# Hacking USB - USB Pico Ducky

Documentation & Guide

Taha Canturk

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# 1 App

### 1.1 What is the USB Pico Ducky

The USB Pico Ducky is a Hacking USB. The physical device is a Raspberry Pi Pico. A Hacking USB is a device that fools a computer into thinking it is an external input device such as a keyboard, this means that the computer is fooled into thinking that the user is typing while the usb is the one inputting keystrokes. Ask yourself, what can I do using an input device (e.g. Keyboard)? Whatever you can do using an inputer peripheral, you can do using USB Pico Ducky. If you want to, as mentioned in section 4.3, you can turn the hacking mode off and program the Raspberry Pi Pico as a normal microcontroller.

This Application is an IDE (Integrated Development Environment) for Duckyscript. Duckyscript is a simple scripting language made by the company Hak5, originally known for the USB Rubber Ducky, which costs around \$130 CAD (plus tax & fees). Even though the USB Rubber Ducky is more than double the price, the USB Rubber Ducky doesn't come with an IDE while the USB Pico Ducky does.

This might seem too good to be true. but, there is one main difference, it's that only Duckyscript 1.0 is supported on a USB Pico Ducky while USB Rubber Ducky supports Duckyscript 3.0. This will not affect most users because Duckyscript 3.0 just provides extra keywords but the possibiltiies are just as endless without them.

# 1.2 payloads

**Payloads** are a file written in duckyscript. Payloads basically have instructions given to the USB so that the USB knows what keystrokes to input.

A hacking USB only supports one mode at a time, it can either execute a payload when connected to a device, or it can be in setup mode where you upload the payload (more details can be found in section 2.1),

- 1.3 Saving & Editing
- 1.4 Shortcuts
- 1.5 Cosmetics
- 1.5.1 Existing Themes
- 1.5.2 Custom Themes
- 2 The USB
- 2.1 Uploading Payloads
- 2.2 Execute
- 2.2.1 Run Duckyscript Program
- 2.2.2 Run C/C++ Program

To run a C/C++/Python program. Please refer to section 4.3 to setup the microcontroller.

Since the USB Pico Ducky is a Raspberry Pi Pico MicroController, you can run a C/C++/Python program as you wish as long as the hacking mode is turned off. Please note that the IDE doesn't support these languages. Therefore use a different IDE or text editor of your choosing. The IDE only supports duckyscript.

# 3 Duckyscript Language

- 3.1 Tutorial
- 3.2 Keywords
- 4 Setup
- 4.1 Reset
- 4.1.1 When to Reset USB

Resetting the USB turns hacking mode off. More information can be found in section 4.3. You can also reset back to the USB Pico Ducky (hacking mode) as specified in more detail in section 4.2.

### 4.1.2 How to Reset USB

You can reset the USB at any time, all it takes is the click of a simple button in the Duckyscript IDE (on the toolbar). The button is at the most right on the toolbar. After clicking this button, a popup window will come up. Click

### 4.2 Hack Mode On

### 4.2.1 Duckyscript Language

### 4.3 Hack Mode Off

When the USB Pico Ducky hack mode is turned off, you can use the micro-controller using C/C++/MicroPython (resources in section 4.3.1).

### 4.3.1 C/C++/MicroPython Language

Here are some helpful links on setting up C/C++/Python for a Raspberry Pi Pico

### Windows Tutorials:

- 1. C Language
- 2. C++ Language
- 3. MicroPython Langauge

### Mac/Linux Tutorials:

- 1. C Language:
  - Tutorial in Linux
  - Tutorial in Mac
- 2. C++ Language:
  - Tutorial in Linux
  - <u>Tutorial in Mac</u>
- 3. MicroPython Language:
  - <u>Tutorial in Linux</u>
  - Tutorial in Mac

# Other Helpful Sources:

- MicroPython Tutorial
- Raspberry Pi Pico Documentation for C/C++

### 4.3.2 Upload

The Duckyscript IDE doesn't have C/C++ support at this time. To use C/C++ on the USB Pico Ducky. First, reset the USB as mentioned in section 4.1.2, then use a different IDE/texteditor to write a C/C++ program. You can reserach for more information in section 4.3.1.