

Read installation thoroughly before starting.

- [] Section A Component checklist
- [] Section B Component mounting
- [] Section C Key switch
- [] Section D Handlebar switch
 - Section D2
 - Section D3
 - Section D4
- [] Section E Main power / Key ON power
- [] Section F Charging
- [] Section G Starter motor
- [] Section H Engine power / spark coil
- [] Section I Lights / horn
- [] Section J Auxiliary input
- [] Section K Dash output
- [] Section L System check
- [] Section M Finalizing

“ KNOW THAT...

Your EnDuraLast R21 comes with comprehensive 1-on-1 tech service. NWT Cycletronic is always ready to answer your questions and assist you in completing your wiring project.

HAVE FUN! It's a hobby, remember?

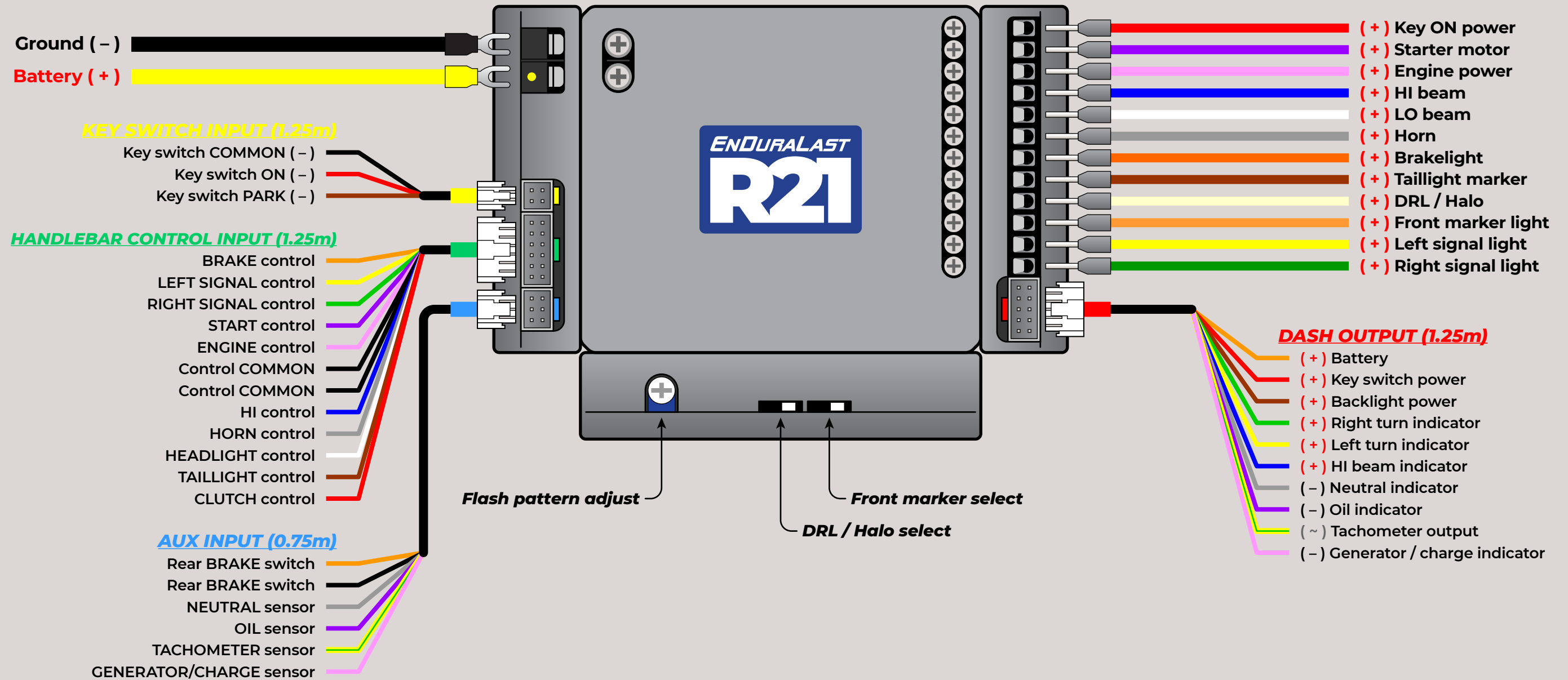
We're here for you all the way.

NEED ASSISTANCE?
Email model and year of bike to
R21service@nwtcycletronic.com

EnDuraLast R21

MODERNIZED R-SERIES (AIRHEAD) ELECTRICAL HUB

ELECTRICAL HUB DIMENSIONS: 95 x 82 x 21mm (approx)



- Battery (**MANDATORY**)
- Rectifier / regulator (**MANDATORY**)
- Spark control module / Contact breaker
- Spark plug coil(s)
- Key switch
- Gauge(s)
- Dash indicators
- Headlight
- Signal lights
- Horn
- Taillight
- Plate light **optional**
- Brake switch (front / rear)
- Neutral sensor switch
- Additional sensors / switches (oil / clutch)
- 8awg or LARGER wires (battery / solenoid / starter motor)
- 16awg wires (key switch)
- 18awg wires (horn / headlight / etc.)
- 20awg or SMALLER wires (LED lights)
- Various size RING terminals
- Various connectors or solder with shrink tube
- Zip ties
- Tape / cable wraps / split loom

**Need parts? Parts suggestions?**

Have a chat with:



EUROMOTOELECTRICS.COM

Website: www.euromotoelectrics.com

Phone: [1-303-526-0901](tel:1-303-526-0901)

