELENCO® RoHS

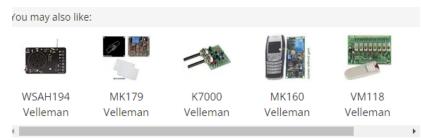
Jameco Part no.: 2244893 Manufacturer: Elenco Electronics Manufacturer p/n: AMFM-108CK

HTS code: 8542390000

No datasheet available. Please review the tabs below for product specifications.



### View larger image





### **AM/FM IC & Transistor Radio Kit**

When you build this kit you will follow the training course of 56 pages is divided into 9 lessons:

- · Audio Amplifier
- AM Detector
- AM IF
- AM Amplifier
- AM Mixer & Oscillator
- FM Detector
- 1st FM IF
- · 2nd FM IF
- FM RF Stages

"Superheterodyne" means it's designed to receive standard AM (amplitude modulation) and FM (frequency modulation) broadcast frequencies. The new transistor module allows you to switch between the modern integrated circuit (IC) technology and the original transistor technology. The kit also includes radio mounting stand.

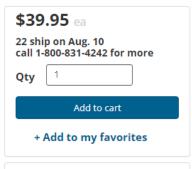
Requires one 9V battery and solder assembly.

### **Build Your Own Transformer Kit**



Jameco Part no.: 2160681 Manufacturer: Jameco Kitpro Manufacturer p/n: CJKIT-20312 HTS code: 8542310000

Kit Instructions [78 KB]



### View larger image



## # of units Price (USD) 1+ \$39.95 5+ \$35.95 Request a Large Quantity Quote WARNING: Proposition 65

### **Build Your Own Transformer Kit**

Learn how to wind your very own **step-up transformer** coil from scratch with this simple sampler kit. Great for anyone from a beginner to the most advanced builder. After all, it's great to be able to say you made something from a handful of parts. It's something more to say you made the parts too.

The Jameco transformer project listed below is a basic and simple DIY educational kit demonstrating how to build your own transformer. The project below was designed as a starting point to give you a basic core experience that you could work and experiment with. Please note that the design will vary dependent on an individual's design requirements.

Read Jameco's Transformer Electronics Fundamentals page.

### WARNING:

If you are unsure of the dangers involved with your particular project, consult with someone who is experienced. Always wear eye protection and gloves. FAILURE TO INITIATE AND FOLLOW YOUR OWN SAFETY PROCEDURES MAY RESULT IN BODILY INJURY OR DEATH!

THE TRANSFORMER SHOULD NEVER BE CONNECTED DIRECTLY TO AC MAINS VOLTAGE. A 120 VAC @ 350mA (OR LESS) AC/AC ADAPTER IS ADVISED FOR THIS LEARNING TASK.

### 7.2 Volts 200mA Solar Panel with 20" Alligator Clip Leads



PicoTurbine

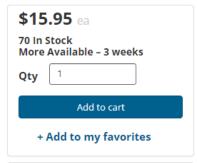
Jameco Part no.: 2221456

Manufacturer: Picoturbine International

Manufacturer p/n: PEP20 HTS code: 8541406020

No datasheet available. Please review the tabs

below for product specifications.



### View larger image



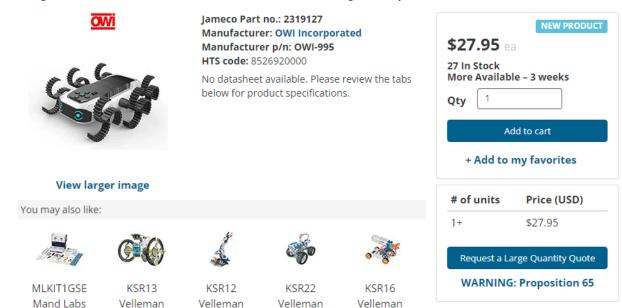
# # of units Price (USD) 1+ \$15.95 5+ \$14.95 25+ \$13.95 Request a Large Quantity Quote WARNING: Proposition 65

### 7.2 Volts 200mA 1.4 Watt Solar Panel with Alligator Clips

Each cell comes with pre-soldered alligator clip connectors to easily hook up and power anything. Typical applications include solar model cars, solar model boat, solar toys, solar scientific kits, solar experimental kits, solar construction kits. These panels can be connected in series or parallel to increase voltage or current output.

- 20" insulated alligator clip leads (1 red, 1 black)
- US dimensions: 3.5 x 4.75 inches
- · Metric dimensions: 88 x 121 mm
- Thickness: 0.1 inch (3mm)
- Solar cell type: polycrystalline
- Typical voltage: 7.2V
- Typical current output: 200 mA
- · Power: 1.44 Watts

### CyberCrawler Robot Kit (Assembly Required)



### CyberCrawler Robot Kit

Smart coding robotics kit that entertains and teaches programming skills to inquisitive ages 8 and up. OWI's CyberCrawler Robot's 76-piece assembly are the ideal level of difficulty taking the user's assembly skills beyond rudimentary snap together type kits. A simple, press-button programming keypad embedded on its cranium provides immediate feedback as CyberCrawler Robot's LEDs illuminate and the robot executes programmed animations. There is no need to download codes from a personal computer or tablet via USB or Bluetooth connections; the technology required is all on-board!

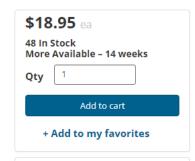
Challenge several levels of thinking skills with the CyberCrawler Robot kit. Simple and basic (forward, backward, left turn, and right turn) with each command powering the robot for timed intervals. Use mathematical time measurement distance coding methodology to travel from point A to B. Graduating to the next level, apply advanced reasoning skills by designing obstacles or maze courses. With a maximum storage capacity of 64 tasks, CyberCrawler Robot is a terrific tool to teach the joy of coding. Easy, entertaining, and fun... rejoiced by effortlessly pushing a few buttons.

- No. of pieces: 76 pcs.
- · No soldering required
- No computer required
- Batteries: AAA x 4 (not included)
- Dimensions of assembled products: 9.35" x 5.72" 2.75"
- · Recommended age: 8+

### Crawling Micro Bug Solder Kit 29pcs. 110mm x 90mm



Jameco Part no.: 200336 Manufacturer: Velleman Manufacturer p/n: WSAK129 HTS code: 8526920000 Data Sheet (current) [187 KB]



**Price (USD)** \$18.95

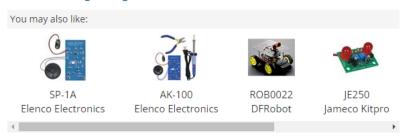
\$16.95

Request a Large Quantity Quote
WARNING: Proposition 65

# of units

1+

### View larger image



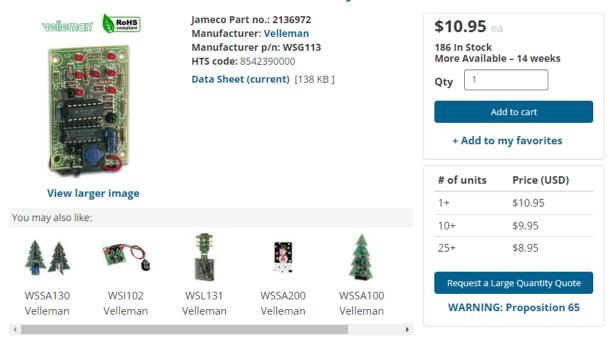
### Crawling Micro Bug Kit

A bright colored miniature bug shaped robot that is attracted to light.

### **Features**

- Intermediate level
- 29 pieces
- Two open chassis sub-miniature motors
- Adjustable light sensitivity that suits almost any light conditions
- LED "eyes" indicate driving direction
- · Stops in total darkness
- Size: 4.0" x 2.4"
- Requires: Soldering iron, solder and 2 AAA batteries, not included.

### Electronic Dice Kit Solder Assembly Simulate a Die Roll



### **Electronic Dice Kit**

The digital equivalent of an ordinary item, the finished device simulates the roll of a die by generating a number when the button is pushed.

### Specifications

- · Soldering required
- Requires: One 9 Volt battery, recommend P/N: 198731
- Size: 1.7 x 2.4"
- Beginner level 1 kit

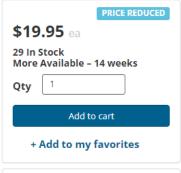
**Note:**If the normally dimmed LEDs are still lighting up, you can replace ZD1, the 2V7 zener diode, with a 3V6 (500mW) zener diode.

### 30-90 Second Voice Recorder and Playback Module Kit with Speaker 9V



Vallaman RoHS

Jameco Part no.: 2196596 Manufacturer: Velleman Manufacturer p/n: WSAH195 HTS code: 8543909500 Kit Instructions [2.4 MB] Data Sheet (current) [2.2 MB]



# View larger image You may also like: WSAH171 WSL104 30016 MK115 Velleman Velleman Parallax Velleman

# of units	Price (USD)		
1+	\$19.95		
5+	\$17.95		
Request a Large Quantity Quote			
Request a La	rge Quantity Quote		
	rge Quantity Quote		

### Voice Recording/Playback Module

### **Features**

- · Assembly required
- recording time between 30 and 90 s (adjust the sample rate)
- · on-board microphone
- speaker Ø 57 mm included
- · using the speed adjustment, a "funny voice" can be created
- external open-collector trigger inputs for recording, playback, delete, next, and volume

- power supply: 9 to 12 VDC or with a 9 V battery (ex. 6LI61)
- power consumption:
  - ·max. 150mA during playback
- ·max. 6mA during standby!
- · adjustable sampling rate: 5...12 kHz
- speaker output: 500 mW max., 8 ohm
- · nominal recording time: 60 seconds
- PCB dimensions: 2.6 x 2 x 0.8"

### Make: How to Use a Breadboard STEM Kit



### Make: How to Use a Breadboard Kit

Strengthen your electronics skills with this self-guided learning course. Inside, you'll find a full-color handbook from the publishers of *Make:* magazine, a solderless breadboard, and all the components you'll need. The book, **How to Use a Breadboard**, is illustrated with comic book-style panels to explain the basic principles of using a breadboard and then guides you through 10 fun and educational projects. Hands-on learning of how to use a breadboard will give you a solid, introductory unit in fundamental electronics. You will learn how to build the following circuits:

- Dark Detector
- LED Flasher
- · Electronic Cricket
- Breathing LED
- Screaming Siren
- · Bike Signal Light
- Touch Switch
- Light Theremin
- Blues Organ
- LED Color Organ

Unlike "building-block" packages designed for kids, this kit introduces you to fundamental electronic components and gives you practical circuits to assemble. As you gain experience building the circuits, you'll also learn how to read actual schematics (the circuit diagrams symbols that serve as the shorthand language of electronics). Bonus features include an "X-ray" illustration of the breadboard and a tutorial on deciphering resistor color codes. The glossary at the end of the handbook provides definitions and illustrations for terms that may be unfamiliar to you.

Electronics is the perfect STEM-related subject because it incorporates a variety of different skills and materials from all four STEM disciplines: science, technology, engineering, and mathematics. There is no better way to learn than by making things yourself. During this course, you won't be handed all the answers, for you will be encouraged to experiment and be asked questions that require you to think critically. Roughly 10 hours will be needed to complete all the projects. Get started with your breadboard experiments today!

### Kit Includes:

Part No.	Qty.	Description
2245968	1	Make: How to Use a Breadboard Book
2146302	10	Ceramic Disc Capacitor 0.1µF 50V ±20%
15229	10	Ceramic Disc Capacitor 0.01µF 50V ±20% Z5U
1586074	5	Tactile Push Button Switch SPST OFF Momentary (On) 15 VDC/20mA
178597	10	Transistor General Purpose BJT NPN 40 Volt 0.2 Amp 3-Pin TO-92
1947351	1	Ceramic Disc Capacitor 0.047µF 25V +80% to -20%

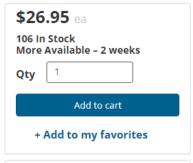
### AutoScan FM Radio Soldering Kit 88 to 108 MHz



View larger image

Jameco Part no.: 2308127 Manufacturer: Elenco Electronics Manufacturer p/n: FM-88K HTS code: 8543909500

User's Manual(current) [2281 KB]



### You may also like: WSG105 AA-1D WSAK204 WSAH136 WSAH1

Velleman



### AutoScan FM Radio Soldering Kit 88 to 108 MHz

Electronic Rainbow

The Dual IC FM Radio Kit is a monophonic, two-IC, FM (frequency modulation) receiver designed to receive FM signals in range of 88 to 108 MHz. It uses an electronic auto-scan feature to search for FM stations. This scan system is done with two button switches - one switch scans up, the other resets to the start of the tuning position.

Velleman

Vellem

The unique design of this radio kit allows you to place the parts over the corresponding symbols in the schematic drawing on the surface of the printed circuit board (PCB). This technique maximizes the learning process, while keeping the chance of assembly error low.

To simplify troubleshooting the FM radio, it's constructed in two sections (Audio and RF). There are two IC's, one for the audio section, the other for the RF. The RF IC is surface mounted (SM-IC), pre-installed on the high-quality printed circuit board.

### Soldering assembly is required.

### Specifications

MadLab

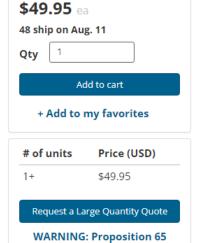
- For ages 13 and up.
- Batteries: 1-9V (not included, recommend P/N: 198731)

### Deluxe Electronics Soldering Kit

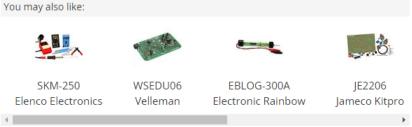


Jameco Part no.: 2245562 Manufacturer: Jameco Kitpro Manufacturer p/n: JVP250 HTS code: 8542390000

No datasheet available. Please review the tabs below for product specifications.



### View larger image



### **Deluxe Electronics Soldering Kit**

Learn how to solder with good technique and start up a proper work bench with a temperature-adjustable soldering station having a temperature range of 302° to 842°F. It will provide the correct temperature for a broad range of electronic components found in modern electronic equipment. Use the included digital multimeter to identify components and test connections when you've finished.

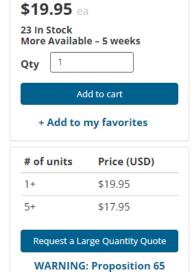
### Kit Includes:

- Learn to Solder Practice Kit (P/N: 2161617)
- 48 Watt Adjustable Temperature Soldering Station 302-842F (P/N: 2196801)
- 6 Piece Soldering Aid Tool Pack (P/N: 2096000)
- **4.5" Cutting Pliers** (P/N: 2123320)
- Clip-on heat sink (P/N: 100378)
- Mini digital multimeter (P/N: 2238397)

### Sound Effects Generator Kit



Jameco Part no.: 127562 Manufacturer: Velleman Manufacturer p/n: WSAH4401 HTS code: 8543909500 Data Sheet (current) [339 KB]



### View larger image

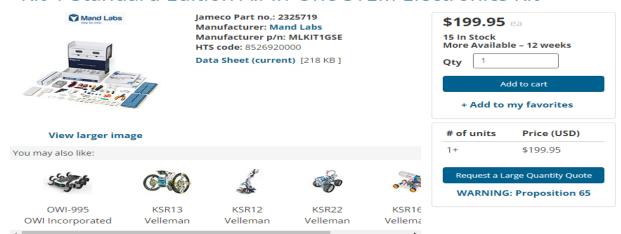


### **Sound Generator Kit**

The ideal device for DJ's, jingles for radio stations or just attract attention. With one output for direct connection to a speaker and one line output for connecting to a mixer panel or amplifier, the following effects may be generated directly by means of a push button: Machine gun, European siren, Phase gun, Racing car with motor howl, Screeching of car tires on a curve, Explosion, Mortar fire followed by explosion, or US siren. It can also play Musical tunes: "Wild charge tune" or "Snake charmers tune"

- Supply voltage: 8 10V DC / 100mA or 9V battery (not incl.)
- Line output: 1VrmsSpeaker output: 1 WattPCB dimensions: 3 x 3"
- Level 1 kit (beginner) requires assembly (soldering)

### Kit-1 Standard Edition All-In-One STEM Electronics Kit



### Kit-1 Standard Edition All-In-One STEM Electronics Kit

Recommended for middle & high schoolers, electrical engineering students, STEM educators, hobbyists and homeschoolers. This kit will ignite your child or student's passion for electronics and robotics and help them develop real-world tech skills. They will gain the inspiration to become a maker of technology rather than mere consumers of it. Set up your personal electronics lab at home with this kit of over 100 components and well-rounded curriculum to help high school students in standardized tests including AP Physics, IB Physics and IGCSE (Cambridge) Physics.

### **Features**

- Ages 8+
- 50+ Hands-on Projects
- 25 Play Hours
- 135+ Components

### **Topics Covered**

Briefly, we cover the following topics in detail: Charge, Battery, Voltage, Current, Resistance, LED, Multimeter, Resistors, Ohm's law, Series and Parallel Combination, Variable Resistors: Potentiometer, Preset and LDR, Switches, Capacitors, Relay, Semiconductors, Diode and Its Types, Digital Logic Gates: NOT, OR, AND, NOT, NAND, Zener Diode, DC Motor, Transistors, Inductors, IR (Infrared) LED, Photodiode, Temperature Sensor (Thermistor).

### What's Included

- · Portable Workstation + a breadboard carry-case
- 57 Projects in Standard Edition
- 136 Components & Tools in Standard Edition
- 2 Guide Books- DIY Electronic Series Volume 1 & Volume 2 Read Ohm's Law
- 70+ DIY Learning Videos (In Flash Drive and Online)
- Digital step-by-step project-making guides Download Automatic Night Lamp
- Classroom Workbook (Available) Download sample workbook

### Projects in the Box

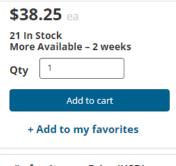
- Automatic Night Lamp
- Burglar Alarm
- Touch Activated Switch (passing current through body)
- LED Flasher/Blinker
- Sequential Glowing of LEDs
- Staircase Lighting
- · Alternate light control using a Preset
- · DC Motor as Generator
- And more... (Download the complete list of experiments)

### 1MHz Function Generator Kit



Jameco Part no.: 2279543 Manufacturer: Elenco Electronics Manufacturer p/n: FG-500K HTS code: 8542310000

No datasheet available. Please review the tabs below for product specifications.



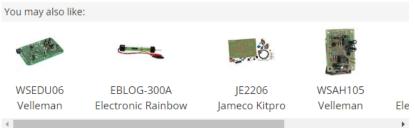
# of units Price (USD)

1+ \$38.25

Request a Large Quantity Quote

WARNING: Proposition 65

### View larger image



### **1MHz Function Generator Kit**

1MHz Function Generator in Kit Form. Assembly is required.

- Provides Sine; Square or Saw Tooth Waveforms Continuously Variable 1Hz to 1MHz Amplitude Adjustable to 3V Peak-to-Peak Complete w/ All Parts; PC Board; Schematic and Deluxe Case w/ Handle.
- Extensive Assembly Manual
- Runs on a 9V battery (sold separately, we recommend P/N: 198731)

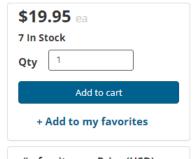
### T4 Transforming Solar Robot Kit



Jameco Part no.: 2218716 Manufacturer: OWI Incorporated Manufacturer p/n: OWI-MSK617

HTS code: 8541406030

No datasheet available. Please review the tabs below for product specifications.



### # of units Price (USD) 1+ \$19.95 5+ \$17.95 Request a Large Quantity Quote WARNING: Proposition 65

### View larger image

You may also like:

WSEDU02 MK185
Velleman Velleman

### **T4 Transforming Solar Robot**

From that talented folks at OWI who brought you the T3 Transforming Solar Robot, they have done a one-up and created the T4 Transforming Solar Robot. "T4" not only has more transformations, but it also comes equipped with bigger parts, meaning your younger child does not have to be excluded from engaging in some quality robot fun.

"T4" is completely solar-powered, so you never need to buy batteries. Not only will "T4" provide your kids with a new understanding of solar power as a source of renewable energy, but it will encourage your children to get outside for some wholesome fun in the sun. This kit gives you the option to easily transform between one of four different modes:

Robot - walking legs as well as moving wheels

Insecta - 6 walking legs as well as moving jaws

T-Rex - 2 walking legs and moving jaws

Drill Vehicle - similar to a miner's driller/drilling bit and moving wheels.

If your children are glued to tablets, video games or smart-phones, give them an opportunity to gain solar power knowledge, learn about mechanical transmissions, and get them outside to play. Amazingly, you may find yourself engaged in discussion with your child thanks to their newly acquired know-how!

### Specifications

Solar Panel Output: 75mA

### Assembled Dimensions:

- Robot: 2.1" x 3.7" x 4.1"
- Insecta: 5.2" x 3.1" x 2"
- T-rex: 5.4" x 3.1" x 2"
- Drill vehicle: 4.3" x 2.4" x 2.2"

### You May Need

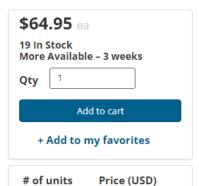
Diagonal cutters

### Robotic Arm Wire Controlled

**ELENCO®** 

Jameco Part no.: 2308095 **Manufacturer: Elenco Electronics** Manufacturer p/n: TTR-535 HTS code: 8526920000

No datasheet available. Please review the tabs below for product specifications.



\$64.95

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You may also like:



Elenco Electronics



Elenco Electronics



ROB0022 DFRobot Jameco Kitpro

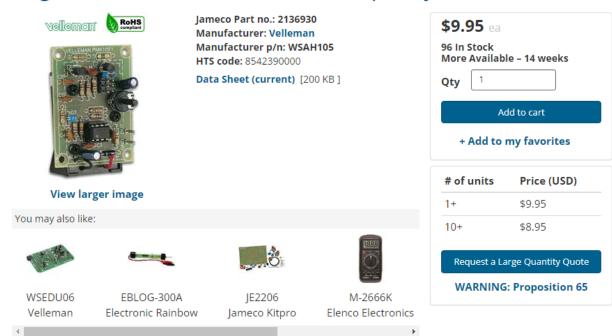
Robotic Arm Wire Controlled

Learn basic robotic technology and build your own Robotic Arm Wired Controlled! This ingenious robotic arm has a wide range of motion through all pivot points. It's an introduction to Robotics and Mechanical Engineering that will excite engineers young and old. Five motors power five joints for optimal control and movement. It's easy to assemble and doesn't require any soldering; just diagonal clippers, a screw driver and your creative mind. You will develop problem solving skills while you assemble and start operating your own robot arm.

Mechanical-Robotic kits are great for the classroom or at home and can have a big impact on STEM education. Learn about robots and have fun while doing it! There are numerous projects, activities and tasks that these robots can accomplish. The possibilities are as limitless as your imagination!

- Lifting capacity: 100 g (3.5 oz)
- · Horizontal reach 320 mm
- · Vertical reach 380 mm
- Base rotation range 270°
- Base motion range 180°
- Elbow range 300°
- Wrist motion range 120°
- Four D-cell batteries required but not included (we recommend P/N: 215845).
- · For engineers 12 and up.
- HS Code: 8542390000

### Signal Generator Kit 1kHz Fixed Frequency



### **Signal Generator Kit**

### **Features**

- This kit outputs: sine wave, triangle, square wave and integrator (selectable through jumper)
- Signal Frequency: 1KHz (fixed)
- Output level: adjustable from0 to 100 mVrms (Controlled by a potentiometer)
- Requires a 9V battery Suggested P/N: 198731

### Digital Theory Complete Lab



### **Digital Theory Complete Lab**

Digital Theory by ETron Circuit Labs is Electronic Education Curriculum designed for the 21st century electronics student. It features 35 exciting Labs, and Digital Theory picks up where **The Basics** leaves off teaching the necessary Digital Theory needed to be competitive in a technology based job market.

