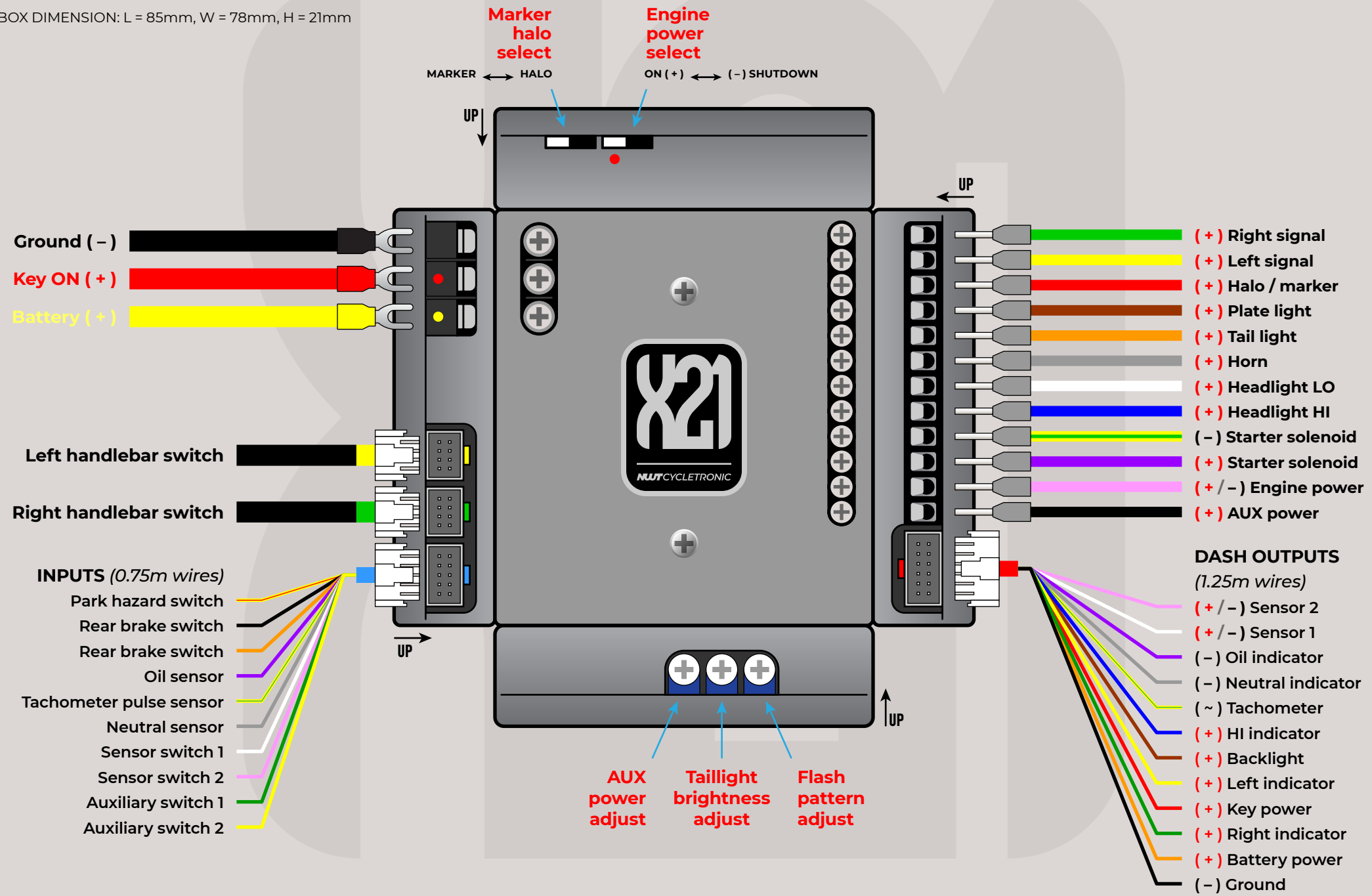


X21 PLUS

Control Hub

BOX DIMENSION: L = 85mm, W = 78mm, H = 21mm



Read installation thoroughly before starting.

- [] Section A Component checklist
- [] Section B Component mounting
- [] Section C Power/charging /starting
- [] Section D Engine power/spark coil
- [] Section E1 Lights /horn
- [] Section E2 Markers /halo lights /daytime running lights (DRL)
- [] Section F Switches /dash lights
- [] Section G Auxiliary output
- [] Section H System check
- [] Section I Finalizing

“ Take pictures and document your progress.

It comes in handy if or when you need help.

Share your project with us and inspire others.

Most importantly, **HAVE FUN!**

It's a hobby, remember?

We're here for you all the way.

- Battery (**MANDATORY**)
- Rectifier/regulator (**MANDATORY**)
- Starter solenoid/relay **electric start bikes only**
- Spark control module (CDI /TCI /points 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
- Single FUSE HOLDER **for non protected starter solenoids /key switches**



Need parts? Parts suggestions?

