usb

Version 2.

Generated by Doxygen 1.9.7

Chapter 1

usb

1.1 Attribution

- Title: USB file.
- Author: Terrortronics / Bradley Elenbaas (mr.elenbaas@gmail.com)
- Version: 2
- Date: September 25, 2023.

1.2 Intellectual Property

1.3 License

1.4 Description

The USB library.

1.5 Pins

- empty

1.6 Resources

- https://learn.adafruit.com/adafruit-feather-huzzah-esp8266/using-arduino-ide?gclid= CjwKCAjwh4ObBhAzEiwAHzZYU9fWXPNZrw8oHU1V8xxeILSFGz1O_08SyU8i6gU0pNtaYeBZTgg0exoCMEQQAvD_BwE
- https://www.silabs.com/developers/usb-to-uart-bridge-vcp-drivers?tab=downloads
- https://arduinogetstarted.com/faq/how-to-reset-arduino-by-programming

1.7 WARNINGS

- DO NO USE THIS EXAMPLE (https://reference.arduino.cc/reference/en/language/functions/co
(Reason #1): The readString function may cause memory leaks.
- DO NO USE THIS EXAMPLE (https://reference.arduino.cc/reference/en/language/functions/co
(Reason #2): The Serial blocking code breaks on Unity Standalone Windows builds.
- DO NOT USE the pySerial.write() call inside any PyGame code, and instead use the Thread library to seperate their respective blocks with flags to move data back and forth.

Chapter 2

File Index

2.1 File List

Here is a list of all files with brief descriptions:

Chapter 3

File Documentation

3.1 usb.ino File Reference

Enumerations

- enum messages { startMessage = START_MESSAGE , resetMessage = RESET_MESSAGE }

Functions

- void setup ()
- void loop ()
- void reset ()
- void start ()

Variables

- const int SERIAL_BAUD_RATE = 9600
- const int START_MESSAGE = 48
- const int RESET_MESSAGE = 49
- int incomingMessage
- const String CONFIG = ¨type:config,filename:joystick_manager,function:reset,delimiters: cm0;\n¨
- int COUNTER_MAX = 4
- int counter

3.1.1 Enumeration Type Documentation

3.1.1.1 messages

```
enum messages
```

An enum for parsing an incoming byte. Starts with ASCII 0 (48) and goes up from there.

Enumerator

startMessage	
resetMessage	

3.1.2 Function Documentation

3.1.2.1 loop()

```
void loop ( )
```

The main function.

3.1.3 WARNING

- Remember to consume the incoming bytes.
  - The error does not occur when using the usb.c or usb.py files.
  - The error does occur when reading/writing in a PyGame application.

3.1.3.1 reset()

```
void reset ( )
```

A stub function to be populated on a per-project basis.

3.1.3.2 setup()

```
void setup ( )
```

Set up Serial.

3.1.3.3 start()

```
void start ( )
```

Outputs the CONFIG string.

3.1.4 Variable Documentation

3.1.4.1 CONFIG

```
const String CONFIG = ¨type:config,filename:joystick_manager,function:reset,delimiters:  cm0;\n¨
```

The config to be parsed by a PC application.

3.1.4.2 counter

```
int counter
```

The counter to be output.

3.1.4.3 COUNTER_MAX

```
int COUNTER_MAX = 4
```

The maximum count for counter.

3.1.4.4 incomingMessage

```
int incomingMessage
```

A single incoming byte.

3.1.4.5 RESET_MESSAGE

```
const int RESET_MESSAGE = 49
```

Associated with the reset() function.

3.1.4.6 SERIAL_BAUD_RATE

```
const int SERIAL_BAUD_RATE = 9600
```

Baud rate (pair with PC).

3.1.4.7 START_MESSAGE

```
const int START_MESSAGE = 48
```

Associated with the start() function.

Index