

## Code example: USB power detection

Mercury V1 manual · v1.0

<https://d21c22pth15itr.cloudfront.net/support/mercuryv1/code-usb-detect/>

The Mercury altimeter has a voltage divider connected to the pin defined as USBDETECT.

If USB is present (5V) then the USBDETECT pin will read as 1 (HIGH), when no USB is connected it will read as 0 (LOW)



**Using Arduino IDE?** Our online programmer includes Mercury\_Pins.h by default so the pin names work without issue. If you are using Arduino IDE or another programmer, copy the Mercury\_Pins.h tab content and paste it into the top of your program.

```
/*
 * Mercury V1 (ESP32-C6) Detecting USB
 * You can detect the presense of a USB by reading the state of USBDETECT
 */
#include "Mercury_Pins.h"

void setup() {
  pinMode(USBDETECT, INPUT); // You need to set the USBDETECT as a input
  Serial.begin(115200);
  delay(1000);
}
void loop() {
  if(digitalRead(USBDETECT) == 1){
    // USB detected
  }
  if(digitalRead(USBDETECT) == 0){
    // No USB connected
  }
  delay(500);
}

#pragma once
/*
 * Mercury (ESP32-C6) Pin Definitions
 * Board-specific GPIO assignments
 */

// — Status LED (NeoPixel) —
#define LEDPOWER 3 // NeoPixel power (drive HIGH to enable)
#define LED 2 // NeoPixel data signal

// — I2C Bus —
#define SDA 21 // I2C data
#define SCL 22 // I2C clock

// — Sensor Power —
#define VACC 20 // Sensor power rail (drive HIGH to enable)

// — General Purpose Ports —
#define GP06 6 // GP06 port
#define GP07 7 // GP07 port

// — High Current Output —
#define OUT1 5 // High current output (e.g. pyro / relay)
```

```
// — Battery Bar LEDs —
#define BL1      4 // Battery LED 1 (lowest)
#define BL2     14 // Battery LED 2
#define BL3     15 // Battery LED 3
#define BL4     18 // Battery LED 4
#define BL5     19 // Battery LED 5 (highest)

// — Indicators —
#define DISK      8 // Disk activity LED

// — Analogue / Detection —
#define BATIN     0 // Battery voltage (1:1 divider)
#define USBDETECT 1 // USB power detect (HIGH = USB present)
#define BUTTON    9 // BUTTON on the board, boot button but can be used
```