# OPENRC Transmitter

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OpenRC transmitter is stransmitter which was been primary designed for OpenRC f1, but can be used for all RC cars. Transmitter for forward moving use height sensors with which control speed of RC car. Speed is regulated with power of pressing to height sensor. For steering left and right transmitter use gyro sensor which detected steering transmitter and move wheels to the right posittion.

Hardware:

- 2x Arduino nano (https://www.ebay.com/itm/1-2PCS-Nano-V3-0-USB-ATmega328-16M-5V-Micro-Controller-CH340G-for-Arduino/192931268000?ssPageName=STRK%3AMEBIDX%3AIT&_trksid=p2060353.m2749.l2649)
- GY-521 MPU-6050 Module 3 Axis Gyroscope (https://www.ebay.com/itm/High-Quality-MPU-6050-3-Axis-Accelerometer-Gyro-Sensor-Module-GY-521-Arduino-AU/282784754073?ssPageName=STRK%3AMEBIDX%3AIT&_trksid=p2060353.m2749.l2649)
- 2x NRF24L01+PA+LNA SMA Antenna wireless transceiver (https://www.ebay.com/itm/NRF24L01-PA-LNA-SMA-Antenna-Wirele-Transceiver-communication-module-2-4G-1100-SE/132900720574?ssPageName=STRK%3AMEBIDX%3AIT&_trksid=p2060353.m2749.l2649)
- 2x 8Pin Socket Adapter Board for NRF24L01 (https://www.ebay.com/itm/2PCS-Socket-Adapter-plate-Board-for-8Pin-NRF24L01-Wireless-Transceive-Module-51/263615734359?hash=item3d60b8e257:g:gSAAAOSw-uda1wk4)
- 50KG scale body load cell resistance strain weight sensor W/ HX711 AD module (https://www.ebay.com/itm/4Pcs-50KG-Body-Load-Cell-Resistance-Strain-Weight-Sensor-HX711-AD-Modules/264007214341?ssPageName=STRK%3AMEBIDX%3AIT&_trksid=p2060353.m2749.l2649)
- HX711 AD module (https://www.ebay.com/itm/Weighing-Sensor-AD-Module-Dual-channel-24-bit-A-D-Conversion-HX711-Shieding-CA-N/141975948937?hash=item210e6d0e89:g:vVYAAOxypNtSegO1)
- 2x Battery 7.4V (https://hobbyking.com/en_us/turnigy-nano-tech-180mah-2s-25c-lipoly-pack-compatible-losb0863-5pcs.html)
- 2x 3x8 screw
- 8x 3x12 screw

Connections:

1. Transmitter

NRF24L01+PA+LNA SMA (ANTENA):

| ARDUINO NANO | SENSOR |
|---|---|
| 5V | VCC |
| GND | GND |
| D12 | M1 |
| D11 | M0 |
| D13 | SCK |
| D8 | CSN |
| D7 | CE |

MPU-6050 (GYRO):

| ARDUINO NANO | SENSOR |
|---|---|
| D2 | INT |
| A4 | SDA |
| A5 | SCL |
| GND | GND |
| 5V | VCC |

HX711 AD (HEIGHT SENSOR RIGHT):

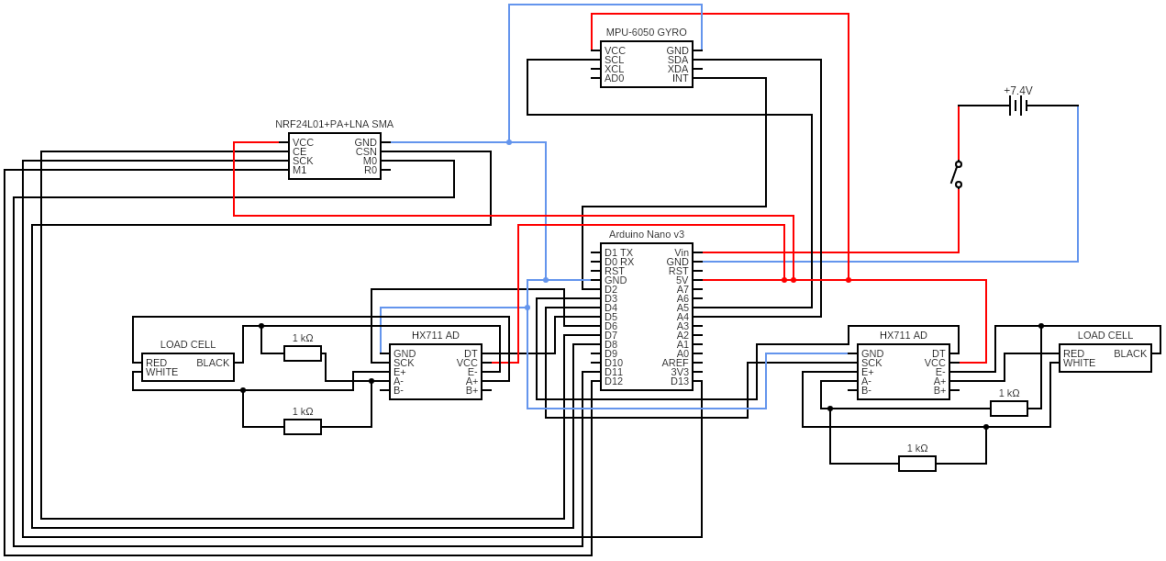
| ARDUINO NANO | SENSOR |
|---|---|
| 5V | VCC |
| GND | GND |
| DT | D3 |
| SCK | D4 |
| RED | A+ |
| BLACK | E- |
| WHITE | E+ |
| BLACK + 1K UPOR + WHITE + 1K UPOR | A- |

