WHADDA

EXCITING ELECTRONICS

MANUAL

EN RGB LED RING SHIELD FOR MICRO:BIT

WPSE475

whadda.com

Introduction

To all residents of the European Union
Important environmental information about this product
This symbol on the device or the package indicates that disposal of the device after its lifecycle could harm the environment. Do not dispose of the unit (or batteries) as unsorted municipal waste; it should be taken to a specialized company for recycling. This device should be returned to your distributor or to a local recycling service. Respect the local environmental rules.
If in doubt, contact your local waste disposal authorities.

Thank you for choosing Whadda! Please read the manual thoroughly before bringing this device into service. If the device was damaged in transit, do not install or use it and contact your dealer.

Safety Instructions

Read and understand this manual and all safety signs before using this appliance.

For indoor use only.

- This device can be used by children aged from 8 years and above, and persons with reduced physical, sensory or mental capabilities or lack of experience and knowledge if they have been given supervision or instruction concerning the use of the device in a safe way and understand the hazards involved. Children shall not play with the device. Cleaning and user maintenance shall not be made by children without supervision.

General Guidelines

- Refer to the Velleman® Service and Quality Warranty on the last pages of this manual.
- All modifications of the device are forbidden for safety reasons. Damage caused by user modifications to the device is not covered by the warranty.
- Only use the device for its intended purpose. Using the device in an unauthorised way will void the warranty.
- Damage caused by disregard of certain guidelines in this manual is not covered by the warranty and the dealer will not accept responsibility for any ensuing defects or problems.
- Nor Velleman nv nor its dealers can be held responsible for any damage (extraordinary, incidental or indirect) – of any nature (financial, physical...) arising from the possession, use or failure of this product.
- Keep this manual for future reference.

What is Arduino®

Arduino® is an open-source prototyping platform based on easy-to-use hardware and software. Arduino® boards are able to read inputs – light-on sensor, a finger on a button or a Twitter message – and turn it into an output – activating of a motor, turning on an LED, publishing something online. You can tell your board what to do by sending a set of instructions to the microcontroller on the board. To do so, you use the Arduino programming language (based on Wiring) and the Arduino® software IDE (based on Processing). Additional shields/modules/components are required for reading a twitter message or publishing online. Surf to www.arduino.cc for more information

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Product overview

Make your Micro:Bit projects shine even brighter!

The Whadda RGB LED Ring Shield integrates 26 full-color RGB LEDS, a microphone and a passive buzzer into a shield that easily connects to your Micro:Bit, by using only 5 screws.