Have a chat with one of our affiliates:

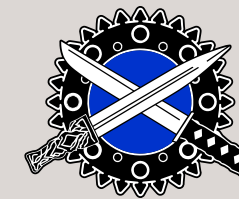


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NEED ASSISTANCE?

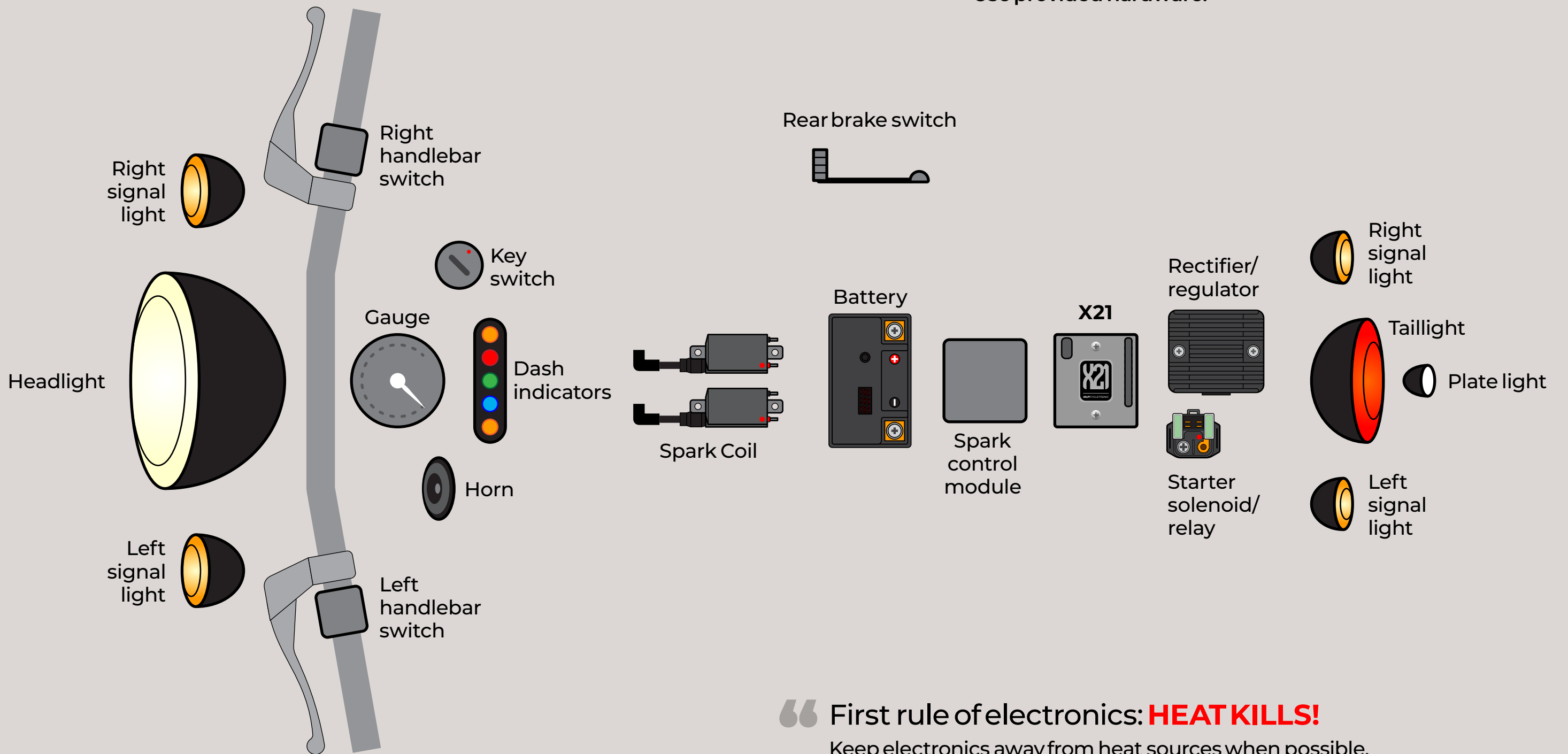
Email make, model, year of bike to
techservice@nwtcycletronic.com

COMPONENT CHECKLIST

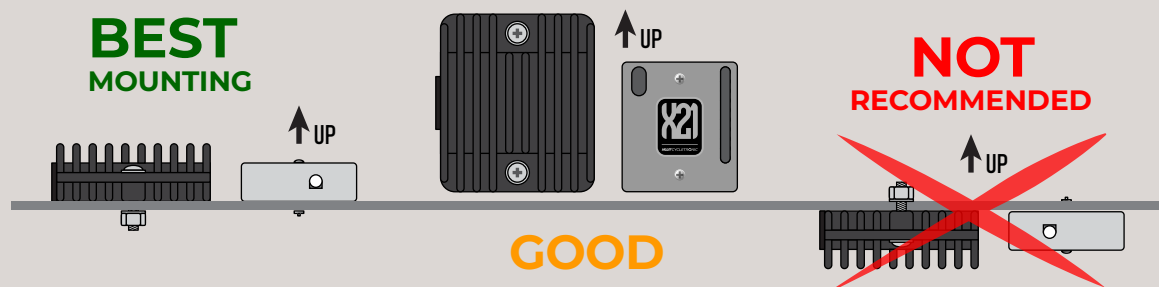
MOUNT ALL COMPONENTS onto desired location.

