

# Assignment 9: Statechart

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ECE 3760 A01

March 6, 2025

## 1 Statechart

The statechart will use the following user interface for the skip and sweeper devices and encoding scheme for the 5 messages provided in Figure 1.

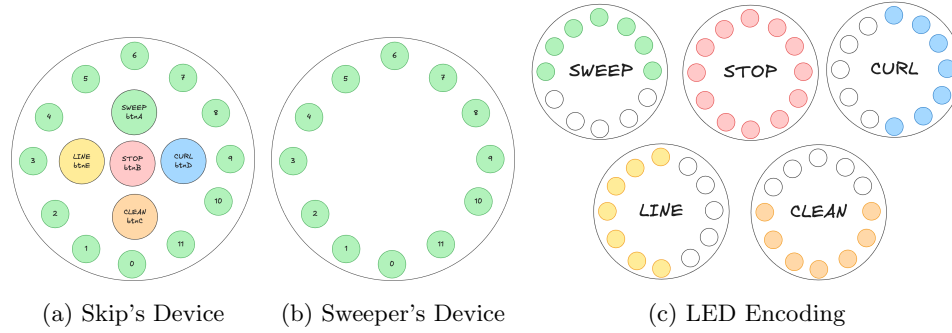


Figure 1: Device UI and LED Encoding

The sweeper statechart is seen in Figure 2. A simple walk-through of the statechart is as follows:

- Once the device is powered on, it will setup the esp-now connection and transition into the light sleep state.
- When a button is pressed, the device will wake up and turn on the WiFi, and send the message to the receiving devices.
- After the message is successfully delivered, all LEDs will turn off and light up to the appropriate command-encoding. The device will then turn of its radio and go back to sleep.

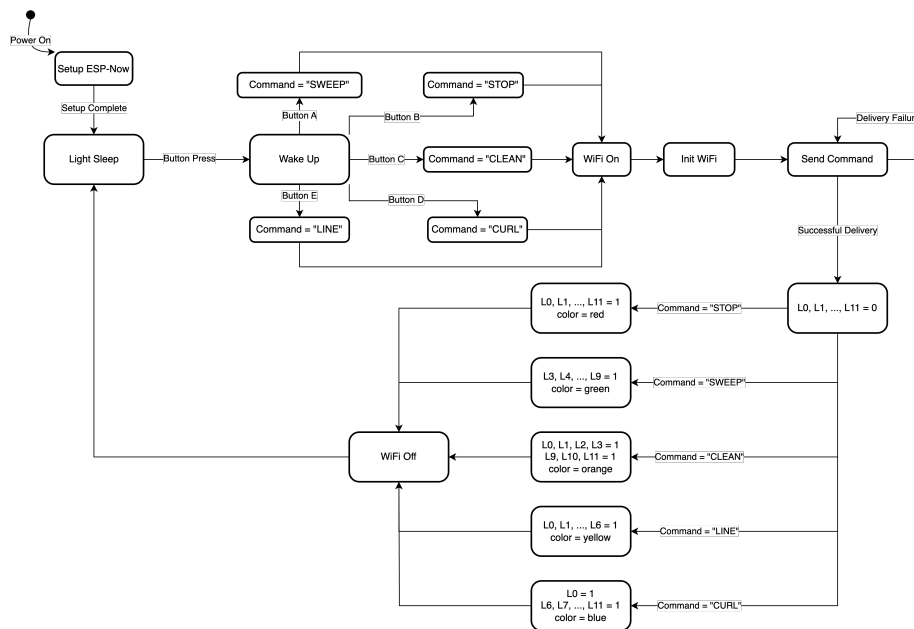


Figure 2: Skip's Statechart

Similarly, the sweepers statechart is seen in Figure 3 and the walk-through of the statechart is as follows:

- Once the device is powered on, it will setup the esp-now connection and enter the listening state.
- When a message is received, the command will be parsed and the appropriate LEDs will light up.
- If the command received is not one of the 5 commands, the device will ignore and go back to listening. Otherwise, the device will light up the LEDs for the appropriate command and go back to listening.

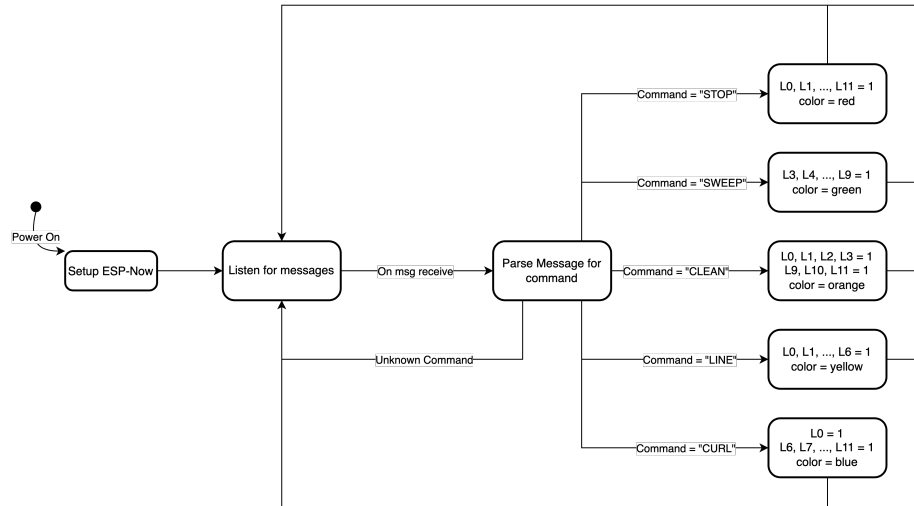


Figure 3: Sweeper's Statechart