

Part of the initiative

Everyone  
does



www.allemachenmint.de



www.brickrknowledge.com

Electronics  
Coding  
STEM-Education



Part of the initiative

Everyone  
does



www.allemachenmint.de



ALLNET GmbH Computersysteme  
Maistraße 2  
82110 Germering, Germany

Phone: +49 (0)89 894 222 22  
Fax: +49 (0)89 894 222 33

E-Mail: [mint@allnet.de](mailto:mint@allnet.de)  
[www.allnet.de](http://www.allnet.de)

Maker Store & Maker Space  
Prenzlauer Allee 173  
10409 Berlin, Germany

Phone: +49 (0) 30 473 756 81  
[www.maker-store.de](http://www.maker-store.de)  
[shop.maker-store.de](http://shop.maker-store.de)



ALLNET GmbH Computersysteme  
Maistraße 2  
82110 Germering, Germany

Phone: +49 (0)89 894 222 22  
Fax: +49 (0)89 894 222 33

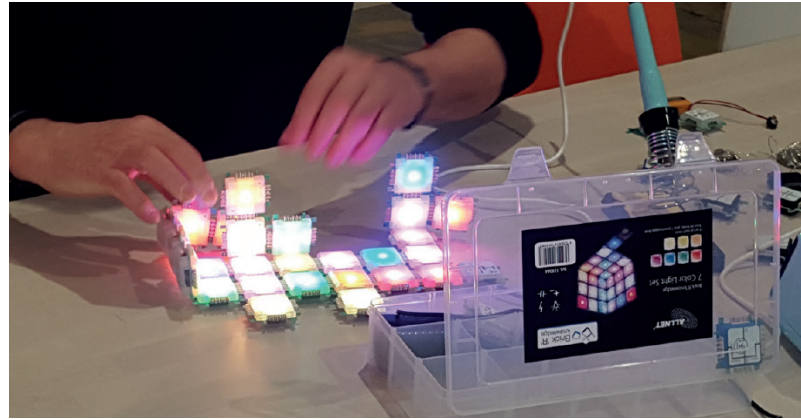
E-Mail: [mint@allnet.de](mailto:mint@allnet.de)  
[www.allnet.de](http://www.allnet.de)

Maker Store & Maker Space  
Prenzlauer Allee 173  
10409 Berlin, Germany

Phone: +49 (0) 30 473 756 81  
[www.maker-store.de](http://www.maker-store.de)  
[shop.maker-store.de](http://shop.maker-store.de)



# Brick'R'knowledge Education Institution

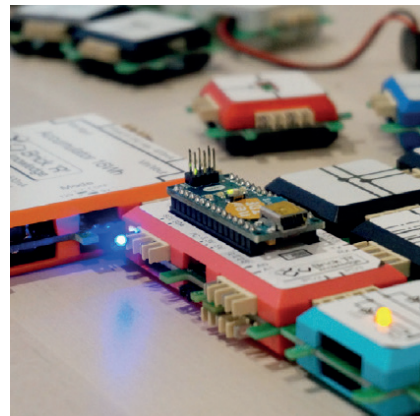
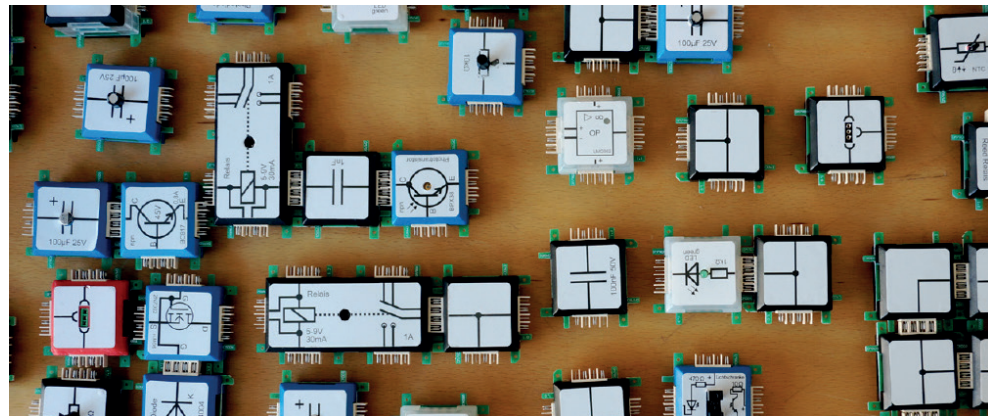


Our aim is to simplify the learning and teaching of analogue and digital electronics: digital circuit technology, renewable energy, development and to make this knowledge accessible to everyone. A common problem in electronics classes is the presentation, and handling of electronic components.