DO NOT route wires/cables at this time.

DO NOT enlarge or alter the X21 mounting holes.
Use provided hardware.



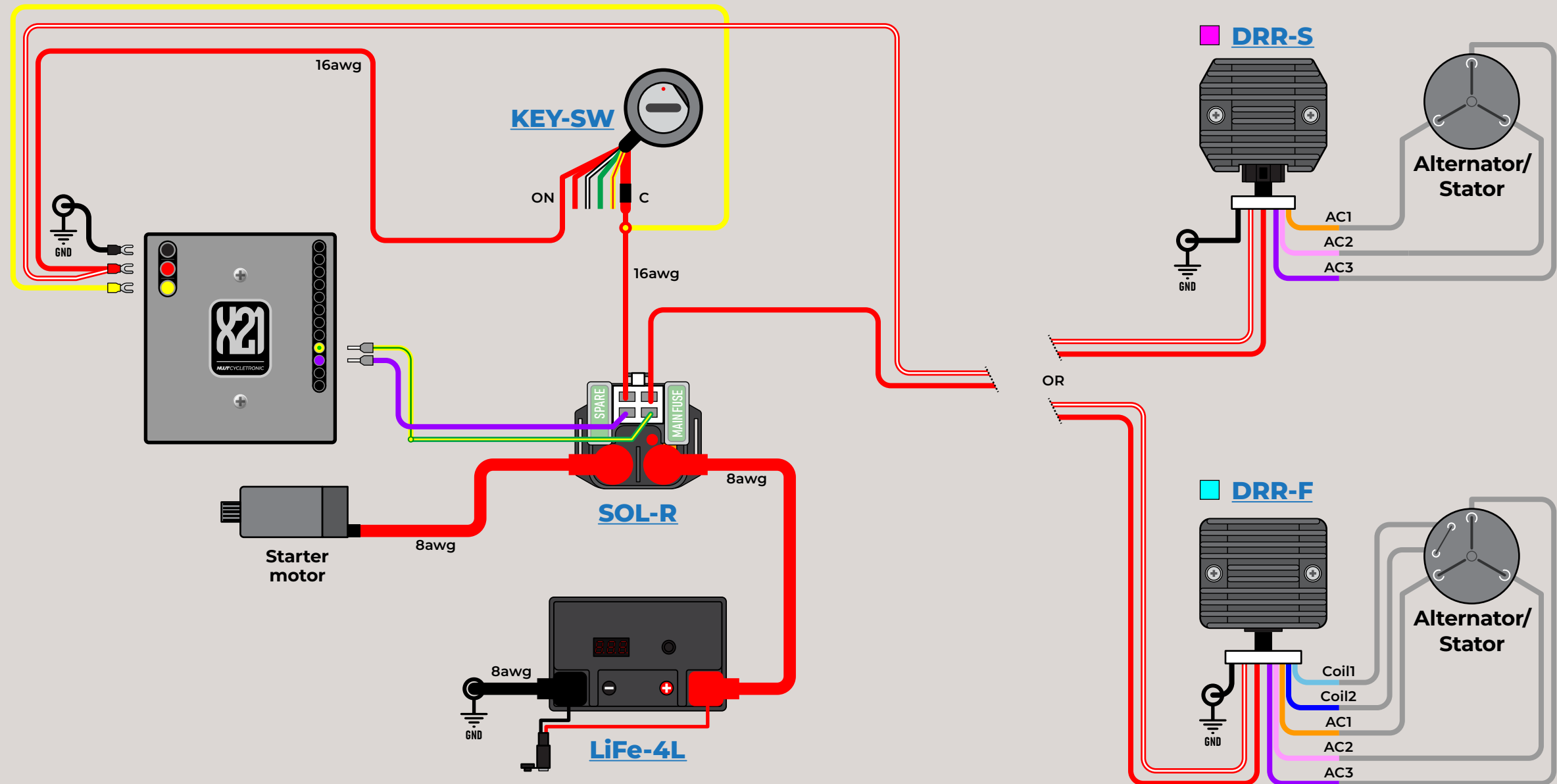
“ First rule of electronics: **HEAT KILLS!**
Keep electronics away from heat sources when possible.



NEED ASSISTANCE?
Email make, model, year of bike to
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REMOVE FUSE from fuse holder before starting.
DO NOT install fuse until instructed.

Use recommended wire gauge size.
DO NOT overtorque/tighten screw terminals.



Mywire colors

Mytype ■ A ■ B _____

- Alternator/stator**
- Coil1 _____
 - Coil2 _____
 - AC1 _____
 - AC2 _____
 - AC3 _____

“Modernize your charging system with a digital type rectifier/regulator for a safer and more efficient charging source.”