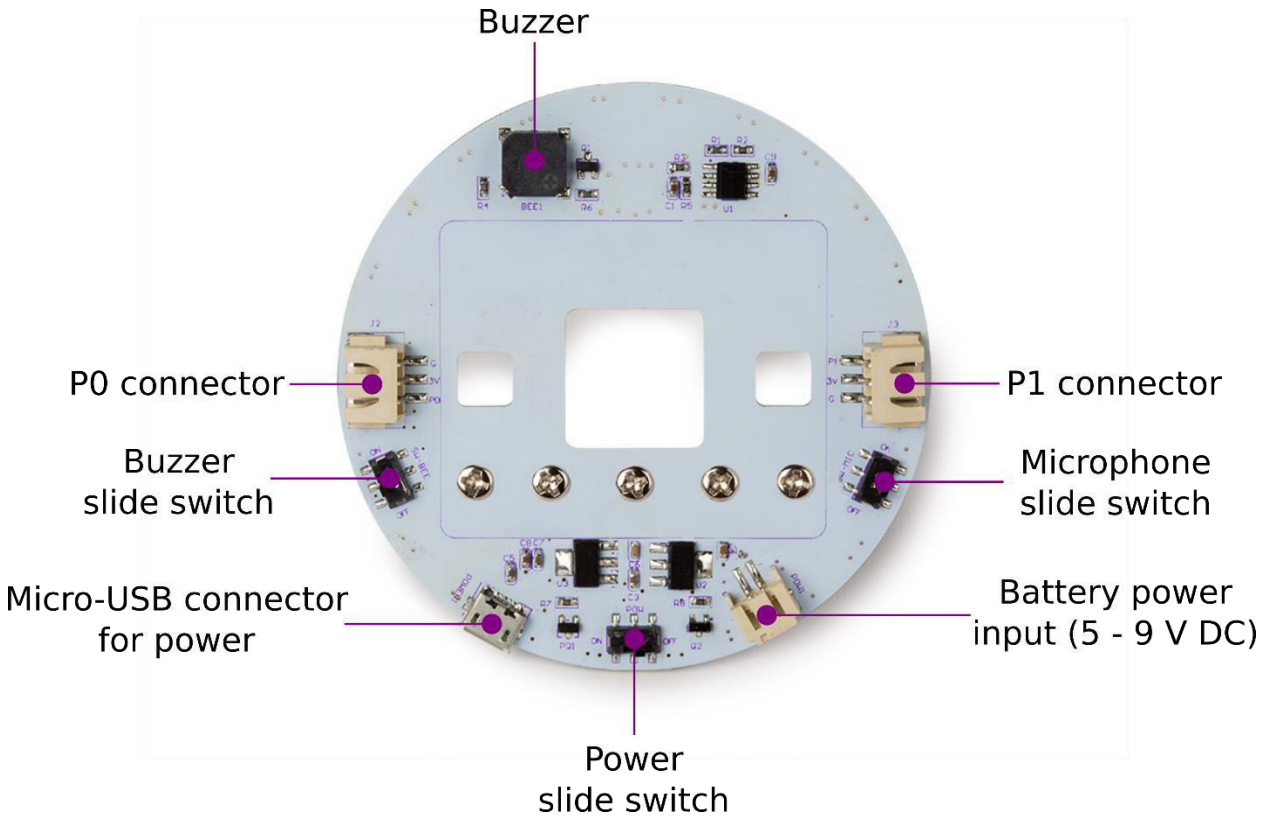
The shield is fully compatible with the Micro:Bit makecode blocks editor which makes it a breeze to program.

Specifications

Supply voltage: 5 – 9 V DC (battery power connector) or 5 V DC (USB connector)
Operating voltage: 3,3 V DC
Operating current: 350 mA
Maximum power: 1,5 W
Weight: 26 g
Dimensions (W x L x H): 80 x 80 x 10 mm

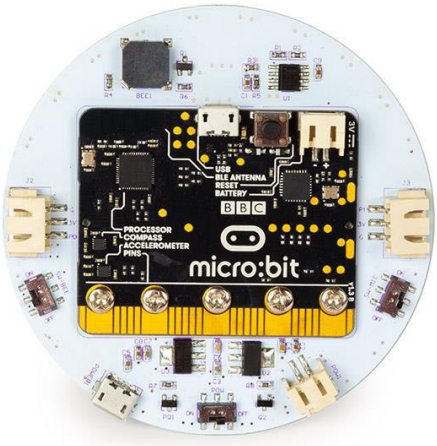
Wiring description

Connector/Switch designator	Name	Function
J2	P0 connector	Connect external devices to the P0 pin of micro:bit
SW-BEE	Buzzer slide switch	Turn OFF to ENABLE buzzer, turn ON to use external devices for P0 pin
POWER1	Micro-USB connector for power	Powers the RGB LED shield and the micro:bit
POW	Power slide switch	Controls the power to the RGB LED shield and the micro:bit
POW1	Battery power input	Battery power input (5 – 9 V DC) to power the RGB LED shield and the micro:bit.
SW-MIC	Microphone slide switch	Turn OFF to ENABLE microphone, turn ON to use external devices for P1 pin
J3	P1 connector	Connect external devices to the P1 pin of micro:bit
Pin	**Name**	**Arduino® connection**
Brown wire (VCC)	Supply voltage (5 - 24 V DC)	5V
Yellow wire (OUT)	Detection signal	Digital Pin
Blue wire (GND)	Ground	GND
Black wire (LEV)	Valid level selection	-