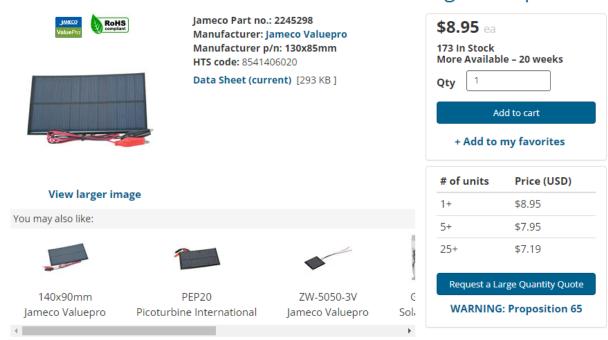
 $\label{thm:policy} \mbox{Digital Theory is fully backwards compatible with Tron. ix 2 and Mr. Circuit 2/Digital Magic courses.}$ 

Complete Lab includes Digital Theory manual (ETCM2), Digital Theory parts kit (ETCP2), Solerless Circuit Board (CB222) and **9-Volt Battery** (SK9VB)

### Kit Includes:

Part No.	Qty.	Description
SK01054	2	360 ohm resistor
SK01057	2	470 ohm resistor
SK01059	7	560 ohm resistor
SK01061	2	680 ohm resistor
SK01065	3	1K ohm resistor
SK01067	10	1.2K ohm resistor
SK01073	2	2.2K ohm resistor
SK01077	2	3.3K ohm resistor
SK01081	2	4.7K ohm resistor
SK01085	2	6.8K ohm resistor
SK01089	2	10K ohm resistor
SK01094	1	16K ohm resistor
SK01097	1	22K ohm resistor
SK01113	2	100K ohm resistor
SK01117	1	150K ohm resistor
SK01129	2	470K ohm resistor

### 6 Volts 270 mA 1.6 Watt Solar Panel with Alligator Clips



### 6 Volts 270 mA 1.6 Watt Solar Panel with Alligator Clips

Each cell comes with pre-soldered 20" wire leads with alligator clip connectors to easily hook up and power anything. Typical applications include solar model cars, solar model boat, solar toys, solar scientific kits, solar experimental kits, solar construction kits. These panels can be connected in series or parallel to increase voltage or current output.

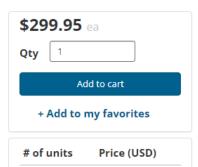
- 20" insulated alligator clip leads (1 red, 1 black)
- US dimensions: 5.1 x 3.3 inches
- Metric dimensions: 130 x 85 mm
- Thickness: 0.1 inch (3mm)
- · Solar cell type: polycrystalline
- Power: 1.6 Watts

# Southern Illinois University EET General Kit



Jameco Part no.: 2279767 Manufacturer: Jameco Kitpro Manufacturer p/n: KIT-SIUEET HTS code: 8542310000

No datasheet available. Please review the tabs below for product specifications.



\$299.95

Request a Large Quantity Quote

**WARNING: Proposition 65** 

View larger image

You may also like:



KIT-UMASSECE361 Jameco Kitpro



KIT-SIUEET150 Jameco Kitpro



KIT-SIUEET238 Jameco Kitpro



1+

KIT-SIUEET403/ Jameco Kitpro

# Southern Illinois University EET General Kit

### Kit Includes:

### PART NO. (QTY) - DESCRIPTION

- 17857 (1) 200 Piece Ceramic Disc Capacitor Grab Bag
- 17911 (1) 100 Piece Radial Axial and Snap Electrolytic Capacitors
- 18041 (1) T1 and T1-3/4 Assorted Colors and Shapes LED Grab Bag
- 18075 (1) 200 pcs. Trimmer Potentiometer Grab Bag 1/10 to 1/5 Watt (10-2M ohm)
- 18104 (1) 1/4-Watt Resistor Grab Bag
- 2096018 (1) 140 Piece Wire Jumper Kit 22 AWG 14 Lengths 10 Colors
- 2130757 (1) Diode Set 120 Pieces
- 2157731 (1) 3220-Point Breadboard 4 Terminals 7 Bus Strips 4 Binding Posts
- 216485 (1) 6 Outlet Power Strip with Surge Suppressor 4 Foot Cord
- 2319791 (1) 1999 Count 3.5-Digit Digital Multimeter 8 Function
- 2225529 (1) 15 Watt 5V 3A AC-DC High Reliability Industrial Wall Adapter 2.1mm Plug Level VI
- 2326759 (1) 150W 30V 5A Single Channel Benchtop DC Power Supply 3.7" LCD

### **Electronic Kits for Students**

Jameco offers a variety of electronic kits, robotic kits, STEM projects, and customized kits with the electronic components and the parts needed to meet project or curriculum requirements. Jameco has created a selection of pre-made kits for university and college programs and curriculums. These can be used "as is" or customized for specific requirements. We share and promote the efforts of our partner professors.

# 3220 Point Breadboard & 350 pc Wire Jumper Super Combo



Jameco Part no.: 2244113 Manufacturer: Jameco Kitpro Manufacturer p/n: JESC-350BB HTS code: 8542390000

No datasheet available. Please review the tabs below for product specifications.



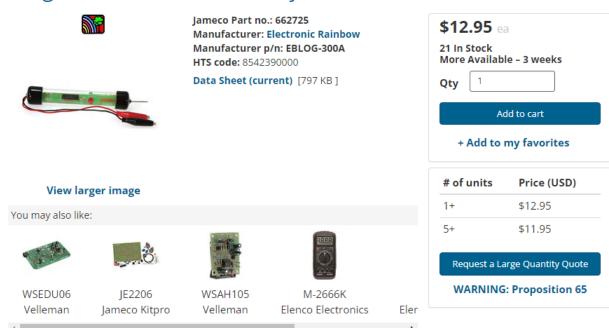
You may also like:			
			B B
WBU-301-R Jameco Valuepro	WBU-202-R Jameco Valuepro	WBP-317 Jameco Valuepro	PROTO ŀ Jameco Valı

# of units	Price (USD)	
1+	\$39.90	
10+	\$34.90	
50+	\$31.90	
Request a La	rge Quantity Quote	
WARNING: Proposition 65		

# 3220 Point Breadboard & 350 pc Wire Jumper Super Combo

Part No.	Qty.	Description
19290	1	350 pc 22AWG wire jumper kit, 14 lengths, 10 colors
2157731	1	3,220 point breadboard with 4 binding posts, 7.25" x 7.5"
4		b.

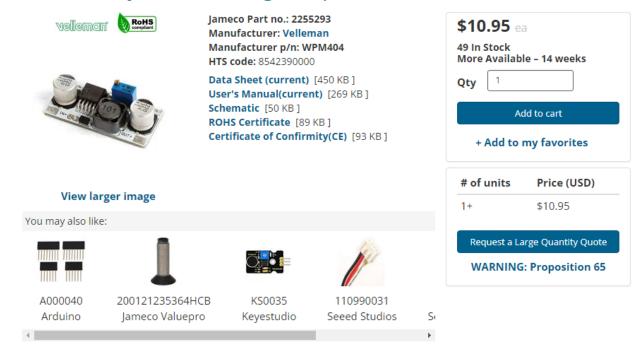
# Logic Probe Solder Assembly Kit CD4069-Based



# **Educational Logic Probe Kit**

Digital logic: the heart of today's technological revolution. Yet, digital signals are either "on" or "off", and you need an easy way to monitor them. Enter the EBLOG-300, a simple piece of test equipment that comes in very handy. Logic probes test digital circuits at various points, and show whether that point is high, low, or constantly changing. They help you understand and troubleshoot logic gates, timers, clocks, counters, prescalers, and other digital circuits you might come across. The logic probe is powered by the circuit under test. Size 4" x 0.75".

# DC-DC Adjustable Voltage Step-Down Module LM2596S



## LM2596S DC-DC Adjustable Voltage Step-Down Module

- Input voltage: 3 to 40 VDCOutput Voltage: 1.25 to 35 VDC
- Max. input current: 2.5 A
- Chip: LM2596S
- Dimensions: 1.93" x 1.02" x 0.47" (49 x 26 x 12 mm)
- Difficulty: Level 3

# 3.5 Digit Deluxe Full Function Digital Multimeter Kit Soldering Required



Jameco Part no.: 2181343 Manufacturer: Elenco Electronics Manufacturer p/n: M-2666K HTS code: 8542390000 Data Sheet (current) [5.1 MB]

Add to cart

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larger image

# of units Price (USD 1+ \$47.95





\$47.95 ea

Qty

114 ln Stock More Available – 2 weeks

### 3½ Digit Deluxe Full Function Digital Multimeter Kit

Note: Soldering Required

#### Features

- Extra Large 1"; 3 1/2 Digit Display
- AC/DC current to 20A
- Capacitance to 200µF
- Transistor Tester
- Overload Protection
- Diode Test
- Audio Continuity
- Low Battery Indicator
- Holster
- Tilt Stand
- · Safety input socket and Test Leads
- Dimensions: 7.5" x 3.5" x 1.3"
- Number of pieces: 135 pcs

### Specifications

- AC + DC Volts: 200mV, 2V, 20V, 200V, 1000V, 750VAC
- Accuracy:
  - $\circ$  DC:  $\pm$ (0.5% rdg + 2 digits); 1000V:  $\pm$ (0.8% rdg + 2 digits)
  - AC: 200mV, 750V: ±(1.5% rdg + 2 digits), 1mV-100mV: ±(1.0% rdg + 2 digits)
- Resolution: 100µV
- AC + DC Current:200µA, 2mA, 20mA, 200mA, 20A
- Accuracy:
  - $\bullet \quad \textbf{DC} : \text{DC: } 200\mu\text{A-}20\text{mA: } \pm (1.5\% \text{ rdg} + 2 \text{ digits}), \\ 200\text{mA: } \pm (2.0\% \text{ rdg} + 2 \text{ digits}), \\ 204\text{mA: } \pm (2.5\% \text{ rdg} + 3 \text{ digits}), \\ 206\text{mA: } \pm (2.5\% \text{ rdg} + 3 \text{ dig$
  - AC: 200μA-20mA: ±(1.0% rdg + 3 digits), 200mA: ±(1.5% rdg + 3 digits), 20A: ±(2.0% rdg + 3 digits)
- Resolution: 0.1µA
- Resistance:  $200\Omega$ ,  $2k\Omega$ ,  $20k\Omega$ ,  $200k\Omega$ ,  $2M\Omega$ ,  $20M\Omega$
- Accuracy:  $200\Omega$ :  $\pm (1.0\% \text{ rdg} + 2 \text{ digits})$ ,  $2\text{k} 2\text{M}\Omega$ :  $\pm (0.8\% \text{ rdg} + 3 \text{ digits})$ ,  $20\text{M}\Omega$ :  $\pm (2.0\% \text{ rdg} + 4 \text{ digits})$
- Resolution:  $0.1\Omega$
- Capacitance: 2nF, 20nF, 200nF, 2μF, 20μF, 200μF
- Accuracy:  $2nF-20\mu F$ :  $\pm (2.5\% \ rdg + 3 \ digits)$ ,  $200\mu F$ :  $\pm (5.0\% \ rdg + 3 \ digits)$
- Resolution: 1pF

### Accessories

• Test Leads, Holster, Manual, 9V battery included

### Function Generator Kit Assembly Required

WSAH105

Velleman





9 ship on Aug. 11 call 1-800-831-4242 for more

\$29.95 ea

### **Function Generator Kit**

FBI OG-300A

Electronic Rainbow

The Function Generator kit is a single-board assembly incorporating the basic circuit necessary for a sine, square and triangle wave generator of high stability and accuracy that may be amplitude and frequency modulated. The kit is intended to be incorporated into a higher assembly of the user's own design that adds power supply, controls and housing.

M-2666K

Elenco Electronics

**Please Note:** Due to inventory packaging methods, you may receive extras for some components. **Instrumentation knobs** and **enclosure** are sold separately.

- Operation from either +12VDC or ± 6VDC @ 15mA (Recommend P/N: 20626 if using split power supply configuration)
- Note: XR2206 performs best at 18V
- Frequency capability: +1 to 100K Hz in 4 ranges
- Frequency variability: 1:100 within each range
- Frequency accuracy dependent upon timing capacitors and user's potentiometer: calibration by user
- Sine triangle output amplitudes variable, 0-6VPP for sine and 0 to V  $\pm$  for triangle, with 600 $\Omega$  source impedance
- Maximum sine wave distortion: 1% 10-10K Hz and 3% 10K-100K Hz
- Linear frequency modulation capability: range dependent on center frequency
- Linear amplitude modulation capability, range 55dB
- Other criteria as determined by Exar XR2206 function generator IC

### Click for a cool video demonstration of this kit with an enclosure

### Kit Includes:

WSFDU06

Velleman

Part No.	Qty.	Description
10882	3	Axial capacitor, 10μF, 50V
27001	1	Mylar capacitor, 1μF, 100V
26956	1	Mylar capacitor, 0.1μF, 100V
26884	1	Mylar capacitor, 0.01μF, 100V
26833	1	Mylar capacitor, 0.001μF, 100V
690865	2	Resistor, 1/4W, 1k Ω
691032	2	Resistor, 1/4W, 5.1k Ω
691340	1	Resistor, 1/4W, 100k Ω

# Metal Detector Solder Assembly Kit LED Proximity Indicator



Jameco Part no.: 129091 Manufacturer: Velleman Manufacturer p/n: WSMI7102 HTS code: 8543909500 Data Sheet (current) [491 KB]

\$12.95 ea
68 In Stock
More Available – 14 weeks
Qty

Add to cart

+ Add to my favorites

### View larger image



# # of units Price (USD) 1+ \$12.95 5+ \$11.95 Request a Large Quantity Quote WARNING: Proposition 65

### Metal Detector Kit

To come up against an electric cable while drilling a hole in a wall can have catastrophic consequences. Likewise, drilling into gas, water pipes or central heating pipes can be extremely hazardous. With a handy metal detector it can now be determined beforehand whether there are metal objects to be found in a wall, ceiling or floor. An LED indicates if a metal object is in the vicinity. Assembly required.

### **Features**

- Adjustable sensitivity
- · Push button operation
- · LED proximity indicator
- Max detecting distance: 8cm / 3.15"
- Power Supply: 9V battery (not incl.) Recommend Jameco P/N: (2112461).
- Dimensions: 56mm x 64mm (2.2" x 2.5")
- Optional buzzer: SV4/12 (discontinued), we recommend this alternate buzzer (P/N:138713).
- Enclosure: G407 (optional, not included)
- Difficulty: Level 3 (Intermediate)

### Boe-Bot BASIC Stamp 2 Robot Kit USB Version



### **BoE-Bot Robot Kit - USB Version**

Build your own rolling robot with a BASIC Stamp 2 microcontroller brain. Just follow the clear, step-by-step instructions and illustrations with the included book, Robotics with the Boe-Bot. No programming or electronics experience is needed!

The Boe-Bot Robot takes about 1-2 hours to put together. Each project in the Robotics text provides a unique new experience of wiring and source code tuning. Completing the entire set of projects takes 50 hours and is suitable for anybody over 13 years of age. The USB Board of Education (and BS2-IC) may also be removed to be used as your platform for the other kits in the Stamps in Class series.

You can find Boe-Bot robots in middle and high schools, vocational schools and colleges, robotics clubs, and hobbyists' homes. They are great companions for learning or teaching technology, mechatronics, and STEM programs. It's also an approved platform for the Boy Scouts of America Robotics Merit Badge.

### Features

- · Beginner-friendly No programming experience needed
- . Open platform Exposed circuitry allows you to learn and create your own electronic circuits
- · Solder-free Experiment with custom circuits on the breadboard (no special-brand connectors)
- Understandable Included text provides easy-to-follow tutorials
- · Programmable PBASIC is easy to learn and introduces concepts found in most programming languages
- · Autonomous Touch, light and infrared sensors let the Boe-Bot navigate on its own
- Expandable Additional sensors and hardware expansion kits are available to get the most out of your robot

### Kit Contents

- Board of Education development board with a BASIC Stamp 2 microcontroller (#28803, Jameco P/N: 2109165)
- Durable brushed-aluminum chassis with mounting holes for servos and accessories (#700-00022, Jameco P/N: 2153369)
- Parallax continuous rotation servos for the drive wheels (#900-00008, Jameco P/N: 283039)
- · Sensors including whisker-switches, phototransistors, and infrared emitter/receiver pairs
- LEDs and a piezospeaker for audio and visual feedback
- All the resistors, capacitors, and jumper wires needed to build the circuits
- · All the screws, nuts, and other hardware needed to build the Boe-Bot
- Parallax #1 Phillips/flathead screwdriver
- · USB A to Mini-B cable to connect the Boe-Bot to your Windows computer for programming

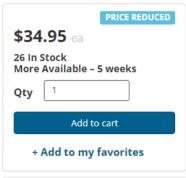
Note: Requires 4 AA batteries, not included, and a PC running Windows XP/Vista/7. Recommended for ages 13 and up.

# MP3 Jukebox Module with SD Card Slot



Jameco Part no.: 2210431 Manufacturer: Velleman Manufacturer p/n: WMAH202N HTS code: 8543909500

Data Sheet (current) [1.9 MB] User's Manual(current) [2.8 MB]



### View larger image





## MP3 Jukebox Module with SD Card Slot

This handy device will play your .mp3 files stored on a USB memory stick or SD card.

### **Features**

- Use momentary pushbuttons for 'NEXT'-, 'PREVIOUS'- and 'PLAY/PAUSE' (Button switches are not included)
- · LED play/pause indicator
- Playback starts at power on
- · Continuous looping of all tracks
- · Stereo line level output
- · Connectors are included

### **Applications**

- · Make your own MP3 jukebox
- · MP3 playback to any domestic or car audio system
- Message playback system

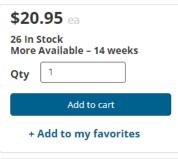
- Supported file format: mp3 (128kb/s, 192kb/s, 256kb/s, 320kb/s variable bit rate)
- Audio output: 500mV/47kOhm stereo line out
- Power supply: 5VDC (We recommend P/N: 1953612) or 9 to 12VDC/50mA max (We recommend P/N: 162996)
- Dimensions: 45x40x8mm / 1.77x1.57x0.31"

### 1 Second to 60 Hour Pulse Pause Timer Kit



Jameco Part no.: 2187323 Manufacturer: Velleman Manufacturer p/n: WST188 HTS code: 8542390000

Data Sheet (current) [603 KB] User's Manual(current) [680 KB] Kit Instructions [403 KB]



# View larger image You may also like: ANGCLKV1 KIT-555TUTORIAL WMT141 K8089 WS Wicked Device Jameco Kitpro Velleman Velleman Velleman



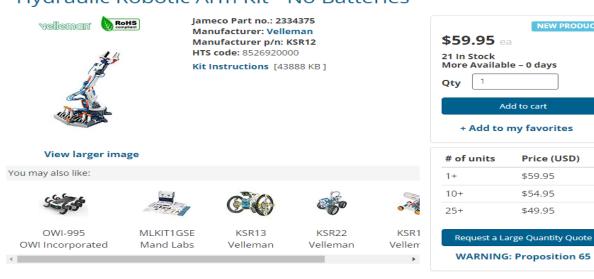
### 1 Second to 60 Hour Pulse-Pause Timer Kit

### Features

- · Assembly required
- Wide timing range
- easy time setting
- start with 'pulse' or 'pause'
- 'single shot' or 'loop'-selection
- applications:
- · blinking of lights
- pulsed operation of buzzers
- automatic irrigation
- lawn sprinklers
- toilet flushing or ventilation
- battery charging time control
- · cyclic operation of equipment

- power supply: 12-24 VDC, via screw terminals
- relay contact: 16 A max.
- dimensions: 80 x 45 x 22 mm / 3.15 x 1.78 x 0.86"

### Hydraulic Robotic Arm Kit - No Batteries



### Hydraulic Robotic Arm Kit - No Batteries

A series of Robot Kits has been created for the future engineer. Construct this kit to see how much fun electronics, mechanics, and hydraulics can be! Make your initial steps into the hydraulics realm. What does this have to do with having a good time? Using the science principles of a hydraulic system and its application, children will have complete control and visual manipulation of a robotic arm. Easy-to-follow instructions with clear graphic representations lead the way for a successful and enjoyable kit building experience (229 pieces in total). Complement your learning plan in engineering, math, science, and technology. It is totally powered by water, hence the "Hydraulic" aspect and how it manipulates axis movement using lever controllers. The Hydraulic Robot Arm is suggested for ages 14 and up, although it will challenge the beginner engineering enthusiast with its 229 assembly components.

NEW PRODUCT

Price (USD)

\$59.95 \$54.95

\$49.95

### Features

- . This Robot Arm helps you to set your first steps in the world of hydraulics
- No motor
- No battery
- Hydraulic DIY
- Science kit
- · Comes with suction cup
- · Recommended age: 14+

- · Commands six axes of varied movements:
  - gripper: opens to 4.8 cm (1.89")
  - o wrist rotation: 180°
  - o wrist mobility: 98°
  - elbow range: 44°
  - base rotation: 270°
  - o shoulder motion: 45°
  - Vertical reach: 41.5 cm (16.35")
  - o Horizontal reach: 31.5 cm (12.42")
  - Lifting capacity: 50 g
  - o Level: Beginner
  - o Number of Pieces: 229

# Component Tester Kit Solder Assembly Test Transistors Resistors Coils Capacitors & Diodes



Jameco Part no.: 2245343 Manufacturer: Velleman Manufacturer p/n: WSMI8115 HTS code: 8542390000 Data Sheet (current) [357 KB]



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\$69.95 ea

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9 In Stock

Qty

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Vou may also like:

WSEDU06 EBLOG-300A JE2206 WSAH105
Velleman Electronic Rainbow Jameco Kitpro Velleman Ele

### **Component Tester Kit**

Build your own component tester and probe for useful information about resistors, diodes and many other components. This is an intermediate level kit and requires soldering. Soldering tools and equipment are sold separately.

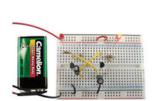
### **Features**

### Supported components:

- BJT
- JFET
- E-IGBT
- D-IGBT
- E-MOS
- D-MOSResistors
- Coils
- Capacitors
- Diodes
- · Auto shutdown
- · Shows pin layout on LCD

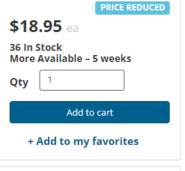
- Dimensions: 5.4" x 2.4" x 1.2" (W x L x H)
- Resistance resolution: 0.1 Ohm (max. 50 MOhm)
- Capacitance range: 28 pF to 100 mF
- Inductance range: 0.01 mH to 20 H
- · Standby current: 20 nA
- Power supply: 9V battery (not included, but we recommend p/n: 198731)
- · Test current approx.: 20 mA
- · Test speed: 2 seconds

# Solderless Education Starter Kit with Ten Projects



Vallement Rohs

Jameco Part no.: 2144374 Manufacturer: Velleman Manufacturer p/n: WSEDU01 HTS code: 8542310000 Data Sheet (current) [2.3 MB]



### View larger image





### **Solderless Education Starter Kit**

The EDU01 basic experiment kit is the first step into the world of modern electronics. Build your own circuits in a fun, safe and educative way. The kit contains a breadboard and all necessary components to get started right away. You will finish assembling your first circuit in just a few minutes...

