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## Input Shield For Arduino SKU: DFR0008



### Contents

- [1 Introduction](#)
- [2 Specification](#)
- [3 Pin Allocation](#)
- [4 Sample Code1](#)
- [5 Sample Code2](#)
- [6 Version history](#)

### Introduction

The upgraded Arduino Input Shield includes a two axis mini joystick (with moment switch) as well as four colored push buttons(Red, Yellow, Blue, Green). The reserved APC220 Radio Data Module(SKU:TEL0005) interface and the Xbee interface is designed to facilitate the realization of wireless rocker button controller. The shield can be easily stacked on top of your Arduino boards. It can also connect with OLED2864 & OLED9664.

### Specification

- Dual axis mini joystick
- Connects to your Arduino using male to male pin headers
- Comes with 2 colored push buttons

- The use of imported high-quality potentiometers and the PS button rocker. The rocker output an analog signal is \*to achieve vertical and horizontal control, which is attached to four keys at the same time. It also has two \*great circle button caps (cap color random round keys), a rocker button and a reset button.
- The use of stack design is so that the plug can easily on Arduino Duemilanove or DFRduino Romeo.
- The reserved APC220/Bluetooth module interface is to facilitate the realization of wireless rocker button controller.
- The remaining unused ports are extended out of standby.

## Pin Allocation

Pin	Function
Digital 8	UP
Analog 1	Down
Digital 9	Left
Digital 12	Right
Analog 3	X axis
Analog 2	Y axis

## Sample Code1

```

/*
 *   function:      test dfr0008
 *   by:            lisper (leyapin@gmail.com)
 *   created:      2013-11-04
 *
 */

#define up_button      8
#define down_button    A1
#define left_button    9
#define right_button   12

#define stick_button   A0
#define level_stick    A3
#define vertical_stick A2

void setup () {

```

```
Serial.begin (9600);

pinMode (left_button, INPUT);
pinMode (right_button, INPUT);
pinMode (up_button, INPUT);
pinMode (down_button, INPUT);

pinMode (stick_button , INPUT);
pinMode (level_stick , INPUT);
pinMode (vertical_stick, INPUT);

}

void loop () {
    int left_state = digitalRead (left_button);
    int right_state = digitalRead (right_button);
    int up_state = digitalRead (up_button);
    int down_state = digitalRead (down_button);

    int stick_state = digitalRead (stick_button);

    int level_value = analogRead (level_stick);
    int vertical_value = analogRead (vertical_stick);

    Serial.print ("up=");
    Serial.print (up_state);
    Serial.print (" down=");
    Serial.print (down_state);
    Serial.print (" left=");
    Serial.print (left_state);
    Serial.print (" right=");
```

```
    Serial.print (right_state);
    Serial.print (" stick=");
    Serial.print (stick_state);

    Serial.print (" vertical=");
    Serial.print (vertical_value);
    Serial.print (" level=");
    Serial.println (level_value);

    delay (500);
}
```

## Sample Code2

```
/*
 *      function:      test dfr0008
 *      by:            lisper (leyapin@gmail.com)
 *      created:      2013-11-04
 *
 */
#include <Arduino.h>

#define up_button      8
#define down_button    A1
#define left_button    9
#define right_button   12

#define stick_button  A0
#define level_stick   A3
#define vertical_stick A2

int vertical_value=0; //current value
```

```

int level_value=0;           //current value
int vertical_valuep=0; //previous value
int level_valuep=0;         //previous value

uint16_t key_delay_time = 20; // for ispressed ()

//
void setup () {
    pinMode (stick_button, INPUT);
    pinMode (level_stick, INPUT);
    pinMode (vertical_stick, INPUT);

    pinMode (up_button, INPUT);
    pinMode (down_button, INPUT);
    pinMode (left_button, INPUT);
    pinMode (right_button, INPUT);

    Serial.begin (9600);
}

//
void loop () {

    vertical_value = analogRead (vertical_stick);
    level_value = analogRead (level_stick);

    if (vertical_value != vertical_valuep) {
        Serial.print ("vertical=");
        Serial.println (vertical_value);
    }
    if (level_value != level_valuep) {
        Serial.print ("level=");
        Serial.println (level_value);
    }
}

```

```
vertical_valuep = vertical_value;
level_valuep = level_value;

if (ispresed (up_button))
    Serial.println ("up pressed");
if (ispresed (down_button))
    Serial.println ("down pressed");
if (ispresed (left_button))
    Serial.println ("left pressed");
if (ispresed (right_button))
    Serial.println ("right pressed");
if (ispresed (stick_button))
    Serial.println ("stick pressed");
delay (10);
}

//check button
boolean ispresed (uint8_t key) {
    if (digitalRead (key) == 0) {
        delay (key_delay_time);
        if (digitalRead (key) == 0)
            return true;
    }
    return false;
}
```