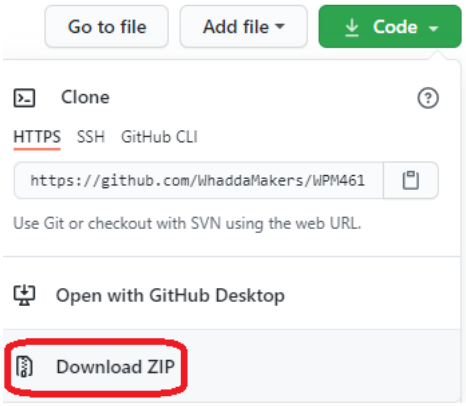
Connecting the shield to your Micro:Bit board

Use the 4 included screws and threaded inserts to mount your micro:bit to the RGB LED ring shield, as shown below:

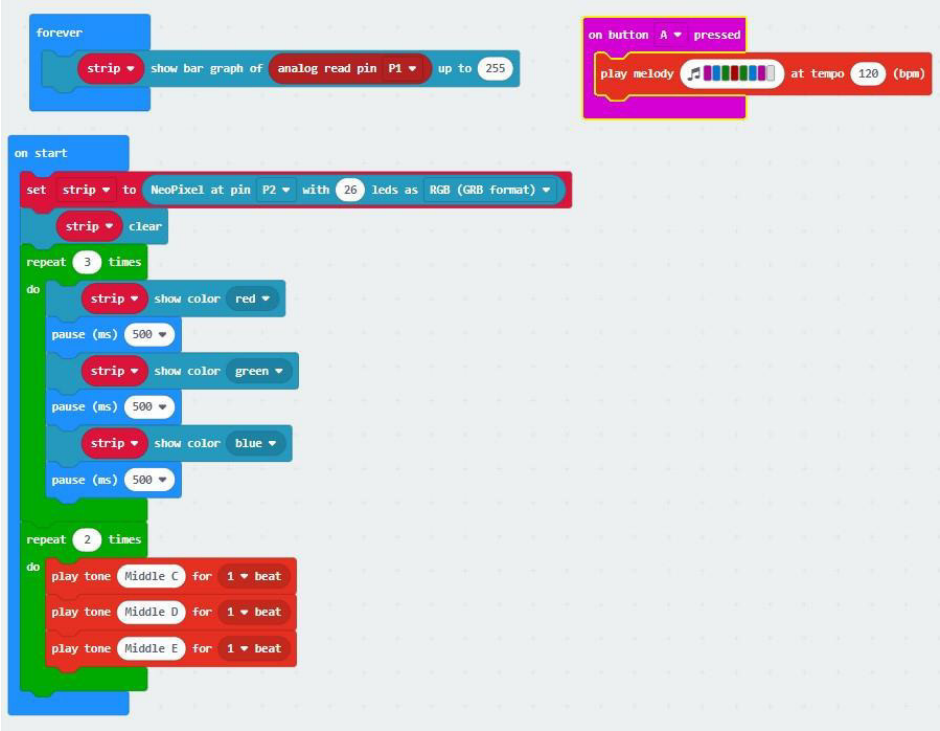


You can download the example micro:bit® program by going to the official Whadda github page: https://github.com/WhaddaMakers/RGB-LED-ring-shield-for-MicroBit

1. Click the "**Download ZIP**" link in the "**Code**" menu:



2. Unzip the downloaded file.
3. Go to makecode.microbit.org and start a new project
4. Drag the **example_code.hex** file that is located in the folder you unzipped to the empty makecode blocks workspace. The sample code blocks should appear on your screen:



5. Upload the code to your micro:bit. Make sure to use the built-in USB connector of the micro:bit to connect to your pc.
6. Once the program has been uploaded to the micro:bit, unplug the USB cable from the built-in USB connector of the micro:bit, and plug the cable into the micro-USB connector of the RGB LED ring shield labeled "**POWER**". Turn on the power switch on the RGB LED shield.

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