### **Features**

- · 10 exciting projects to build
- no soldering required
- high-quality breadboard with 456 contact terminals
- · extended manual
- projects include: blinking LEDs, burglar alarm, light sensor, polarity tester, start-stop circuit, timer, running light, water alarm and more...

- breadboard dimensions: 80 x 60mm / 3.15" x 2.36"
- 9V battery required (not included), we recommend P/N: 198731.

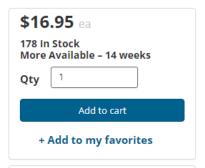
# Running Microbug 100mm x 60mm





Jameco Part no.: 200328 Manufacturer: Velleman Manufacturer p/n: WSAK127 HTS code: 8526920000

Data Sheet (current) [192 KB]



### View larger image





## **Running Micro Bug Kit**

A bright colored miniature bug shaped robot that is attracted to light.

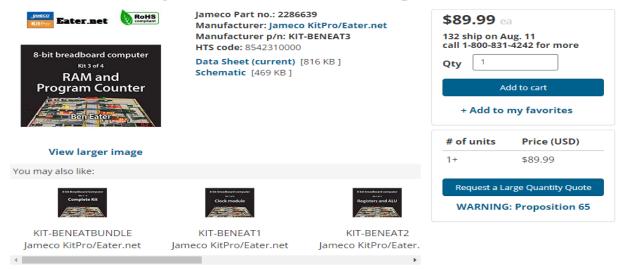
### **Features**

- Intermediate level
- 26 pieces
- Two open chassis sub-miniature motors
- · Adjustable light sensitivity that suits almost any light conditions
- LED "eyes" indicate driving direction
- Stops in total darkness
- Size: 4.0" x 2.4"

### Requires:

2 AAA batteries, not included. We recommend Jameco P/N: 198715

# Build An 8-Bit Computer by Ben Eater (Part 3) - Random Access Memory (RAM) Module and Program Counter



### Build An 8-Bit Computer by Ben Eater - Random Access Memory (RAM) Module and Program Counter (Kit 3 of 4)

In this kit, the random access memory (RAM) stores the program the computer is executing as well as any data the program needs. Our breadboard computer uses 4-bit addresses which means it will only have 16 bytes of RAM, thus limiting the size and complexity of the programs it can run. This is by far its biggest limitation. **See the build videos below**.

The other part of the build is the program counter (PC) which counts in binary to keep track of which instruction the computer is currently executing. See below for the **videos explaining how counting in binary works**. Then follow the **Program Counter build videos**, also below.

Part No.	Qty.	Description
149948	1	Switch Push Button Tactile SPST OFF-(ON) 15 VDC @ 20mA Actuator Height 0.13 Inch
151116	5	Capacitor Ceramic Disc 0.1μF 25V ±20%
15229	5	Ceramic Disc Capacitor 0.01µF 50V ±20% Z5U
2258831	1	3-Pin SPDT Slide Switch
2283767	4	830 Point Solderless Plug-in Breadboard with 4 Power Rails 21-26AWG ABS
333973	10	LED Red Diffused 5mm (T-1 3/4) 643nm 75mcd 36VA
38820	1	Standard Slide-Raised 4 Position DIP Switch
38842	1	8 Position DIP Switch Standard Raised Slide SPST DIP-16
46252	1	IC 74LS00 Quad 2-Input Positive NAND Gate DIP-14
46316	2	IC 74LS04 Hex Inverter
46771	4	IC 74LS157 Quad 2-to-1 Line Data Selector
46818	1	IC 74LS161 4-BIT Synchronous Binary Counter
46922	1	IC 74LS173 4-Bit D-Type Register 3-State Output
47212	2	IC 74LS245 Tri-State Octal Bus Transceiver

# Component Bundle for Getting Started with Electronics Book



Jameco Part no.: 2225115 Manufacturer: Jameco Kitpro Manufacturer p/n: KIT-GSE BUNDLE

HTS code: 8542310000

No datasheet available. Please review the tabs

below for product specifications.



Price (USD)		
\$32.95		
\$29.95		
rge Quantity Quote		
WARNING: Proposition 65		

### View larger image

You may also like:



Jameco KitPro/Eater.net



Jameco KitPro/Eater.net

Jameco KitPro/Eater.

### **Component Bundle for Getting Started with Electronics Book**

(Book is not included)

This kit includes over 120 components so you can build all the circuits from the eBook, "Getting Started with Electronics" (2nd edition) by Øyvind Nydal Dahl.

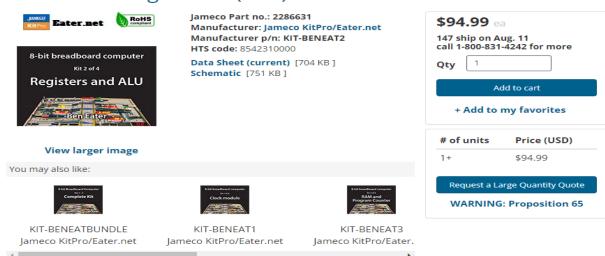
These are some of the circuits you can build:

- Blinking lights
- An alarm for your fridge
- A classic synthesizer
- LED chaser
- · Siren circuit
- ...and many more.

The eBook is not included in the kit, but it can be purchased here.

Part No.	Qty.	Description
1954818	1	4" square ferrite speaker, 8 ohm
38359	10	Transistor, 2N3904, NPN general purpose
335557	1	Piezo buzzer, 3400 Hz, 90 dB
202454	1	Photocell, 400mW, 350VPK, 8Kohm
2179286	1	1/4" sealed cermet potentiometer, 1/2W, 10Kohm
690865	10	1/4 watt resistor, 1k ohm
15229	10	Ceramic disc capacitor, 0.01µF, 50V
151116	10	Ceramic disc capacitor, 0.1µF, 50V
94212	10	Radial capacitor, 10µF, 25V
27422	2	IC, LM555CN, DIP-8
2193969	10	Green diffused 5mm LED
178618	10	Transistor, 2N3906, PNP general purpose
608032	1	Radial capacitor, 100µF, 63V
153252	1	Tactile push button switch, SPST, OFF-(ON)
109154	1	9V battery snaps with 6" 26AWG wires
151095	1	9V battery
690620	10	1/4 watt resistor, 100 ohm
606563	2	Radial capacitor, 2200μF, 10V
2157693	1	400 point breadboard, 3.25" x 2.125"
<del>2159197</del>		Mini power relay, SPDT
<del>144186</del>	1	(Substitutions have been made as components
174432		are no longer available.)

# Build An 8-Bit Computer by Ben Eater (Part 2) - Registers and Arithmetic Logic Units (ALU)



# Build An 8-Bit Computer by Ben Eater - Registers and Arithmetic Logic Units (ALU) (Kit 2 of 4)

**Registers:** Most CPUs have several registers which store small amounts of data the CPU is processing. In our simple breadboard CPU, we'll build three 8-bit registers: A, B, and IR. The A and B registers are general-purpose registers. IR (the instruction register) works similarly, but we'll only use it for storing the current instruction that is being executed. **Register build videos below**.

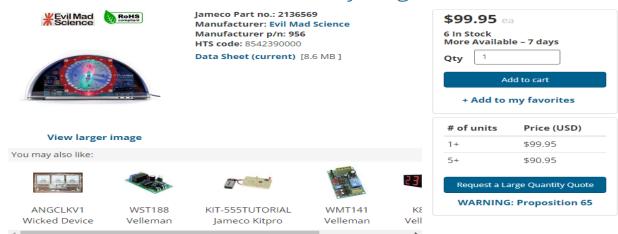
**Arithmetic Logic Unit (ALU):** The arithmetic logic unit (ALU) part of a CPU is usually capable of performing various arithmetic, bitwise and comparison operations on binary numbers. In our simple breadboard CPU, the ALU is only able to add and subtract. It is connected to the A and B registers, and it outputs either the sum of A+B or the difference of A-B. **ALU build videos below**.

### Theory

Before diving into building the ALU, **check out these two videos (below)**. The first shows how we can use hardware to add numbers in binary. The second video explains how negative numbers work. Between the two videos, you'll know how to add negative numbers which means you'll know how to subtract!

Qty.	Description
10	Capacitor Ceramic Disc 0.1µF 25V ±20%
1	22 AWG 6-Color Solid Tinned-Copper Hook-Up Wire 25 Foot
5	LED Blue Diffused 5mm T-1 3/4 470nm 350mcd
4	830 Point Solderless Plug-in Breadboard with 4 Power Rails 21-26AWG ABS
30	LED Red Diffused 5mm (T-1 3/4) 643nm 75mcd 36VA
6	IC 74LS173 4-BIT D-TYPE REGISTER 3-STATE OUTPUT
4	IC 74LS245 Tri-State Octal Bus Transceiver
2	IC 74LS283 4-BIT BINARY FULL ADD FAST CARRY
2	IC 74LS86 QUAD 2-INPUT EXCLUSIVE OR GATE
40	Carbon Film Resistor 220 Ohm 1/4 Watt 5%
10	LED Yellow Diffused 5mm (T-1 3/4) 588nm 29mcd 50VA
	10 1 5 4 30 6 4 2 2 40

### Bulbdial Clock Kit Solder Assembly Programmable



The Bulbdial Clock kit is based on an original design concept from IronicSans.com. It works like an indoor sundial, but with three shadows of different length. You tell the time just like you do on a normal clock, by reading the positions of the hour, minute, and second hands. The Bulbdial clock is designed to be mounted in a handsome, laser-cut acrylic case that makes it suitable for desk or mantle use. The included case is Black acrylic for the back and Clear acrylic for the front.

### **Bulbdial kit configuration:**

The Bulbdial clock kit comes complete with three custom **circuit boards**, 72 ultrabright LEDs, pre-programmed ATmega168 microcontroller with Arduino bootloader, tactile button switches, aluminum standoffs, 20 ppm quartz crystal, pre-selected clock face, gnomon spike, universal-input plug-in power supply, stainless mounting hardware, plus the resistors, capacitors and other little parts needed to build the Bulbdial clock.

Note: The Chronodot module shown in the photo is an optional accessory available separately.

### **LED Style**

The kit comes with 12 red, 30 green, and 30 blue LEDs, marking hours, minutes, and seconds. The colors provide contrast and tend to mix in interesting ways.

### Case Style

The Bulbdial clock is designed to be mounted in a handsome, laser-cut acrylic case that makes it suitable for desk or mantle use. This particular kit comes with the Black back/Clear front. Other cases are also **available separately**. Cases options include Tortoiseshell, Abalone Pearl, Black Granite, Black back/Smoke front.

### ChronoDot

The Bulbdial clock kit has a socket on the circuit board to accept an **optional Chronodot module** as an upgrade. It provides your Bulbdial kit with (1) a higher accuracy quartz crystal oscillator, (2) a backup battery, and (3) extra geek cred for having a TCXO-based RTC. The included battery is estimated to last for 7 years. The Chronodot (V1) is available separately. (The Chronodot is a product of Macetech.)

### **USB-TTL Cable**

The FTDI USB-TTL converter cable **(not included)** provides an optional interface between your computer and your Bulbdial clock. It can be used (1) to sync the Bulbdial's time to the time on your PC, (2) to reprogram the Bulbdial clock through the Arduino IDE, or (3) to make the Bulbdial clock into a USB powered Bulbdial clock.

### **Building it**

The Bulbdial Clock is sold as a soldering kit. Basic electronic soldering skill is required, and you provide basic soldering tools: a soldering iron + solder and small wire clippers. You will also need internet access to read or download our detailed assembly guide. No additional knowledge of electronics is presumed or required. Easy "through-hole" construction and clear, photo-heavy instructions are provided. Assembly time: 1-3 hours, depending on your level of experience with soldering.

# 1 Amp Power Supply Kit



Jameco Part no.: 117621 Manufacturer: Velleman Manufacturer p/n: WSPC1823 HTS code: 8542310000 Data Sheet (current) [864 KB]



# View larger image You may also like: JE215 DFR0140 WSI8004 34020 WSPC8042 Jameco Kitpro DFRobot Velleman Solarbotics Velleman

# # of units Price (USD) 1+ \$12.95 5+ \$11.95 25+ \$10.95 Request a Large Quantity Quote WARNING: Proposition 65

### 1 Amp Power Supply Kit

This small power supply provides a regulated voltage, adjustable between 1.5 and 35 volts at 1 Amp. With the LM317 regulator remarkably better ripple and regulation characteristics are given than with conventional regulators. Current limiter and thermal overload protection are included in the IC. Heatsink not included. Soldering assembly required.

### **Features**

- Just add a suitable transformer (see table on page 2 of the datasheet)
- Great to power your projects and save money on batteries
- Suitable as an adjustable power supply for experiments
- · Control DC motors, low voltage light bulbs, etc...

- Level 1 kit (beginner)
- · Preset any voltage between 1.5 and 35V
- Very low ripple (80dB rejection)
- Short-circuit, thermal and overload protection
- Max input voltage: 28VAC or 40VDC (Recommend P/N 149797, 28VCT @ 2A)
- · Max. dissipation: 15W (with heatsink)
- Dimensions: 52 x 30mm (2.1" x 1.2")

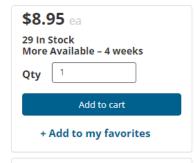
# DC Voltage Monitor Kit with 7 LEDs





Jameco Part no.: 181833 Manufacturer: Electronic Rainbow Manufacturer p/n: VM-2 HTS code: 8543909500

Data Sheet (current) [86 KB]





# # of units Price (USD) 1+ \$8.95 5+ \$7.95 Request a Large Quantity Quote WARNING: Proposition 65

# DC Voltage Monitor Kit with 7 LEDs

Monitor the status of your batteries with this kit, so that you know exactly how much power is left inside.

### Features:

- 7 LEDs to monitor 12VDC in 1V, 1/2V, or 1/4V steps
- Can also be built to monitor 8V or 5V in 1/4V steps
- · Great for boats, motor homes, model planes, or race car Ni-Cd batteries
- · All parts and instructions included
- Size: 1.3" x 2.7"

### 1 Watt Audio Stereo Amplifier Kit



Jameco Part no.: 662670 Manufacturer: Electronic Rainbow Manufacturer p/n: EBST-11 HTS code: 8543909500 Data Sheet (current) [207 KB]





## **Audio Stereo Amplifier Kit**

This kit will teach you how amplifiers take a small signal and amplify it to drive two small speakers or headphones. It is based on two LM386 ICs and one LM1458 IC. The LM386 chip is not a toy, for it is designed to be used in a variety of consumer electronics applications like AM/FM radio amplifiers, portable tape or CD players, intercoms, TV sound systes, and more.

The kit provides up to 1 watt of low-distortion audio power. Harmonic distortion is 0.2% with a voltage gain up to 46dB. You supply the speakers/headset and input power source.

### Features:

• Output Power: 1 Watt

• Power Requirement: +7 to +15 VDC, well filtered and regulated.

• PC Board size: 2.25" x 2.75"

NOTE: The 9V battery snap shown in the image above is not included. Input power must be well-filtered and regulated and should be between +7 and +15 VDC, but +9V DC is recommended, especially if you are using this with other kits from Rainbowkits.

Part No.	Qty.	Description
R2, R11	2	1K ohm resistor (brown, black, red)
R7, R12	2	10K ohm resistor (brown, black, orange) <i>(use</i>
117, 1112		with mic only)
R3, R8	2	51K ohm resistor (green, brown, orange)
R4, R5	2	100K ohm resistor (brown, black, yellow)
R6, R9	2	270 ohm resistor (red, violet, brown)
R1, R10	2	10K or 5K trim pot (horizontal)
C2, C3	2	4.7μF or 10μF capacitor
C7, C8, C11, C12	4	Optional capacitors (see text) (customer
C7, C0, C11, C12	+	supplied)
C1, C4, C6, C9	4	0.1µF capacitor (marked .1 or 104)
C5, C10	2	47μF capacitor
U2, U3	2	LM386 audio output IC
U1	1	LM1458 IC
U1S, U2S, U3S	3	8-pin IC sockets
Pins	12	Connecting terminals
PCB	1	#080-00368A
4		

### Pirate: 4WD Mobile Robot Kit for Arduino with Bluetooth 4.0



View larger image

Jameco Part no.: 2335783 Manufacturer: DFRobot Manufacturer p/n: ROB0022 HTS code: 8526920000

No datasheet available. Please review the tabs below for product specifications.

# NEW PRODUCT \$77.95 ea 14 In Stock Qty 1 Add to cart + Add to my favorites

# You may also like: SP-1A AK-100 JE250 JE255 Elenco Electronics Electronics Jameco Kitpro Jameco Kitpro

# # of units Price (USD) 1+ \$77.95 10+ \$75.95 Request a Large Quantity Quote WARNING: Proposition 65

### Pirate: 4WD Mobile Robot Kit for Arduino with Bluetooth 4.0

The Pirate: 4WD Mobile Robot Kit for Arduino with Bluetooth 4.0 is an Arduino-compatible and Bluetooth 4.0 (BLE) ready robot kit that includes a set of Ultrasonic sensors (URM37). It enables you to create a fully self-contained mobile robot. With over 200 DFRobot Gravity sensors and modules available to enhance the functionality, this kit has a lot of promise. It's a great educational robot kit for K12 robotics and STEM classes.

The DFRobot 4WD mobile robot platform contains 4x motors, 4x wheels, and a full chassis with mounting hardware for use with the DFRobot ROMEO All-in-one Controller. The second level, which is supplied, lets you add more electronics and create a flexible layout. A servo can be mounted to the rectangular hole and utilized for a variety of applications, such as a moveable camera or a robotic arm. The high-strength aluminum alloy body composition allows for quick mobility, especially on grass, gravel, sand, or a sloped terrain. Because of the chassis study structure, the electronics and gears have a longer life expectancy. The Pirate: 4WD Mobile Robot Kit for Arduino with Bluetooth 4.0 is also appropriate for robot competitions and research.

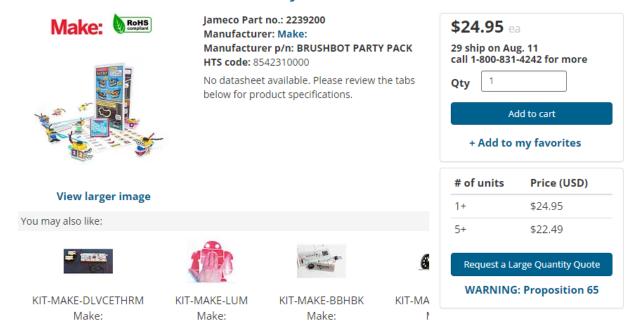
### **Specifications**

- Microcontroller: Romeo BLE
- Controller Operating Voltage: 5 VDC
- Ultrasonic Sensor Detecting range: 5 cm to 500 cm
- Rotation range: 0 180
- Power Supply: 7.5 to 12V DC
- Speed: 90 cm/s
- Dimensions: 200mm x 170mm x 105mm (7.9 x 6.7 x 4.1 in)
- Weight: 1020g

### Downloads & Resources

- · How to Build a Robot Tutorial
- WiKi (4WD Mobile Platform SKU:ROB0022)
- Instruction Manual V2.0
- · Assembly Tutorial by RuG Community
- Assembly Guide by Opensource Hardware Group

# Make: Brushbot STEM Party Pack



Decorate your brushbot with numbers, teeth, eyes (sure, the googly kind) or even a moustache! The Brushbot Party Pack is a fun way to upgrade your kid's next party. In a few quick steps, turn the 12 toothbrushes, motors and batteries in the kit into buzzing, twirling "bots" that can be customized with goofy decals and numbers that are included.

The toothbrush head acts as the body with hundreds of tiny legs that send the BrushBots jiggling and bumping on their way. Included in your party pack is a BrushBot mini-comic, instructions on how to build a racetrack, and a **MAKE** pin to hand out to race winners or creators of the wackiest bot. You can also print out a downloadable colorful BrushBot party invitation (see below). Let the race begin!

This kit is not for speedy tooth brushing and includes small parts not intended for children under 3 years.

- (12) colored toothbrushes
- (12) micro vibrating motors
- (12) coin cell batteries
- (6) sticky poster tape

### DIY Discover Electronics Kit v3





### Discover Electronics Kit v3

Like the old Radio Shack spring circuits but updated with modern teaching styles. The growing DIY movement is empowering people to take control of their products and environment. Discover Electronics Kit contains everything you need to learn the basics of electronics and make your own projects. It contains the most common electronics components as well as a prototyping breadboard for you to get started right away. Easy full color diagrams teach you how to bring your own ideas to life.

The Discover electronics kit uses standard components. All of these parts can be used by the beginner or the advanced user. As you grow and learn all of the parts in the kit are still useful in more advanced projects and can be expanded on by ordering additional parts from electronics suppliers. See more info on the kit and additional lessons here.

#### Features:

- · Learn how electricity works and calculate voltage, current and resistance
- Illustrated projects and online videos teach you how to create circuits, diagnose problems and read schematics
- Ages: 12 and up (contains small parts)
- No. of Projects: 16
- No. of Parts: 130+
- RoHS-compliant

### **Kit Contents:**

- Manual
- 3 Potentiometers
- 2 Buttons
- · Dip switch
- · 2 Photocells
- 556 timer
- Breadboard
- · 2 Regulators
- 2 Diodes
- 70 Resistors
- · 25 Capacitors
- · 2 Transistors
- Speaker
- 10 LED's in super colors!
- · Pre-stripped wires
- Battery case/holder
- 2 Alligator clips

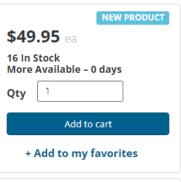
### Projects:

- · Wire LEDs and switces
- · Understand analog sensors to create designs that react to the environment
- LED flasher
- · Interactive Noisemaker

### 14 in 1 Educational Solar Robot Kit



Jameco Part no.: 2334367 Manufacturer: Velleman Manufacturer p/n: KSR13 HTS code: 8526920000 Kit Instructions [48056 KB]



### View larger image



# of units	Price (USD)	
1+	\$49.95	
10+	\$45.95	
25+	\$44.95	
Request a La	arge Quantity Quote	
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### 14 in 1 Educational Solar Robot Kit

A series of Robot Kits has been created for the future engineer. Construct this kit to see how much fun electronics, mechanics, and hydraulics can be!

