RobotDyn Keypad 3x4 Analog library for Arduino

1.0.0

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Chapter 1

RobotDyn library for Arduino

This is a RobotDyn Keypad 3x4 with analog output library for Arduino.

Hardware

Any Arduino / ESP8266 / ESP32 board with an ADC (Analog Digital Converter).

Pins

Keypad	Any Arduino board	WeMos D1 & R2 / Node MCU	WeMos LOLIN32
VCC	5V (or 3.3V)	3V3	3V3
GND	GND	GND	GND
OUT	A0 (ANALOG pin)	A0 (ADC0)	A0 = SVP (GPIO36)

Example

Examples | Erriez RobotDyn Keypad 3x4 Analog:

- PrintADC
- Example

Usage

Initialization

```
{c++}
#include <Arduino.h>
#include <RobotDynKeypad3x4Analog.h>

// Connect the keypad OUT pin to the ANALOG pin of an Arduino / ESP8266 / ESP32 board
#define KEYPAD_ANALOG_PIN   A0

// Create keypad object
RobotDynKeypad3x4Analog keypad(KEYPAD_ANALOG_PIN);
```

Get buttons

```
{c++}
// Read buttons:
// -1:    Buttons up
// 0..11: Button down
int keypadState = keypad.getButtons();
```

Library dependencies

- None.

Documentation

- Doxygen online HTML
- Doxygen PDF

Library installation

Please refer to the Wiki page.

Chapter 2

Class Index

2.1 Class List

Here are the classes, structs, unions and interfaces with brief descriptions:

RobotDynKeypad3x4Analog
RobotDyn Keypad 3x4 Analog class 7

Chapter 3

File Index

3.1 File List

Here is a list of all documented files with brief descriptions:

RobotDynKeypad3x4Analog.cpp
RobotDyn Keypad 3x4 Analog library for Arduino 9
RobotDynKeypad3x4Analog.h
RobotDyn Keypad 3x4 Analog library for Arduino 9

Chapter 4

Class Documentation

4.1 RobotDynKeypad3x4Analog Class Reference

RobotDyn Keypad 3x4 Analog class.

`#include <RobotDynKeypad3x4Analog.h>`

Public Member Functions

- RobotDynKeypad3x4Analog (uint8_t analogPin, uint16_t maxAnalogValue=MAX_ANALOG_VALUE)
  Constructor LCDKeypadShield class.
- virtual int getButtons ()
  Read buttons from one analog pin.

Protected Attributes

- uint16_t _maxAnalogValue
  Max analog value.
- uint8_t _analogPin
  Analog pin number.

4.1.1 Detailed Description

RobotDyn Keypad 3x4 Analog class.

Definition at line 50 of file RobotDynKeypad3x4Analog.h.

4.1.2 Constructor & Destructor Documentation

4.1.2.1 RobotDynKeypad3x4Analog()

```
RobotDynKeypad3x4Analog::RobotDynKeypad3x4Analog (
            uint8_t analogPin,
            uint16_t maxAnalogValue = MAX_ANALOG_VALUE )  [explicit]
```

Constructor LCDKeypadShield class.

Parameters

analogPin	Analog pin number
maxAnalogValue	Maximum value of the ADC value may be slightly different. This may be compensated, but was not needed during testing with several different boards.

Definition at line 62 of file RobotDynKeypad3x4Analog.cpp.

4.1.3 Member Function Documentation

4.1.3.1 getButtons()

```
int RobotDynKeypad3x4Analog::getButtons ( )  [virtual]
```

Read buttons from one analog pin.

Returns

-1: Button up 0..11: Button down

Definition at line 74 of file RobotDynKeypad3x4Analog.cpp.

The documentation for this class was generated from the following files:

- RobotDynKeypad3x4Analog.h
- RobotDynKeypad3x4Analog.cpp

Chapter 5

File Documentation

5.1 RobotDynKeypad3x4Analog.cpp File Reference

RobotDyn Keypad 3x4 Analog library for Arduino.

```
#include "RobotDynKeypad3x4Analog.h"
```

5.1.1 Detailed Description

RobotDyn Keypad 3x4 Analog library for Arduino.

Source: https://github.com/Erriez/RobotDynKeypad3x4Analog

Experimental ADC keypad values +----—+-------—+------—+-------—+ | AVR | ESP8266 | ESP32 | Button | +----—+-------—+-------—+-------—+ | 0 | 0 | 0 | None | +--------------------—+ | 490 | 467 | 1700 | 11 | |o OUT GND VCC o| | 510 | 490 | 1800 | 0 | +--------------------—+ | 540 | 515 | 1900 | 10 | | | | 570 | 546 | 2050 | 9 | | 1 2 3 | | 600 | 580 | 2170 | 8 | | | | 640 | 615 | 2300 | 7 | | 4 5 6 | | 680 | 660 | 2500 | 6 | | | | 730 | 700 | 2700 | 5 | | 7 8 9 | | 790 | 760 | 2940 | 4 | | | | 850 | 825 | 3250 | 3 | | 10 0 11 | | 930 | 900 | 3700 | 2 | |o o| | 1023 | 990 | 4095 | 1 | +--------------------—+ +----—+-------—+------—+-------—+ TOP VIEW

5.2 RobotDynKeypad3x4Analog.h File Reference

RobotDyn Keypad 3x4 Analog library for Arduino.

```
#include <Arduino.h>
```

Classes

- class RobotDynKeypad3x4Analog
  RobotDyn Keypad 3x4 Analog class.

5.2.1 Detailed Description

RobotDyn Keypad 3x4 Analog library for Arduino.

Source: https://github.com/Erriez/RobotDynKeypad3x4Analog

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