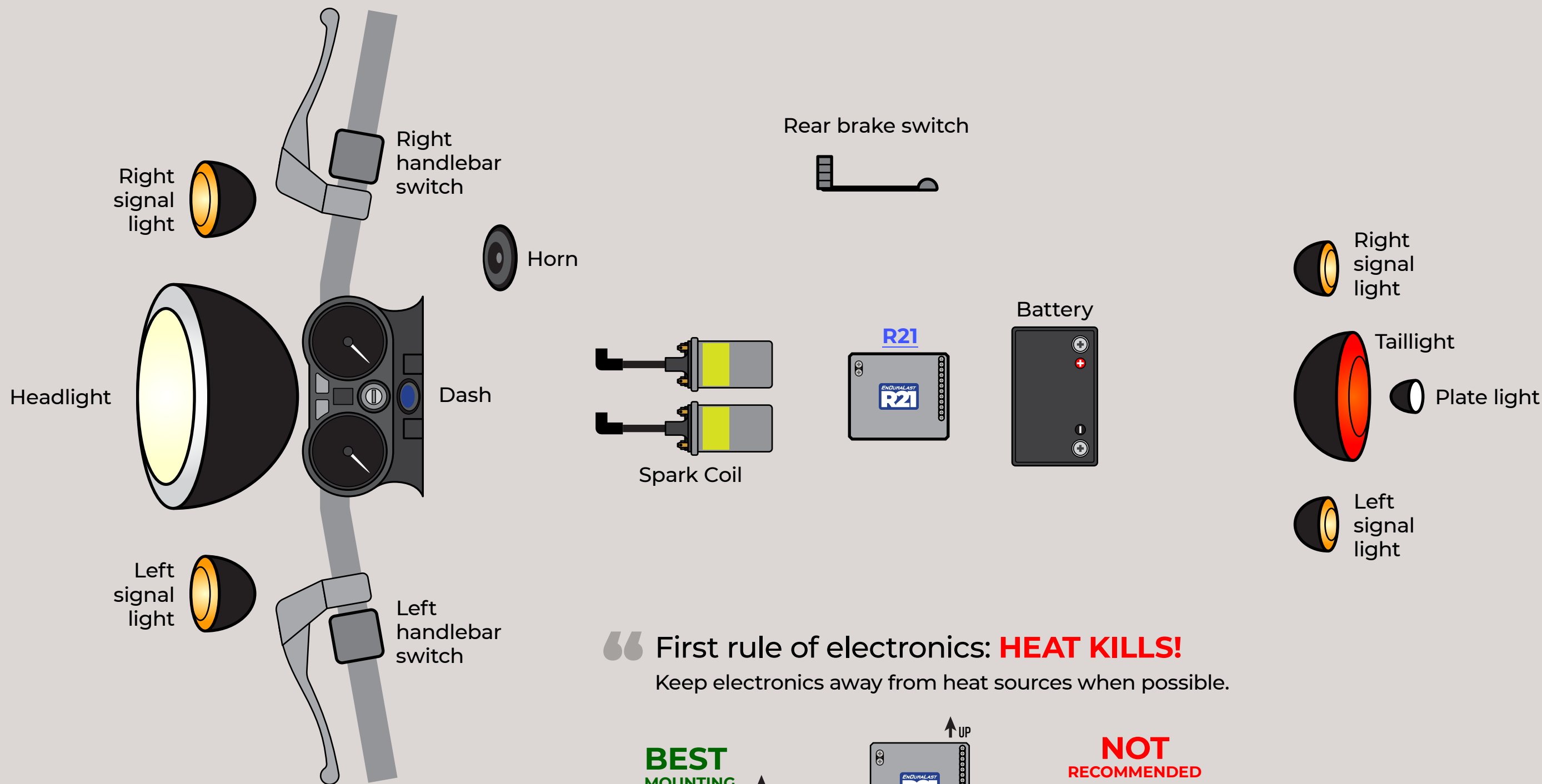
E-mail: info@euromotoelectrics.com

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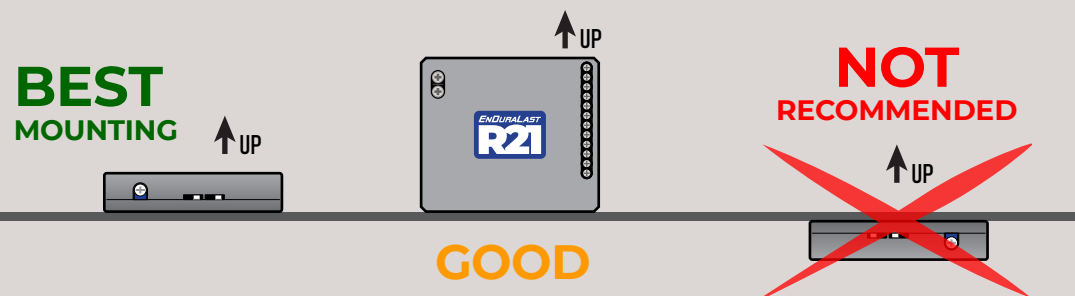
COMPONENT CHECKLIST

MOUNT ALL COMPONENTS onto desired location.

DO NOT route wires/cables at this time.



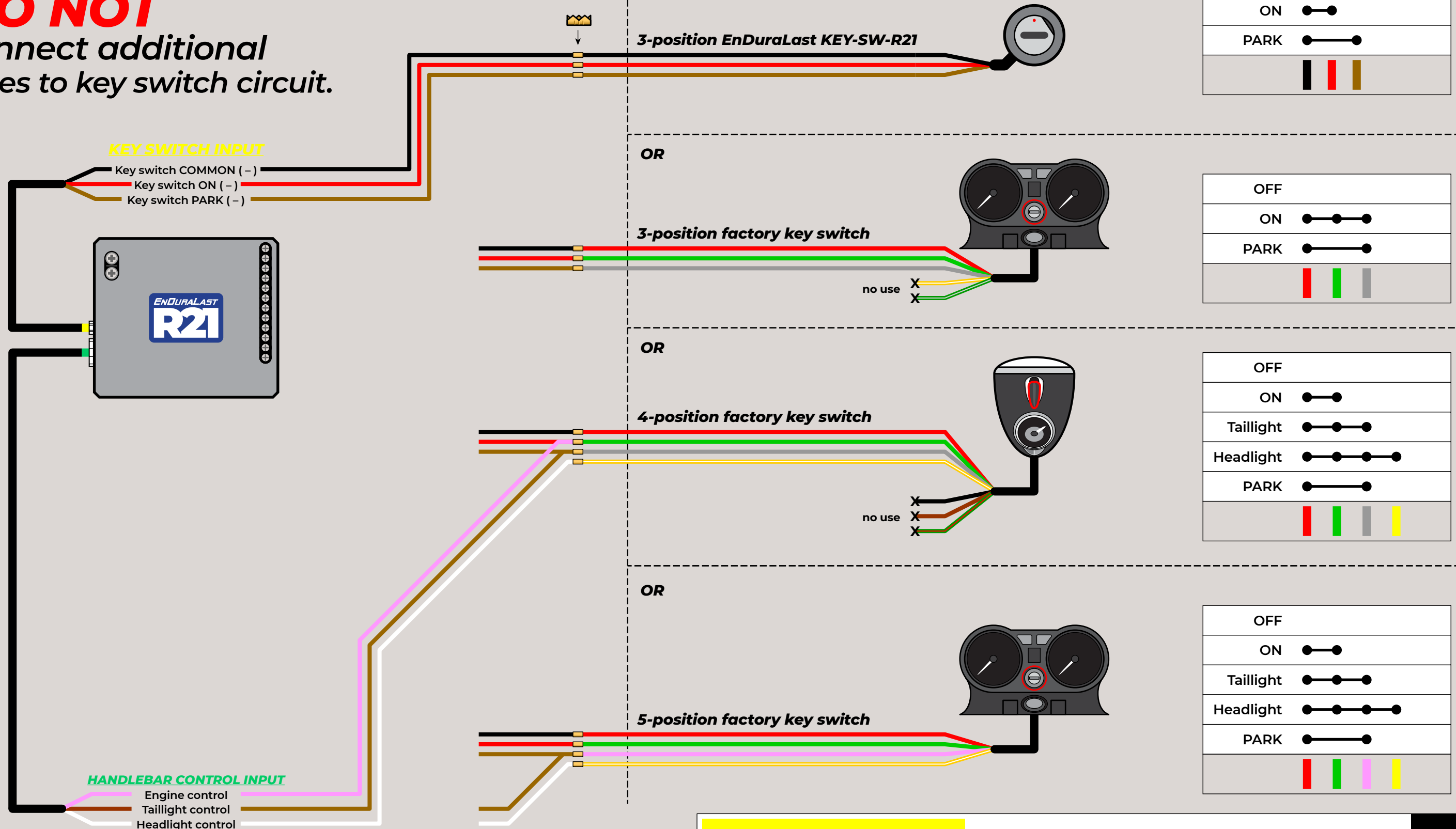
“ First rule of electronics: **HEAT KILLS!**
 Keep electronics away from heat sources when possible.



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LOW SIDE SWITCHING SYSTEM.

DO NOT
connect additional
wires to key switch circuit.