### **Features**

- Solar powered (no battery required)
- Starter Level Builds:
  - Turtle-bot
  - Beetle-bot
  - o Quadru-bot
  - o Boat-bot
  - Walker-bot
  - Dog-bot
  - Wheel-bot
- · Challenging Level Builds:
  - o Roly Poly-bot
  - Auto-bot
  - Sligher-bot
  - Surf-bot
  - Boxer-bot
  - o Crab-bot
  - o Row-bot
- Contents:
  - o motor: 14 000 rpm 1.2 VDC
  - o solar panel
  - o plastic parts
  - o detailed assembly instructions
- Recommended age: 14+

# Easy PIR Alarm Kit Solder-Assembly Customizable Project

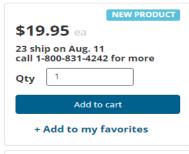




View larger image

Jameco Part no.: 2316663 Manufacturer: Jameco Kitpro Manufacturer p/n: JE-PIR ALARM HTS code: 8543909500

Kit Instructions [1280 KB] Schematic [38 KB]



# You may also like: CJKIT-20829 WSAA108 K2604 K6400 KIT-FA2 Jameco Kitpro Velleman Velleman Jameco Kitp

# of units	Price (USD)	
1+	\$19.95	
5+	\$17.95	
25+	\$15.95	
Request a La	rge Quantity Quote	
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### **Easy PIR Alarm Kit**

Protect yourself and your property with the Jameco Electronics Easy PIR Alarm Kit! It runs on a 9V battery - or you can add your own wall transformer to save batteries or for use in permanent installations. The kit is fully customizable. For example, an extra set of relay contacts are also available to connect to external circuits or alarm systems. One can find dozens of uses like: midnight refrigerator alarm, animal or human monitoring, trespass sensor, blind-side alarm, customer entrance chime - anytime one needs low sound level alarm notification.

### Soldering assembly is required.

### **Features**

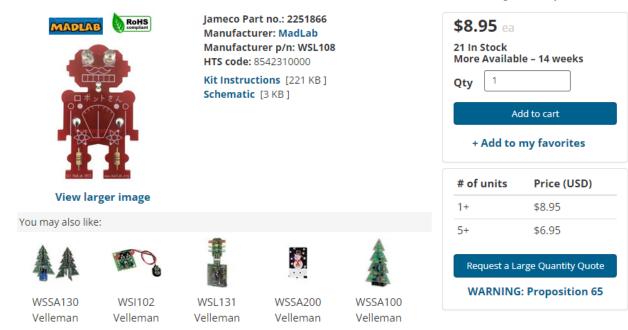
- · Passive Infrared (PIR) Sensor Alarm- Perfect for Simple Detection without Loud Alarm
- · Self-Contained No Externals Needed
- · Resets Automatically
- · Easy to Build "dead bug" Design
- Customizable
- · Runs on 9V Battery
- · Dozens of Possible Uses
- · Detection Range: 0 to approx. 25 feet
- · Optional: Extra NO/NC Contacts Output

### Required Tools and Parts

The kit includes all the parts needed except hook up wire. To assemble it, you will also need:

- Soldering Iron and solder
- · A knife is helpful for dressing out the holes
- A drill and bits to drill out holes
- Small Philips screwdriver for the project box screws
- · Wire cutter/stripper
- Insulated wire, solid or stranded 22-24 awg
- · Hot glue gun
- Dremel tool
- Small diameter heat shrink tubing (for 22-24 awg wire)

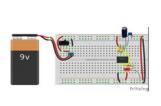
# Mr. Robot MadLab Electronic Kit Solder Assembly Required



### MadLab Electronic Kit - Mr. Robot

Mr. Robot (AKA Robotto-San) is a piece of wearable electronics. He's a fun robot that you can choose to pin or clip to your clothes. With flashing LED eyes and a red PCB (printed circuit board), he's an electronic fashion statement with a touch of attitude. A **coil cell battery** is required but not included.

### Parts Kit for The Ultimate Beginner's Guide to the 555 Timer Book



RoHS

Jameco Part no.: 2244666 Manufacturer: Jameco Kitpro Manufacturer p/n: CJKIT-21536 HTS code: 8542310000 Kit Instructions [385 KB]

\$29.95 ea
84 ship on Aug. 12
Qty 1

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# of units Price (USD)

1+ \$29.95

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You may also like:

### Parts Kit for The Ultimate Beginner's Guide to the 555 Timer Book

Save 20% compared to buying the electronic components individually!

This kit is the complete parts kit for the book, "The Ultimate Beginner's Guide to the 555 Timer" (found on Amazon). This project is an abridged version of the first project in the book, which includes much more information and many more projects to utilize the parts in the Bill of Materials.

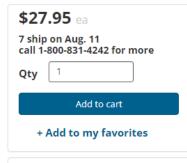
Part No.	Qty.	Description
20601	1	400-Point Solderless Breadboard 3.3"Lx2.1"W
101470	1	9V Battery Snap Holder with 10 Inch Wires
2094485	1	Connector Terminal Blocks 2 Position 5mm
2127718	1	70-Piece Jumper Wire Kit - 22AWG 14 Lengths 10 Colors
2258831	1	3-Pin SPDT Slide Switch
149948	2	Tactile SPST Push Button Switch OFF-(ON)
2161422	2	3/8" Square Cermet Potentiometer 1MEG Ohms 1/2 Watt 1 Turn
2161414	2	3/8" Square Cermet Potentiometer 500K Ohms 1/2 Watt 1 Turn
2161393	1	3/8" Square Cermet Potentiometer 5k Ohm 1/2 Watt 1 Turn
904085	2	Standard Timer Single 8-Pin Plastic DIP
697522	10	LED Uni-Color Red 697nm 2-Pin T1-3/4
2099606	1	1.05" Round Speaker 8 Ohm 0.20 Watts 320-7500Hz 78dB
691104	10	Resistor Carbon Film 10k Ohm 1/4 Watt 5%
691260	10	Resistor Carbon Film 47k Ohm 1/4 Watt 5%
691382	10	Resistor Carbon Film 150k Ohm 1/4 Watt 5%
690865	10	Resistor Carbon Film 1k Ohm 1/4 Watt 5%
690785	10	Resistor Carbon Film 470 Ohm 1/4 Watt 5%
691585	10	Resistor Carbon Film 1.0M Ohm 1/4 Watt 5%
1946367	10	10 uF 25 Volt Radial Electrolytic Capacitor 20% 85c 5x11x5mm

# Circuit Skills #5: Customizable LED Color Organ Kit



Jameco Part no.: 2126272 Manufacturer: Jameco Kitpro Manufacturer p/n: KIT-CS5 HTS code: 8542390000 Data Sheet (current) [1.7 MB]

Schematic [49 KB]







# Circuit Skills: Customizable LED Color Organ Kit

This intermediate project will cover a number of concepts fundamental to analog electronics - frequency, filters, signal & ground relationship, etc. - as well as incorporating build techniques from past installments of the series.

I'll explain the basic functionality of an LED color organ ("sound-to-light" circuit) - and of course build it! The initial description will follow the circuit's schematic covering the role of each major component involved, which will demystify all of the actual physical connections I solder during construction. And the result of this educational build process - an LED lightshow controlled by music!

This kit is called "customizable" because you layout the components on the blank PCB according to your preference. An easier drop-and-solder version is now available! See our **Easy Color Organ Kit here.** 

Click here for a design schematic and to follow Collin Cuningham as he builds his LED Color Organ.

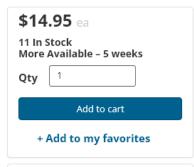
\*\*Note: You will need a 12 volt power supply to power the board. We recommend Jameco P/N: (252824).

# Timer Op Amp and Optoelectronic Circuits and Projects Book Vol. 1 By Forrest Mims



Jameco Part no.: 2112743 Manufacturer: Master Publishing Manufacturer p/n: ISBN 0945053290 HTS code: 4901990093

No datasheet available. Please review the tabs below for product specifications.



You may also like:

9781449363338 9781680454031 978-0-596-15374-8 978159327

Oreilly Media Make: Oreilly Media No Starch F



## Timer, Op Amp & Optoelectronic Circuits & Projects by Forrest Mims III

Volume I of the Forrest Mims Engineer's Mini Notebook series includes three of his best-selling notebooks: 555 Timer IC Circuits; Op Amp Projects; and Optoelectronics.

This Engineer's Mini Notebook features more than two dozen 555 timer circuits that you can build, including three tone generators, LED flashers, sound-effects circuits, and a touch switch. It also includes more than 50 operational amplifier (Op Amp) circuits, many with simple formulas to help you modify them for special circuits of your own design. A wide range of optoelectronic circuits and projects are featured, including many LED circuits and various lightwave communication systems.

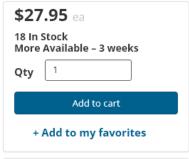
**About Forrest Mims III** 

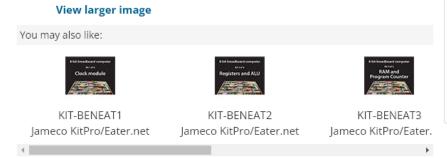
# The Basics v2.0 Complete Lab



Jameco Part no.: 2283775 Manufacturer: ETron Circuit Labs Manufacturer p/n: ETCL1 HTS code: 8542310000

Data Sheet (current) [206 KB]







# The Basics v2.0 Complete Lab

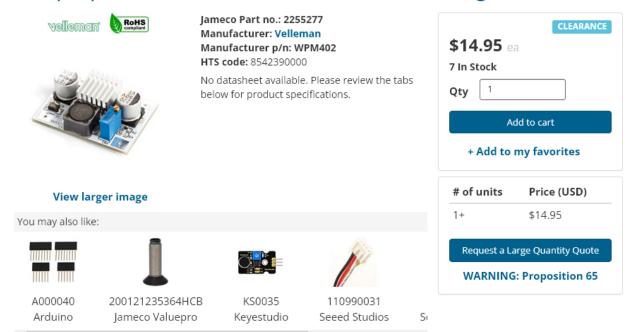
The 2nd Edition has updated pictures and graphics and has over 16 pages of content and quizzes for all labs.

The Basics v2.0 by ETron Circuit Labs is Electronic Education Curriculum designed for the 21st century electronics student. This guide is ready to take your technology program to the next level. Starting with electronic basics, this fully interactive course teaches about each component and how it works and interacts with other components. It progresses into more complex labs with exciting projects the stimulate learning and inspire further exploration.

Fundamental theories and concepts underlie this STEM-compliant course firmly laying the groundwork for a solid understanding on basics electronic principles. Engineering, Electronics, Automotive Technology, Robotics, COmputer Science and many other careers demand this basic knowledge with The Basics v2.0 delivering an immersive experience that cultivates critical thinking and problem solving skills that will last a lifetime.

Complete Lab includes The Basics v2.0 manual (ETCM1), The Basics parts kit (ETCP1), Solderless Circuit Board (CB111) and **9-Volt Battery** (SK9VB)

# Step Up Booster Module LM2577 DC-DC Voltage



# LM2577 DC-DC Voltage Step-Up (Boost) Module

This module converts the microcontroller's power supply into a higher, adjustable voltage.

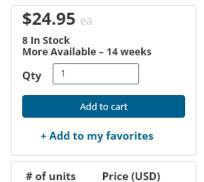
- Input voltage: 3.5 to 35 VDC
- Output Voltage: 5 to 55 VDC (adjustable)
- Max. input current: 3 A
- Continuous input current: 2 A
- Chip: LM2577
- Dimensions: 1.69" x 1.18" x 0.47" (43 x 30 x 12 mm)
- Difficulty: Level 3 (intermediate)

# Start-Stop Timer Module 1 Sec - 60 Hr 12VDC/100mA 2.8x1.8x0.8"



Jameco Part no.: 2130520 Manufacturer: Velleman Manufacturer p/n: WMT141 HTS code: 8542390000

Data Sheet (current) [238 KB]



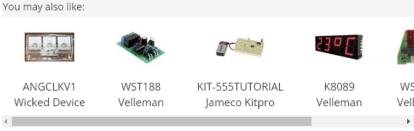
\$24.95

\$22.49

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1+	
5+	
R	
٧	WS
	Vell

### View larger image



# Start-Stop Timer Module

### Features

- Pre-assembled
- · wide timing range
- · easy time setting
- LED animation during operation
- · on-board START-STOP buttons
- · non retriggerable
- · power-on trigger is possible
- · debounced buffered inputs avoid false triggering
- compact size
- · front panel mountable

- adjustable delay: 1s 60h
- · power supply: 12VDC / 100mA
- NO/NC relay: 24VAC/DC 3A max.
- dimensions: 2.8 x 1.8 x 0.8"

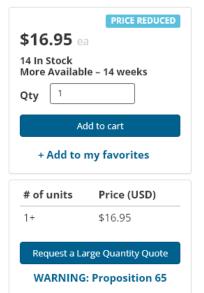
## **Dual Electronic Dice Game Kit**



Jameco Part no.: 200352 Manufacturer: Velleman Manufacturer p/n: WSG3400 HTS code: 8542390000 Data Sheet (current) [15 KB]

### View larger image





### **Dual Electronic Dice Kit**

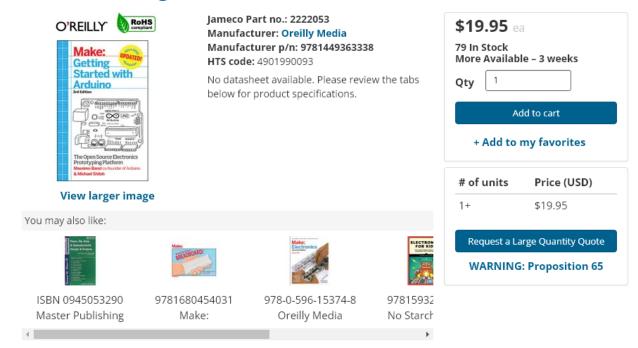
Board games provide an excellent source of entertainment. However, the dice can be a constant source of distraction: they fall off the table, allow cheating, results may not be seen properly and so on. There can be no doubt at all about the result displayed on this electronic dice module, and cheating is out of the question. Displays are switched off automatically after 30 seconds to save battery power. Rolls out slowly when releasing the push button.

### Features:

- . Two fully independent dice, at your choice you can play with one or two dice
- 85-piece kit
- · Experience level: Intermediate

- Power supply: 8 to 12V DC or 6V AC / 60mA
- PCB dimensions: 3.0" (L) x 2.8" (W)
- · Weight: 0.5 lbs

# Make: Getting Started with Arduino, 3rd Edition



# Make: Getting Started with Arduino, 3rd Edition

### The Open Source Electronics Prototyping Platform

Arduino is the hot open source prototyping platform for artists, hobbyists, students, and anyone who wants to create interactive physical environments. Getting Started with Arduino is co-authored by Arduino co-founder Massimo Banzi, and incorporates his experience in teaching, using, and creating Arduino.

From getting organized to putting the final touches on your project, all the information you need is right in this handy book. Inside, you'll learn about:

- · Interaction design and physical computing
- The Arduino hardware and software development environment
- · Basics of electricity and electronics
- Prototyping on a solderless breadboard
- Working with sensors (such as LEDs) and actuators (such as switches and knobs)
- 262 pages
- ISBN: 978-1-4493-6333-8
- ISBN 10: 1-4493-6333-4

# Arduino Course for Absolute Beginners Savings Kit



Jameco Part no.: 2199543 Manufacturer: Jameco Kitpro Manufacturer p/n: KIT-AC-OSHG

HTS code: 8542310000

No datasheet available. Please review the tabs below for product specifications.

\$59.95 ea
108 ship on Aug. 12
Qty 1

Add to cart
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You may also like:

A000066 A000067 BB-ARDUINO A000005 AKX00026
Arduino Arduino Jameco Kitpro Arduino Arduino

# # of units Price (USD) 1+ \$59.95 5+ \$56.95 Request a Large Quantity Quote WARNING: Proposition 65

### **Arduino Course for Absolute Beginners Savings Kit**

If you have an electronics project in mind you intend to build, then Arduino is a great resource to get you started on making a prototype.

This kit contains all the parts needed to complete the Arduino Course for Absolute Beginners as found at **Programming Electronics Academy** (plus a few extra components to tinker with on your own).

The parts have been assembled for someone completely new to electronics and contains everything you will need to get up and running with the Arduino prototyping platform.

This kit provides a significant savings over buying the components separately and brings together all the parts you will need in one place for the course. Have a fun adventure in tinkering!

Also, check out the free video course for learning the electronics and programming of Arduino (offsite).

Part No.	Qty.	Description
2151486	1	Arduino UNO R3, DIP version
222608	1	USB Cable, Type-A to Type-B, black, 3 ft.
18041	1	Assorted LED grab bag
29082	2	Potentiometer, 1/2 watt, 10K Ω
690700	10	Resistor, 1/4 watt, 220 Ω
691104	10	Resistor, 1/4 watt, 10k Ω
2096018	1	Wire jumper kit, 22 AWG, 140 pieces
20723	1	Breadboard, 830 points, 6.5" x 2.125"
153252	2	Tactile pushbutton switch, SPST, OFF-(ON)
10444	1	Alligator clip test leads, 10 pack
2125181	1	RGB LED, common cathode, T1-3/4 (5mm),
	'	water clear
2128500	1	RGB LED, common anode, T1-3/4 (5mm),
	'	water clear

# Educational PC Oscilloscope Kit 200kHz Solder Assembly



Jameco Part no.: 2191251 Manufacturer: Velleman Manufacturer p/n: WSEDU09 HTS code: 8543909500

Data Sheet (current) [1035 KB] User's Manual(current) [4.1 MB]



\$49.95

\$44.95

Request a Large Quantity Quote **WARNING: Proposition 65** 

1+

### View larger image

You may also like: WSMI7102 VM-2 K2639 WST2579 Velleman Electronic Rainbow Velleman Velleman

### **Educational PC Oscilloscope Kit**

Oscilloscopes are expensive and complicated instruments? Not this one! Build your own oscilloscope and use your PC to display your measurements. This small and easy to build kit has all the features of a full blown oscilloscope, just like our PCSU200 or PCSU1000. Kit comes complete with detailed instructions and test leads.

### Difficulty: Level 4 (Intermediate/Expert)

### Specifications

### Oscilloscope:

- bandwidth: DC to 200 kHz ± 3 dB
- input impedance: 100 kohm / 20 pF
- maximum input voltage: 30 V (AC + DC)
- time base: 10 μs to 500 ms per division
- · input range: 100 mV to 5 V/division
- input sensitivity: 3 mV display resolution
- readouts: True RMS, dBV, dBm, p to p, Duty cycle, Frequency
- · record length: 1k samples
- sampling frequency: 62.5 Hz to 1.5 MHz
- · sample history function
- · auto set-up function
- pre-trigger function: on 0.1 ms/div to 500 ms/div ranges
- · persistence options: Colour graded, Variable and Infinite

### Spectrum Analyzer:

- frequency range: 0 to 150 Hz to 75 kHz
- · operating principle: FFT (Fast Fourier Transform)
- FFT resolution: 512 lines

### Transient Recorder:

- timescale: 20 ms/div to 2000 s/div
- · max. recording time: 9.4 h/screen
- · automatic storage of data
- · record and display of screens
- · automatic recording for more than 1 year
- · max. number of samples: 100/s
- min. number of samples: 1 sample/20 s

### General Information:

- · markers for: amplitude/voltage and frequency/time
- · expert or basic mode selection in software
- · input coupling: DC and AC
- 8 bit resolution
- · storage of display and data
- · power supply through USB: ± 200 mA
- uses Microsoft® human interface device (HID) driver, no external driver required

# Circuit Skills #5: Easy LED Color Organ Kit



Jameco Part no.: 2155541 Manufacturer: Jameco Kitpro Manufacturer p/n: KIT-COLORORGAN HTS code: 8543909500 Kit Instructions [1282 KB] Schematic [1120 KB]



### View larger image





# Circuit Skills: Easy LED Color Organ Kit

Building on the success of one of the most popular kits at Jameco, we've added an easy to solder (beginner) version that just about anyone can assemble. The original **LED Color Organ came with a blank prototyping board and all the components**, but the component placement and layout was up to your creativity to design.

We've made an easier version that tells you exactly where to place each component. All you have to do is solder. This version of the kit comes with all the same components except for the new PCB which has labeled positions for the components. Just follow the step-by-step instructions, and you'll be flashing to the beat in no time. The instructions are included with the kit but can also be found near the top of this page.

Visit the Jameco workshop page for the original build, and check out the video while you're there.

- Included LEDs: (4) Red, (4) Yellow, & (4) Blue
- PCB Dimensions: 2.4" W x 4.4" L x 0.07" D

### You May Need:

- Recommended regulated power supply: 12VDC@500mA (P/N: 252808 or similar), not included.
- 6' Male to male 3.5mm audio cable
- Soldering Iron
- Solder

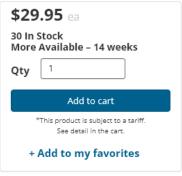
# 4WD Robot Chassis with 4 Motors



Jameco Part no.: 2150547 Manufacturer: Dagu HiTech Electronic Manufacturer p/n: DG008 HTS code: 8542390000 Data Sheet (current) [853 KB]

### View larger image





# of units	Price (USD)
1+	\$29.95
5+	\$26.95
Request a La	rge Quantity Quote
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# **4WD Robot Chassis with 4 Motors**

### Features:

- (4) motors
- Suggested voltage: 4.5V
- · No load speed: 90± 10rpm
- · No load current: 190mA (250mA MAX)
- It is a kit and needs to be assembled.



# Rolling Message Graphic Display Kit with 35 LEDs



Jameco Part no.: 200310 Manufacturer: Velleman Manufacturer p/n: WSMB124 HTS code: 8543909500

Schematic [32 KB]

User's Manual(current) [314 KB]





# of units	Price (USD)
1+	\$15.95
5+	\$14.49
Request a La	arge Quantity Quote
WARNING: Proposition 65	

# Scrolling Message Kit

Create your own moving message using this 35-LED graphic display with a maximum of 16 characters. It also features adjustable scrolling speed. Press "SET" to change a particular character. Press the up or down-key to select a character and end with the "<"-sign. Display standby function: press "Stby" (press RUN to restart).

### Specifications:

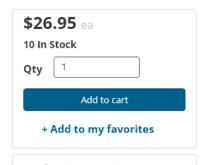
- Uses PIC16C58 IC
- Intermediate skill level
- 76 pieces
- · Power supply: 9-12V DC adapter or car battery
- Current consumption: 20mA max. / 4mA standby
- Backup battery: 9V block type 6LR61/ 6F22
- Dimensions: 1.8"H x 3.5"L x 2.6"W

# Muscle Wire R&D Kit Project Book and Sample Kit



Jameco Part no.: 357659 Manufacturer: Mondo Tronics Manufacturer p/n: 3-141 HTS code: 8542310000

Data Sheet (current) [335 KB]



•			
You may also like:			
	Out of the control of	to the bose-throat computer to the control of the c	Regis
SP-1A Elenco Electronics	K000007 Arduino	KIT-BENEAT1 Jameco KitPro/Eater.net	KIT-E Jameco Kit



### Muscle Wire R&D Kit

Here is a quick and economical way to experiment with a wide range of Muscle Wire sizes. Try different projects and test in a variety of conditions.

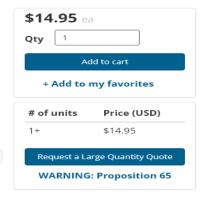
### Includes:

- · Muscle Wires Project Book
- 20cm of the 075 LT Muscle Wire
- 40cm of the 100 LT Muscle Wire
- 40cm of the 150 LT Muscle Wires

Check out more fun and exciting electronic kits

### Southern Illinois University EET 403A





# **Southern Illinois University EET 403A**

KIT-SIUEET150

Jameco Kitpro

### Kit Includes:

KIT-UMASSECE361 Jameco Kitpro

Part No.	Qty.	Description
830522	5	Op Amp Single General Purpose ±18 Volt
26884	10	.01 uF 100 Volt Mylar Capacitor
38359	10	Transistor 2N3904 NPN General Purpose
38236	5	2N2222A NPN Switching Transistor 40V 800mA TO-18
36169	10	Zener Diode 1N4742A 12 Volt 5% 1W
238633	1	Trimmer Potentiometer 20k Ohm 10% 1/2 Watt 25 Turn 2.29mm Pin THM
42981	1	Resistor Cermet Trimmer 1M Ohm 10% 0.5W (1/2W) 1 Turn 3.15mm Pin THM
38527	2	Transistor JFET N Channel 3-Pin TO-92 Bulk
17857	1	200 Piece Ceramic Disc Capacitor Grab Bag
4		<u> </u>

KIT-SIUEET238

Jameco Kitpro

KIT-SIUEET

Jameco Kitpro

### **Electronic Kits for Students**

Jameco offers a variety of electronic kits, robotic kits, STEM projects, and customized kits with the electronic components and the parts needed to meet project or curriculum requirements. Jameco has created a selection of pre-made kits for university and college programs and curriculums. These can be used "as is" or customized for specific requirements. We share and promote the efforts of our partner professors.