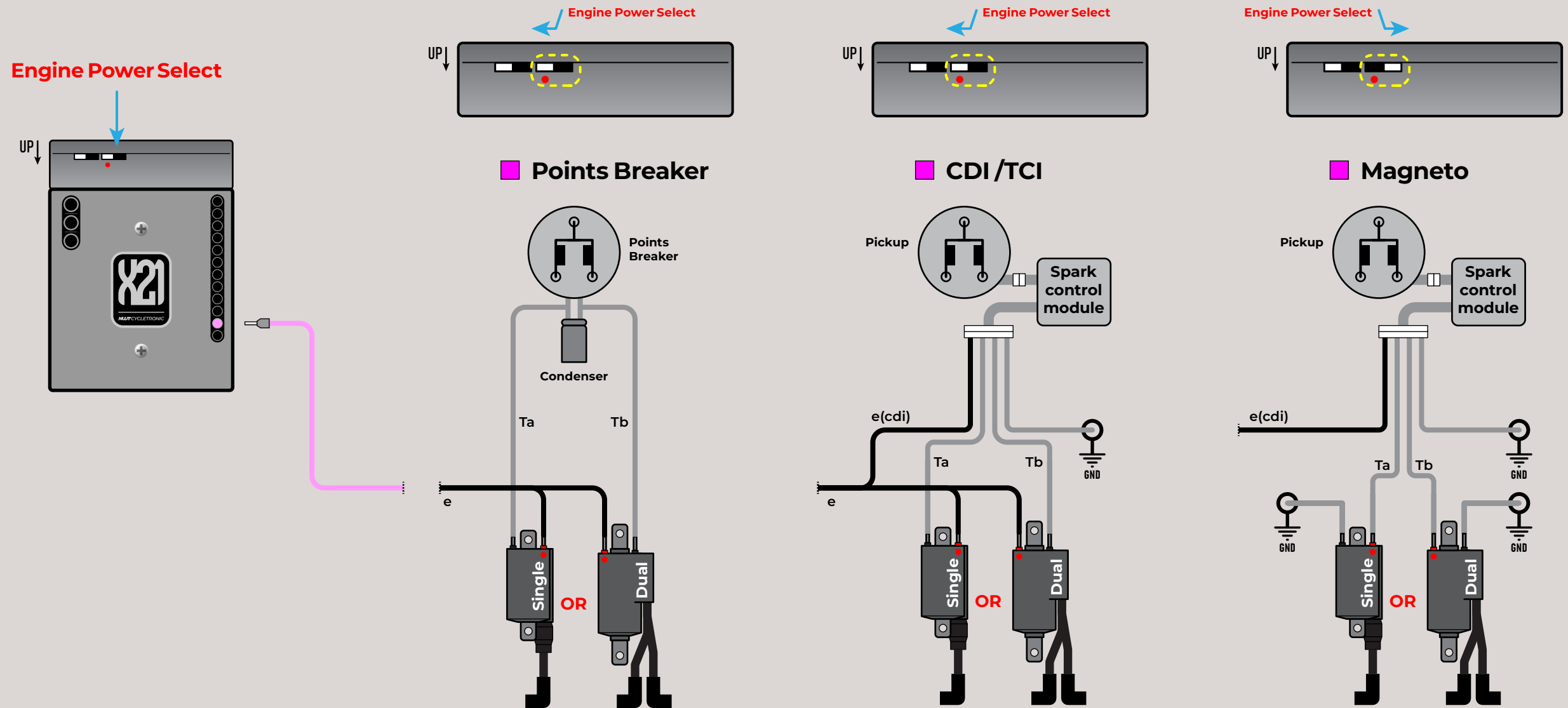
Need assistance with “My wire colors”?
 Email make, model, year of bike to
techservice@nwtcycletronic.com

POWER / CHARGING / STARTING

DO NOT install fuse until instructed.

DO NOT over torque/tighten screw terminals.

Pay attention to "Engine Power Select" switch position.



My wire colors

My type

Points breaker / Pickup

Ta _____

Tb _____

Original Spark control module

Ta _____

Tb _____

e(cdi) _____

GND _____

Original coil(s)

Ta _____

Tb _____

e _____

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

Need assistance with "My wire colors"?
 Email make, model, year of bike to
techservice@nwtcycletronic.com

ENGINE POWER / SPARK COIL

DO NOT install fuse until instructed.

DO NOT overtorque/tighten screw terminals.

“ Your X21 does not need additional parts to run LED lights. LED lights produce low heat to no heat and are energy efficient.

Aftermarket parts

Aftermarket or aftermarket replacement parts refer to vendor for wire colors.

OR include wiring diagrams/pictures in your email for assistance.