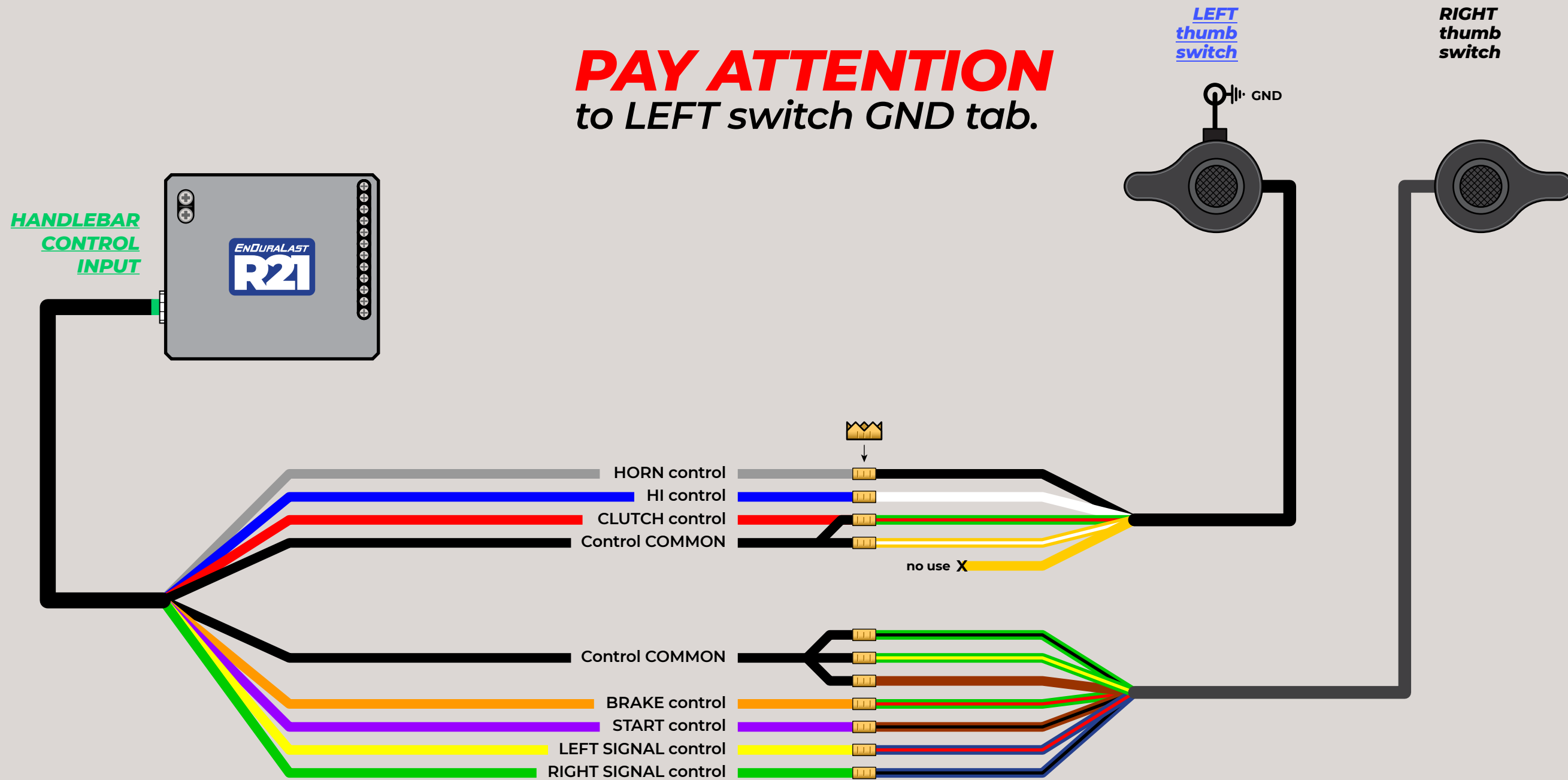


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KEY SWITCH

LOW SIDE SWITCHING SYSTEM.

PAY ATTENTION
to LEFT switch GND tab.



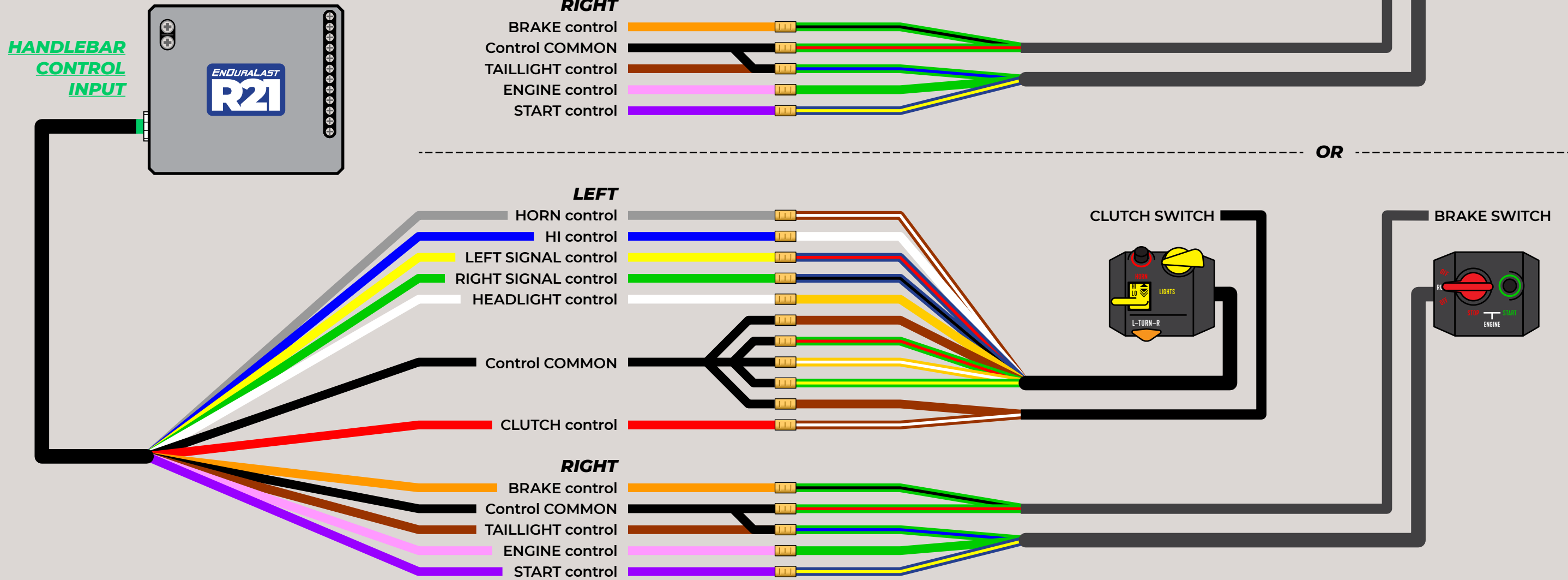
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HANDLEBAR SWITCH

LOW SIDE SWITCHING SYSTEM.

NO CLUTCH SWITCH?

Connect CLUTCH control wire to GND.



