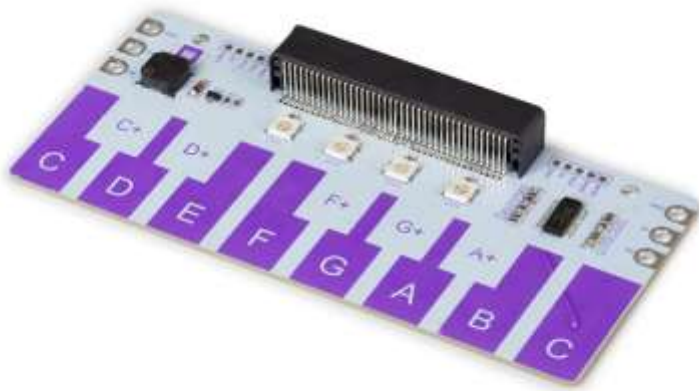


**EN** PIANO SHIELD FOR MICRO:BIT

WPSH455



## 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](http://www.arduino.cc) for more information

## Product overview

This piano shield is the ideal musical companion for your Micro:Bit project!

The shield features 13 touch sensitive piano keys spanning 1 full octave (including sharp/flat keys), a buzzer, and 4 RGB LEDs. It is super easy to connect your Micro:Bit to the shield, simply slot it into the provided card-edge connector, no screws or wires required!

The shield also breaks out various pins and interfaces to screw connectors and pin headers including power, ground, P2, P8, SPI and I2C bus. Perfect for advanced users who wish to connect additional devices to their Micro:Bit.

## Specifications

Supply voltage: 5 V DC (Micro-USB port) or 3 - 3.3 V DC (external battery pack)

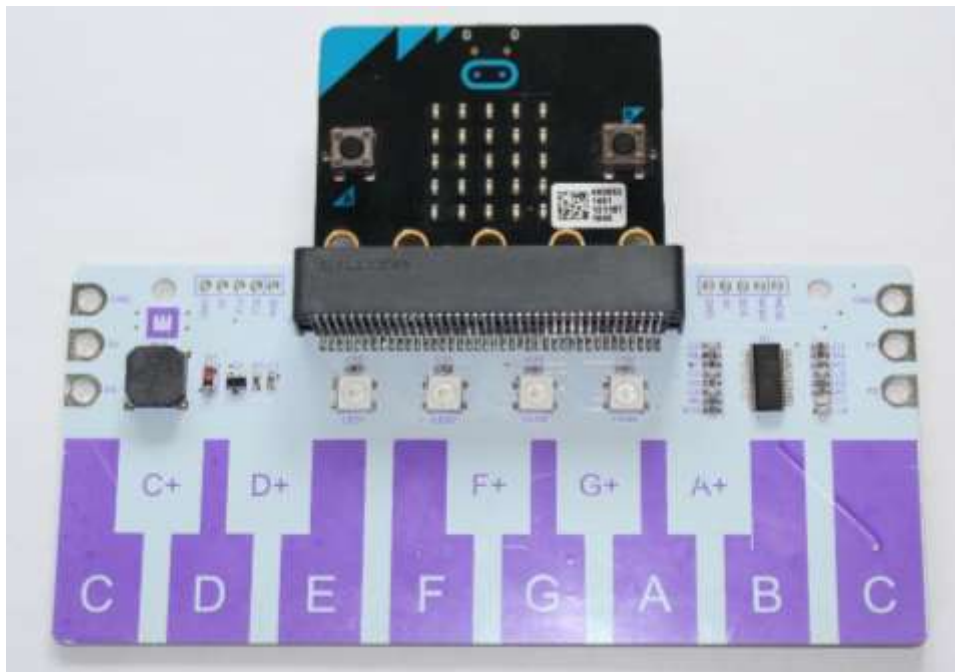
Control chip: TTP229-LSF capacitive touch controller

