

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

```
LiquidCrystal lcd(8, 9, 4, 5, 6, 7);
```

```
#define btnNONE    1
```

```
#define btnRIGHT  2
```

```
#define btnUP     3
```

```
#define btnDOWN   4
```

```
#define btnLEFT   5
```

```
#define btnSELECT 6
```

```
int adc_key_in;
```

```
int lcd_key;
```

```
int read_LCD_buttons() {
```

```
    adc_key_in = analogRead(0);
```

```
    if (adc_key_in > 1000) return btnNONE;
```

```
    if (adc_key_in < 50)   return btnRIGHT;
```

```
    if (adc_key_in < 250)  return btnUP;
```

```
    if (adc_key_in < 450)  return btnDOWN;
```

```
    if (adc_key_in < 650)  return btnLEFT;
```

```
    if (adc_key_in < 850)  return btnSELECT;
```

```
    return btnNONE;
```

```
}
```

```
void setup() {
```

```
    lcd.begin(16, 2);
```

```
    lcd.setCursor(0, 0);
```

```
    lcd.print("Push the buttons");
```

```
}
```

```
void loop() {
```

```
    lcd.setCursor(9, 1);
```

```
    lcd.print(millis() / 1000);
```

```
    lcd.setCursor(0, 1);
```

```
    lcd_key = read_LCD_buttons();
```

```
    switch (lcd_key) {
```

```
        case btnRIGHT:
```

```
            lcd.print("RIGHT ");
```

```
            break;
```

```
        case btnLEFT:
```

```
            lcd.print("LEFT  ");
```

```
    break;
case btnUP:
    lcd.print("UP  ");
    break;
case btnDOWN:
    lcd.print("DOWN ");
    break;
case btnSELECT:
    lcd.print("SELECT");
    break;
case btnNONE:
    lcd.print("NONE ");
    break;
}
}
```