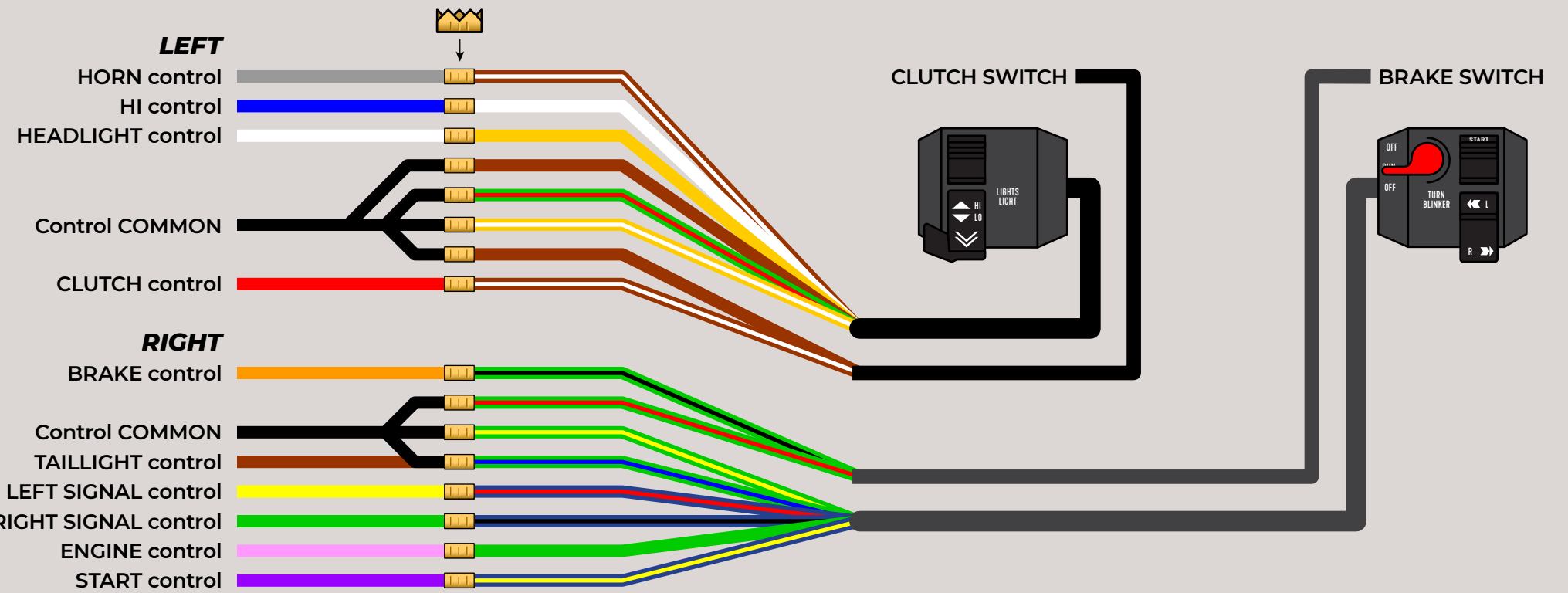
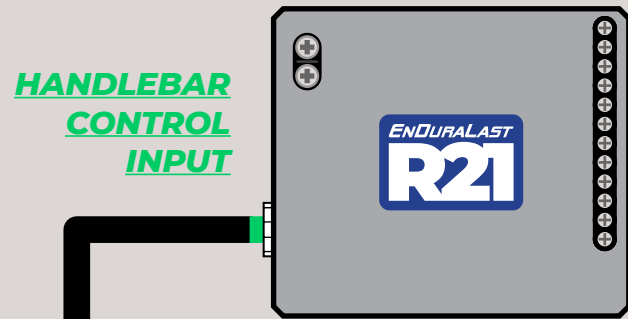
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HANDLEBAR SWITCH

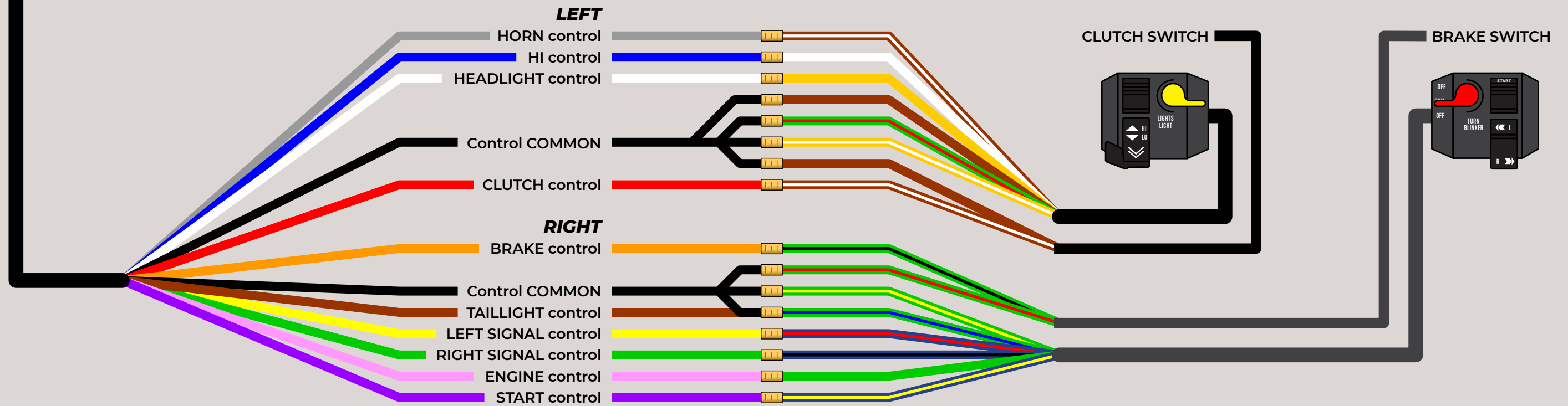
LOW SIDE SWITCHING SYSTEM.

NO CLUTCH SWITCH?

Connect CLUTCH control wire to GND.

