

Arduino ESP8266 模拟 Philips Hue 智能灯设备

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玩点什么: <https://www.wandianshenme.com>

原文链接:<https://www.wandianshenme.com/play/esp8266-emulator-philips-hue>

在上一个玩法《智能家居声控: Amazon Echo + NodeMCU (ESP8266 模拟 Wemo) 控制 LED》中, 我尝试使用 ESP8266 模拟了 Wemo 设备, 以此来使用 Amazon Echo 设备来控制。于是, 便想着是否能够通过 ESP8266 来仿真 Philips Hue 设备, 来实现同样的效果。

遗憾的是, Philips Hue 设备与 Amazon Echo 通讯需要帐户登录, 因此便放弃了想法。尽管如此, 还是记录一下 ESP8266 模拟 Philips Hue 设备的过程。

这一篇里, 我们所需要的设备只有一个 **ESP8266**。

步骤 1: 环境准备

首先, 我们需要安装 Arduino ESP8266, 请参考上一篇文章:《智能家居声控: Amazon Echo + NodeMCU (ESP8266 模拟 Wemo) 控制 LED》。

为了实现上面的目的, 我们需要用到 ESP8266 Hue Emulator 项目, 其 GitHub 地址: [ESP8266HueEmulator](#)。

而这个 ESP8266 仿真 Philips Hue 设备的项目, 需要这么几个库 NeoPixelBus、aJson、Time、NtpClient, 同时还需要修改一些相关的配置。

因此官方推荐使用这个脚本安装, 比较简单:

(注意: 如果是 Mac OS, 需要将下面脚本中的 \$HOME/Arduino/libraries/ 改为 \$HOME/Documents/Arduino/libraries/)

```
1 mkdir -p $HOME/Arduino/libraries/
2 cd $HOME/Arduino/libraries/
3 git clone --branch 2.1.4 https://github.com/Makuna/NeoPixelBus.git
4 git clone https://github.com/interactive-matter/aJson.git
5 git clone https://github.com/PaulStoffregen/Time.git
6 git clone https://github.com/gmag11/NtpClient.git
7 sed -i -e 's|#define PRINT_BUFFER_LEN 256|#define PRINT_BUFFER_LEN 4096|g'
   aJson/aJSON.h
8 cd -
9 git clone https://github.com/probonopd/ESP8266HueEmulator.git
10 sed -i -e 's|#include "/secrets.h"|#include "/secrets.h"|g'
   ESP8266HueEmulator/ESP8266HueEmulator/ESP8266HueEmulator.ino
11 sed -i -e 's|//const char|const char|g'
```

```
ESP8266HueEmulator/ESP8266HueEmulator/ESP8266HueEmulator.ino
```

