

AtomS3R IR Transmission

Libraries and example programs related to AtomS3R infrared transmission.

| Example Program

| Compilation Requirements

- M5Stack board manager version $\geq 3.2.2$
- Development board option = M5AtomS3R
- M5Unified library version $\geq 0.2.17$
- M5GFX library version $\geq 0.2.22$
- [IRremote](#) library version $\geq 4.5.0$

```
1  #include "M5Unified.h"
2  #include <IRremote.hpp>
3
4  #define IR_SEND_PIN    47
5
6  // Demo parameters for NEC protocol
7  uint16_t address = 0x0000;    // Starting device address
8  uint8_t  command = 0x55;      // Starting command value
9  uint8_t  repeats = 0;        // Number of repeat transmissions
10
11 void setup() {
12     M5.begin();                // Initialize M5Stack device
13     Serial.begin(115200);      // Start serial communication at 115200 baud
14     Serial.println("AtomS3U IRremote example");
15     delay(200);                // Wait for serial port to stabilize
16
17     pinMode(IR_SEND_PIN, OUTPUT); // Essential! Otherwise can not transmit
18
19     // Initialize IR communication
20     IrSender.begin(DISABLE_LED_FEEDBACK); // Initialize IR sender without LED feedback
21     IrSender.setSendPin(IR_SEND_PIN);    // Assign transmitter pin
22
23     Serial.printf("IR Send Pin: %d\n", IR_SEND_PIN);
24     delay(500); // Wait for hardware components to stabilize
25 }
26
27 void loop() {
28     // Send infrared signal using NEC protocol
29     Serial.printf("Send NEC: addr=0x%04x, cmd=0x%02x\n", address, command);
30     IrSender.sendNEC(address, command, repeats);
31
32     // Update transmission parameters for next cycle
33     address += 0x0001; // Increment device address
34     command += 0x01;   // Increment command code
35     repeats  = 0;      // Disable repeat frames (set >0 to test repeats)
36
37     delay(2000);
38 }
```

AtomS3R sends one NEC infrared signal every two seconds. The address and command start from 0x0000 and 0x55 respectively and increment over time. You can use an NEC-compatible infrared receiver device to verify reception.

Driver Library

- [IRremote](#)