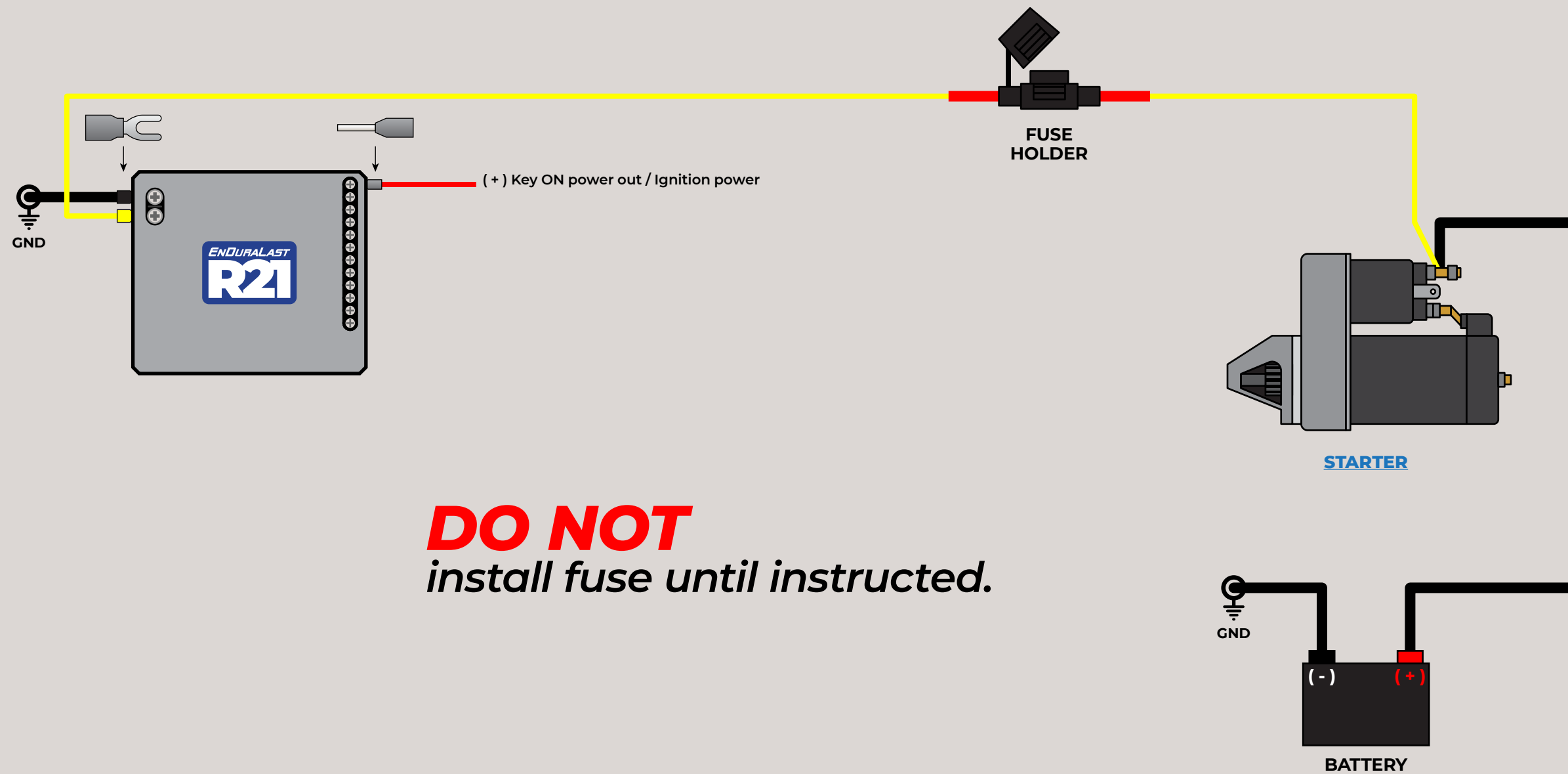


OR



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HANDLEBAR SWITCH

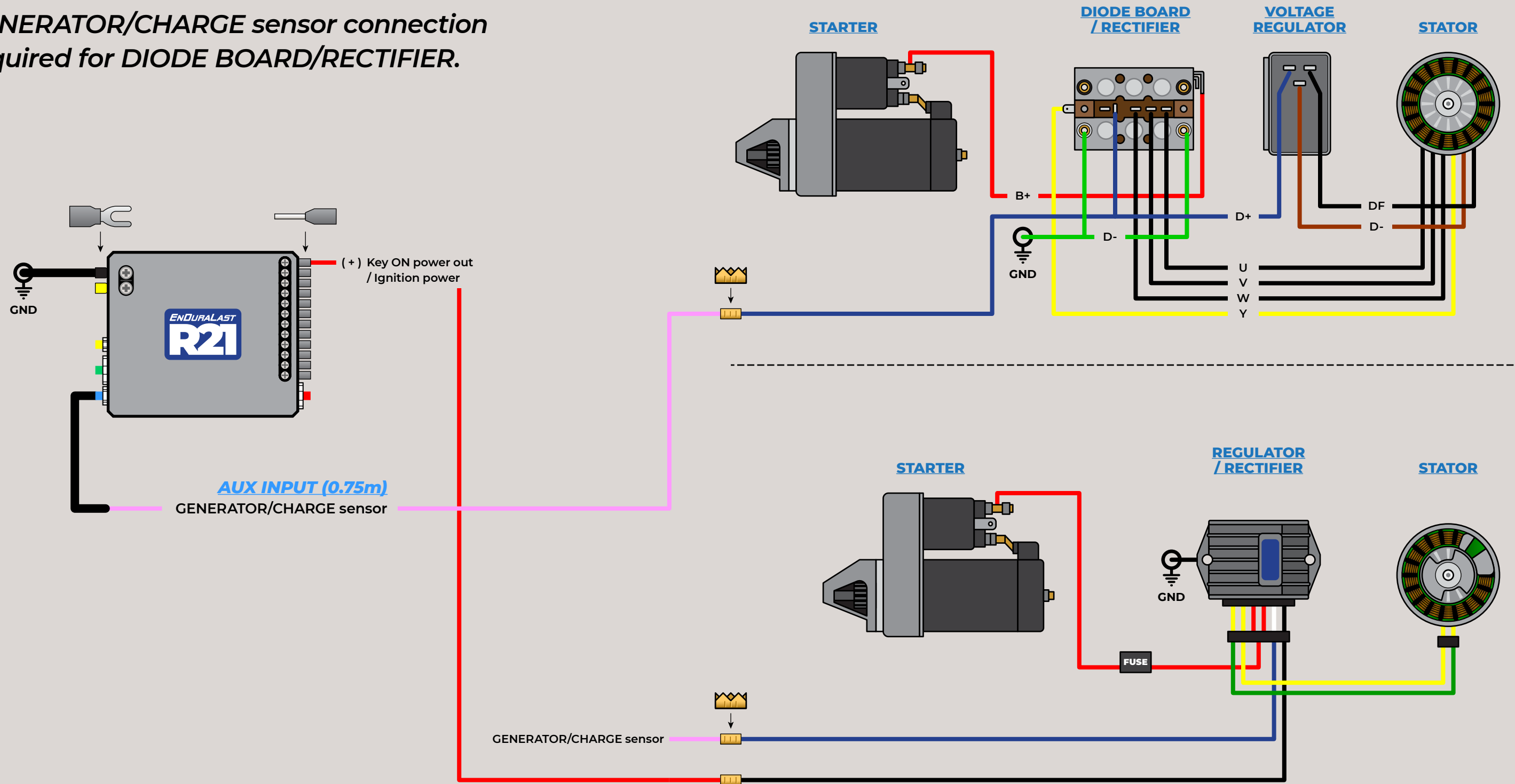


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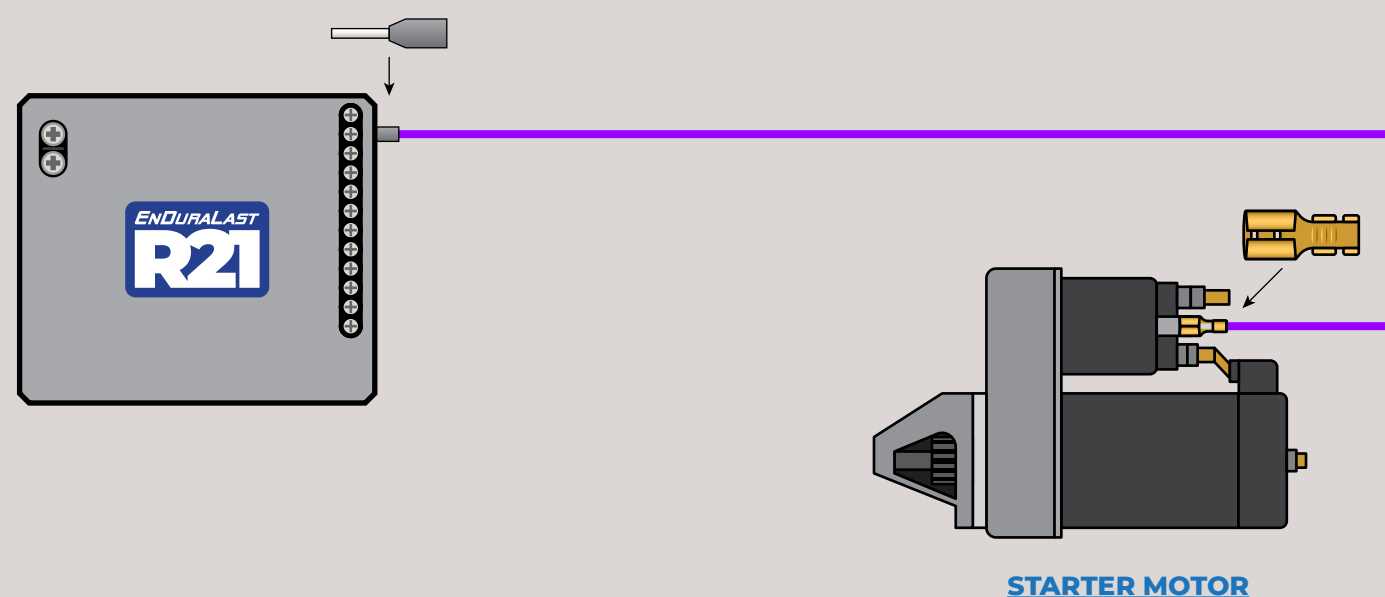
MAIN POWER / KEY ON POWER

MANDATORY

GENERATOR/CHARGE sensor connection required for DIODE BOARD/RECTIFIER.