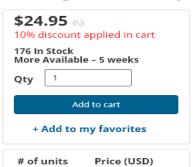
# Make: Electronics (2nd Edition) - Learning Through Discovery



Jameco Part no.: 2239277 Manufacturer: Oreilly Media Manufacturer p/n: 978-0-596-15374-8

HTS code: 4901990093

No datasheet available. Please review the tabs below for product specifications.



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25+	\$19.95	
5+	\$22.49	
1+	\$24.95	

# Make: Electronics (2nd Edition) - Learning Through Discovery

Do you want to learn the fundamentals of electronics in a fun, hands-on way? With *Make: Electronics 2nd Edition*, you will start working on real projects as soon as you crack open the book. Explore all of the key components and essential principles through a series of fascinating experiments. You will build the circuits first, *then* learn the theory behind them!

### Build working devices, from simple to complex

You'll start with the basics and then move on to more complicated projects. Go from switching circuits to integrated circuits, and from simple alarms to programmable microcontrollers. Step-by-step instructions and more than 500 full-color photographs and illustrations will help you use and understand electronics concepts and techniques.

### You Will:

- · Discover by breaking things: experiment with components and learn from failure
- · Set up a tricked-out project space: make a work area at home, equipped with the tools and parts you'll need
- · Learn about key electronic components and their functions within a circuit
- Create an intrusion alarm, holiday lights, wearable electronic jewelry, audio processors, a reflex tester, and a combination lock
- · Build an autonomous robot cart that can sense its environment and avoid obstacles
- . Get clear, easy-to-understand explanations of what you're doing and why

### New in the 2nd Edition!

- · Totally new text throughout with many new projects and others revised and updated
- · Smaller, more affordable range of components
- · Now includes coverage of Arduino!

### About the Author

**Charles Platt**'s first electronics project was a telephone answering machine, which he build when he was 15. He became a science-fiction writer (author of *The Silicon Man*), taught classes in computer graphics, and was a senior writer at Wired, but he has retained his lifelong love for hobby electronics. He is currently a contributing editor to *Make:* magazine.

### Non Contact Voltage Detector Kit



Manufacturer: Jameco Kitpro Manufacturer p/n: KIT-NCVD HTS code: 8542390000

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# \$19.95 ea 88 ship on Aug. 12 Qty Add to cart + Add to my favorites # of units Price (USD)

\$19.95

\$18.95 \$17.95

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IE250 Jameco Kitpro

# Non-Contact Voltage Detector Kit

Electricity can cause serious injury or even death which is why safety must always come first when working with electricity or electrical devices. Prior to starting work on an electrical box, for example, (such as an AC mains switchboard) or a power supply, you must first verify there is no AC voltage. If you can't completely isolate your device from the supply wires, how can you be sure that there's no voltage remaining? There could be residual current due to faults such as a short circuit.

Situations like this are where a non-contact AC voltage detector comes in handy. There are several options available on the market and they range in price. In true DIY fashion, you can quickly and easily create your own non-contact AC voltage detector in less than an hour.

### Click over to the DIY Workshop page for instructions.

### **Required Tools**

- · Soldering Iron
- Solder
- · Drill and drill bits (for making holes in the box)
- · Copper Wire
- · Cutters (for copper wire)
- Adhesive Tape

Part No.	Qty.	Description
178597	10	Transistor, 2N3904, NPN, TO-92
691585	10	1/4 watt resistor, 1M $\Omega$
691340	10	1/4 watt resistor, 100K Ω
690697	10	1/4 watt resistor, 200 $\Omega$
333973	10	Red LED, 643NM, T-1 ¾
76065	1	5VDC buzzer, 2300 Hz @ 85 dB
76523	1	SPST toggle switch, ON-OFF
105100	1	Prototyping PCB, 1.6" x 2.7"
198731	1	9V battery
109154	1	9V battery snap with 6" leads
18914	1	ABS plastic case, 4.9 " x 2.5" x 1.5"

# Simple DC Motor Kit - Single Kit



Jameco Part no.: 2192296 Manufacturer: Jameco Kitpro Manufacturer p/n: CJKIT-21178 HTS code: 8542310000

Kit Instructions [1 MB]



### View larger image

You may also like:

# of units	Price (USD)
1+	\$15.95
5+	\$14.95
25+	\$13.95
Request a La	arge Quantity Quote
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# Simple DC Motor Kit - Single Kit

This kit is also available as a classroom bundle with enough components to support 20 students.

This project shows you how to construct a simple DC motor by making use of electromagnetic principles. It will demonstrate what happens when a wire carrying current is placed in a magnetic field. Anyone who has knowledge of the principles of electromagnetism will be able to see the equations in action. Nevertheless, the experience is equally valuable for those in lower division science classes; they will be able to experiment with different constructions, and eventually discover why one method worked better than another.

Please note: Due to inventory packaging methods, you may receive more components than required for some products.

### You Will Need

- · 2 Paperclips
- · Fine grit sandpaper

### Kit Includes:

Part No.	Qty.	Description
2098419	1	24 AWG magnet wire, 200ft
2155452	1	Breadboard, 170 point, 1.9" x 1.3"
215845	1	Energizer D-cell battery
216371	1	D-cell battery holder with wires
109031	1	Round ceramic magnet, 1.23" diameter
	1	Instructions
4		

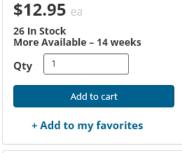
Follow the entire DC Motor Project and learn some Background Theory

# Siren Sound Generator - 2.4" x 1.6"



Jameco Part no.: 2130870 Manufacturer: Velleman Manufacturer p/n: WSAH113 HTS code: 8543909500 Data Sheet (current) [267 KB]

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	5			
You may also like	:			
WSG105 MadLab	AA-1D Electronic Rainbow	WSAK204 Velleman	WSAH136 Velleman	WSAH <sup>*</sup> Vellem
4				

# of units	Price (USD)
1+	\$12.95
10+	\$11.49
Request a La	arge Quantity Quote
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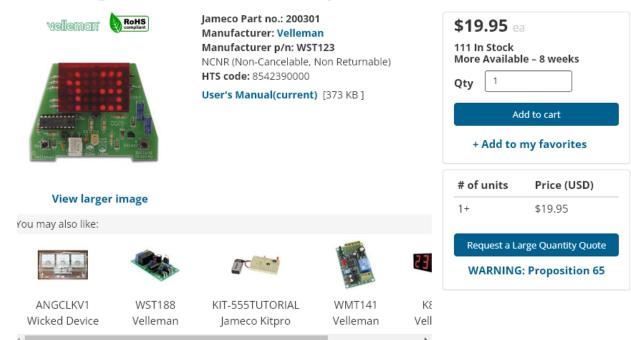
### Siren Sound Generator

Generates 4 different sounds: police siren, fire brigade, emergency vehicle and laser gun. RV1 adjusts sound pitch. On/off switch and PCB speaker included.

### Specifications

- Power supply: 9V battery (not incl.)
- Dimensions: 2.4 x 1.6"

# Scrolling Clock Solder Assembly Kit 35 LEDs



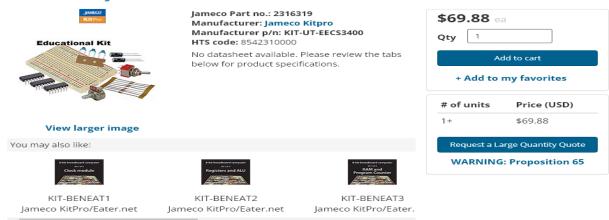
# **Rolling Clock Kit**

A nicely animated clock scrolling the time and date on the graphic display with 35 LEDs. Select hours, minutes, month or day with SELECT and enter the values with SET. The time display in 12h-mode (24h-mode when setting clock) and you can fine-tune the clock by turning CV1.

### Specifications

- Power supply: 9-12V DC adapter or car battery
- Current consumption: 20mA max.
- Backup battery: 9V block type 6LR61 / 6F22
- Dimensions: 1.8/3.5 x 2.6"

### University of Toledo EECS 3400 Electronics I Lab Kit



# University of Toledo EECS 3400 Electronics I Lab Kit

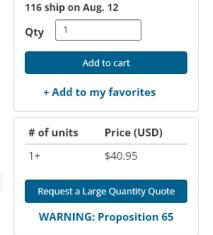
Part No.	Qty.	Description
2275039	1	Breadboard Jumper Wire Male to Female 15cm 10pcs
690865	10	Resistor Carbon Film 1k Ohm 1/4 Watt 5%
691104	10	Resistor Carbon Film 10k Ohm 1/4 Watt 5%
2127718	1	70-Piece Jumper Wire Kit - 22AWG 14 Lengths 10 Colors
2157706	1	830-Point Solderless Breadboard BB-102
691180	10	Resistor Carbon Film 22k Ohm 1/4 Watt 5%
691278	10	Resistor Carbon Film 51k Ohm 1/4 Watt 5%
36038	1	Diode 1N4148 100V Small Signal Switching
2220533	1	Diode 1N34A General Purpose Germanium
179039	1	Zener Diode 1N5230B 4.7 Volt 5% 500mw
28628	4	Transistor PN2222 General Purpose NPN 30 Volt 0.6 Amp
46252	1	IC 74LS00 Quad 2-Input Positive NAND Gate DIP-14
12634	1	IC CD4011 Quad 2-Input NAND Gate
333973	1	LED Red Diffused 5mm (T-1 3/4) 643nm 75mcd 36VA
29891	1	10 uF 50 Volt Radial Capacitor
2234214	1	AC to AC Wall Adapter 12 VAC 830 mA 3.5 mm Male Plug
151116	1	Capacitor Ceramic Disc 0.1µF 25V ±20%
15190	2	Capacitor Ceramic Disc 0.001uF 50V ±20%

# Basic Learn to Solder Kit with Tools



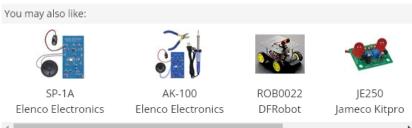
Jameco Part no.: 2245554 Manufacturer: Jameco Kitpro Manufacturer p/n: JVP175 HTS code: 8542310000

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\$40.95 ea

### View larger image

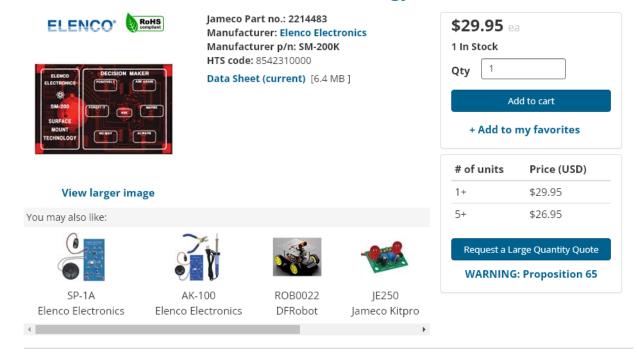


### **Basic Learn to Solder Kit with Tools**

Learn how to solder with good technique and start up a proper work bench with a temperature-adjustable soldering station having a temperature range of  $302^{\circ}$  to  $842^{\circ}$ F. It will provide the correct temperature for a broad range of electronic components found in modern electronic equipment.

- Learn to Solder Practice Kit (P/N: 2161617)
- 48 Watt Adjustable Temperature Soldering Station 302-842F (P/N: 2196801)
- 6 Piece Soldering Aid Tool Pack (P/N: 2096000)
- 4.5" Cutting Pliers (P/N: 2123320)
- Clip-on heat sink (P/N: 100378)

# **Educational Surface Mount Technology Kit**



# **Educational Surface Mount Technology Kit**

The future of electronics is headed for miniaturization through surface mount technology (SMT). Taking our course of training will prepare you for the future. Includes all parts and instructions to give you experience on working with surface mount components. The finished project is a decision maker with 6 flashing LEDs to help you make vital decisions.

Need help in making up your mind? Just ask the SM-200K Decision Maker. Press the ask button and the right answer will be given to your question. The Decision Maker has six light emitting diodes (LEDs) that are driven ON and OFF one at a time in sequence. When the ASK button is pushed the LEDs will flash and the buzzer will sound. After a brief period of time only one LED will remain lit. Above the lit LED is the answer to the question asked. In a minute or two the LED will get dim and gradually go out. The SM-200K uses very small surface mounted components. By building this kit you will obtain an interesting electronic device and also gain valuable experience in surface mount technology.

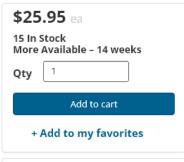
Requires 1-9V battery

# Kit Battery Charger/Discharger NiCd And NiMH Battery1.2-9.6V

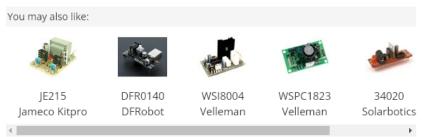


Jameco Part no.: 2137246 Manufacturer: Velleman Manufacturer p/n: WSPC7300 HTS code: 8542310000

Data Sheet (current) [213 KB] User's Manual(current) [600 KB]



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# # of units Price (USD) 1+ \$25.95 10+ \$23.95 Request a Large Quantity Quote WARNING: Proposition 65

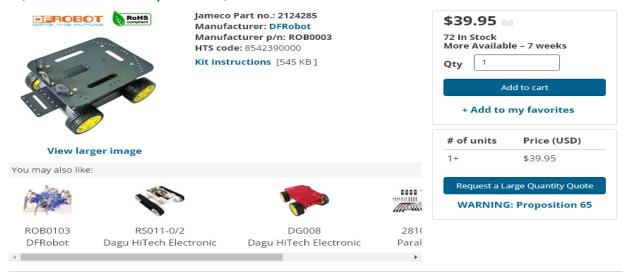
# **Universal Battery Charger/Discharger**

There are many battery chargers available on the market, but few of them are universal chargers that can be used for all battery types. Using our kit, batteries of different voltages and capacities can be charged both quickly and normally. In order to ensure that the battery is fully discharged prior to charging, an automatic discharger is also fitted.

### Specifications:

- · Charges and discharges NiCd and NiMH batteries.
- Can be charged both quickly (52 minutes) and normally (14 hours).
- It automatically discharges the battery first to ensure a long life cycle
- Charge current: from 15mA to 750mA (selectable)
- Usable battery voltages: 1.2V, 2.8V, 3.6V, 4.6V, 6V, 7.2V, 8.4V and 9.6V
- Usable mains AC adapter: 15VDC @ 800 mA
- Dimensions: 3.4 x 3.1"
- Recommended housing: Velleman G311 plastic enclosure (not included, sold separately)

# 4WD Mobile Platform Chassis with 4 Wheels and Motors (Arduino Compatible)



# **4WD Mobile Platform Chassis (Arduino-Compatible)**

So you want to get mobile with your Arduino or other micro controller, and you aren't sure where to start? This 4WD robotic platform is a great start! The kit includes four geared motors, four rims with tires, and a high-strength aluminum alloy body with mounting holes. It can traverse grass, gravel, sand, or sloped surface with ease. Just add an Arduino, or other microcontroller, motorshield, and power supply and you ready to get going!

### **Features**

- · 4WD Arduino mobile robot development platform
- (4) high-quality micro-speed motors
- · Tough aluminium body with mounting holes
- · Variety of sensors can be added

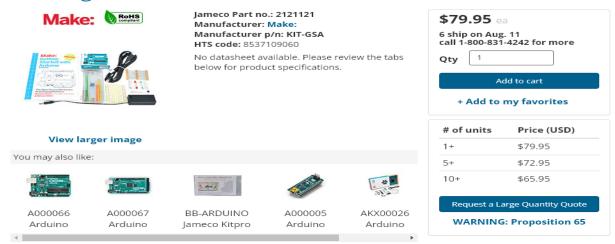
### Includes

- (1) Aluminium chassis with mounting holes
- . (4) Wheels with tires
- (4) 130 Motors

### Specifications

- · Motor Model: 130 Motor
- · Output Mode: Two-way shaft output
- Gear ratio: 1:120
- · No-load speed (3V): 90RPM
- No-load speed (6V): 180RPM
- No load current (3V): 120mA
- No load current (6V): 160mA
- Locked-rotor current (3V): 1.5A
- Locked-rotor current (6V): 2.8A
- Size: Long 55MM W 48.3MM high-23MM
- Weight: About 45g

### Getting Started with Arduino STEM Kit v2.0



Facilitate code writing for Arduino boards with Jameco's selection of **Arduino Software** & IDE. Our wide stock of Arduino based products & accessories often come with downloadable software. Choose from The Arduino Starter Kit which walks you through the basics of using the Arduino in a hands-on way. You'll learn through building several creative projects. Starting the basics of electronics, to more complex projects, the kit will help you control the physical world with sensors and actuators.

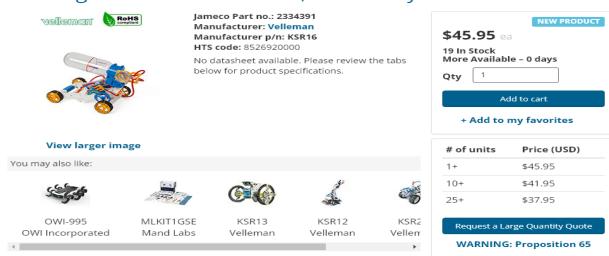
# Getting Started with Arduino Kit v2.0

**Arduino** is a tool for making computers that can sense and control more of the physical world than your desktop computer. It's an open source physical computing platform based on a simple microcontroller board, and a development environment for writing software for the board.

Bridging the gap between the "real world" and your computer, the Getting Started with Arduino kit is your starting point into the world of physical computing. Using the electronic parts included, along with our best selling **Getting Started** with Arduino 3rd Edition book by Massimo Banzi, the co-founder of Arduino, you'll be ready to join the tens of thousands of engineers, designers, artists and hobbyists who have discovered this incredible and educational prototyping platform. Besides the DC plug and battery pack, this kit requires no soldering whatsoever.

- (1) Arduino UNO Rev. 3 (ATmega328)
- (1) Getting Started with Arduino book
- (1) 3 ft. USB-A to USB-B Cable
- (10) 10ΚΩ Resistors
- (10) 220Ω Resistors
- (10) 270Ω Resistors
- (1) Tactile Momentary Button Switch
- (2) Photoresistors
- (10) Red LEDs
- (10) Green LEDs
- (2) Super Bright Blue LED
- (1) RGB LED, Water Clear
- (1) 70pc Deluxe Jumper Wire Kit (55 @ 4", 10 @ 5", 5 @ 7", 5 @ 9")
- (1) 2.1" x 3.3" 400 Total Tie Point Clear Breadboard
- (1) 9V Battery Holder with cover & switch and attached 2.1mm female barrel plug output
- (1) 9V Battery included

### Air Engine Car Kit - No Motor, No Battery



### Air Engine Car Kit - No Motor, No Battery

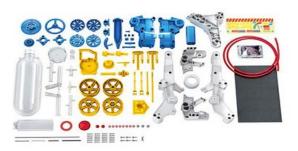
A series of Robot Kits has been created for the future engineer. Construct this kit to see how much fun electronics, mechanics, and hydraulics can be! Construct an air-powered vehicle. A fun construction kit that teaches your kids about clean energy using hands-on activities.

### Features

- A great introduction to green energy through hands-on learning
- Build a car that runs on clean energy
- No motor, no battery
- DIY science kit, runs completely on air
- The vehicle uses a pump and cylinder engine to race for  $\pm$  50 meters
- · Recommended age: 10+

### Specifications

- · Age recommended: 14+
- Range: 50 m
- Number of batteries: 0
- Number of pieces: 102
- Number of wheels: 4
- · Application: educational engineering robotics
- Level: Beginner
- Size: 227 mm L x 160 mm W x 160 mm H
- Weight: 574 g

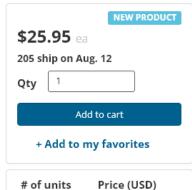


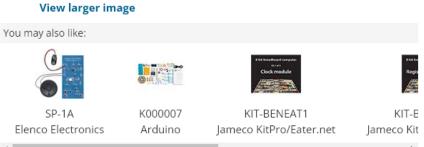
# Water Level Indicator Electronics Project



Jameco Part no.: 2316903 Manufacturer: Jameco Kitpro Manufacturer p/n: KIT-WLI HTS code: 8542310000

No datasheet available. Please review the tabs below for product specifications.





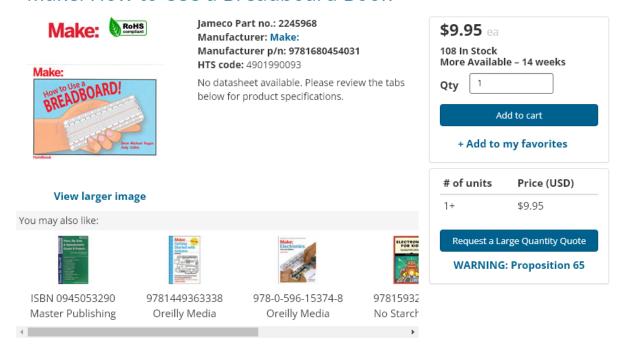
# 1+ \$25.95 Request a Large Quantity Quote WARNING: Proposition 65

# **Water Level Indicator Electronics Project**

This electronics project shows how to build a simple water level indicator with a buzzer that sounds and an LED that lights up when wires come into contact with water. This is an excellent project for newcomers! To make this kit your own, feel free to alter it and go beyond the guidelines. **Check out the project walk through here.** 

Part No.	Qty.	Description
109154	1	9V Battery Snap with 6 Inch 26 AWG Wires
198731	1	9V Energizer® Alkaline Battery
2283767	1	830 Point Solderless Plug-in Breadboard with 4 Power Rails 21-26AWG ABS
2120452	1	Buzzer Piezo 3-20VDC 8mA 2900Hz 85dB 2Pin
333973	10	LED Red Diffused 5mm (T-1 3/4) 643nm 75mcd 36VA
690620	10	Carbon Film Resistor 100 Ohm 5% 1/4 Watt (250mW)
2237212	10	Carbon Film Resistor 4.7k Ohm 1 Watt 5%
254799	10	Transistor BC547C TO-92 Transistor NPN Switch
36792	1	22 AWG Black Solid Tinned-Copper Hook-Up Wire 100 Feet
4		<b>)</b>

# Make: How to Use a Breadboard Book



### Make: How to Use a Breadboard

This book will help you make electronic circuits with a breadboard. A breadboard is a plastic base used for making circuits. The holes in the top of the breadboard open onto clamps on metal strips that conduct electric current. By inserting wires and electronic components into the openings, you can build an endless variety of circuits. And, because no solder is needed, you can easily move components around or even tear down the circuit completely and reuse your breadboard to build a new circuit.

