

# The PlayPal

## User Manual



Written by Jack Stephens

6/3/2024

## Contents

Installation .....	2
Using the PlayPal .....	4
Getting to your Webapp .....	4
Switching Buttons .....	4
Activating the Toy.....	4
Configuring Button Timeout .....	4
Accessibility .....	5
Highlight Buttons.....	5
Increase Toy Size .....	5
High Contrast Colors .....	5
Troubleshooting.....	6
Not Able to Access Webapp.....	6
Button States not Changing/not Working .....	6

# Installation

1. Install [Arduino IDE](#)

## Downloads



### Arduino IDE 2.3.2

The new major release of the Arduino IDE is faster and even more powerful! In addition to a more modern editor and a more responsive interface it features autocompletion, code navigation, and even a live debugger.

For more details, please refer to the [Arduino IDE 2.0 documentation](#).

Nightly builds with the latest bugfixes are available through the section below.

**SOURCE CODE**

The Arduino IDE 2.0 is open source and its source code is hosted on [GitHub](#).

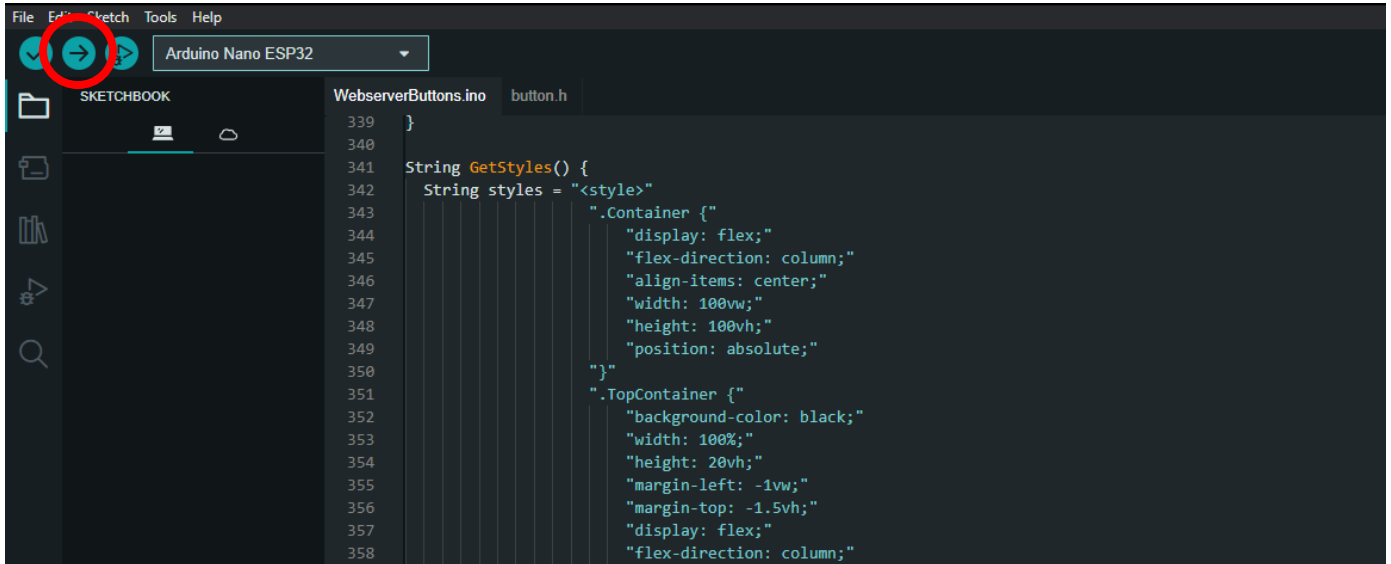
#### DOWNLOAD OPTIONS

**Windows** Win 10 and newer, 64 bits  
**Windows** MSI installer  
**Windows** ZIP file  
**Linux** AppImage 64 bits (X86-64)  
**Linux** ZIP file 64 bits (X86-64)  
**macOS** Intel, 10.15: "Catalina" or newer, 64 bits  
**macOS** Apple Silicon, 11: "Big Sur" or newer, 64 bits

[Release Notes](#)

2. Install the latest release of [PlayPal software](#)
3. Extract the contents of the release to a safe location
4. Run Arduino IDE
5. Open the WebserverButtons.cpp file in Arduino IDE
  - a. Located in the extracted files at  
Code/AsyncButtonServer/AsyncButtonServer/src/WebserverButtons.cpp
6. Update the credentials found on *line 24 and 25* with your network credentials

## 7. Upload the files to your Arduino ESP32



## 8. Turn on PlayPal

## 9. An LED will light up to signify a WiFi connection

## 10. Enjoy

# Using the PlayPal

## Getting to your Webapp

In the serial output of your Arduino ESP32 there should be a IP address to connect to. Enter this IP address into your browser while on the same network as the Arduino ESP32 and access your webapp

## Switching Buttons

To switch buttons, all you must do is select the button on the image of the toy in the webapp. These are highlighted by black boxes to indicate where you can click

## Activating the Toy

After switching to the button you want to activate, press your switch and watch your Linkimal(s) do that action!

## Configuring Button Timeout

If you want to change the amount of time the button is put in timeout after a press, you must change the value of the `buttonTimeoutTime` variable.

The variable can be found on *line 58* of the `Code/AsyncButtonServer/AsyncButtonServer/src/WebserverButtons.cpp`

The value is in milliseconds

# Accessibility

At the bottom of your webapp are some accessibility options, here are descriptions of their uses:

## Highlight Buttons

This feature will highlight the buttons and make them and their hitboxes more visible

## Increase Toy Size

This will increase the size of the image of the toy on your webapp. This will allow you to easier click on the buttons

## High Contrast Colors

We use high contrast colors on the webapp to make it as visible as possible

# Troubleshooting

## Not Able to Access Webapp

Ensure the Arduino is connected to WiFi by checking the indicating LED.

Turn Arduino off and back on again

Make sure network credentials have been set in the main file

## Button States not Changing/not Working

Reset Arduino

Look for serial monitor output

Ensure all pins are connected correctly