My wire colors

Front signal lights

marker _____
 turn _____
 GND _____

Rear signal lights

turn _____
 GND _____

Taillight

marker _____
 brake _____
 GND _____

Plate light

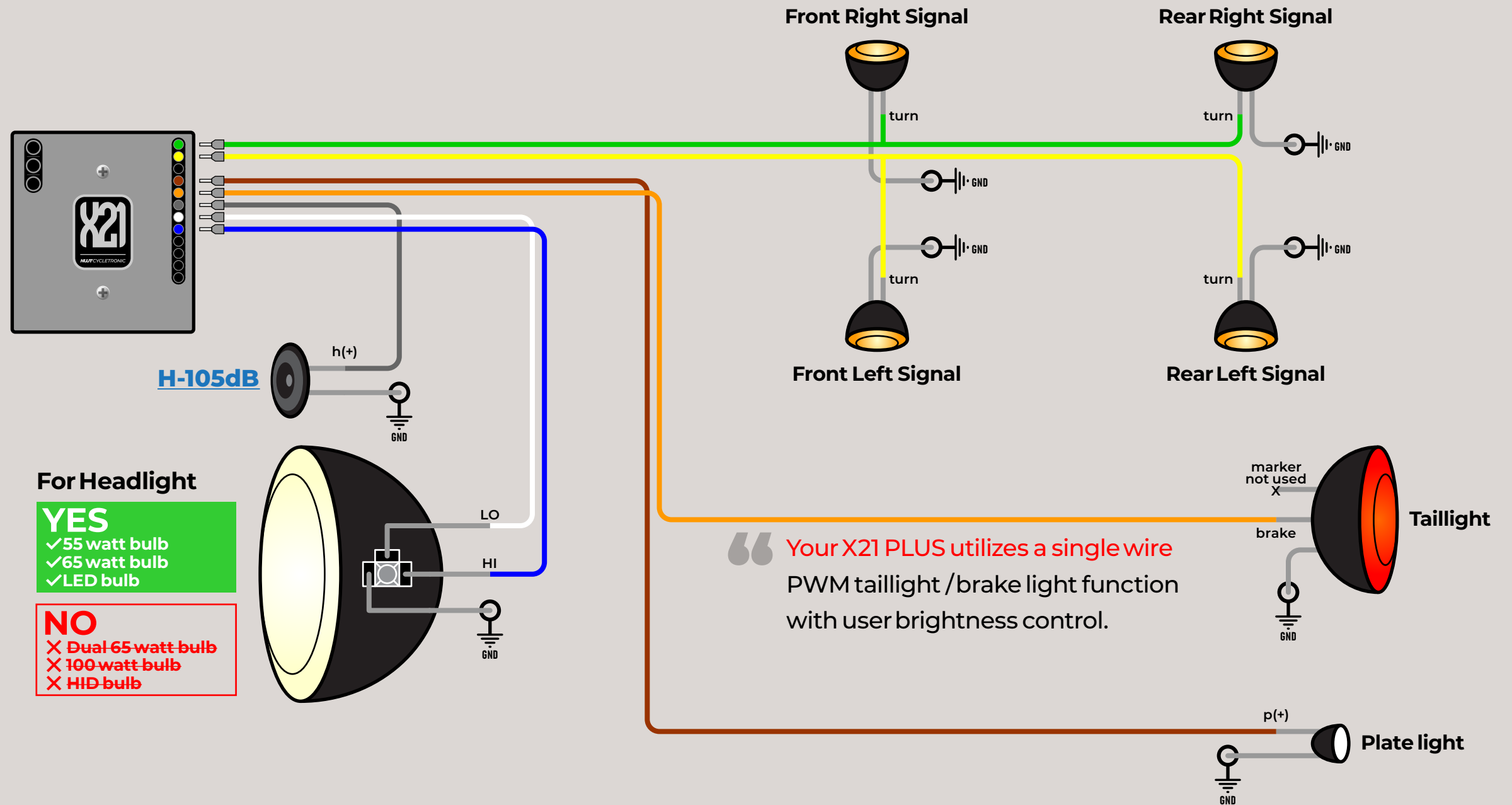
p(+) _____
 GND _____

Horn

h(+) _____
 GND _____

Headlight

DRL _____
 GND _____
 LO _____
 HI _____
 GND _____



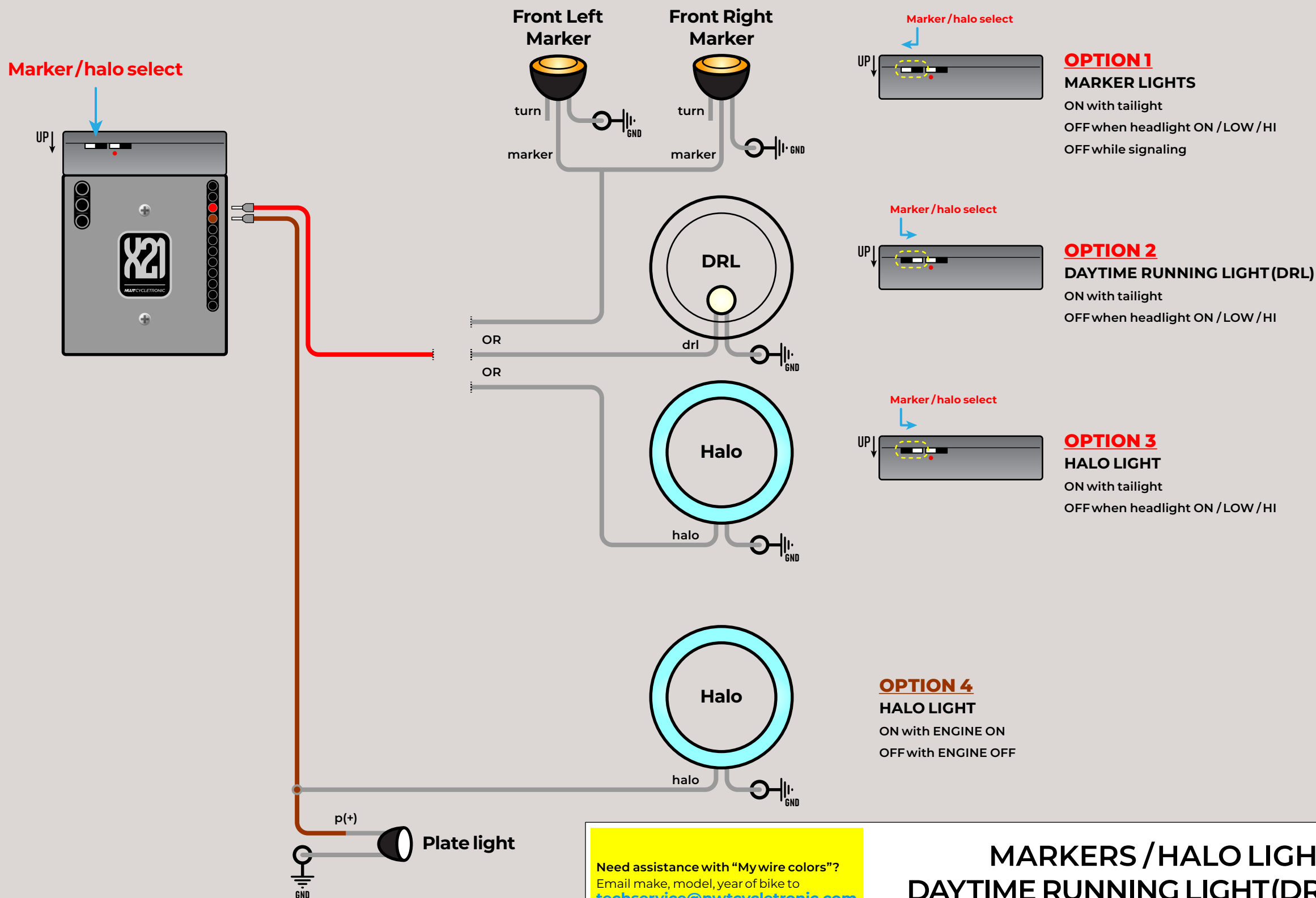
“ Your X21 PLUS utilizes a single wire PWM taillight /brake light function with user brightness control.

Need assistance with “My wire colors”?
 Email make, model, year of bike to
techservice@nwtcycletronic.com

DO NOT install fuse until instructed.

DO NOT overtorque/tighten screw terminals.

“ Your X21 does not need additional parts to run LED lights.
LED lights produce low heat to no heat and are energy efficient.



Aftermarket parts
Aftermarket or aftermarket replacement parts refer to vendor for wire colors.

OR include wiring diagrams/pictures in your email for assistance.

My wire colors

Front signal lights

marker _____
GND _____

Headlight

drl _____
GND _____
halo _____
GND _____

Plate light

p(+) _____
GND _____

Need assistance with "My wire colors"?
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**MARKERS / HALO LIGHT /
DAYTIME RUNNING LIGHT (DRL)**

DO NOT install fuse until instructed.

Pay attention to cable slack for steering head movement.

Aftermarket parts

Aftermarket or aftermarket replacement parts refer to vendor for wire colors.

OR include wiring diagrams/pictures in your email for assistance.

