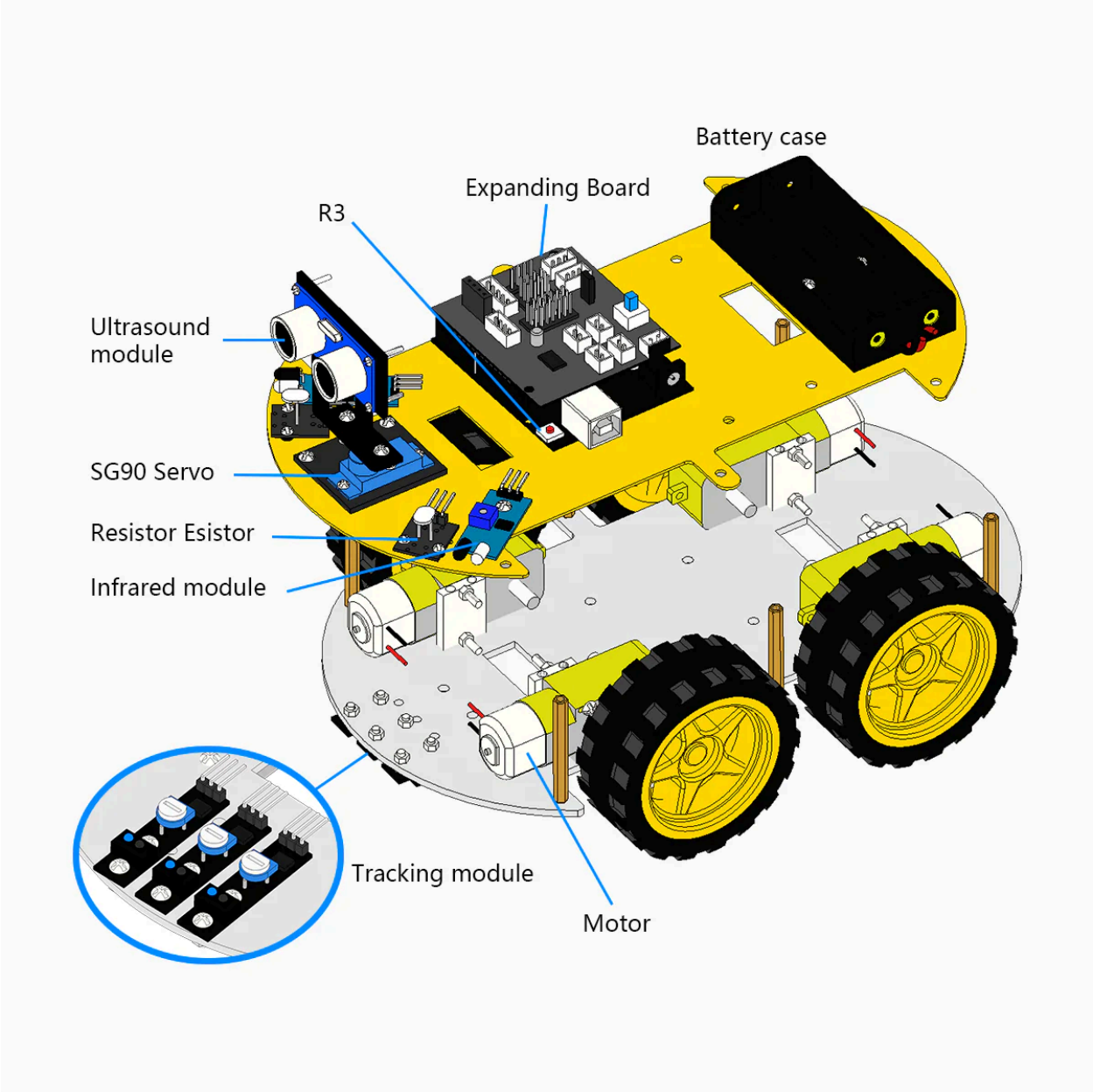
Parts List:



This is a diagram provided by the kits' manual, not all parts will be used.

Battery Case:

A case where it stores lithium 18650 batteries. The case provides 7~12V of power

Motor:

It gives spin to the wheels, allowing the car to move.

R3 Arduino Uno:

The arduino uno that is provided by the kit, has all functionalities of an arduino and is the core component that allows communication between all components.