The circuits that are soldered on PCBs are not reusable, while using breadboards has the disadvantage of not being able to document circuits in a clear way. A further problem is that most of the up-to-date components are only available in the SMD form, which is not suitable for lessons.

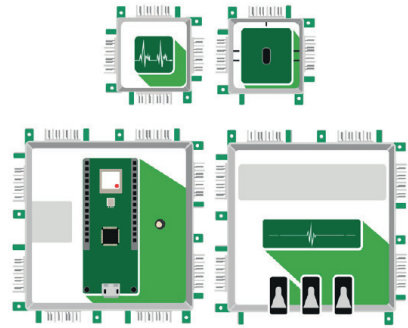
The advantages of the Brick'R'knowledge system are explained in five points:

- ◆ Easy documentation and sharing of circuit plans by taking photos of the circuit.
- ◆ Easy exchange of components and change of the circuits by connecting bricks.
- ◆ Compact circuits by ground return.  
Didactic manuals and new projects everyday via a growing community.
- ◆ Robust and stable plug system by plastic housings that can be opened. Four pole hermaphrodite connectors that can realize 3D constructions.



## SET OVERVIEW

# Sets

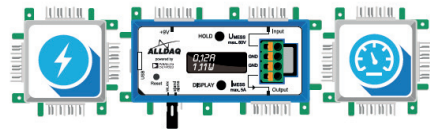


## Bio Feedback Set - From heartbeat to mind control!

NEW!

Do you want a LED blinks with your thoughts? Our Bio Feedback Set will make your dream come true! Let's measure your heart rate by using the ECG (electrocardiogram), test your muscle activity with the EMG (electromyography), and record the electrical activity of your brain with the EEG (Electroencephalography.) Plus, with the pulse brick, you can even measure your pulse rate and your oxygen saturation. With Bio Feedback Set, you will be using the Arduino® MKR 1010 WiFi Board as the interface, which blends perfectly into your current Arduino® environment!

Art.Nr.: 168071

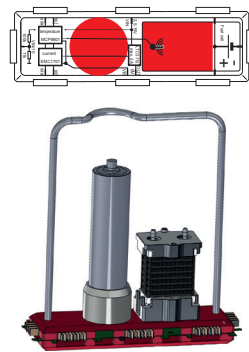


## Powermeter Set - Measurements, formulas & mathematics!

NEW!

Let's measure directly on your brick circuits! First, you will be guiding through the differences in voltage and the current measurements, and understanding how meters work. Then, we will be continuing with experiments on power consumption: How does charging your phone work? Test and explore the Ohm's law with series and parallel circuits. In the end, you will be mastering the bridge circuits and the Y-Δ transform (wye-delta.) Sounds complicated? Not any more!

Art.Nr.: 155536

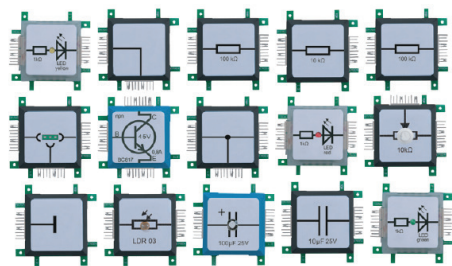


## Fuel Cell Set - Green energy in your hand!

NEW!

The Brick'R'knowledge fuel cell set is another set to explore alternative energies. Hydrogen is a new flexible energy source besides solar and wind energy. It is considered as the future solution for energy storage and supply, especially for mobile applications. This set can be used in combination with the microcontroller Arduino® MKR to run experiments on the physics of the fuel cell, as well as experiments on the use of electricity generated by the fuel cell.

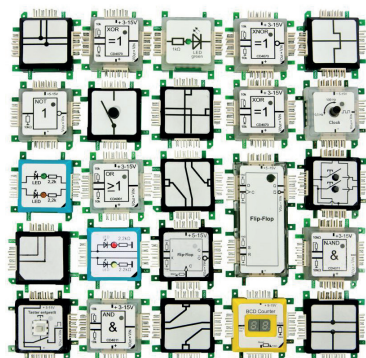
Art.Nr.: 180230



## Basic Set

The Basic Set will be introducing you to the most important variables and functionalities of electronic circuits. It's perfect for beginners to realize complex circuits easily. The 19 bricks in the kit will help you to understand more about electronics. Brick'R'knowledge is an open source experimental kit. This educational system can be used from group to individual, it makes the electrical knowledge more accessible, and efficiently passing the electrical knowledge to the younger generation in a playful way.

