

# Optional Breadboard Kit for the Vernier Circuit Board 2

(Order Code VCB2-OB BK)

Install this small breadboard on the Vernier Circuit Board 2 (order code VCB2), sold separately, to easily conduct experiments using additional components not permanently mounted on the VCB2. Some components are included to get you started.

**NOTE:** Vernier products are designed for educational use. Our products are not designed nor are they recommended for any industrial, medical, or commercial process such as life support, patient diagnosis, control of a manufacturing process, or industrial testing of any kind.

## What's Included

- Breadboard
- Double-sided tape\*
- Small screws (2)\*
- Jumper wires, male–male (4)\*



- Jumper wires, male–clip (6)\*



- 220 Ω resistors (5)\*



- Green LED\*



- Blue LED\*



- Red-Green-Blue tri-color LED (4-pin, single cathode)\*  
Datasheet:  
[www.vernier.com/files/manuals/vcb2-obbk.rgb\\_led.pdf](http://www.vernier.com/files/manuals/vcb2-obbk.rgb_led.pdf)



- Transistor (NPN) has marking BC547 on flat side\*  
Datasheet:  
[www.vernier.com/files/manuals/vcb2-obbk.npn\\_transistor.pdf](http://www.vernier.com/files/manuals/vcb2-obbk.npn_transistor.pdf)



- Transistor (PNP) has marking 2N 3906 on flat side\*  
Datasheet:  
[www.vernier.com/files/manuals/vcb2-obbk.pnp\\_transistor.pdf](http://www.vernier.com/files/manuals/vcb2-obbk.pnp_transistor.pdf)



- Photocell\*  
Datasheet:  
[www.vernier.com/files/manuals/vcb2-obbk.photocell.pdf](http://www.vernier.com/files/manuals/vcb2-obbk.photocell.pdf)



- 555 timer (8-pin DIP)\*  
Datasheet:  
[www.vernier.com/files/manuals/vcb2-obbk.555\\_timer.pdf](http://www.vernier.com/files/manuals/vcb2-obbk.555_timer.pdf)



## Specifications

Type	Standard 170 connection point plug-in solderless breadboard
Ratings	36 V 2 A maximum current
Insertion wire size	21 to 26 AWG
Size	1.8 × 1.4 inches (43 × 36 × 9 mm)

## Assembly

Peel the backing off the adhesive foam, apply it to the breadboard, and affix it to the designated spot on the Vernier Circuit Board 2 (area J8). If you intend to use the provided screws for fastening the breadboard on the circuit board, be careful to align the holes on the back of the breadboard with the holes on the circuit board.

\*This part is a consumable and is excluded from the warranty.

## How a Breadboard Works

A breadboard has numerous rows of five holes each, and the holes in each row are connected electrically. Thus, up to five terminals or wires can be electrically in contact without the use of solder.

When placing any circuit component on the breadboard, do not insert terminals from the same component into the same row.

When placing DIP-format integrated circuits such as the 555 timer (which is in a DIP-8 format package), place the IC so that the two rows of terminals straddle the center groove of the breadboard.

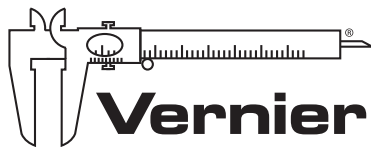
## Warranty

Vernier warrants this product, excluding consumables, to be free from defects in materials and workmanship for a period of five years from the date of shipment to the customer. Consumables are clearly marked in the What's Included section of this User Manual.

## Disposal

When disposing of this electronic product, do not treat it as household waste. Its disposal is subject to regulations that vary by country and region. This item should be given to an applicable collection point for the recycling of electrical and electronic equipment. By ensuring that this product is disposed of correctly, you help prevent potential negative consequences on human health or on the environment. The recycling of materials will help to conserve natural resources. For more detailed information about recycling this product, contact your local city office or your disposal service.

The symbol, shown here, indicates that this product must not be disposed of in a standard waste container.



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Rev. 12/29/2015

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