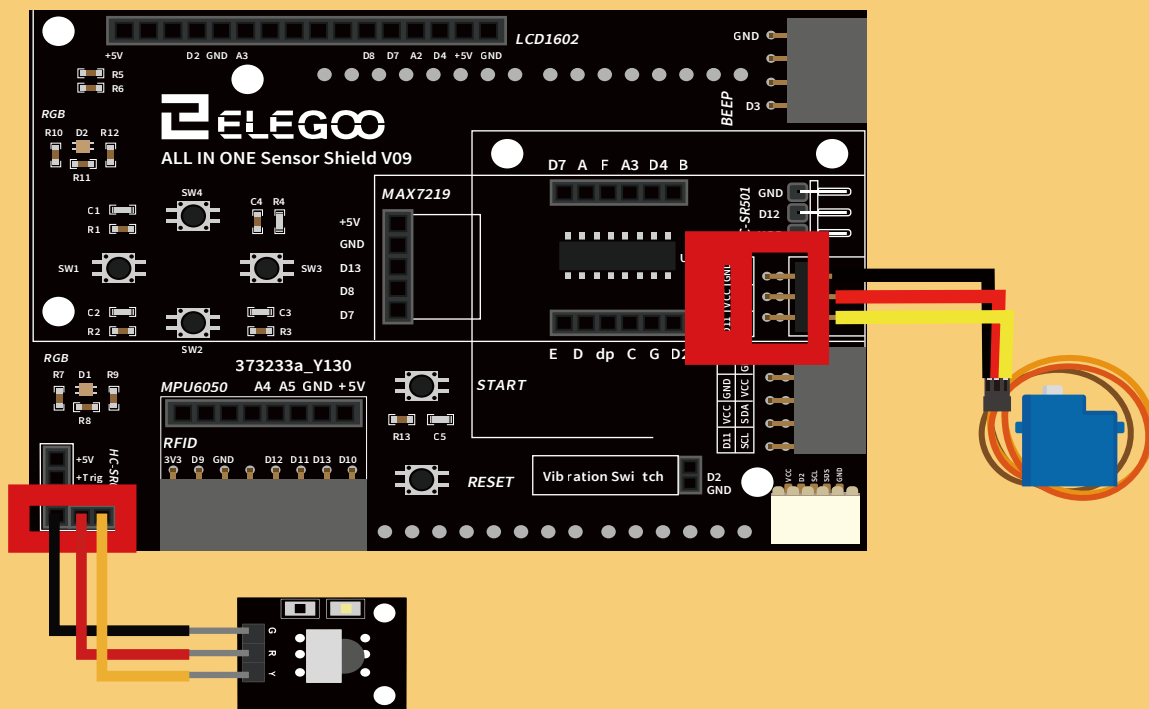# lesson

8

Infrared Remote Switch Light

Introduction:

By means of steering gear, infrared receiving module and infrared remote control, the remote control switch light can be realized without changing the line.

Component Required:

(1) x ELEGOO UNO R3
(1) x ALL IN ONE Sensor Shield
(1) x Infrared Receiving Module
(1) x Servo
(1) x Infrared Remote Control

Wiring Diagram:

Realization of Remote Control:

By programming different infrared keys corresponding to the steering gear to different angles, achieving the remote sensing control of the lamp, switch door, exhaust fan and other electrical appliances that has entity switches.

Programming Code:

1. Initializing the infrared module and steering gear module:

```
#include "IRremote.h"
#include <Servo.h>
/* After including the corresponding libraries,
  we can use the "class" like "Servo" created by the developer for us.
  We can use the functions and variables created in the libraries by creating
  objects like the following "myservo" to refer to the members in ".".*/

Servo myservo;
int receiver = 12; // Signal Pin of IR receiver to Arduino Digital Pin 12

/*-----( Declare objects )-----*/
IRrecv irrecv(receiver);    // create instance of 'irrecv'
decode_results results;     // create instance of 'decode_results'
```

2. Combine the program of infrared receiving module and the steering gear. Replace the "VOL-" in the infrared receiver switch program with "myservo.write(30);" and turn the steering gear to 30°.

```
//the "VOL-" button
case 0xFF629D:  myservo.write(30);  // move servos to center position -> 30°
delay(1000);
break;
```