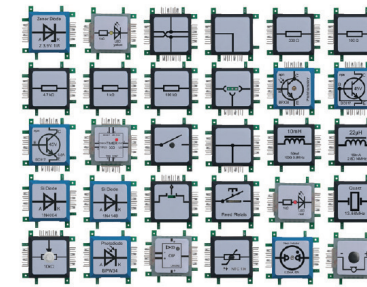
Art.Nr.: 115589



## Logic Set

The Logic Set is suitable for a quick start into the digital circuit technology. The manual includes didactically structured examples of circuits. While working with the manual, students learn about the most important digital circuits, such as adder, shift register and numerator. The comprehensively equipped Logic Set provides teachers with practical basis for daily teaching. Plugging the bricks together and experimenting with them is fun, it encourages to build your own circuit variants as well. The Logic Set offers ranges from easy logic bricks (AND, OR, NAND, NOR, XOR, XNOR, NOT), to a variety of flip flop bricks (D-, RS- and JK-type), and an impulse brick (alternatively a debounced switch for single pulses) through to a BCD counter brick with an integrated 7 segment display.

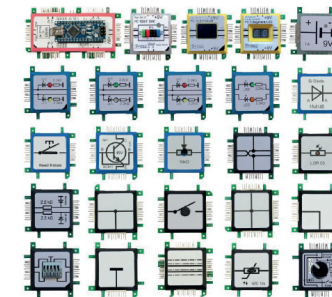
Art.Nr.: 135006



## Advanced Set

The Advanced Set enables users to rebuild basic circuits of modern electronics, and to develop them further. This set includes a manual, which contains explanations on 111 different bricks with experimental setups. The Advanced Set includes a variety of switches, transistors, antenna, audio elements, and special modules, such as the Timer 555.

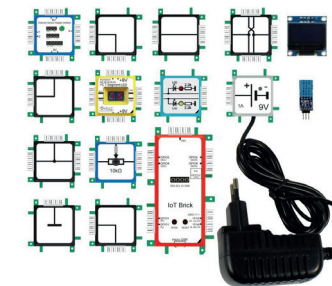
Art.Nr.: 118704



## Arduino@Coding Set

The Brick'R'knowledge Arduino® Coding Set introduces you to digital electronics and programming with the Arduino® Nano. This set includes Arduino® Nano, digital components such as 7-segment displays, OLED display, D/A converter, and a I²C adapter that are complementary to all analog bricks.

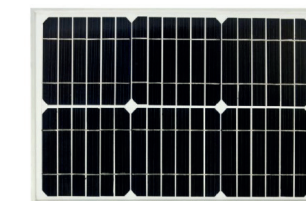
Art.Nr.: 125697



## Internet of Things Set

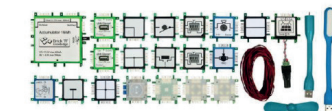
Let's control your bricks via internet! With the included IoT Brick, you will learn how to build your first website, and control I/O pins via smartphone. Furthermore, the set contains a temperature and humidity sensor, and the I²C is used to run the 7-segment display.

Art.Nr.: 138090



## Solar Set

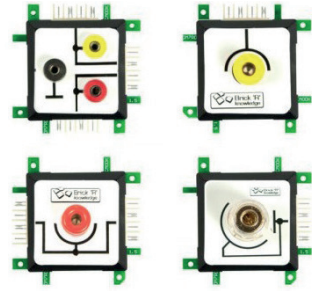
The Brick'R'knowledge Solar Set guarantees fun with experiments for the whole family! This set introduces renewable solar energy in a playful, easy way. How does a solar cell work? How does an accumulator store energy? How to build a night light with motion detector? These questions and many more will be answered with the set.



Art.Nr.: 133574



# Sets



## Measurement Set One

The Measurement Set One will be assisting you to measure the voltage, current, and other measured variables with standard measuring instruments. This set includes a measuring adapter connector (3x2mm), a measuring adapter (4mm Closed End GND) with additional cable clamp, and two additional measuring adapters (4mm Endpoint and 4mm Inline red.)

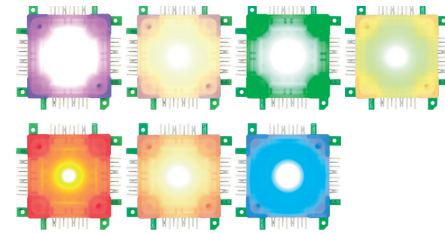
Art.Nr.: 136818



## Measurement Set Two

The Measurement Set Two includes the following 6 measurement bricks: 2 x black measuring adapters (4mm Closed End GND), 2 x red measuring adapters (4mm Inline) and 2 x black measuring adapters (4mm Open End GND). The Measurement Set Two enables you to measure the voltage, current and other measured variables with standard measuring instruments.