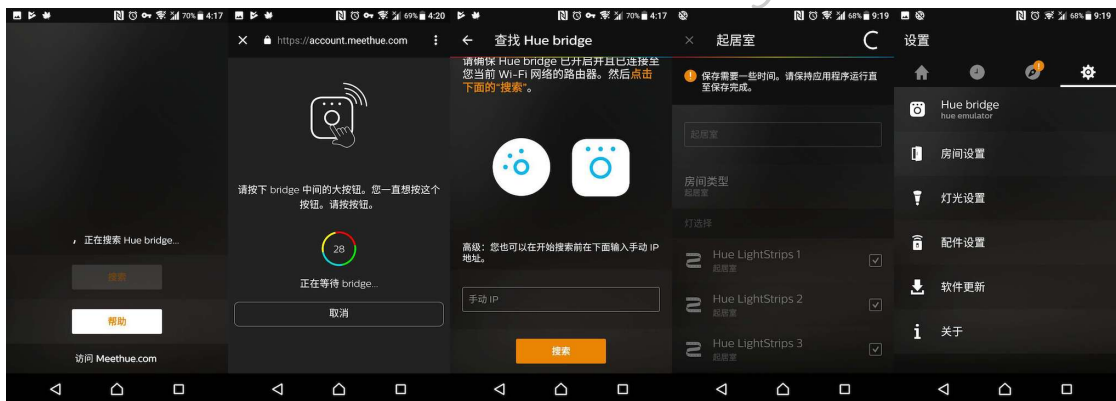
接着, 我们只需要打开相应的 `ino` 文件, 并编译烧录代码到设备上。

步骤 2: 连接设备

在完成上一步后, 让我们打开 **Arduino** 的控制台, 来看看相应的日志。

- ```
1 Starting SSDP...
2 SSDP Started
```

然后, 我们需要在手机上安装相应的 **Philips Hue** 软件, 过程如下所示:



如果不能在应用上查找到相应的设备, 那么我们需要手动输入 IP 设备地址。随后, 我们就可以连接上设备, 对应的控制台就有相应的日志:

- ```
1 4090
2 {"name": "hue
   emulator", "swversion": "81012917", "bridgeid": "5CCF7FFFFEB147DA", "portalservices": false, "li
3 4983
4 {"1": {"type": "Extended color light", "name": "Hue LightStrips
   1", "uniqueid": "AA:BB:CC:DD:EE:FF:00:11-1", "modelid": "LST001", "state": {"on": false, "hue": 0,
   color light", "name": "Hue LightStrips
   2", "uniqueid": "AA:BB:CC:DD:EE:FF:00:11-2", "modelid": "LST001", "state": {"on": false, "hue": 0,
   color light", "name": "Hue LightStrips
   3", "uniqueid": "AA:BB:CC:DD:EE:FF:00:11-3", "modelid": "LST001", "state": {"on": false, "hue": 0,
   color light", "name": "Hue LightStrips
   4", "uniqueid": "AA:BB:CC:DD:EE:FF:00:11-4", "modelid": "LST001", "state": {"on": false, "hue": 0,
   color light", "name": "Hue LightStrips
   5", "uniqueid": "AA:BB:CC:DD:EE:FF:00:11-5", "modelid": "LST001", "state": {"on": false, "hue": 0,
```

```
    color light", "name": "Hue LightStrips
    6", "uniqueid": "AA:BB:CC:DD:EE:FF:00:11-6", "modelid": "LST001", "state": {"on": false, "hue": 0,
5 5171{}
```

除此，我们还能看到一些相应的 **Hue** 设备的其他信息：

```
1 88565
2 {"1": {"name": "起居室", "lights": ["1", "2"]}}
3 88613
4 {"name": "注入能量", "owner": "api", "picture": "", "lastupdated": "", "recycle": false, "locked": false
5 88780
6 {"name": "静心阅读", "owner": "api", "picture": "", "lastupdated": "", "recycle": false, "locked": false
7 89260
8 {"name": "渐暗", "owner": "api", "picture": "", "lastupdated": "", "recycle": false, "locked": false, "ve
9 89343
10 {"name": "集中精神", "owner": "api", "picture": "", "lastupdated": "", "recycle": false, "locked": false
11 89430
12 {"name": "放松休息", "owner": "api", "picture": "", "lastupdated": "", "recycle": false, "locked": false
13 89551
14 {"name": "夜灯", "owner": "api", "picture": "", "lastupdated": "", "recycle": false, "locked": false, "ve
15 89622
16 {"name": "热带黎明", "owner": "api", "picture": "", "lastupdated": "", "recycle": false, "locked": false
17 {}
18 90369
19 {"name": "北极光", "owner": "api", "picture": "", "lastupdated": "", "recycle": false, "locked": false, "
```

步骤 3: 总结与问题

尽管，我们能使用 **ESP8266** 模拟 **Philips Hue** 设备，但是我们并不能使用 **Homekit** 或者 **Home Assistant** 进行直接控制。这样一来，还是模拟 **Wemo** 好用。

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