My wire colors

Gauges

tachometer _____

backlight _____

b(-) _____

Left indicator

L(+) _____

L(-) _____

Neutral indicator

N(+) _____

N(-) _____

HI indicator

H(+) _____

H(-) _____

Oil indicator

O(+) _____

O(-) _____

Right indicator

R(+) _____

R(-) _____

Turn indicator

T(+) _____

T(-) _____

Tachometer pulse sensor

tsense _____

Oil switch

oil sw _____

Rear brake switch

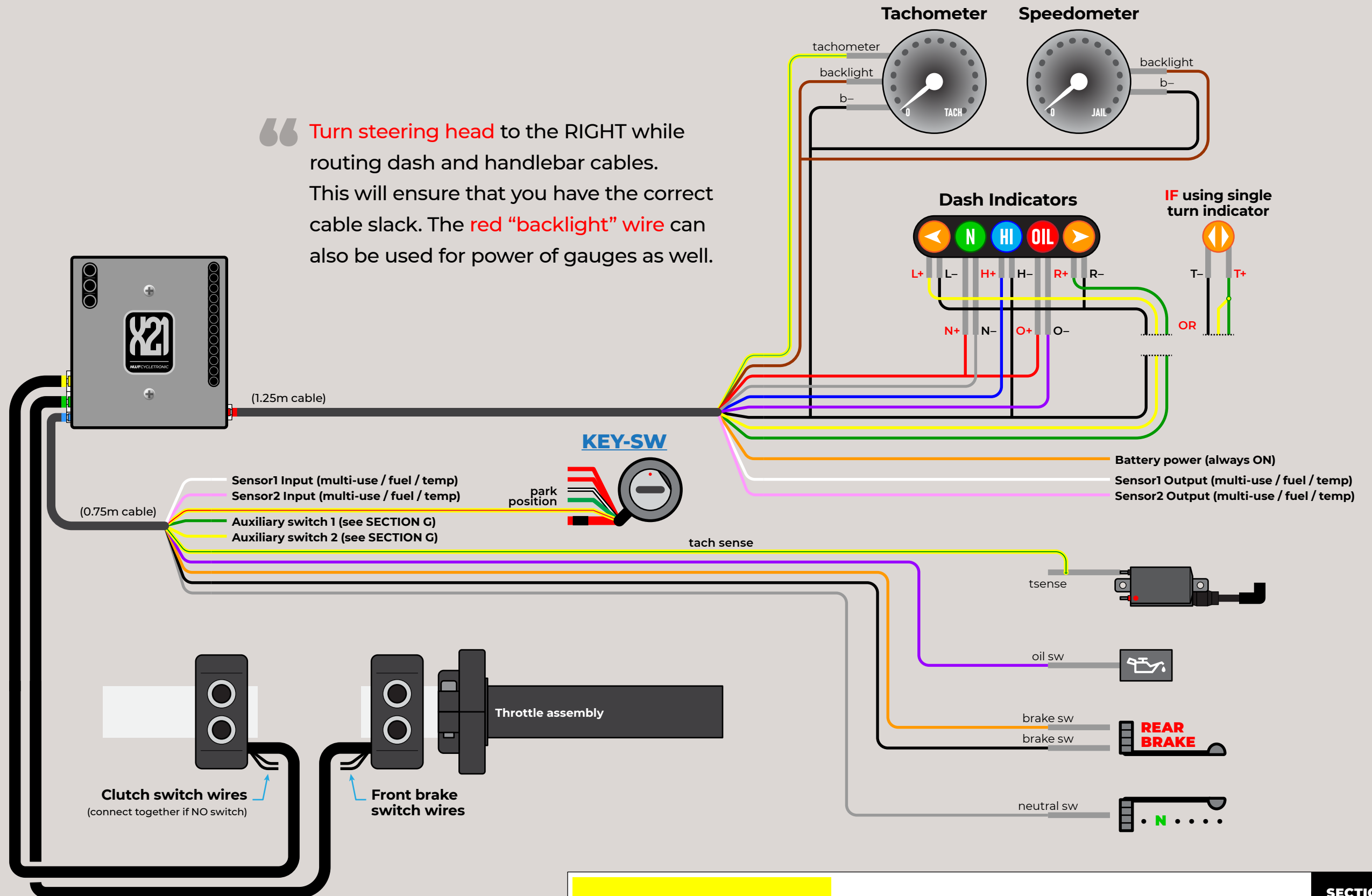
brake sw _____

brake sw _____

Neutral switch

neutral sw _____

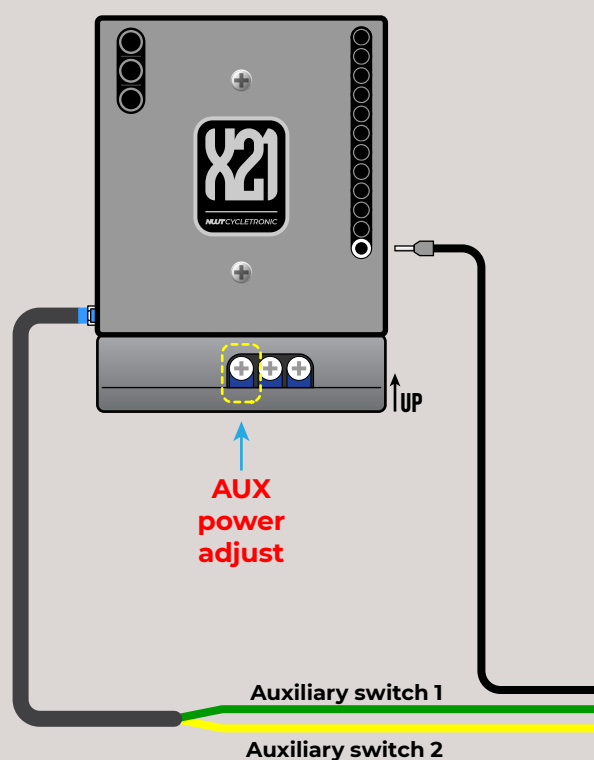
“ Turn steering head to the RIGHT while routing dash and handlebar cables. This will ensure that you have the correct cable slack. The red “backlight” wire can also be used for power of gauges as well.