Weight: 30 g

Dimensions (W x L x H): 124 x 55 x 10 mm

## Connecting the shield to your Micro:Bit

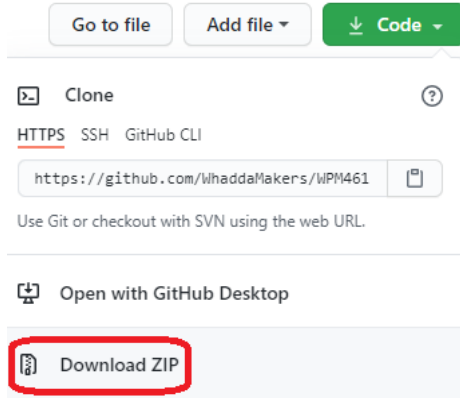
Make sure the LED matrix is on the front to ensure a proper connection, as shown below:



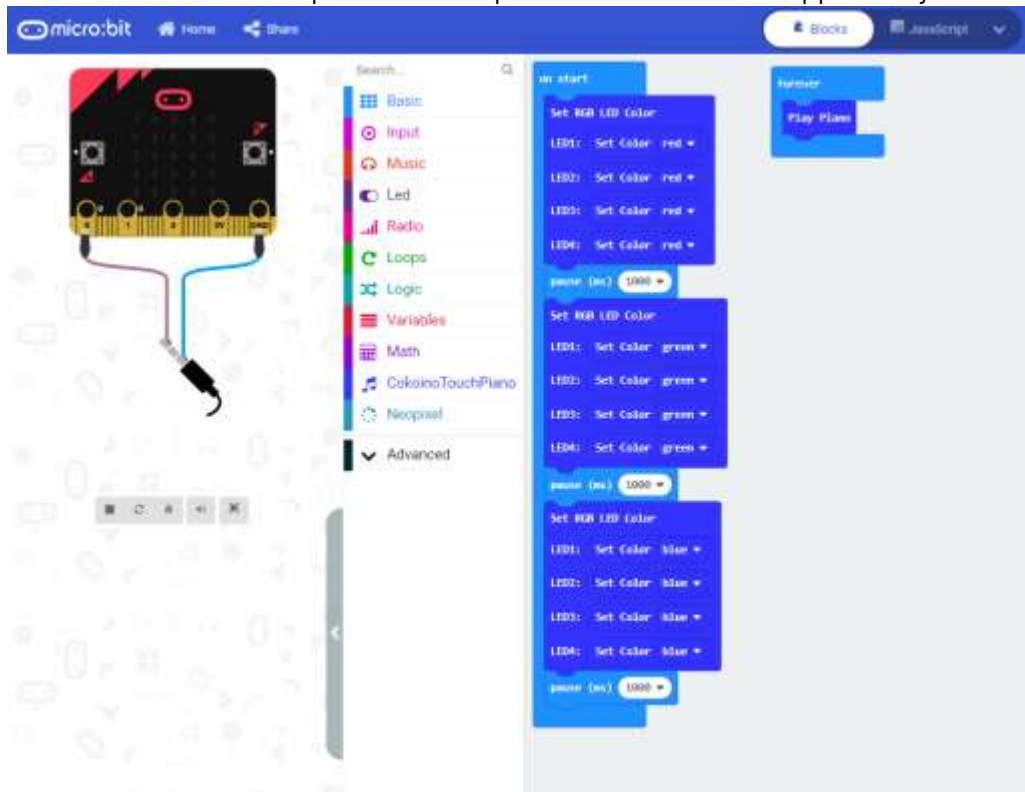
## Example program

You can download the example micro:bit® program by going to the official Whadda github page: [github.com/WhaddaMakers/piano-shield-microbit](https://github.com/WhaddaMakers/piano-shield-microbit)

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



2. Unzip the downloaded file.
3. Go to [makecode.microbit.org](https://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. The LEDs should start flashing red, green and blue once the upload has successfully completed, after which you can use capacitive touch keys marked with notes to play a tune!





[whadda.com](http://whadda.com)



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