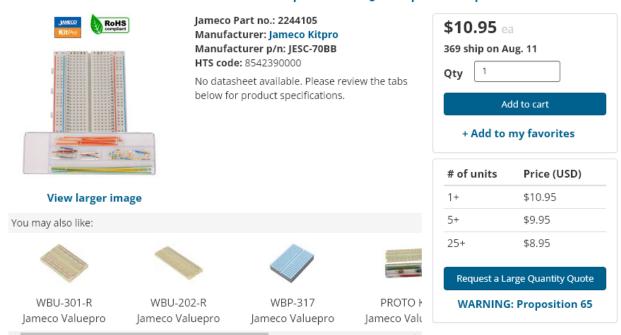
This comic book-style manual contains 10 fun and challenging circuits you can build yourself. Each is shown as circuit diagrams and as easy-to-follow, full-color drawings. Build it as shown, and then experiment! We also offer the **book and parts bundle** (P/N: 2246485), so you can get started right away!

Inside, you'll find instructions for the following circuits:

- Dark Detector
- LED Flasher
- Electric Cricket
- Breathing LED
- Banshee Siren
- · Light Theramin
- Blues Organ
- Bike Signal Light
- Touch Switch
- LED Color Organ

You'll also find an "X-ray" drawing showing you the inside of your breadboard and a handy chart for understanding the color codes on resistors.

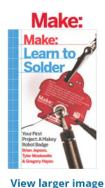
# 400 Point Breadboard & 70 pc Wire Jumper Super Combo



# 400 Point Breadboard & 70 pc Wire Jumper Super Combo

Part No.	Qty.	Description
2127718	1	70 piece 22 AWG wire jumper kit, 14 lengths, 10 colors
2157693	1	400 point breadboard, 3.25" x 2.125"
4		<b>.</b>

# Make: Learn to Solder Book



You may also like:

Jameco Part no.: 2222601 Manufacturer: Make:

Manufacturer p/n: 9781449337247

HTS code: 4901990093

No datasheet available. Please review the tabs below for product specifications.

\$19.95 ea 34 In Stock Qty Add to cart + Add to my favorites

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Name (Se Auto-	Make: General Control of the Control	WELDOOARD!	Make
ISBN 0945053290 Master Publishing	9781449363338 Oreilly Media	9781680454031 Make:	978-0-596-1: Oreilly Me

1+	\$19.95		
10+	\$17.95		
Request a Large Quantity Quote			
WARNING: Proposition 65			

### Make: Learn to Solder

### **Tools and Techniques for Assembling Electronics**

Learn the fundamentals of soldering and pick up an essential skill for building electronic gadgets. You will discover how to preheat and tin your iron, make a good solder joint, desolder cleanly (when things don't go right), and how to use helping hands to hold components in place.

This concise book is part of MAKE's Getting Started with Soldering Kit. Using the tools in the kit and some electronic components, you can practice soldering while making fun blinky objects. Then show the world you just learned a new skill by wearing the Learn to Solder Skill Badge.

- · Learn how to prepare your workspace
- · Get to know the components you will work with
- · Use the best methods for soldering components in place
- · Experience the perfect solder joint
- . Know how to desolder when things don't work the first time

Heat up the iron and start soldering today!

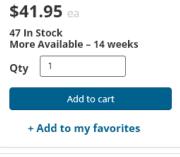
### **Table of Contents**

- · Chapter 1 Getting the Workspace Ready
- · Chapter 2 How to Solder
- · Chapter 3 Desoldering
- · Chapter 4 What's Next?

# Dagu Rover 5 Tracked Chassis



Jameco Part no.: 2143865
Manufacturer: Dagu HiTech Electronic
Manufacturer p/n: RS011-0/2
HTS code: 8542390000
Data Sheet (current) [609 KB]



# View larger image



# # of units Price (USD) 1+ \$41.95 5+ \$37.95 Request a Large Quantity Quote WARNING: Proposition 65

# **Dagu Rover 5 Tracked Chassis**

### Dual Motor - No Encoder

The Rover 5 tracked chassis, made by Dagu Electronics, is a durable robot platform with caterpillar treads that let it drive over many types of surfaces and uneven terrain. All you need to get the chassis moving is a robot controller or motor controller to drive the two built-in DC motors, which powered by the included 6-AA battery holder (**AA batteries** sold separately). A small Phillips screwdriver and an Allen wrench are included for working with the chassis.

The chassis features a rugged white plastic body with room to house the included battery holder and some additional electronics. The two powerful motors with 86.8:1 gearboxes are strong enough to lift the weight of the chassis and allow it to achieve speeds as high as 10 in/s (25 cm/s)

A unique feature of this chassis is the ability to adjust its height and, therefore, the clearance under its body by changing the angles at which the gearbox assemblies are mounted on the body. Interlocking teeth on the body and the gearboxes hold them in place and allow you to make adjustments in  $5^{\circ}$  increments by unscrewing a metal bracket inside the chassis, removing a gearbox, and reinserting it at a different angle. The elastic rubber tracks maintain sufficient tension with several different gearbox angles, allowing the chassis height to vary by nearly 1.5" (3.8 cm).

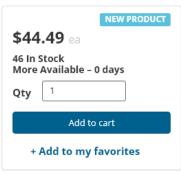
# Salt Water Fuel Cell Engine Car Kit



Jameco Part no.: 2334383 Manufacturer: Velleman Manufacturer p/n: KSR22 HTS code: 8526920000

Certificate of Confirmity(CE) [87 KB]

REACH Certificate [80 KB]



### View larger image



# of units	Price (USD)	
1+	\$44.49	
10+	\$39.95	
25+	\$34.95	
Request a La	rge Quantity Quote	
WARNING: Proposition 65		

# Salt Water Fuel Cell Engine Car Kit

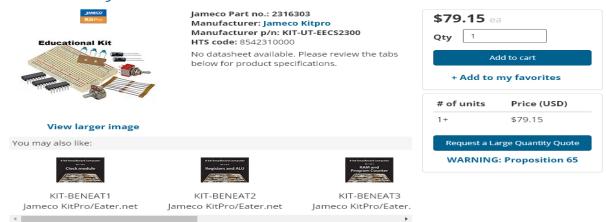
### **Features**

- · Powered by salt water, works without batteries
- Two modes: V-engine and flat engine. Twist the body to handle different types of terrain
- · Transparent case allows to see engine work
- Switch positive and negative connectors to make the car run forward and backward

### Specifications

- · Age recommended: 14+
- Power type: salt water
- Material: ABS PC EVA
- · Number of modes: 2
- Color: white + blue
- Number of batteries: 0
- · Number of pieces: 96
- Number of wheels: 4
- · Application: educational engineering robotics
- · Level: Beginner
- Size: 120 mm L x 99 mm W x 89.3 mm H
- Weight: 266 g

# University of Toledo EECS 2300 Electric Circuits I Lab Kit



# University of Toledo EECS 2300 Electric Circuits I Lab Kit

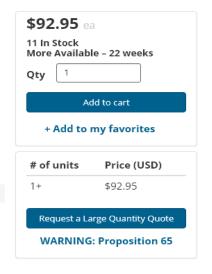
Part No.	Qty.	Description		
109154	1	9V Battery Snap with 6 Inch 26 AWG Wires		
198731	1	9V Energizer® Alkaline Battery		
2230002	1	3.5 Digit 8-Function Multimeter with Single Frequency Signal Generator		
2235217	1	Cermet Potentiometer 1 kΩ 1/2 Watt 3/8" Square Single Turn Top Adjust		
182837	1	Potentiometer 1/4" Square Cermet 1/2W 10Kohm		
920561	1	Capacitor 0.22 uF 50 Volt PLYE 5% 7.3 X 4.8 X 5.5mm Radial 5mm Bulk		
2258831	1	3-Pin SPDT Slide Switch		
2127718	1	70-Piece Jumper Wire Kit - 22AWG 14 Lengths 10 Colors		
2157706	1	830-Point Solderless Breadboard BB-102		
2275039	1	Breadboard Jumper Wire Male to Female 15cm 10pcs		
659614	10	Resistor Carbon Film 1.5 Ohm (1R5) 5% 1/2 Watt		
690540	10	Resistor Carbon Film 47 Ohm 1/4 Watt 5%		
690822	10	Resistor Carbon Film 680 Ohm 1/4 Watt 5%		
690865	10	Resistor Carbon Film 1k Ohm 1/4 Watt 5%		
690902	10	Resistor Carbon Film 1.5k Ohm 1/4 Watt 5%		
690945	10	Resistor Carbon Film 2.2k Ohm 1/4 Watt 5%		
690961	10	Resistor Carbon Film 2.7k Ohm 1/4 Watt 5%		
690988	10	Resistor Carbon Film 3.3k Ohm 1/4 Watt 5%		
691104	10	Resistor Carbon Film 10k Ohm 1/4 Watt 5%		
691121	10	Resistor Carbon Film 12K Ohm 5% 1/4 Watt		

# Mini Drone with WIFI FPV (First Person View) 4K HD Camera



Jameco Part no.: 2309183
Manufacturer: Jameco Valuepro
Manufacturer p/n: KK6
HTS code: 8526920000

Data Sheet (current) [834 KB]
Material Safety Data Sheet(MSDS) [5206 KB]



### View larger image

You may also like:







K000007 Arduino DFR0100 DFRobot DFR0107 DFRobot

4

.....

### Mini Drone with WIFI FPV 4K HD Camera

### **Features**

- The arms are foldable, small in size and easy to carry.
- Altitude hold mode function provides stable flight.
- Attractive headless mode, completely solving "loss of orientation" problems.
- The 4K HD camera allows you to capture your highlights.
- APP control, 50x zoom lens, beauty filter function. Easy to record quality images through gestures.
- 6-Axis gyroscope strong stability, easily implement various flight movements, stronger wind resistance, easier to control.

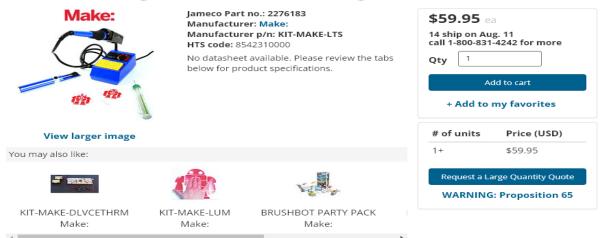
### Specifications

- · Color: Black
- · Body battery capacity: 3.7V 2000 mAh
- Product expansion size: 14 x 14 x 6 cm (folded), 27 x 26 x 6 cm (unfolded)
- Remote control battery: 3x AA batteries (not included)
- Charging time: about 60-90 minutes
- · Flight time: about 20 minutes
- · Flight range: Within 100 meters
- · Camera: 4K HD Camera

### Contains

- (1) Quadcopter
- (1) Remote Control
- (1) USB Charger
- (4) Protection ring
- (4) Spare propellers
- (1) Manual
- (1) Carry Case (see below)

### Make: Getting Started with Soldering Kit



# Make: Getting Started with Soldering Kit

Soldering is an essential Maker skill and one that you can easily master. This kit includes a step-by-step how-to book to get you started and fun projects that you will be soldering in no time. It's great for kids with supervision!

We made this kit to contain all the components you need to get started with soldering. This kit contains your first project - a Makey Robot badge that you can wear to show off your soldering skills! This kit includes our *Getting Started with Soldering* book and the badges will help you perfect basic soldering skills.

### What is Soldering?

Have you ever wondered what soldering is? Soldering is the process of connecting pieces of metal together using another special metal, called solder, that melts at a lower temperature. It's a little bit like welding. When the melted solder cools, it creates a solid connection between the metal pieces. Soldering allows you to repair electronic toys and gadgets, create your own electronic devices, make jewelry and more. Learning how to solder can open up a new world of fun and rewarding activities for the whole family.

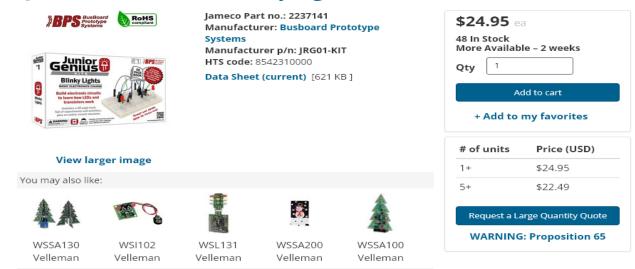
### What You'll Need

Goggles / protective eyewear (such as P/N: 2133691)

### What's in the Box?

Part No.	Qty.	Description	
2130626	1	) Watt Low Cost Soldering Station 374-896F	
2305999	1	5mm Conical Tip for VTSS5, VTSS4NU and VTSS7U Soldering Stations	
2275079	1	nm Conical Tip for VTSS5, VTSS4NU and VTSS7U Soldering Stations	
2275071	1	nm Flat Tip for VTSS5, VTSS4NU and VTSS7U Soldering Stations	
26690	1	hird Hand Soldering Tool With Magnifying Lens	
170457	1	.031 Inch Diameter Rosin Core Solder Tube 99.3% Tin 0.7% Copper	
19166	1	7.8" Long Manual Non-Electric Desolder Pump (Silver)	
41082	1	Solder Wick 5' 0.079 Inch Wide	
2096000	1	6 Piece Soldering Aid Tool Kit	
2123320	1	Spring Return Cutting Pliers 4.5 Inches	

# Junior Genius Kit #1 Blinky Lights 10 Core Activities



# Junior Genius Kit #1 - Blinky Lights

### 10 Core Activities!

Build electronic circuits to learn how LEDs and transistors work. This is a great kit for beginners to electronics. Junior Genius Kits are build for experimentation, learning and fun! Experience the joy of seeing your first LED light up. The Blinky Lights Kit leads you through 10 core activities, from a simple LED circuit up to more advanced transistor LED blinky light circuits, using standard parts on a real-world breadboard.

Learn about voltage and current by using LEDs, resistors, capacitors and transistors. You'll be able to build circuits using a schematic diagram, and there's plenty of help to get you there. Simple examples make it easy to grasp the basics and 'What's Happening' and 'Things To Try' sections encourage you to dig deeper.

You will get valuable assembly and troubleshooting experience as you learn to use a great experimentation tool, the solderless breadboard. Real hands-on experience means greater educational value.

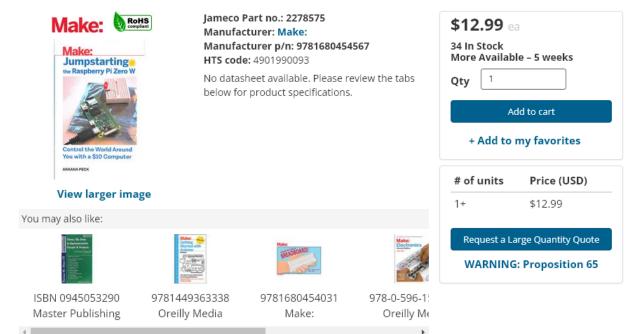
These next-generation science kits don't seal the parts into simplified plastic blocks. You get to experience what real parts work like and learn to build a real circuit (not just assemble puzzle pieces). Working with real electronic parts helps you to gain the confidence to graduate to other projects. The parts and breadboard can be disassembled and reused for new creations and can be used with other **Busboard Prototype System products**.

A great introduction to the world of electronics for both students and adults!

### Features

- Includes 24 parts plus a battery holder, ZipWires, batteries and a BB400 Breadboard.
- 10 Core activities plus many additional Things To Try for each.
- · Real-world, industry standard, reusable parts.
- Junior Genius Online Club Access to additional content, knowledge & activities.
- · Full-color illustrated 60-page manual, perfect for students and adults alike.

# Make: Jumpstarting the Raspberry Pi Zero W Book



# Make: Jumpstarting the Raspberry Pi Zero W Book

### Control the World Around You with a \$10 Computer

### Get up and running quickly with the Jumpstarting series!

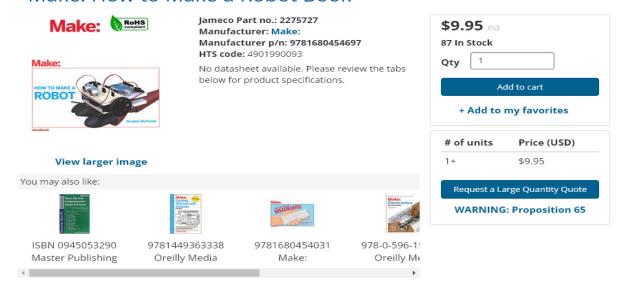
Jumpstarting books provide an avenue for makers to quickly master topical knowledge. Each book starts with instructions on how to install or initialize the hardware or software needed to reach the all-important "Hello, World" stage of getting started. Or get **the book with the Pi Zero W and essential parts** (P/N: 2276231) for the projects found in the book.

The second project builds on the first to use more of the hardware or software's capabilities. Later projects expand the user's knowledge into lesser-known aspects of the topic. All Jumpstarting projects are for Makers - they provide handson, real-world experience in making the hardware or software do what you want it to do.

### Chapters

- · Getting Started
- Blink an LED
- · A Temperature Notifier and Fan Control
- A Wearable News Alert Light Show

### Make: How to Make a Robot Book



### Make: How to Make a Robot Book

Learn the basics of modern robotics while building your own intelligent robot from scratch! You will use inexpensive household materials to make the base for your robot, then add motors, power, wheels and electronics.

But wait, there's more... Your creation is actually five robots in one! Build your bot in stages, and add the features you want. Vary the functions to create a robot that's your own creation.

Mix and match features to make your own custom robot:

- Flexible Motorized Base a playpen for all kinds of programming experiments
- Obstacle Detector whiskers detect when your robot has bumped into things
- · Object Avoider ultrasonic sound lets your robot see what's in front of it
- Infrared Remote Control command your robot from your easy chair
- · Line Follower use optics to navigate your bot; have races with other robot builders!

You will learn how switches, ultrasonic sensors, infrared detectors, and optical sensors work. You will install an Arduino microcontroller board and program your robot to avoid obstacles (hopefully), provide feedback with lights and sound and follow a tracking line. In this book, you'll combine multiple disciplines of electronics, programming, and engineering to successfully build a multifunctional robot. Everything is explained with lots and lots of full-color line drawings. No prior experience is necessary, and you'll have fun while you learn a ton!

### You'll discover how to:

- · Construct a motorized base
- · Set up an Arduino to function as the brain
- Use "whisker" switches to detect physical contact
- · Avoid obstacles with ultrasonic sensors
- Teach your robot to judge distances
- Use a universal remote to control your robot
- Install and program a servo motor
- · Respond to input with LEDs, buzzers, and tones
- · Mount line-following sensors under your robot

### Electronics for Kids Book



### **Electronics for Kids**

Play with Simple Circuits and Experiment with Electricity!

### By Oyvind Nydal Dahl

Why do the lights in a house turn on when you flip a switch? How does a remote-controlled car move? And what makes lights on TVs and microwaves blink? The technology around you may seem like magic, but most of it wouldn't run without electricity.

<u>Electronics for Kids</u> demystifies electricity with a collection of awesome hands-on projects. In Part 1, you'll learn how current, voltage, and circuits work by making a battery out of a lemon, turning a metal bolt into an electromagnet, and transforming a paper cup and some magnets into a spinning motor. In Part 2, you'll make even more cool stuff as you:

- · Solder a blinking LED circuit with resistors, capacitors, and relays
- Turn a circuit into a touch sensor using your finger as a resistor
- Build an alarm clock triggered by the sunrise
- · Create a musical instrument that makes sci-fi sounds

Then, in Part 3, you'll learn about digital electronics - things like logic gates and memory circuits-as you make a secret code checker and an electronic coin flipper. Finally, you'll use everything you've learned to make the LED Reaction Game - test your reaction time as you try to catch a blinking light! With its clear explanations and assortment of hands-on projects, Electronics for Kids will have you building your own circuits in no time. **Be sure to pick up the Electronics for Kids electronic parts bundle that are used with the projects in this book here (P/N: 2244720)**.

### **Table Of Contents**

### PART 1: Playing with Electricity

Chapter 1: What Is Electricity?

Chapter 2: Making Things Move with Electricity and Magnets

Chapter 3: How to Generate Electricity

### **PART 2: Building Circuits**

Chapter 4: Creating Light with LEDs

Chapter 5: Blinking a Light for the First Time

Chapter 6: Let's Solder!

Chapter 7: Controlling Things with Circuits

Chapter 8: Building a Musical Instrument

### PART 3: Digital Electronics

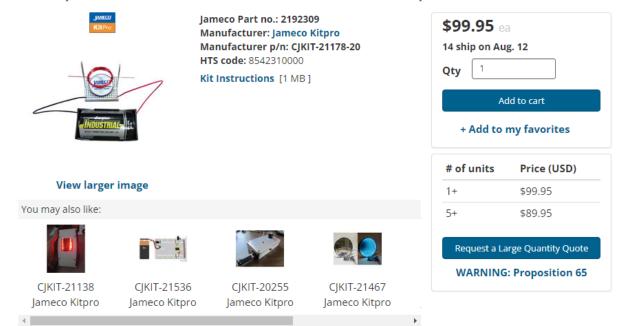
Chapter 9: How Circuits Understand Ones and Zeros

Chapter 10: Circuits That Make Choices

Chapter 11: Circuits That Remember Information

Chapter 12: Let's Make a Game!

# Simple DC Motor Kit - Classroom Pack (Up to 20)



# Simple DC Motor Kit - Classroom Pack (Up to 20)

Ideal for a classroom of students, this kit is contains the components to make 20 individual DC motors. We also carry a <u>kit for a single DC motor</u>.

This project shows you how to construct a simple DC motor by making use of electromagnetic principles. It will demonstrate what happens when a wire carrying current is placed in a magnetic field. Anyone who has knowledge of the principles of electromagnetism will be able to see the equations in action. Nevertheless, the experience is equally valuable for those in lower division science classes; they will be able to experiment with different constructions, and eventually discover why one method worked better than another.

Please note: Due to inventory packaging methods, you may receive more components than required for some products.

### You Will Need

- 2 Paperclips
- · Fine grit sandpaper

Part No.	Qty.	Description	
2098419	1	24 AWG magnet wire, 200ft	
2155452	20	Breadboard, 170 point, 1.9" x 1.3"	
215845	20	Energizer D-cell battery	
216371	20	D-cell battery holder with wires	
109031	20	Round ceramic magnet, 1.23" diameter	
	1	Instructions	

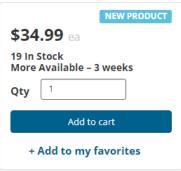
# Motor and Generator Action Kit Electronic Generator Lab

### **ELENCO**°



Jameco Part no.: 2333063 Manufacturer: Elenco Electronics Manufacturer p/n: MX902T HTS code: 8542310000

No datasheet available. Please review the tabs below for product specifications.



### View larger image



# of units	Price (USD)		
1+	\$34.99		
10+	\$32.95		
100+	\$29.95		
Request a Large Quantity Quote			
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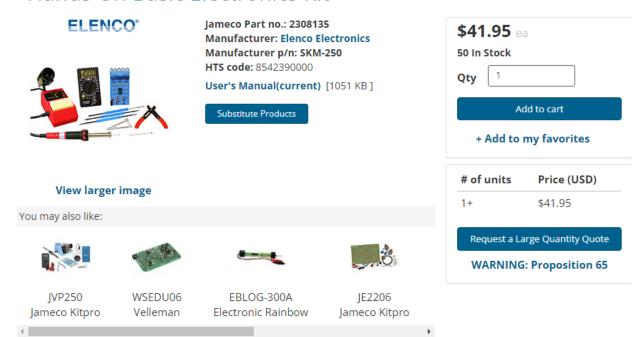
### Motor and Generator Action Kit Electronic Generator Lab

Safe, solderless, exciting, educational and fun! East to read illustrated operating manual included.