Expansion Board with motor driver:

A secondary board that plugs into the Arduino to simplify wiring and extend its functionality. It provides power management, pre-mounted connectors for servos or sensors, as well as an IR receiver and a slot for a bluetooth connector which will be used to control the car. This contains a TB6612FNG motor driver integrated into this board which will serve as our motor driver.

Ultrasound Module (This is not used for the project):

A sensor that uses ultrasonic waves to measure distance. Useful for detecting obstacles and avoiding collision by emitting sound waves and calculating the time it takes for the echo to return.

SG90 Servo (This is not used for the project):

A small, lightweight servo motor used for providing angular control to allow a component to rotate, this is meant for the ultrasound monitor.

Resistor Esistor (This is not used for the project):

Also named as photoresistor sensor, which is a sensor that measures light.

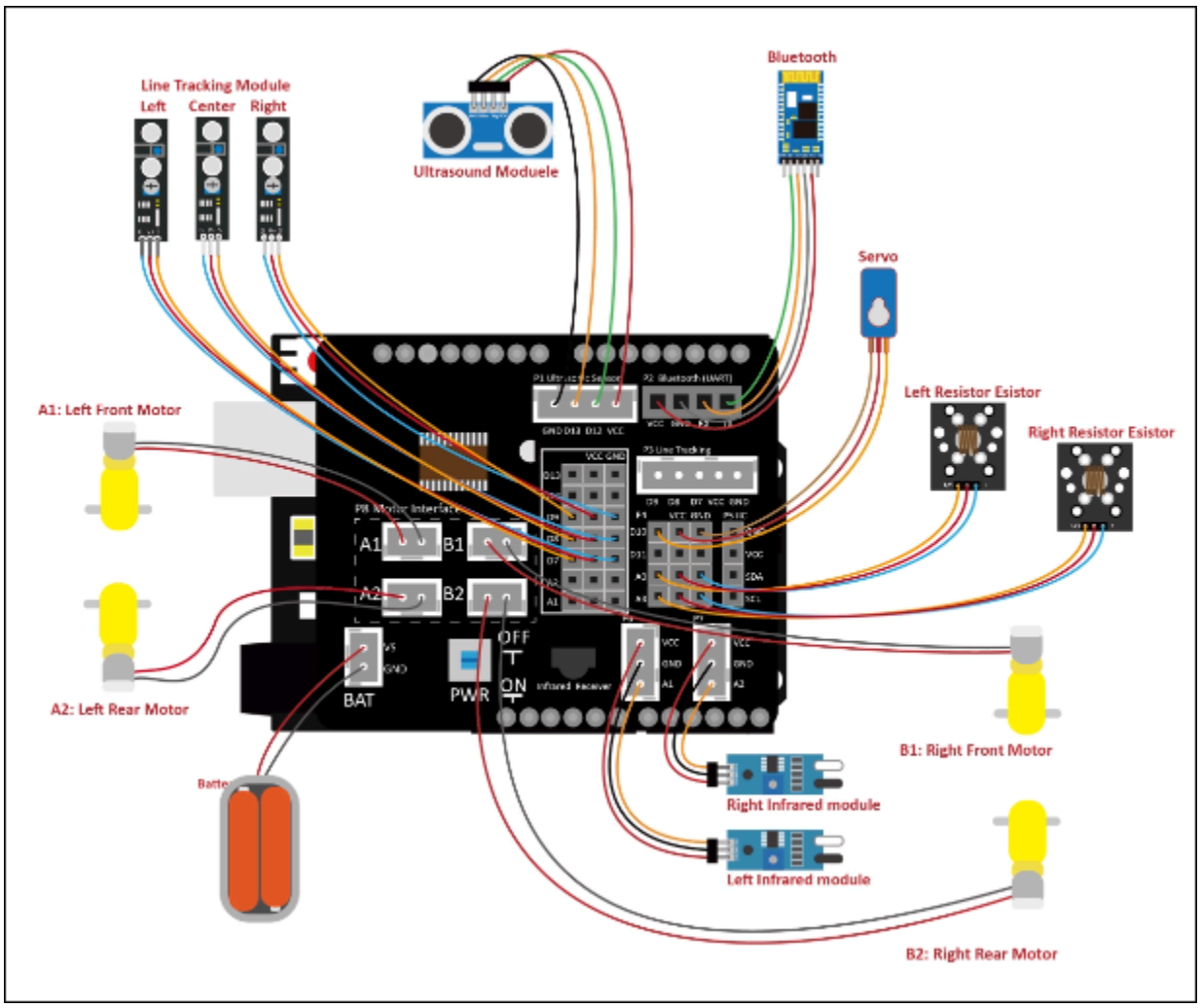
Infrared Module (This is not used for the project):