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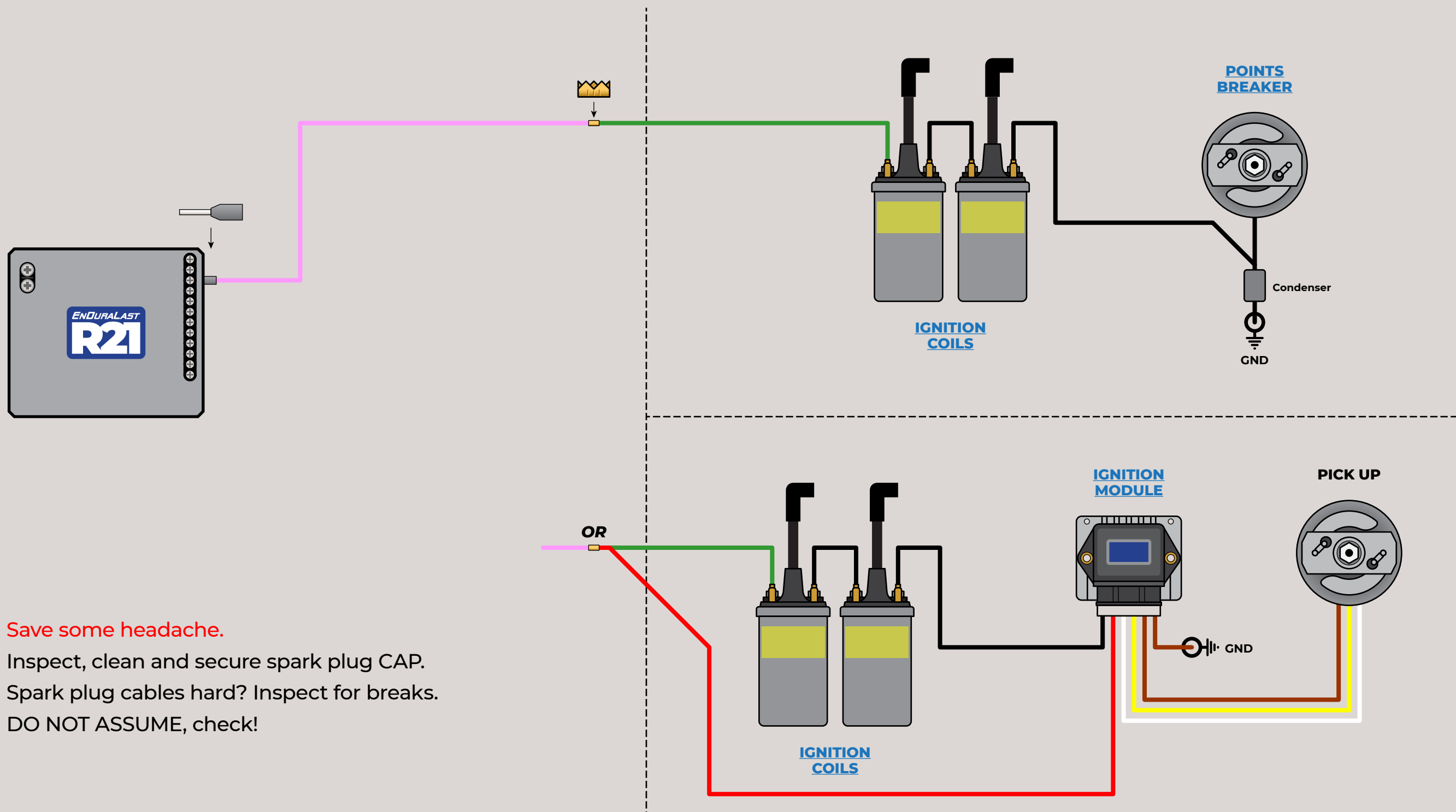


R21 IS STARTER MOTOR DIRECT DRIVE.
NO additional
Starter relay / solenoid needed.

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STARTER MOTOR

DO NOT install fuse until instructed.



Save some headache.

Inspect, clean and secure spark plug CAP.
Spark plug cables hard? Inspect for breaks.
DO NOT ASSUME, check!

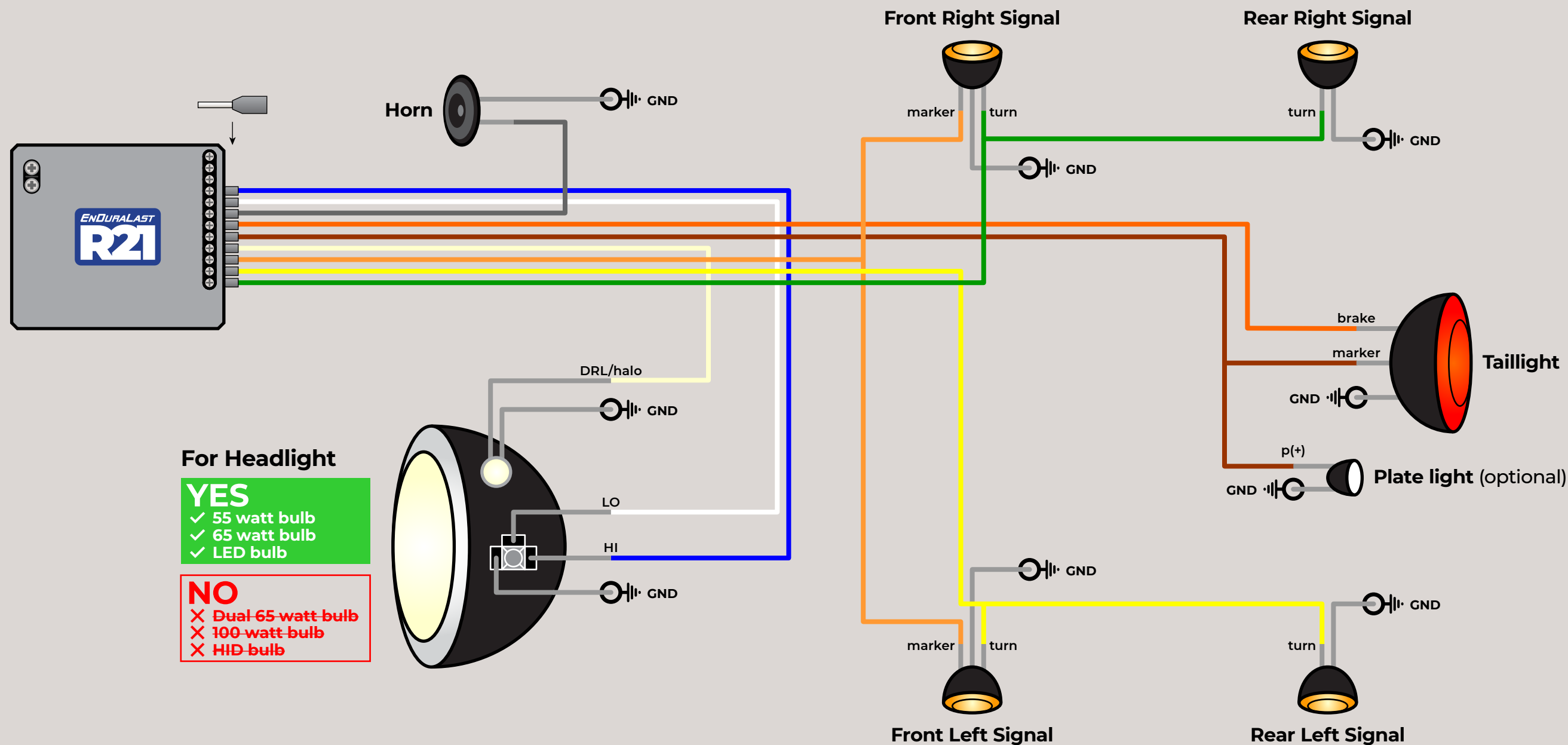
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ENGINE POWER / SPARK COIL

DO NOT install fuse until instructed.