### **Features**

- Build your own operating motor and generator it's easy, fun and safe
- · Control motor's forward and reverse rotation with power
- · Color mixing with rotation color disc
- · Fan using motor and power
- Find out how a generator makes the electricity that makes thing work
- Learn how a generator can light up an LED
- Uses 2x AA 1.5V batteries (not included, but we recommend P/N: 198707)

# Hands On Basic Electronics Kit



### **Hands-on Basic Electronics Kit**

A basic hands-on kit that introduces you to good soldering techniques while working on state-of-the-art printed circuit board circuits. You will learn the basics of digital multimeters and circuit troubleshooting.

### Kit Includes

- SL75 Variable Temperature Solder Station with Iron and extra tip.
- SP3B Learn to Solder Practice Kit
- SE1 Solder Tool Kit
- ST3 Wire Stripper
- M1000 Multimeter
- CC100 Color Code Calculator

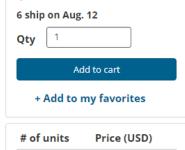
### Specifications

- · For ages 13 and up.
- Batteries: (2) 9V (not included, recommend P/N: 198731)

# Fridge Alarm Kit Forrest M. Mims III



Jameco Part no.: 2158717 Manufacturer: Jameco Kitpro Manufacturer p/n: KIT-FA2 HTS code: 8543909500 Kit Instructions [66 KB]



\$16.95 ea



View larger image



# Forrest M. Mims III: Fridge Alarm Kit

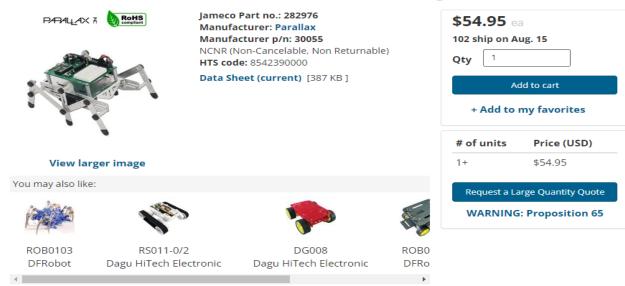
Without Engineer's Mini Notebook: Volume 3

Have a food burglar in your midst, or just trying to keep the midnight snackers at bay? You need a fridge alarm. This handy little gadget sits quietly in the fridge until someone opens the door. When the door opens, it turns on the light inside the fridge. The light triggers the photocell on the alarm causing it to emit a shrill tone. It may not stop the perpetrator, but it will make them think twice about opening the fridge door again. Visit the **Jameco Workshop page** for complete build instructions.

### Fridge Alarm Kit Includes:

Qty.	Description
1	Transistor, 2N2222A
1	Buzzer, Piezo, 3400Hz, 90dB
1	Photocell
1	Potentiometer, 3/8" Sq. Cermet, 10K Ω
1	9V Battery
1	Battery Holder, 9V snaps
1	Fridge Alarm PCB
1	Instructions
	1 1 1 1 1

# Crawler Kit for Small Parallax Robots 6-Leg 90 Pieces



### Crawler Kit for the Parallax Small Robot

Make your Boe-Bot® Robot a Crawler by adding this accessory kit. Includes printed documentation with detailed assembly instructions. The Crawler runs on standard Boe-Bot source code with only minor adjustments for ground speed. Sample PBASIC code is included in the documentation. The Boe-Bot Robot (and chassis) are not included (Boe-Bot, ActivityBot, or Shield Robot).

### **Features**

- 6-legged add-on to give a robot crawling-like movement
- · Easy to assemble and compatible with existing programs
- Rubber feet for legs for protection

### Kit Contents:

- (2) Crawler Sides
- (2) Servo horns
- (4) Legs
- (6) Rubber feet
- (14) Nylon washers
- (2) 3 mm (1/8") Nylon spacers
- (4) Push Arms
- (2) 19 mm(¾") Nylon standoffs
- (4) 25 mm (1") Nylon standoffs
- (2) M3x18 Phillips pan head screw
- (10) M3x12 Phillips pan head screw
- (6) M3x10 Phillips pan head screw
- (6) M3 Hex nuts
- . (6) M3 Nylon insert locknuts
- (2) Middle Legs
- (6) M3x6 Phillips pan head screw
- (12) Plastic screw covers

Note: Boe-Bot is sold separately.

# Digitally Controlled FM Radio Soldering Kit



View larger image

Jameco Part no.: 2337887 Manufacturer: Velleman Manufacturer p/n: WSAH194 HTS code: 8542390000 Data Sheet (current) [182 KB] Kit Instructions [601 KB]

# \$29.95 ea 30 In Stock More Available - 7 weeks Qty 1 Add to cart + Add to my favorites

# You may also like: AMFM-108CK MK179 K7000 MK160 VM118 Elenco Electronics Velleman Velleman Vellema

### 

# **Digitally Controlled FM Radio Soldering Kit**

Build your own FM radio with a new and enhanced HQ FM receiver module that has an auto-seeking button, 4 presets and volume control.

### Features

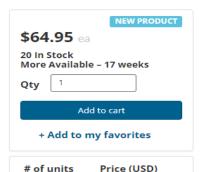
- · New and enhanced HQ FM receiver module
- Easy to solder SMD FM receiver module
- Single button station search function
- 4 station presets (with confirmational beep when setup)
- Restores the last selected station when powered on
- · Soft fade-in of last audio level when powered on

- FM range: 88-107.9 MHz (0.1 MHz step)
- · Power supply: 9 VDC (battery not included)
- Power consumption: 40 mA max.
- Size: 5.1"W x 3.34"H x 1.8"D

### 5-in-1 Mechanical Coding Robot



Jameco Part no.: 2334359
Manufacturer: Jameco Valuepro
Manufacturer p/n: KSR19
HTS code: 8526920000
Kit Instructions [16 MB]
User's Manual(current) [396 KB]



# View larger image You may also like: OWI-995 MLKIT1GSE KSR13 KSR12 KSR2 OWI Incorporated Mand Labs Velleman Velleman Velleman



### 5-in-1 Mechanical Coding Robot

A collection of robot kits for aspiring engineers. Discover how much fun hydraulics, mechanics, and electronics can be by building this kit!

The goal of this mission-based, beginning STEM (Science, Technology, Engineering, and Mathematics) coding robot is to motivate users to learn the fundamentals of mechanical engineering and coding. It helps kids think while also honing their problem-solving abilities when dealing with various challenges and activities. Challenge yourself with your first coding robot and become involved in the world of coding and beyond.

For the robot to navigate its programmed tasks and courses, a mechanical coding wheel is incorporated into the robot's core. By attaching the coding buttons to the wheel, it is simple to apply coding while the robot does its standard actions, such as moving forward or backward, turning to the right or left, spinning, or pausing. With the help of this straightforward methodology, coding and carrying out the tasks (such tossing, lifting, kicking, or drawing) become more engaging and difficult as the user's skills advance.

### **Features**

- . A fun way to develop your STEM skills (Science Technology Engineering Mathematics)
- · A new concept of coding without a computer or app
- Recommended age: 14+

- Power supply: 2 x AAA LR03 battery (not incl.)
- · Dimensions:
  - o forklift bot: 263 x 116 x 210 mm
  - o soccer bot: 231 x 116 x 210 mm
  - o drawing bot: 243 x 116 x 210 mm
  - o gripper bot: 253 x 116 x 210 mm
  - shooting bot: 172 x 116 x 260 mm
- Number of pieces: 238

# Mand Labs Electronic Series KIT-1 Premium Edition (Version 4)



### Mand Labs Electronic Series KIT-1 Premium Edition (Version 4)

The all-in-one Mand Labs KIT-1: STEM Electronics Kit is your most comprehensive do-it-yourself (DIY) learning kit that takes you on a journey of 60+ hands-on projects from fundamentals of electricity to advanced concepts of transistors in electronics and robotics. And everything is step-by-step.

No prior experience in electronics is required. As a beginner, you start with simple hands-on projects, learn to use a digital multimeter and grab the basic fundamentals of electricity, including charge, voltage, current, resistance, Ohm's law and Kirchhoff laws.

As you advance, you start learning about new components, make more complex projects and progress both in terms of knowledge and skill levels. At the start of book-2, you will be able to build interesting projects such as automatic night lamp, H-Bridge (motor driver circuit used in robotics) and many more.

The kit is a great companion for parents who want to provide early practical exposure to their kids, teachers who want to demonstrate the concepts of electrical science & semiconductors, students who want to learn physics by doing, hobbyists who want to brush up their basics. In the premium version, you get three extra projects including IR Security Alarm system, joule thief (drawing energy from a dead cell) and temperature sensor.

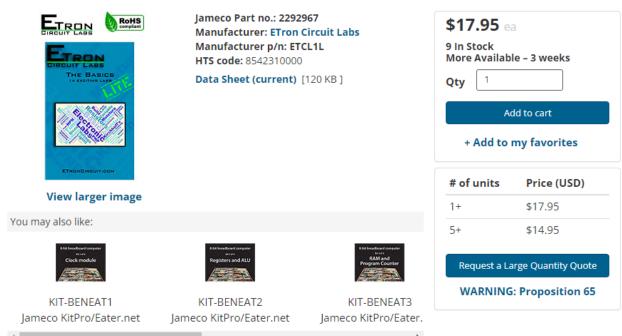
### Who is it For:

- · Middle and high school students
- · STEM educators running maker spaces, physics labs and robotics programs
- Homeschooling parents
- DIY enthusiasts and makers

### What's New in Version 4?

- Wire cutter and stripper is now made of Stainless Steel (SS) and has a new design with a thumb grip
- A more durable screwdriver is included which can unwind switch terminals and multimeter screws with ease
- A new 12 V Piezoelectric buzzer with 4.2 KZ frequency is replacing the older 12 Volt 2.4KHz magnetic buzzer in Version 3
- The portable breadboard box now comes with magnetic locks instead of swap buttons
- A more tactile microswitch with a 120gF operating force on the lever is introduced
- Lead Free Solder (Sn96.5/Ag3.0/Cu0.5) is used for all soldering joints
- All LEDs are now professionally packaged in moisture free anti-static bags four different colored bags for each color
- · Learning videos in the USB Flash drive now come with subtitles (English)
- 24 Micron Polyolefin Shrink Film is used for sealing multimeter, books and KIT-1 box
- Mand Labs KIT-1 Box is re-engineered for durability, strength and usability. The box is made in 12 different parts
  and each part is produced with a very high level precision with right fits and tolerances. The box is assembled
  carefully by hand and undergoes multiple inspections to meet quality standards
- RoHS and Reach Standards are being strictly adhered to
- The TDK EPCOS Thermistor 10K 3950 3% with a faster response time is added to the Premium Edition
- A new Everlight Phototransistor alongside 840 nm Everlight Photodiode is added to the IR Security Alarm System project; Phototransistor gives a better range and high sensitivity

# The Basics LITE Complete Lab



## The Basics LITE Complete Lab

The Basics Lite by ETron Circuit Labs is Electronic Education Curriculum designed for the 21st century electronics student and features 14 of the most advanced labs from The Basics curriculum.

The Basics Lite include the manual and all components, solderless circuit board (CB111) and 9-Volt Battery (SK9VB)

# Make: Easy micro:bit Projects Book



Make: RoHS compliant

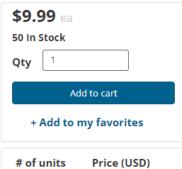
Jameco Part no.: 2283143 Manufacturer: Make:

Manufacturer p/n: 9781680455540

HTS code: 4901990093

No datasheet available. Please review the tabs

below for product specifications.



## View larger image You may also like: ISBN 0945053290 9781449363338 9781680454031 978-0-596-1

# Price (USD) \$9.99 Request a Large Quantity Quote WARNING: Proposition 65

### Make: Easy micro:bit Projects Book

Oreilly Media

Handbook by Eric Hagan

Master Publishing

Discover cool things to do with electronics when you learn how to code! Learn how to program the micro:bit microcontroller with easy-to-use block code, and build your own amazing electronics projects. With this handbook, you'll use the micro:bit to make:

Oreilly Me

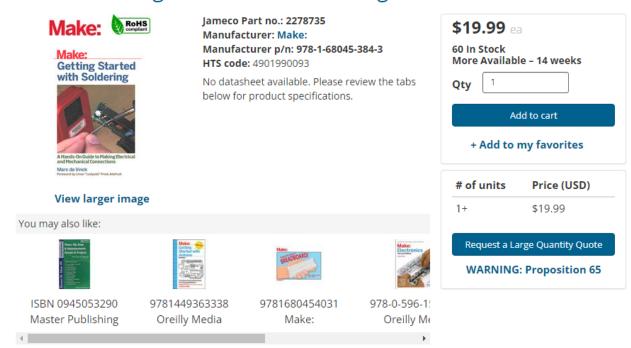
Make:

- · A scrolling name tag
- · Animated LED displays
- A high-tech compass
- · A handheld tilting game
- · A carnival strength tester
- · A powered cooling fan helmet
- · An electronic musical instrument
- · A security system that sends alarms
- A wheeled robot
- · An alert to water your plants

You'll learn how to create electronic circuits using resistors, LEDs and various sensors. You'll incorporate electric devices such as speakers, motors, and fans into your projects. You'll combine multiple disciplines - like electronics, programming, and engineering - to build a series of successful gadgets. You'll also get a sneak peek at the MicroPython programming

Everything is explained with lots and lots of full-color line drawings. No prior experience is necessary. You'll have fun while you learn a ton!

# Make: Getting Started with Soldering Book



### Make: Getting Started with Soldering Book

A Hands-On Guide to Making Electrical and Mechanical Connections

Soldering is an essential Maker Skill! Everything you need to know is in this book. You can learn to solder in just one afternoon!

Whether you're just getting started with your first electronics projects or you're ready to prototype your brilliant invention, knowing how to solder will open up a world of new possibilities for you. It may seem intimidating, but even kids can do it (with adult supervision). I'ts easy and fun when you learn the important dos and don'ts right from the start.

This book will guide you through the techniques of good soldering, advise you on how to pick the soldering iron that's right for you, and show you how to fix mistakes and bad connections. It even included guidance on such advanced techniques as surface-mount soldering.

### What's Inside

- Proper techniques for applying just the right amount of solder
- Troubleshooting guidelines for recognizing and fixing bad connections
- Tops for creating an efficient workspace
- Best practices for safety
- · What to consider when shopping for a soldering iron and solder
- · Other essential tools for your soldering workstation
- · Advanced skills and equipment for surface-mount soldering

Also included is a DIY project that shows you how to build your own mini fume extractor while practicing your soldering. This easy-to-follow, full-color guide gives you the knowledge and skills you need for a lifetime of Making.

### How to Make a Robot STEM Kit

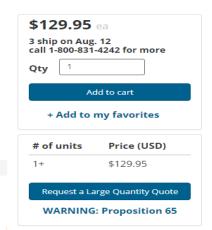
Make:

Jameco Part no.: 2276191 Manufacturer: Make:

Manufacturer p/n: KIT-MAKE-ROBOTS

HTS code: 8542310000

No datasheet available. Please review the tabs below for product specifications.



### View larger image

You may also like:







KIT-MAKE-DLVCETHRM Make: KIT-MAKE-LUM Make: BRUSHBOT PARTY PACK Make:

Make: How to Make a Robot Kit

Learn the basics of modern robotics while building your own intelligent robot from scratch! You will use inexpensive household materials to make the base for your robot, then add motors, power, wheels and electronics.

But wait, there's more... Your creation is actually five robots in one! Build your bot in stages, and add the features you want. Vary the functions to create a robot that's your own creation.

### Kit Includes:

Part No.	Qty.	Description
2278463	1	4x AA Battery Holder with 6" Wired 2P Connector
187805	2	Snap Action Switch (NO-NC) Single Pole Double Throw
20601	1	400-Point Solderless Breadboard 3.3"L x 2.1"W
2098523	1	Buzzer Piezo 5 Vp-p 80 dB 4 kHz 5 mA Pin Contacts
2109624	2	Boe-Bot/Sumobot Wheel/Tire Set 1 Wheel With 2 Rubber Band Tires
2127718	1	70-Piece Jumper Wire Kit - 22AWG 14 Lengths 10 Colors
	1	10 pack of colored jumper wires, rainbow sequence, male to male
	1	10 pack of colored jumper wires, rainbow sequence, male to female
2207056	1	9V Battery Snap with 2.1mm Barrel Plug
222010	1	Cable USB2.0 A/B 6 Feet Black USB-A Male To USB-B Male
2229343	1	QTR-1A Reflectance Sensor (2-Pack)
2229351	1	38 kHz Infrared Receiver
2245407	1	HC-SR05 Ultrasonic Distance Sensor
2275727	1	Make: How to Make a Robot (book)
283039	2	Continuous Rotation Servo
285587	1	3M Tartan Vinyl Electrical Tape 0.75 Inch by 60 Feet
690742	10	Resistor Carbon Film 330 Ohm 1/4 Watt 5%
2278855	10	LED Bi-Color Green/Red 565nm/697nm 2-Pin

### Basic Stamp 2 Board of Education Kit with USB Cable



### BASIC Stamp 2 Board of Education Kit USB Version

The Board of Education "Full Kit" contains a Board of Education® carrier board, BASIC Stamp® 2 module, pluggable wires, and USB cable.

The Board of Education Full Kit is a concise package of all the hardware you need to begin building projects with the BASIC Stamp microcontroller. Everything you need is included except for a power supply, components and parts to build projects. So if you plan to purchase the Stamps in Class parts and text selections or if you have a workshop full of LEDs, resistors, capacitors, sensors and more then this is the right kit for you.

It's called the Board of Education Full Kit since the BOE board is the main feature and houses the BASIC Stamp 2 module (also included.) The BOE carrier board is our most popular board since it is capable of being used in a wide variety of applications. Originally, designed for education, this board is now implemented by the complete spectrum of our customer base. The convenient hook-ups, 3-position power switch, and the overall solid workmanship make it a very reliable platform for any 24-pin BASIC Stamp and Javelin Stamp application. Scroll to the bottom of this page for a listing of technical features.

Each set of educational guides requires a BASIC Stamp 2 module with a Board of Education programming board, both of which are included in this BOE Full Kit. As mentioned previously, the BOE was designed in coordination with our educational customers to teach microcontroller programming and interfacing. Even if you aren't using our educational guides, this kit is still an ideal project board for instructor-authored BASIC Stamp lessons.

### Features:

- · Mechanically interlocked power supply to prevent dual connection of wall-pack and 9-volt battery
- · USB connection for programming and communication during run-time
- P0 P15 I/O pins
- Vdd and Vss connections brought adjacent to 5.1 x 3.5 cm (2" x 1 3/8") breadboard area
- Female 10-pin dual row connector for optional AppMods (more breadboard space)
- · Traces on top of the board show connections between BS2-IC and breadboard connections

### Includes:

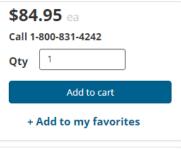
- Board of Education carrier board
- · BASIC Stamp 2 module
- Set of ten (10) color-coded 22 gauge wires
- USB cable

# Components Bundle for Electronics for Kids Book



Jameco Part no.: 2244720 Manufacturer: Jameco Kitpro Manufacturer p/n: KIT-EFK BUNDLE

HTS code: 8542310000
Kit Instructions [69 KB]







# Components Bundle for *Electronics for Kids* Book

(Book is not included)

This kit includes over 45 different components so you can build the circuits from the book, <u>Electronics for Kids</u> by Øyvind Nydal Dahl. Review the list of items you might need to complete some of the projects. Many of you may already have a **multimeter** or **solid core wire**, so we left them out of the kit of parts. Check the list anyway to make sure you have everything you need. Save 5% with this bundle of parts.

These are some of the projects you can build:

- · Lemon powered light
- An electronic coin-tosser
- · A really cool reaction game
- ...and many more.

The Electronics for Kids book is not included in this kit and is no longer available at Jameco.

# Robotic Arm Kit 5-Axis Movement (Assembly and Batteries Required)

vellemen



Jameco Part no.: 2327671 Manufacturer: Velleman Manufacturer p/n: KSR10 HTS code: 8526920000

Certificate of Confirmity(CE) [90 KB] User's Manual(current) [6003 KB]

Substitute Products

This product has been discontinued and is not available for purchase. Please click on the button below for replacement and/or substitute products.

**Substitute Products** 

### View larger image

You may also like:







Elenco Electronics



Elenco Electronics



DFRobc

# Robotic Arm Kit (Assembly and Batteries Required)

For the future engineer, a series of Robot Kits has been created. Construct this kit to see how much fun electronics, mechanics, and hydraulics can be!

Build your own robotic arm with five motors and five joints to learn about basic robotic technologies. A five-switch hardwired control unit, a rotating base, elbow and wrist articulations, and a working gripper are all included in the arm. When used in the dark, the built-in searchlight adds to the enjoyment.

### Features

- · hard-wired control unit
- · optional (not incl.): USB interface kit KSR10/USBN
- recommended age: 14+

- · max. lift capacity: 100 g
- power supply: 4 x LR20C: ALKALINE D / LR20 1.5V-21000mAh (2pcs/bl) batteries (not incl.)
- · full extension height: 38 cm
- weight: 660 g
- number of pieces: 196
- Build videos can be found on YouTube

# Solar Energy Experiment Kit - 10 Projects



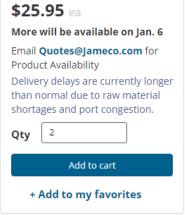
Vallement RoHS

Jameco Part no.: 2144382 Manufacturer: Velleman Manufacturer p/n: WSEDU02

NCNR (Non-Cancelable, Non Returnable)

HTS code: 8541406030

Data Sheet (current) [2.6 MB]



# of units	Price (USD)
2+	\$25.95
Reguest a La	urge Quantity Quote
Request a La	irge Quantity Quote

### View larger image

You may also like:

OWI-MSK617 MK185
OWI Incorporated Velleman

### Solar Energy Experiment Kit - 10 Projects

Solar Education Kit: Fun solar powered projects. Learn all about solar energy.

