Erriez LCD Keypad Shield library for Arduino

1.1.0

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Contents

Chapter 1

LCD Keypad Shield library for Arduino

This is a LCD Keypad Shield library for Arduino which supports the following features:

- 2x16 LCD using `LiquidCrystal.h`.
- 5 pushbuttons connected to analog pin A0.
- Button debouncing.
- Backlight control (on/off).

Hardware

Any Arduino board, tested on Arduino UNO.

Pins

2x16 LCD pins	UNO/Leonardo/Mega2560
RS	8
EN	9
D0	4
D1	5
D2	6
D3	7
Backlight	10

Example

Arduion IDE | Examples | Erriez LCDKeypadShield:

- `LCDKeypadShield`

Documentation

- Online HTML
- Download PDF

Usage

Initialization

```
1 {c++}
2 #include <ErriezLCDKeypadShield.h>
3
4 LCDKeypadShield shield;
```

Backlight control

Backlight on

```
1 {c++}
2 shield.backlightOn();
```

Backlight off

```
1 {c++}
2 shield.backlightOff();
```

Display control

All `LCDKeypadShield.h` functions can be used.

Clear display

```
1 {c++}
2 shield.clear();
```

Set cursor

```
1 {c++}
2 // First character first line
3 shield.setCursor(0, 0);
4
5 // First character second line
6 shield.setCursor(0, 1);
7
8 // Last character second line
9 shield.setCursor(15, 1);
```

Print text

```
1 {c++}
2 shield.print(F("Push the buttons"));
```

Button control

Get buttons

```
1 {c++}
2 LCDButtons button = shield.getButtons();
3 // Returned button enum:
4 //   ButtonNone
5 //   ButtonRight
6 //   ButtonUp
7 //   ButtonDown
8 //   ButtonLeft
9 //   ButtonSelect
```

Library dependencies

- Arduino's build-in `LiquidCrystal` library.

Library installation

Please refer to the `Wiki` page.

Other Arduino Libraries and Sketches from Erriez

- `Erriez Libraries and Sketches`

Chapter 2

Hierarchical Index

2.1 Class Hierarchy

This inheritance list is sorted roughly, but not completely, alphabetically:

Chapter 3

Class Index

3.1 Class List

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

Chapter 4

File Index

4.1 File List

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

Chapter 5

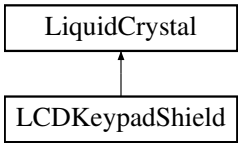
Class Documentation

5.1 LCDKeypadShield Class Reference

LCD Keypad Shield class.

`#include <ErriezLCDKeypadShield.h>`

Inheritance diagram for LCDKeypadShield:



Public Member Functions

- LCDKeypadShield ()
  Constructor LCDKeypadShield class.
- LCDButton getButtons ()
  Read buttons from one analog pin.
- void backlightOn ()
  Turn backlight LED on.
- void backlightOff ()
  Turn backlight LED off.

5.1.1 Detailed Description

LCD Keypad Shield class.

Definition at line 71 of file ErriezLCDKeypadShield.h.

5.1.2 Constructor & Destructor Documentation

5.1.2.1 LCDKeypadShield::LCDKeypadShield ( )

Constructor LCDKeypadShield class.

This initializes the built-in LiquidCrystal library in 4-bit mode:

- RS, EN, D0, D1, D2 and D3 pins

Definition at line 47 of file ErriezLCDKeypadShield.cpp.

5.1.3 Member Function Documentation

5.1.3.1 LCDButton LCDKeypadShield::getButtons ( )

Read buttons from one analog pin.

Returns

LCDButton enum

Definition at line 66 of file ErriezLCDKeypadShield.cpp.

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

- ErriezLCDKeypadShield.h
- ErriezLCDKeypadShield.cpp

Chapter 6

File Documentation

6.1 ErriezLCDKeypadShield.cpp File Reference

LCD Keypad Shield library for Arduino.

```
#include <pgmspace.h>
#include "ErriezLCDKeypadShield.h"
```

6.1.1 Detailed Description

LCD Keypad Shield library for Arduino.

Source: https://github.com/Erriez/ErriezLCDKeypadShield Documentation: https://erriez.github.io/ErriezLCDKeypadShield

6.2 ErriezLCDKeypadShield.h File Reference

LCD Keypad Shield library for Arduino.

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

Classes

- class LCDKeypadShield

  LCD Keypad Shield class.

Macros

- #define LCD_PIN_RS 8

  LCD RS pin.
- #define LCD_PIN_EN 9

  LCD EN pin.
- #define LCD_PIN_D0 4

  LCD D0 pin.
- #define LCD_PIN_D1 5

  LCD D1 pin.
- #define LCD_PIN_D2 6

  LCD D2 pin.
- #define LCD_PIN_D3 7

  LCD D3 pin.
- #define LCD_BACK_LIGHT_PIN 10

  LCD backlight pin.

Enumerations

- enum LCDButton {
  ButtonNone = 0, **ButtonRight** = 1, **ButtonUp** = 2, **ButtonDown** = 3,
  ButtonLeft = 4, **ButtonSelect** = 5 }

  LCD buttons.

6.2.1 Detailed Description

LCD Keypad Shield library for Arduino.

Source: https://github.com/Erriez/ErriezLCDKeypadShield Documentation: https://erriez.github.io/ErriezLCDKeypadShield

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