DO NOT over torque/tighten screw terminals.

“ Your R21 does not need additional parts to run LED lights.
LED lights produce low heat to no heat and are energy efficient.

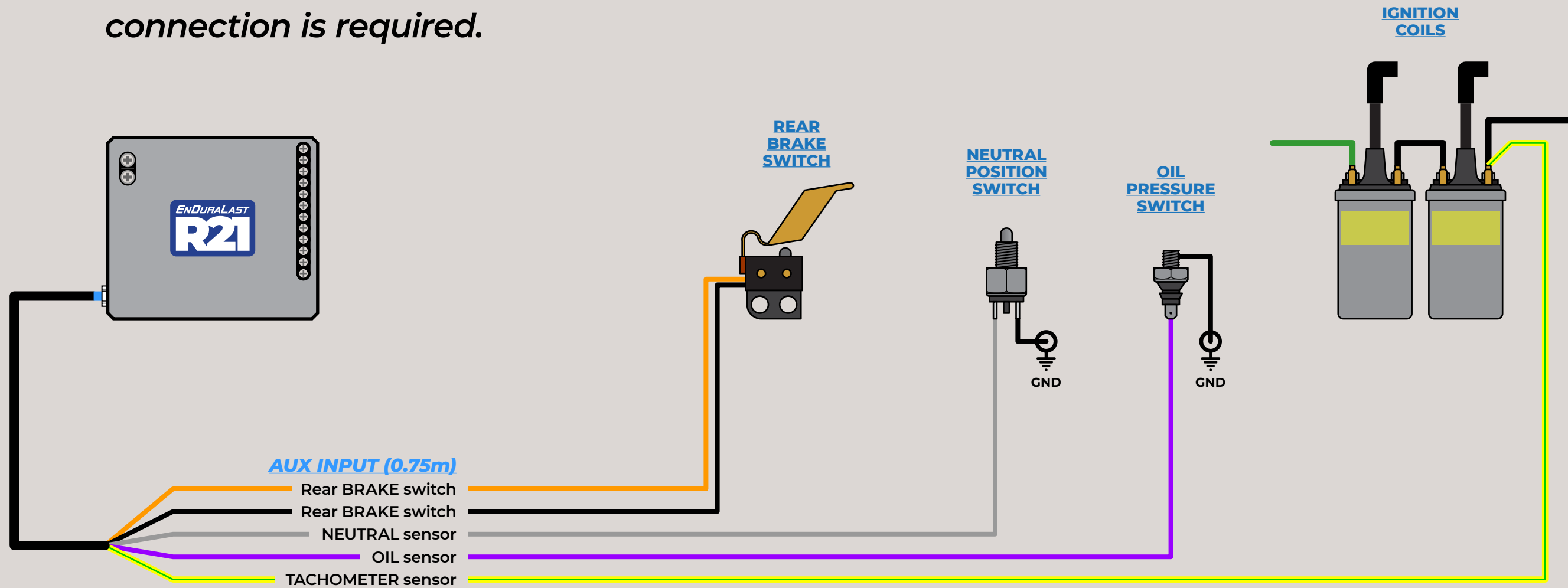


- For Headlight**
- YES**
 - ✓ 55 watt bulb
 - ✓ 65 watt bulb
 - ✓ LED bulb
 - NO**
 - ✗ Dual 65-watt bulb
 - ✗ 100-watt bulb
 - ✗ HID-bulb

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MANDATORY

TACHOMETER sensor connection is required.

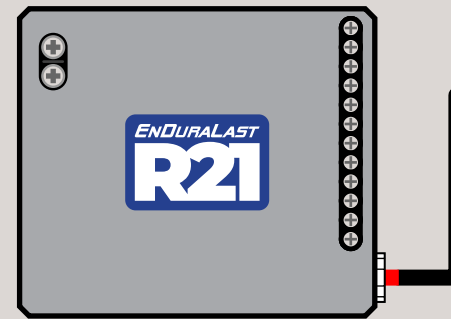


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AUXILIARY INPUT

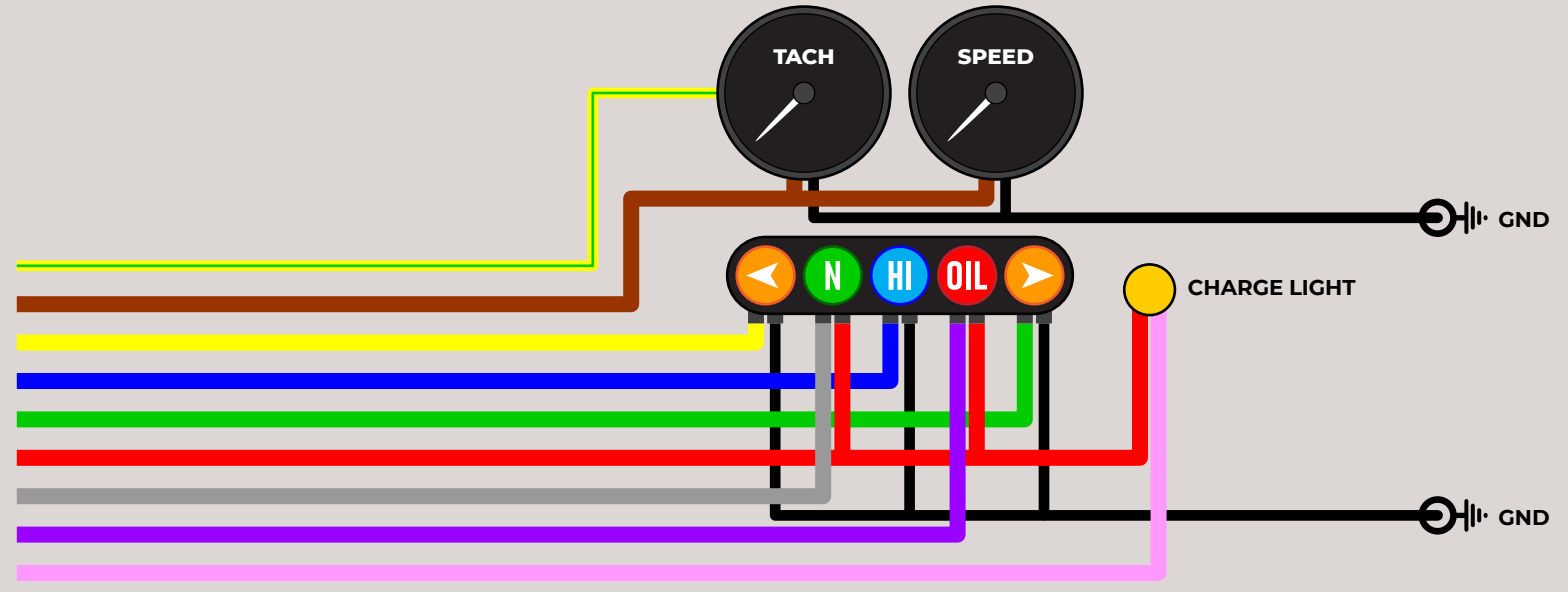
MANDATORY

GENERATOR/CHARGE indicator connection required for DIODE BOARD/RECTIFIER.

