HUB

```
import processing.serial.*;
import net.java.games.input.*;
import org.gamecontrolplus.*;
import org.gamecontrolplus.gui.*;



ControlIO control;  //INitializes controller library
int x,y,z,a,b,c,d,X,Y,NX,NY,But,LSTICK,RSTICK,START,D,STAT;  // Create Variables
ControlDevice device;

import processing.serial.*;

Serial myPort;  // Create object from Serial class
public static final char HEADER = &amp;apos;H&amp;apos;;
public static final char A_TAG = &amp;apos;M&amp;apos;;
public static final char B_TAG = &amp;apos;X&amp;apos;;

void setup()
{
 size(512, 512);
 ControlButton button;
 ControlHat hat;
 ControlSlider slider;
 control = ControlIO.getInstance(this);
 device = control.getMatchedDevice("ArdCont");

 String portName = Serial.list()[0]; // Connects to HUB
 myPort = new Serial(this, portName, 9600);
}

void draw(){
// Reads controller values
y=-1*int(map(device.getSlider("LSTICKY").getValue(), 0,1,0,255));
x=int(map(device.getSlider("LSTICKX").getValue(),0,1,0,255));
z=int(map(device.getSlider("TRIGGERS").getValue(),0,1,0,255));
a=int(device.getButton("A").getValue());
b=int(device.getButton("B").getValue());
c=int(device.getButton("X").getValue());
d=int(device.getButton("Y").getValue());
LSTICK=int(device.getButton("LSTICK").getValue());
```

```
RSTICK=int(device.getButton("RSTICK").getValue());
START=int(device.getButton("START").getValue());
D=int(device.getButton("DPAD").getValue());

STAT=0;

// Sets values based off of read controller values
if(a==8){But=2;}
if(b==8){But=3;}
if(c==8){But=1;}
if(d==8){But=0;}
if(START==8){STAT=24;};
if(LSTICK==8){STAT=25;};
if(D==0){D=1;};
if(RSTICK==8){D=0;};

if ( myPort.available() > 0) // Prints anything sent from hub to processing
 {
 String inString = myPort.readStringUntil(&apos;\n&apos;);
 if(inString != null) {
  print( inString ); // echo text string from Arduino
 }
 }



if (z<0) // If right trigger is pulled send data to HUB and print to Serial monitor
{

 print(But);
 print(",");
 print(D);
 print(",");
 println(STAT);

 sendMessage(A_TAG, But,D,STAT);
 }
}

void sendMessage(char tag, int a, int b, int c){
 // send the given index and value to the serial port
```

```
myPort.write(HEADER);
myPort.write(tag);
myPort.write((char)(a / 256)); // msb
myPort.write(a & 0xff);  //lsb
myPort.write((char)(b / 256)); // msb
myPort.write(b & 0xff);  //lsb
myPort.write((char)(c / 256)); // msb
myPort.write(c & 0xff);  //lsb

}
```