HX711 AD (HEIGHT SENSOR LEFT):

| ARDUINO NANO | SENSOR |
|---|---|
| 5V | VCC |
| GND | GND |
| DT | D5 |
| SCK | D6 |
| RED | A+ |
| BLACK | E- |
| WHITE | E+ |
| BLACK + 1K UPOR + WHITE + 1K UPOR | A- |

BATTERY:

| ARDUINO NANO | BATTERY |
|---|---|
| GND | - |
| VCC | + |



2. Receiver

NRF24L01+PA+LNA SMA (ANTENA):

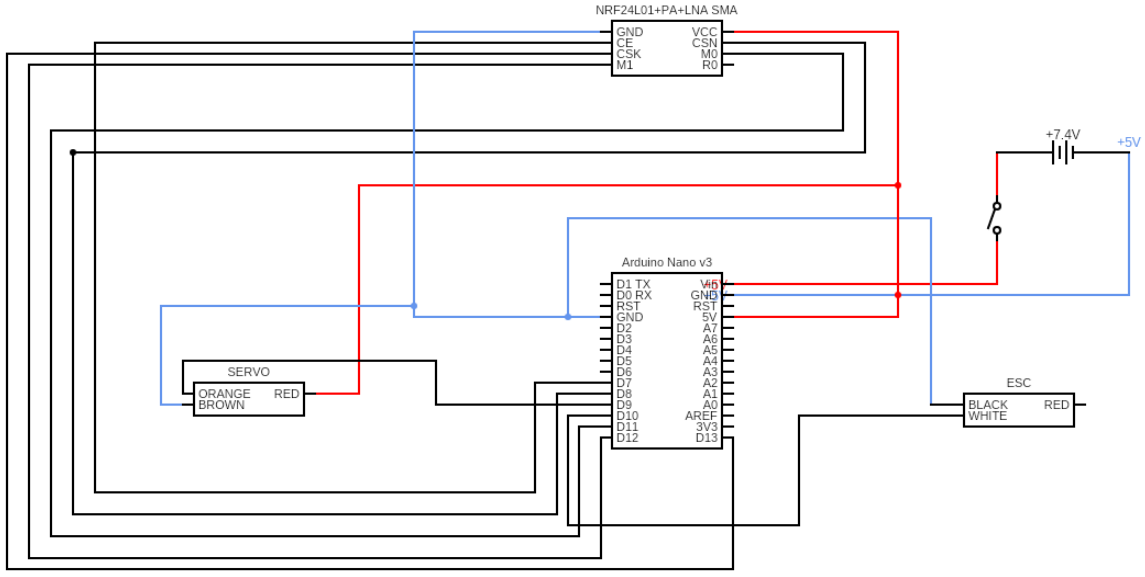
| ARDUINO NANO | SENSOR |
|---|---|
| 5V | VCC |
| GND | GND |
| D12 | M1 |
| D11 | M0 |
| D13 | SCK |
| D8 | CSN |
| D7 | CE |

SERVO:

| ARDUINO NANO | SENSOR |
|---|---|
| 5V | RED |
| D9 | ORANGE |
| GND | BROWN |

ESC:

| ARDUINO NANO | SENSOR |
|---|---|
| D10 | WHITE |
| GND | BLACK |
| BLANK | RED |



When you are connect all wires, then upload code to transmitter and receiver arduino uno.

When all is connected and code is uploaded to arduino, then is start to enjoy in driving your RC car.

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