### **Features**

- · Clear instructions
- · 10 exciting projects
- With micro controller
- HQ breadboard
- · No soldering required!
- Projects include: solar led, solar attention grabber, solar cricket, solar battery charger, solar musical instrument, IR remote tester, solar garden light, solar motion detector, solar alarm simulator

### Specifications

• breadboard dimensions: 80 x 60mm / 3.15" x 2.36"

# 200 Watt Power Amplifier with 100 Watt RMS



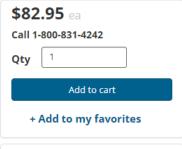
vellement

Jameco Part no.: 645239
Manufacturer: Velleman
Manufacturer p/n: WMAH100

NCNR (Non-Cancelable, Non Returnable)

HTS code: 8543909500

Data Sheet (current) [449 KB]



# View larger image You may also like: WSG105 AA-1D WSAK204 WSAH136 WSAH1 MadLab Electronic Rainbow Velleman Velleman Velleman

# # of units Price (USD) 1+ \$82.95 Request a Large Quantity Quote WARNING: Proposition 65

# 200 Watt Power Amplifier Module (assembled)

#### Features:

- · Excellent value for money
- Fully discrete design using Epitaxial Darlington transistors
- · DC supply circuit on board with LED indication
- Ideal for active speaker system or subwoofer, guitar amp, home theatre systems, instrument amp, etc.
- · Comes fully adjusted and tested
- · Overload and short circuit protection

- 200W music power @ 4Ω load
- 100W RMS power @  $4\Omega$  load
- 70W RMS power @ 8Ω
- Distortion: 0.02% @ 1KHz/10W
- · Damping factor: >800
- Frequency response: 3Hz to 200KHz (-3dB)
- Sensitivity: 0.6V RMS
- Signal to noise ratio: 115dB
- Power supply: 25-30VAC 120VA
- PCB dimensions: 4.2 x 2.44" (107 x 62mm) approx.
- Recommended power transformer:
- 230VAC input, 2 x 30VAC output
- 115 / 230VAC input, 2 x 25VAC output

### Boe-Bot Robot Kit Serial with USB Adapter And Cable



### **Boe-Bot Robot Kit - Serial (with USB adapter and cable)**

The ever-popular Boe-Bot® Robot Full Kit (serial version) is our most complete reprogrammable robot kit. Build your own roaming robot with a BASIC Stamp 2 microcontroller brain. Follow the clear, step-by-step instructions and illustrations with the included book, Robotics with the Boe-Bot. No programming or electronics experience is needed!

The Boe-Bot Robot takes about 1-2 hours to assemble. Each project in the Robotics text provides a unique new experience of wiring and source code tuning. Completing the entire set of projects takes about 50 hours and is suitable for anyone over the age of 13. The USB Board of Education (and **BS2-IC**) may also be removed to be used as your platform for the other kits in the Stamps in Class series.

You can find Boe-Bot robots in middle and high schools, vocational schools and colleges, robotics clubs, and hobbyists' homes. They are great companions for learning or teaching technology, mechatronics, and **STEM programs**. It's also an approved platform for the Boy Scouts of America Robotics Merit Badge. This kit can be used as a **California A-G approved elective course**. Assessment material is available to verified educators; contact **education@parallax.com** for details.

### **Features**

- Beginner-friendly No programming experience needed
- . Open platform Exposed circuitry allows you to learn and create your own electronic circuits
- Solder-free Experiment with custom circuits on the breadboard (no special-brand connectors)
- · Understandable Included text provides easy-to-follow tutorials
- · Programmable PBASIC is easy to learn and introduces concepts found in most programming languages
- · Autonomous Touch, light and infrared sensors let the Boe-Bot navigate on its own
- · Expandable Additional sensors and hardware expansion kits are available to get the most our of your robot
- Affordable Priced for 1-2 students per robot, with no additional fees for software or curriculum

### Kit Contents:

- Board of Education development board with a BASIC Stamp 2 microcontroller (#28803)
- Durable brushed-aluminum chassis with mounting holes for servos and accessories (#700-00022)
- Parallax continuous rotation servos for the drive wheels (#900-00008)
- · Sensors including whisker-switches, phototransistors, and infrared emitter/receiver pairs
- LEDs and a piezospeaker for audio and visual feedback
- · All the resistors, capacitors, and jumper wires needed to build the circuits
- · All the screws, nuts, and other hardware needed to build the Boe-Bot
- · Parallax #1 Phillips/flathead screwdriver
- USB to Serial Adapter and USB A to Mini-B cable to connect the Boe-Bot to a Windows, Mac, Linux, or Chromebook computer for programming

Note: Requires four 1.5 V AA batteries, not included.

# Educational LCD Oscilloscope Kit



# **Educational LCD Oscilloscope Kit**

Build your own oscilloscope and learn how to visualize signals. See the signals you learn about in real life! Despite the low cost, this oscilloscope has many features only found on expensive units like signal markers, frequency, dB, true RMS readouts, etc. This powerful auto-setup function will get you going in a snap!

Note: This scope cannot be used to perform measurements on voltages higher than 30Vpp.

- Kit difficulty: Level 5 (Advanced)
- · High contrast LCD: 64 x 128 pixels with white LED backlight
- · Maximum sample rate: 1MS/s for repetitive signals, 100kS/s in real time
- Input amplifier bandwidth: 200kHz (-3 dB)
- · Measurements can be performed up to: 100kHz
- Input impedance: 100kohm // 20pF
- Maximum input voltage: 30Vpeak (AC + DC)
- · Input coupling: DC and AC
- · AD resolution: 8 bits
- · Run modes: run, single
- Trigger level adjustable: in 16 steps
- Time base range: in 15 steps, 10µs/division to 500ms/division
- Input sensitivity range: in 6 steps, 100mV/division to 5V/division
- Test output: 1.95kHz / 3.3Vpp
- Full auto set up for: Volt/div and time/div (or manual)
- Sensitivity down to 10mV
- Readouts: DC, AC+DC, true RMS, dBm, Vpp, min. & max.
- Time and voltage markers readout
- · Frequency readout (through markers)
- Battery operated: 4 x AAA batteries (max. 100mA)
- Power save mode
- Dimensions: 80 x 115 x 40 mm / 3.14 x 4.52 x 1.57"
- · Weight: 190g (6.70 oz) with batteries

# Siren Electronic Project Kit

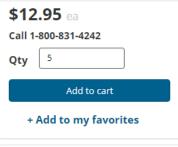


Vallamon RoHS

Jameco Part no.: 2265127 Manufacturer: Velleman Manufacturer p/n: K2604

NCNR (Non-Cancelable, Non Returnable)

**HTS code:** 8543909500 **Kit Instructions** [1384 KB]



# View larger image You may also like: SP-1A AK-100 ROB0022 JE250 Elenco Electronics Elenco Electronics DFRobot Jameco Kitpro

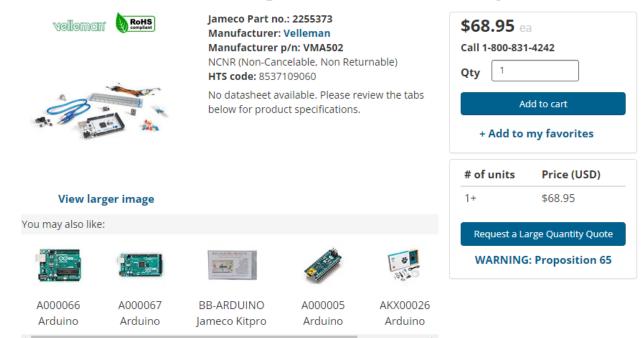
# # of units Price (USD) 5+ \$12.95 Request a Large Quantity Quote NOTE: • Order in multiples of 5 WARNING: Proposition 65

# Siren Electronic Project Kit

Enter the world of amazing electronic sounds and noises. Create or imitate sirens of all kinds by adjusting 3 trimmers. Powerful sound with a 2W amplifier on the PCB. The circuitry in this Velleman K2604 Siren kit lets you create and imitate all kinds of siren sounds by adjusting the three potentiometers. Connect it to your loudspeaker for even more powerful siren sounds.

- Power supply: 8 14V DC / 1A (not included)
- Modulation speed: 0.5 5s
- Frequency: 300 6000Hz
- Output power: +/- 2W max.
- · Connects to a 4 16 ohm loudspeaker (not included)
- Dimensions: 3.14 x 2.16 x 0.6"

# Basic DIY Kit with ATmega2560 for Arduino Projects



# **Basic DIY Kit with ATmega2560 for Arduino Projects**

### **Features**

- This kit includes: 1 x ATmega2560 MEGA DEVELOPMENT BOARD (VMA101)
- 15 x LED (different colors)
- 8 x 220 Ohm resistor (RA220E0)
- 5 x 1K resistor (RA1K0)
- 5 x 10K resistor (RA10K0)
- 1 x 830 hole breadboard
- 4 x 4-pin Key switch
- 1 x Active buzzer (VMA319)
- 1 x Passive buzzer
- 1 x infrared sensor diode
- 1 x LM35 temperature sensor (LM35DZ)
- 2 x Ball tilt switch (similar to MERS4 & MERS5)
- 3 x Photosenitive resistor LDR (similar to LDR04)
- 1 x single digit 7 segment LED display
- 30 x Breadboard jumper wire
- 1 x USB cable

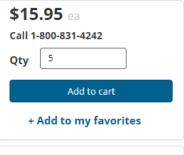
# Universal Power Supply 5-14V DC/1A

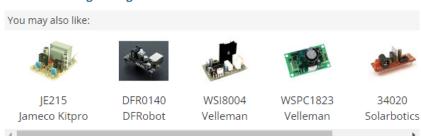


Jameco Part no.: 2211768 Manufacturer: Velleman Manufacturer p/n: K2570

NCNR (Non-Cancelable, Non Returnable)

HTS code: 8542310000 Kit Instructions [551 KB]





# # of units Price (USD) 5+ \$15.95 Request a Large Quantity Quote NOTE: • Order in multiples of 5 WARNING: Proposition 65

# Universal Power Supply 5-14V DC/1A

Suits all Velleman kits requiring a regulated power supply between 5 and 12V DC, and no more than 1A.

- Difficulty Level: 1
- Input voltage: 7-16V DC / 1A
- Output voltage: 5-14V DC, regulated
- Output current: max. 1A
- · Power limitation and thermal overload protection
- Max. Dissipation: 7WPCB dimensions: 3 x 2.4"

# Ding Dong Doorbell Kit with Pushbutton and 8 ohm Speaker

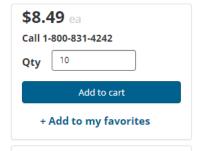


Jameco Part no.: 2196545 Manufacturer: Velleman Manufacturer p/n: MK177

NCNR (Non-Cancelable, Non Returnable)

HTS code: 8543909500

**Data Sheet (current)** [159 KB] **Kit Instructions** [706 KB]



# View larger image You may also like: WSG105 AA-1D WSAK204 WSAH136 WSAH' MadLab Electronic Rainbow Velleman Velleman Velleman

# # of units Price (USD) 10+ \$8.49 Request a Large Quantity Quote NOTE: Order in multiples of 10 WARNING: Proposition 65

# **Ding Dong Doorbell Kit**

### **Features**

- · classic 'ding dong'-sound
- · plays 'dingdong'-sequence twice when triggered
- early retrigger prevention
- attractive, compact design
- speaker included
- on-board pushbutton
- input for external pushbutton
- low power consumption

- · 8 ohmspeaker
- power supply: 9VDC bat.
- · current consumption:
- ·idle: <1µA ·active: 55mA
- dimensions: 2.75 x 3.8 x 1.2"

# Solar Bug Kit

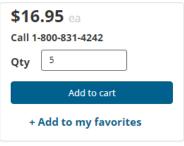


Vallemon RoHS

Jameco Part no.: 2187294 Manufacturer: Velleman Manufacturer p/n: MK185

NCNR (Non-Cancelable, Non Returnable)

HTS code: 8541406030 Kit Instructions [829 KB]





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OWI-MSK617 OWI Incorporated WSEDU02 Velleman

**Solar Bug Kit** 

Bring that Mediterranean atmosphere to your garden

Chirps or glows as long as the sun shines.\*

### Features

- · realistic cricket chirp
- slow fading green led simulates glow-worm

### Specifications

- solar cell: 4.5V/ 35mA
- optional rechargeable batteries: 2x AAA NiCd or NiMH
- dimensions: 140x150x50mm / 5.6 x 5.9 x 1.97"

### Extras

· With two optional AAA rechargeable batteries, the bug charges during the day and chirps or glows at night

Home / Electronic Kits & Projects / Electronic Kits / Educational

## Start to Solder Education Kit



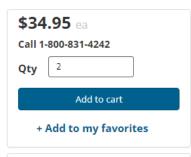


Jameco Part no.: 2175541 Manufacturer: Velleman Manufacturer p/n: EDU03U

NCNR (Non-Cancelable, Non Returnable)

HTS code: 8542310000

Data Sheet (current) [699 KB] Kit Instructions [699 KB] Data Sheet (current) [1433 KB]



Price (USD)

\$34.95

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SP-1A Elenco Electronics



AK-100 Elenco Electronics



ROB0022 DFRobot



JE250 Jameco Kitpro Request a Large Quantity Quote

### NOTE:

# of units

Order in multiples of 2

**WARNING: Proposition 65** 

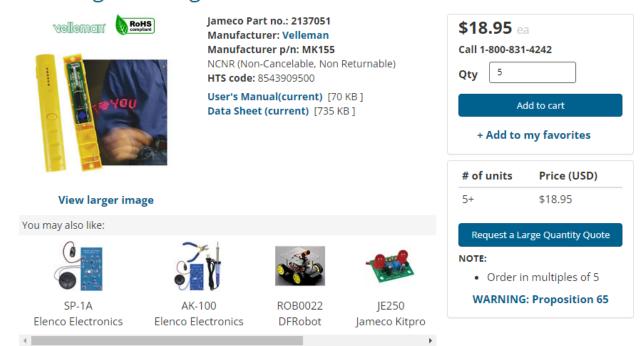
### "Start to Solder" Education Kit

Discover the world of electronics. This kit includes a soldering iron, tools, electronic parts and the necessary printed circuit boards to complete two minikits. It's an ideal introduction to soldering and comes complete with a handy storage box.

### Kit Includes:

- · Soldering iron and support
- Solder
- Side cutters
- 1 mini kit "Blinking LEDs"
- 1 mini kit "LED Light Organ"

# Kit Magic Message Wand 7-Character 2 Aaa 6.1X1X0.9"



### **Magic Message**

Wave the wand and make a message appear! You are able to enter your own 7 character message. Required: 2AAA batteries suggested P/N: 198715

# Kit Car Alarm Simulator 2.3 X 1.8"



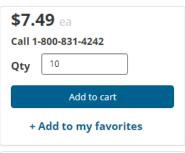
Vallement RoHS

Jameco Part no.: 2131071 Manufacturer: Velleman Manufacturer p/n: MK126

NCNR (Non-Cancelable, Non Returnable)

HTS code: 8543909500

Data Sheet (current) [704 KB]



### # of units Price (USD) 10+ \$7.49 Request a Large Quantity Quote NOTE: • Order in multiples of 10

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### **CAR ALARM SIMULATOR**

LED with 'realistic-appearing' flash sequence simulates active car alarm system.

- · activates automatically when the engine is turned off
- easy to install, just two wires to connect
- adjustable sensitivity

- low current consumption: 12mA max. (12V only)
- · comes complete with pre-wired LED-holder and two warning labels
- dimensions: 2.3 x 1.8"

# Kit Cable Polarity Checker 10Ma Max

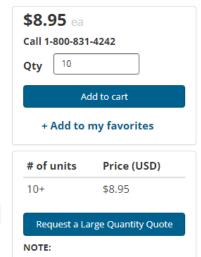


Jameco Part no.: 2131004 Manufacturer: Velleman Manufacturer p/n: MK132

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HTS code: 8542390000

Data Sheet (current) [150 KB]



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### **CABLE POLARITY CHECKER**

Check cables for continuity and identify individual wires. Ideal for speaker cable polarity checking. LED indication for open circuit, shorts and correct or wrong polarity. Pushbutton operation with auto power off.

- low power consumption: 10mA max.
- power supply: 9V battery operated (not incl.)
- dimensions:
  - main board: 2.2 x 1.6 x 1.3"remote board: 1.6" x 0.3"

# Remote Control Via GSM Cellphone Turn Equipment On and Off at Any Location

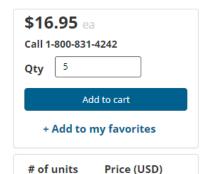


Jameco Part no.: 2130773 Manufacturer: Velleman Manufacturer p/n: MK160

NCNR (Non-Cancelable, Non Returnable)

HTS code: 8542390000

Data Sheet (current) [421 KB] User's Manual(current) [56 KB]



# # of units Price (USD) 5+ \$16.95 Request a Large Quantity Quote NOTE: Order in multiples of 5 WARNING: Proposition 65

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### Remote Control Via GSM Mobile Phone

### Features

- turn equipment on and off at any location via GSM mobile phone
- applications: turn on lighting, heating, open your gate, simulate presence, control animal feeders, activate car alarm, etc...
- · ring detection circuit avoids phone charges
- no need to open or modify phone, no physical connection to mobile phone
- · works with most GSM mobile phones

- · dual operation mode: on/off toggle or on with auto turn-off timer
- timer settings: 0.5s, 2s, 30s, 1 min, 5 min, 15 min, 30min and 1 hour
- NO/NC 3A relay output
- power supply: 12Vdc / 100mA
- dimensions: 4 x 1.7 x 0.9"

# Liquid Level Controller Kit

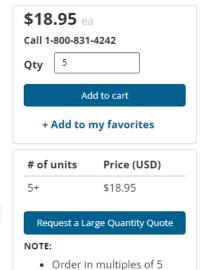


Jameco Part no.: 2130597 Manufacturer: Velleman Manufacturer p/n: K2639

NCNR (Non-Cancelable, Non Returnable)

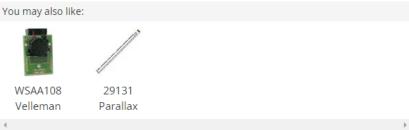
HTS code: 8543909500

Data Sheet (current) [383 KB]



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## **Liquid Level Controller Kit**

Forgotten to turn off the tap, leaking washing machines, water level dropping in your aquarium, rain tank or water tank suddenly dry or over flowing, water in your cellar, etc. Such situations are often the cause of trouble and financial burden. Prevention is better than cure. So use this fluid detector. This multifunctional device is easy to use in a variety of applications: 1) LED control of set fluid level: LOW, MIDDLE, HIGH; 2) Controller: the relay automatically switches a pump and/or valve to keep the fluid level between the LOW and HIGH marks; 3) Alarm: if the sensor detects a level which is too high or too low (selectable), the relay will operate a bell or other alarm device.

- · Assembly required (soldering)
- Difficulty: Intermediate
- Power supply: 12-14V AC or 16-18V DC / 100mA
- Relay output: 240V / 3A max.
- · Dimensions:
  - Controller PCB: 4.1 x 2.4"
  - Sensor PCB: 4.1 x 1"

# Multifunction Up Down Counter Kit

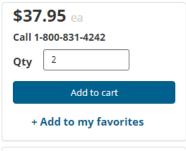


Jameco Part no.: 2130503 Manufacturer: Velleman Manufacturer p/n: K8035

NCNR (Non-Cancelable, Non Returnable)

HTS code: 8542390000

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# of units	Price (USD)
2+	\$37.95
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### MULTIFUNCTIONAL UP/DOWN COUNTER

### **Features**

- comes in handy for people counting, part counting, score keeping,  $\dots$
- · counts up or down
- · count input through on-board pushbuttons or by external pulses
- display modes: normal or time (hh:mm and mm:ss)
- an internal oscillator allows time measurement
- · programmable pre-set value with equal output
- · self diagnostic at power up
- comes with easy board-to-wire connector (20cm wire)
- optional bezel enclosure: B8035

- counter input voltage: 3...12V DC (normal dry contact also possible)
- EQUAL output: 5V DC / max. 50mA
- max. counting speed: 200 / sec. (2 / sec. with long debounce delay)
- max. count: 4 digits (9999 / 23h59m / 59m59s)
- power supply: 9 12V DC or transformer 2 x 9V AC / 300mA
- power consumption: 150mA max.
- dimensions: 4.9 x 3"

# Miniature Infrared Security System 7M Dc 9-15V

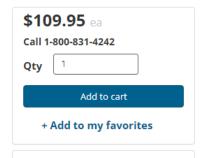


Jameco Part no.: 2130415 Manufacturer: Velleman Manufacturer p/n: PEM7D

NCNR (Non-Cancelable, Non Returnable)

HTS code: 8543909500

Data Sheet (current) [467 KB]



Price (USD)

\$109.95

### # of units View larger image You may also like: Request a Large Quantity Quote **WARNING: Proposition 65** WSSA130 WSI102 WSL131 WSSA200 WSSA100

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### MINI INFRARED SECURITY SYSTEM, 7mFeatures

Velleman

· easy to install

Velleman

- · adjustable timer & volume
- applications:
  - o entry detection
  - o automatic alarm warning
  - o present detection
- includes:
  - o 1 x retro-reflection IR photoelectric beam sensor

Velleman

- 1 x power supply 110V / 9V DC / 250mA
- o 1 x alarm speaker (timer & volume adjustable)

- · nominal detection range: 23ft
- · light source: IR LED
- · speaker:
  - o power supply: DC 9-15V
  - speaker output: chime / off / alarm (selection through by switch)
  - o duration audio signal: about 1 sec. for chime, 30 sec. for alarm
  - o timer adjustable: 3 30sec. before alarm activation
  - volume adjustable: yes (from 0 to max)
- working temperature: -4°F to +122°F
- power supply: DC 9-15V regulated (adapter included)
- total current consumption: < 130mA</li>
- · standby current: 25mA
- IP rating: IP44

### Robotics with the Boe-Bot Parts Kit

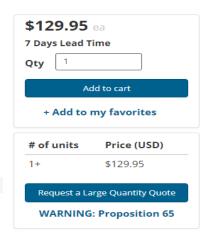


Jameco Part no.: 2109317 **Manufacturer: Parallax** Manufacturer p/n: 28124

NCNR (Non-Cancelable, Non Returnable)

HTS code: 8526920000 Data Sheet (current) [3.2 MB]





### Robotics with the Boe-Bot Parts Kit

This compact, high-quality chassis kit turns any Parallax Board of Education development platform into a rolling robot. The electronics pack includes all of the components needed to build three sensor systems for autonomous roaming robot. Upgrade your existing Propeller Board of Education or BASIC Stamp Board of Education Full Kit into a roaming robot.

### Features

- · Also compatible with the BASIC Stamp HomeWork Board or Board of Education Shield for Arduino with a few extra parts (see Notes under Details)
- · Three sensor systems (touch whiskers, light sensors, infrared object detectors) let your robot roam on its own
- · Sturdy brushed-aluminum chassis features holes and slots for mounting sensors and accessories
- · Free tutorials and example code for BASIC Stamp and Propeller
- Replacement components are available for easy maintenance

### Kit Contents

- (1) Boe-Bot Robot Chassis
- · (2) Parallax continuous rotation servos
- (2) Plastic wheel and tire sets
- (1) 1" tail wheel
- (1) 4 AA Cell Battery Holder
- (2) Whisker wires for touch sensors
- (2) Phototransistors for light sensors
- (2) IR Transmitter Assembly Kits
- (2) Infrared Receivers for object sensors
- (2) Pushbuttons, LEDs, and a piezospeaker
- (2) Passive components (resistors, capacitors, 3-pin headers, and jumper wires)
- (2) All the required hardware (screws, standoffs, spacers, nuts. washers, and grommets)

Note: If using a BASIC Stamp HomeWork Board, you will also need a 4 AA Battery Holder with Tinned Leads and two additional 3-Pin Single Row Headers. If using the Board of Education Shield for Arduino, you will also need one Boe-Boost module, three 1/2" nylon spacers, three 4/40 nylon nuts, and three 4/40 7/8" panhead screws. The Robotics Shield Kit is a complete option for Arduino Uno, Mega, and Duemilanove modules.

# Car Burglar Alarm Kit



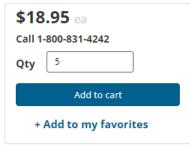
Jameco Part no.: 120627 Manufacturer: Velleman Manufacturer p/n: K3504

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HTS code: 8543909500

below for product specifications.





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5+	\$18.95
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