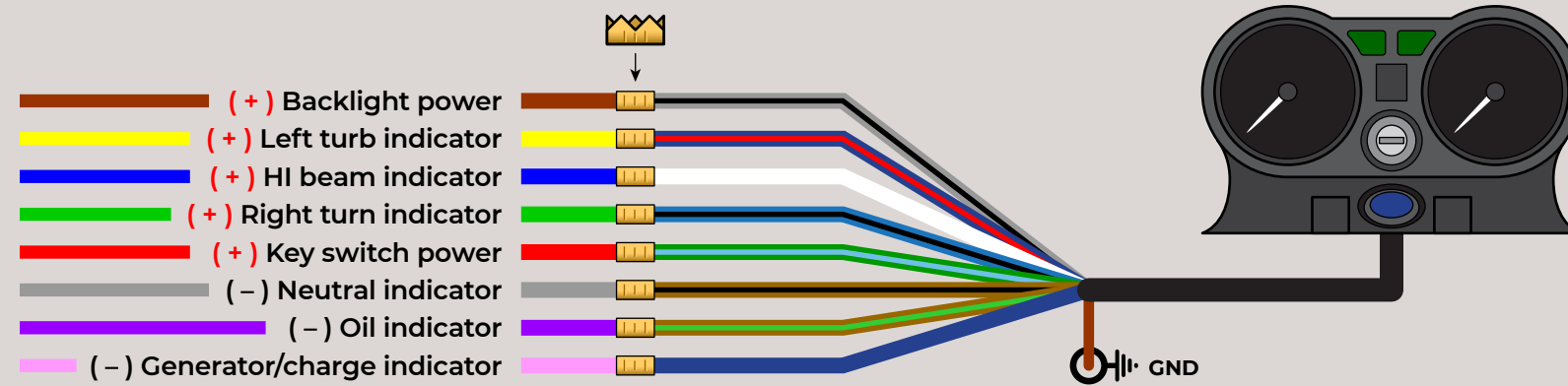


DASH OUTPUT (1.25m)

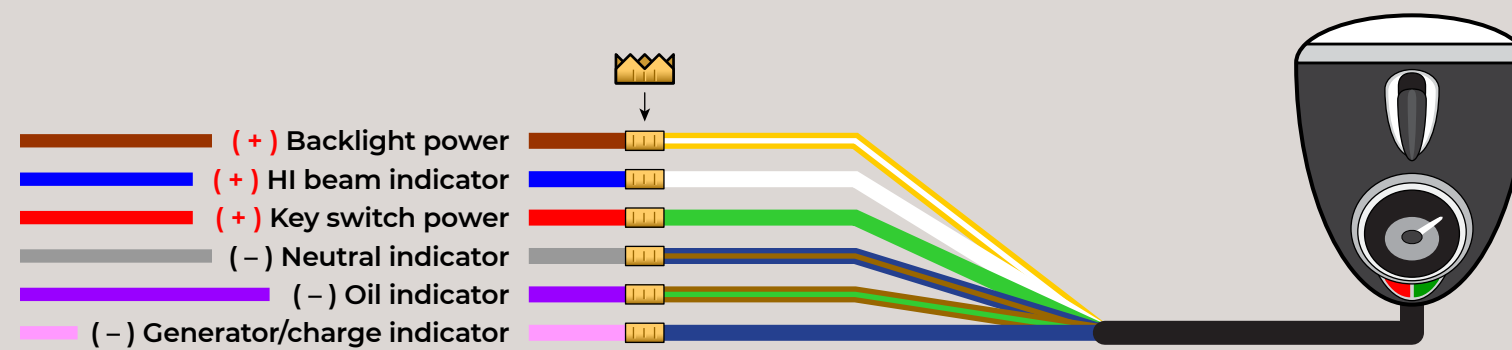
- (~) Tachometer output
- (+) Backlight power
- (+) Left turn indicator
- (+) HI beam indicator
- (+) Right turn indicator
- (+) Key switch power
- (-) Neutral indicator
- (-) Oil indicator
- (-) Generator/charge indicator



OR



OR



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DASH OUTPUT

1. Do a visual once over on the wiring job.
2. **Have ALL switches and Key in OFF position & gear in NEUTRAL position.**
3. Install MAIN Power fuse.
4. Turn **KEY SWITCH** to **ON** position.
= R21 LED will blink 3 times and then ON solid
= signal lights will blink 2 times
This indicates the system is ready.
= NEUTRAL and OIL indicator lights ON
5. Turn **MASTER LIGHT** switch to **1ST POSITION**.
= taillight marker ON
= front marker/DRL/Halo lights ON (if installed)
= dash backlight ON
6. Check **FRONT** and **REAR brake switch**.
= brake light flashes quick a few time then ON solid
7. Turn **MASTER LIGHT** switch to **2ND POSITION**.
= front marker/DRL/Halo lights OFF (if installed)
= headlight LO "soft start" ON (light will gradually come to full brightness)
8. Turn **HI BEAM** switch to **ON**.
= HI beam ON and HI indicator ON, LO beam OFF
Turn **HI BEAM** switch to **OFF**.
= HI beam OFF and HI indicator OFF, LO beam ON

**** AUTOMATED PASSING LIGHT feature ****
Tap **PASSING LIGHT** switch.
= LO beam OFF, HI beam flashing
Hold **PASSING LIGHT** switch for half a second or longer, then release.
= Flashing HI beam OFF
HI beam and PASSING LIGHT always available regardless of MASTER LIGHT switch position.
9. Push **HORN** switch.
= horn ON while push
10. Check **LEFT** and **RIGHT turn switch**.
= signal lights ON and turn indicator ON to L/R direction

**** MARKER LIGHTS SWITCHBACK feature ****
Marker lights will turn OFF while signal lights are blinking.

**** TURN SIGNAL LIGHTS AUTO TIME OUT feature ****
Signal lights will turn off automatically after 3.5 minutes if NOT cancelled manually.
Dash indicator lights will be solid to indicate signal switch is ON after TIME OUT.
Indicator lights will turn OFF after signal switch is cancelled.
11. Turn **ENGINE** switch to **ON**.
= engine ON While NEUTRAL indicator ON or CLUTCH pulled (if clutch switch is installed), hold START button
= engine CRANKING and headlight OFF during
= engine ON and headlight ON (if MASTER LIGHT switch is set to ON)
If engine not ready to run, install spark plug to Spark Coil, then spark plug body to ground, check for spark.
START button **ONLY available** if ENGINE switch is ON **and** gear in NEUTRAL or CLUTCH pulled.
12. **Smart Dash Indicators**
- TURN INDICATORS flash steady regardless of turn signal flash pattern selection
- NEUTRAL INDICATOR will flash steady if engine is running and in idle speed and in NEUTRAL
- OIL INDICATOR will flash rapidly if engine is running and oil switch is triggered
- DASH BACKLIGHT will come ON when taillight is ON
13. **Park position HAZARD** lights
Turn **KEY SWITCH** to **PARK** position
= left & right signal lights ON (hazard)
14. **Turn ALL switches OFF including KEY SWITCH.**

“ Spark coil heats up and gets HOT when engine is not running. Leave **ENGINE switch to OFF** unless starting engine.

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SYSTEM CHECK

Finalizing system installation

1. **Remove MAIN Power fuse.**
2. Organize wires and cables.
3. Cut and shorten excess wiring.
4. Bundle, wrap or tape to protect wiring.
5. **Turn steering head to the RIGHT while routing dash and handlebar cables.**

This will ensure that you have the correct cable slack.

6. Secure bundle with zip ties.
7. Secure and tighten all nuts, bolts, screws, twist ties.
8. Thoroughly inspect all connection points.
9. **REPEAT Section L.**