JOYSTICK SHIELD

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OVERVIEW

INTRODUCTION

The Joystick Shield easily stacks on top of your ATmega 328 and turns it into a simple robotic and gaming controller. Six momentary push buttons (4+2), a two-axis thumb joystick and optional remote transmission adapter for Xbee and Bluetooth allows your ATmega 328 to control from remote location.

ATmega 328 digital pins D3-D8 are connected to momentary push buttons, when pressed they will pull the pin HIGH. Voltage across analog pin 0 varies proportionally for the vertical movement of the joystick, like wise horizontal movement can be tracked at analog pin 1.Xbee Dout is connected to D0(Rx) and Din is connected to D1(Tx) of ATmega 328 sheild.

FEATURES

- Jumbo yellow 4 keypad.
- Joystick.
- Two selection switch.
- RoHS compliant.
- Compatible with UNO R3 and Mega 2560.
- High quality PCB FR4 Grade with FPT Certified.

ARDUINO CODE

```
/*
* Project name:
Joystick Shield
* Copyright
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* Description:

* Test configuration:
MCU: ATMEGA328
Dev.Board: Arduino uno
Oscillator: 16 MHz
Software: Arduino
*/
const int analogInPin1 = A0; // Analog input pin that the potentiometer is
attached to x axis Joystick
const int analogInPin2 = A1; // Analog input pin that the potentiometer is
attached to y axis Joystick
const int buttonPin_A = 3; // the number of the pushbutton A pin
const int buttonPin_B = 4; // the number of the pushbutton B pin
const int buttonPin_C = 5; // the number of the pushbutton C pin
const int buttonPin_D = 6; // the number of the pushbutton D pin
const int buttonPin_E = 7; // the number of the pushbutton E pin
const int buttonPin_F = 8; // the number of the pushbutton F pin

int sensorValue = 0; // value read from the pot
int buttonState = 0; // variable for reading the pushbutton status
void setup() {
// initialize serial communications at 9600 bps:
Serial.begin(9600);
Serial.println("Joystick Shield with XBEE RDL ");
Serial.println(" " );

// initialize the pushbutton pin as an input:
pinMode(buttonPin_A, INPUT);
pinMode(buttonPin_B, INPUT);
pinMode(buttonPin_C, INPUT);
```