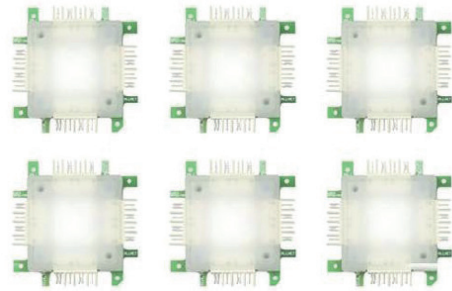
Art.Nr.: 136820



## 7 Color Light Set

The 7 Color Light Set includes 28 LED bricks in red, yellow, blue, orange, violet, green, and warm white. You can build your own night lamp with it, as the bricks can be plugged, or vertically in 3D. Children can learn colors with our Light Set cheerfully, the bricks are rather robust, even toddlers can play with them just by clicking them together.

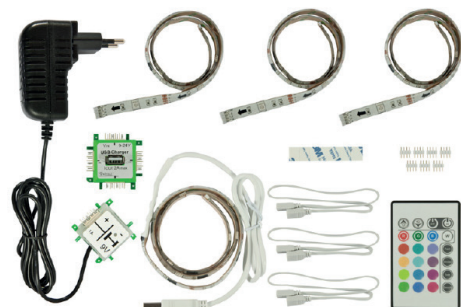
Art.Nr.: 124344



## Highpower LED Set 50

The Highpower LED Set 50 includes fifty 1 watt highpower bricks and a 12V 8A power supply. You can build a staircase lighting, for example, expand it and let it grow like a tree through your house. The Highpower LED Set 50 enables you to playfully deal with light design

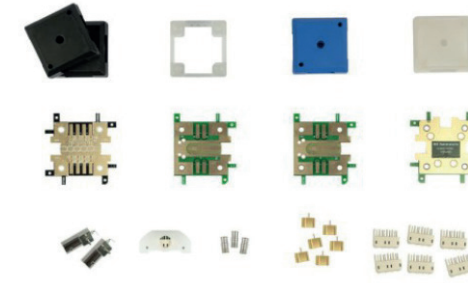
Art.Nr.: 124449



## RGB Color Light Set

Create your light show! The RGB Color Light Set includes four flexible LED strips, which contains 36 LEDs in total. It can be controlled with the included infrared remote control. You can glue, cut, and connect the LED strips as you wish. The infrared remote control has 16 different color-keys and 4 light programs.

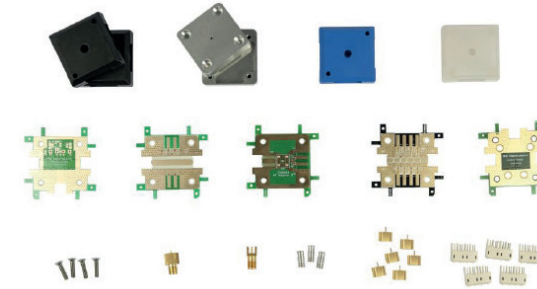
Art.Nr.: 133907



## MHz DIY Set

The MHz DIY set is perfect for progressive circuits in the MHz range (megahertz,  $10^6$  Hz.) It includes four PCBs (printed circuit board), these boards in the kit are ideal for building splitters, combiners, filters, mixers, adapters, attenuators, bias supply, or passive connecting element. Further more, this set includes BNC connectors, P-SMP plugs, and matching connectors.

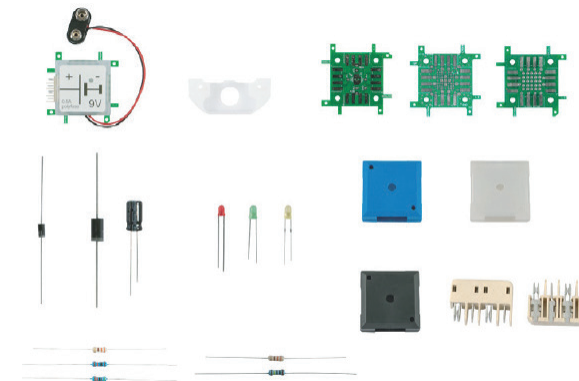
Art.Nr.: 130192



## GHz DIY Set

The GHz DIY set contains everything for aspiring circuits in the GHz range. This set contains five PCBs, you can use these to build splitters, combiners, filters, mixers, adapters, attenuators, bias supply, or as passive connecting elements. Furthermore, this set contains high-quality SMA and P-SMP connectors, plugs, connectors, and plastic cases. This set is suitable especially for fans of measurement technology and for radio amateurs.

Art.Nr.: 130193



## DIY Set

We love DIY! With the DIY set, you can develop your own brick world. This set enables inventors and developers to design their own bricks. By using soldering iron and tin solder you can either rebuild standard bricks or design your own individual ones for special applications, or even develop your own brick sets. Apart from 25 blank PCBs, 25 plastic shells, various resistors, connector parts, capacitors, transistors, diodes, and LEDs, you will also get a roll of solder and a void to build your own!

Art.Nr.: 124343

Part of the initiative

Everyone  
does



[www.allemachenmint.de](http://www.allemachenmint.de)