A sensor that detects infrared light for proximity direction, line following, or remote control signal reception

Tracking Module (This is not used for the project):

It consists of IR sensors or optical sensors that detects lines or paths by sensing reflected infrared light

Circuit Layout:

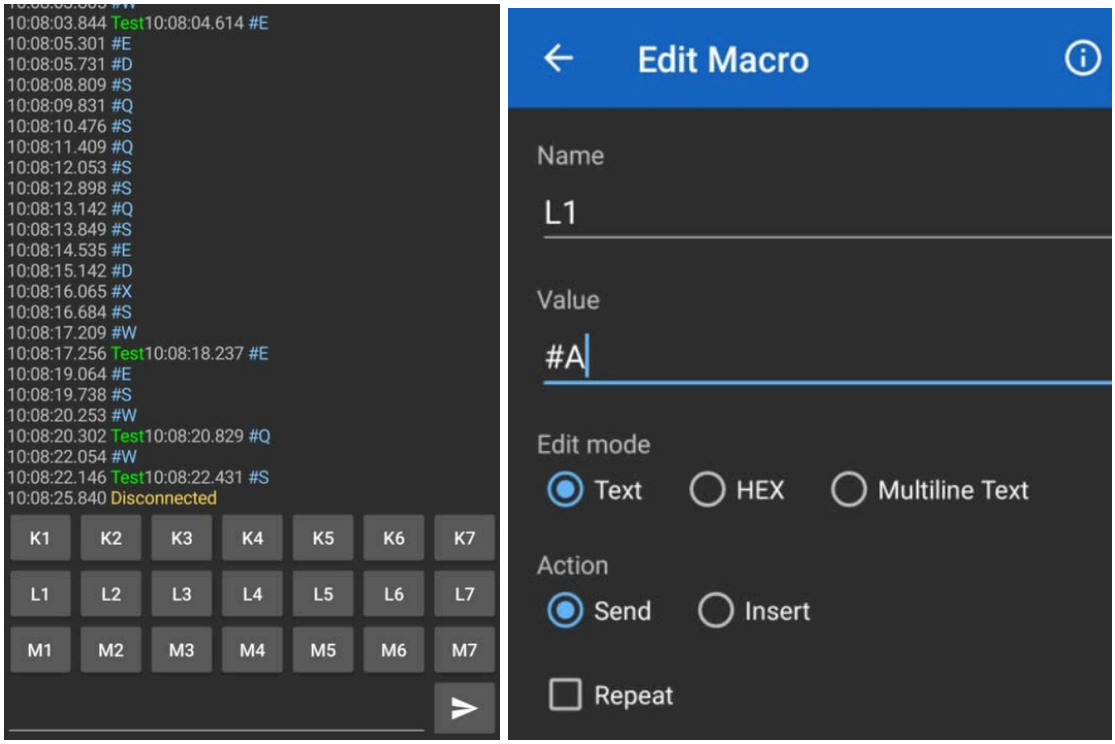


This is a diagram provided by the kits' manual, not all parts will be used.

This is the circuit that lafvin provided in their documentation, since only the RC control of the motors will be implemented, only the batteries, motors and the bluetooth connector will be used.

Functionality:

Ths rc car is controlled via bluetooth using a bluetooth transmitter/receiver that is on the board, which can be connected to using an app called "Serial Bluetooth Terminal" which allows us to connect to the bluetooth receiver/transmitter and send Strings, which will then be interpreted by the arduino and converted into motor movement which allows the rc car to move. The app allows us to create macros which are binded to buttons that send predefined strings of text, these macros will functions as our buttons.



By pressing one of these macro buttons, we will be able to control the rc car.

Sources:
https://lafvintech.com/cdn/shop/products/product-image-1932396759_700x.png?v=1643092133
https://www.dropbox.com/sh/6187ka3n25k9ehm/AADFEevzsCi8bzNvVYzhata4a?dl=1