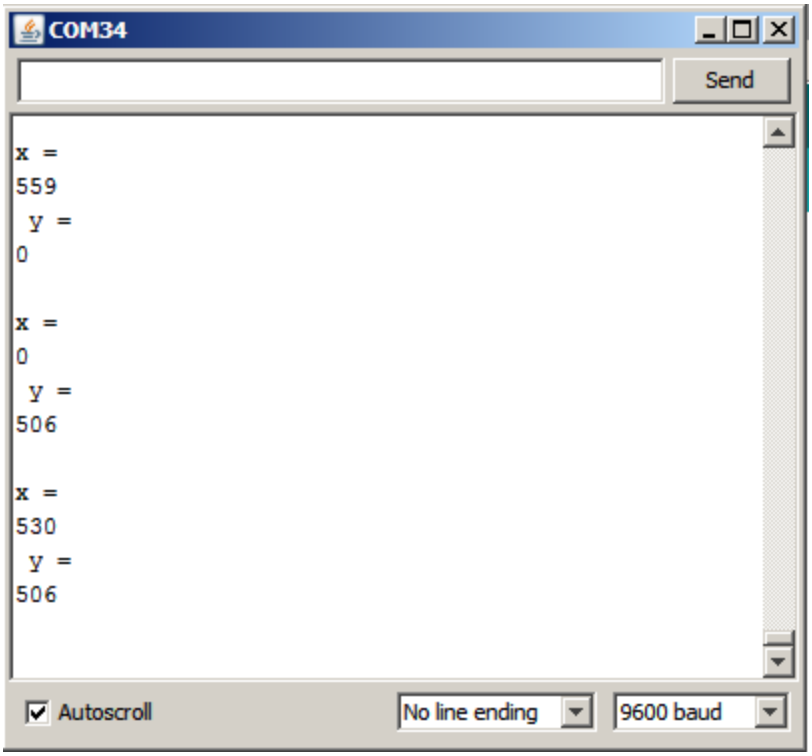
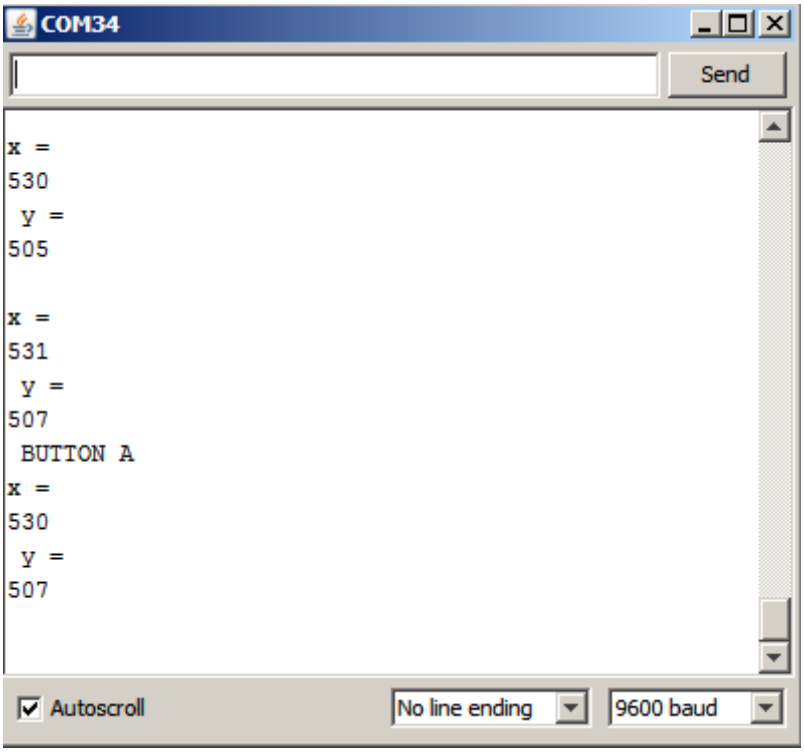

```
pinMode(buttonPin_D, INPUT);
pinMode(buttonPin_E, INPUT);
pinMode(buttonPin_F, INPUT);

}
void loop() {

// read the input on analog pin 0 x axis:
sensorValue = analogRead(analogInPin1);
Serial.print("x = " );
Serial.print(sensorValue); // print out the value you read:

// read the input on analog pin 1 y axis:
sensorValue = analogRead(analogInPin2);
Serial.print(" y = " );
Serial.print(sensorValue); // print out the value you read:

// read the state of the pushbutton A value:
buttonState = digitalRead(buttonPin_A);
// check if the pushbutton A is pressed.
// if it is, the buttonState is HIGH:
if (buttonState == HIGH) {
Serial.print(" BUTTON A " );
}

// read the state of the pushbutton B value:
buttonState = digitalRead(buttonPin_B);
// check if the pushbutton B is pressed.
// if it is, the buttonState is HIGH:
if (buttonState == HIGH) {
Serial.print(" BUTTON B " );
}

// read the state of the pushbutton C value:
buttonState = digitalRead(buttonPin_C);
// check if the pushbutton C is pressed.
// if it is, the buttonState is HIGH:
```

```
if (buttonState == HIGH) {
Serial.print(" BUTTON C " );
}
// read the state of the pushbutton D value:
buttonState = digitalRead(buttonPin_D);
// check if the pushbutton D is pressed.
// if it is, the buttonState is HIGH:
if (buttonState == HIGH) {
Serial.print(" BUTTON D " );
}

// read the state of the pushbutton E value:
buttonState = digitalRead(buttonPin_E);
// check if the pushbutton E is pressed.
// if it is, the buttonState is HIGH:
if (buttonState == HIGH) {
Serial.print(" BUTTON E " );
}

// read the state of the pushbutton F value:
buttonState = digitalRead(buttonPin_F);
// check if the pushbutton F is pressed.
// if it is, the buttonState is HIGH:
if (buttonState == HIGH) {
Serial.print(" BUTTON F " );
}
Serial.println(" " );
delay(1000);
}
```

OUTPUT


COM34
Send
x =
559
y =
0
x =
0
y =
506
x =
530
y =
506
Autoscroll
No line ending
9600 baud


COM34
Send
x =
530
y =
505
x =
531
y =
507
BUTTON A
x =
530
y =
507
Autoscroll
No line ending
9600 baud

RELATED PRODUCTS

4 KEYS KEYPAD

XBee

ATMEGA328 DEVELOPMENT BOARD