Need assistance with “My wire colors”?
Email make, model, year of bike to
techservice@nwtcycletronic.com

SWITCHES / DASH LIGHTS

USE ONE OPTION ONLY.

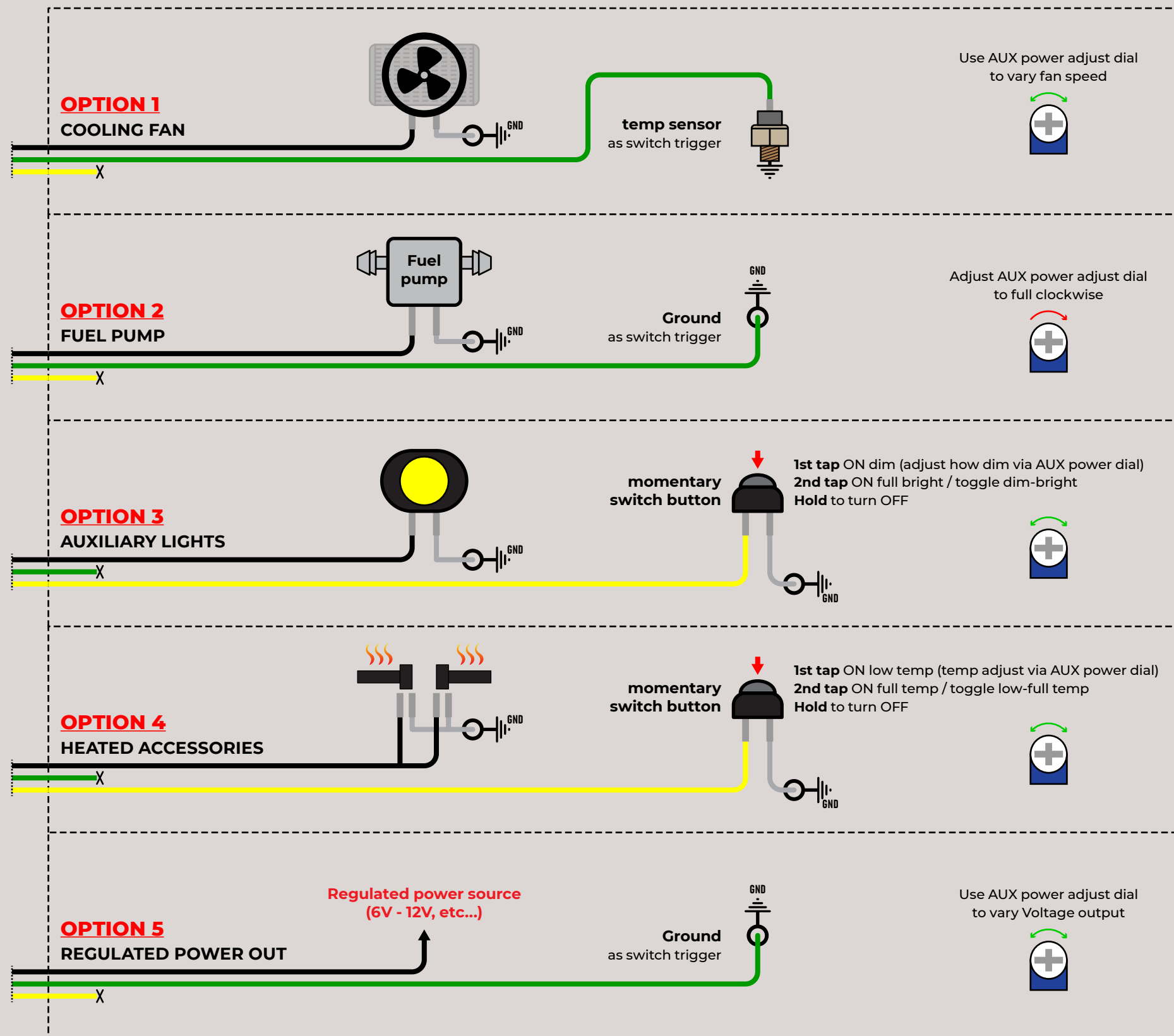


AUXILIARY SWITCH 1 FUNCTION

When GROUNDED, AUX OUTPUT is active
When NOT Grounded, AUX OUTPUT is OFF

AUXILIARY SWITCH 2 FUNCTION

Single TAP of MOMENTARY switch, AUX OUTPUT is set to dial setting.
Single TAP again, AUX OUTPUT is ON Full.
HOLD button for half a second or longer, turns AUX OUTPUT to OFF.
Each single TAP will alternate output from LOW to HIGH or HIGH to LOW.

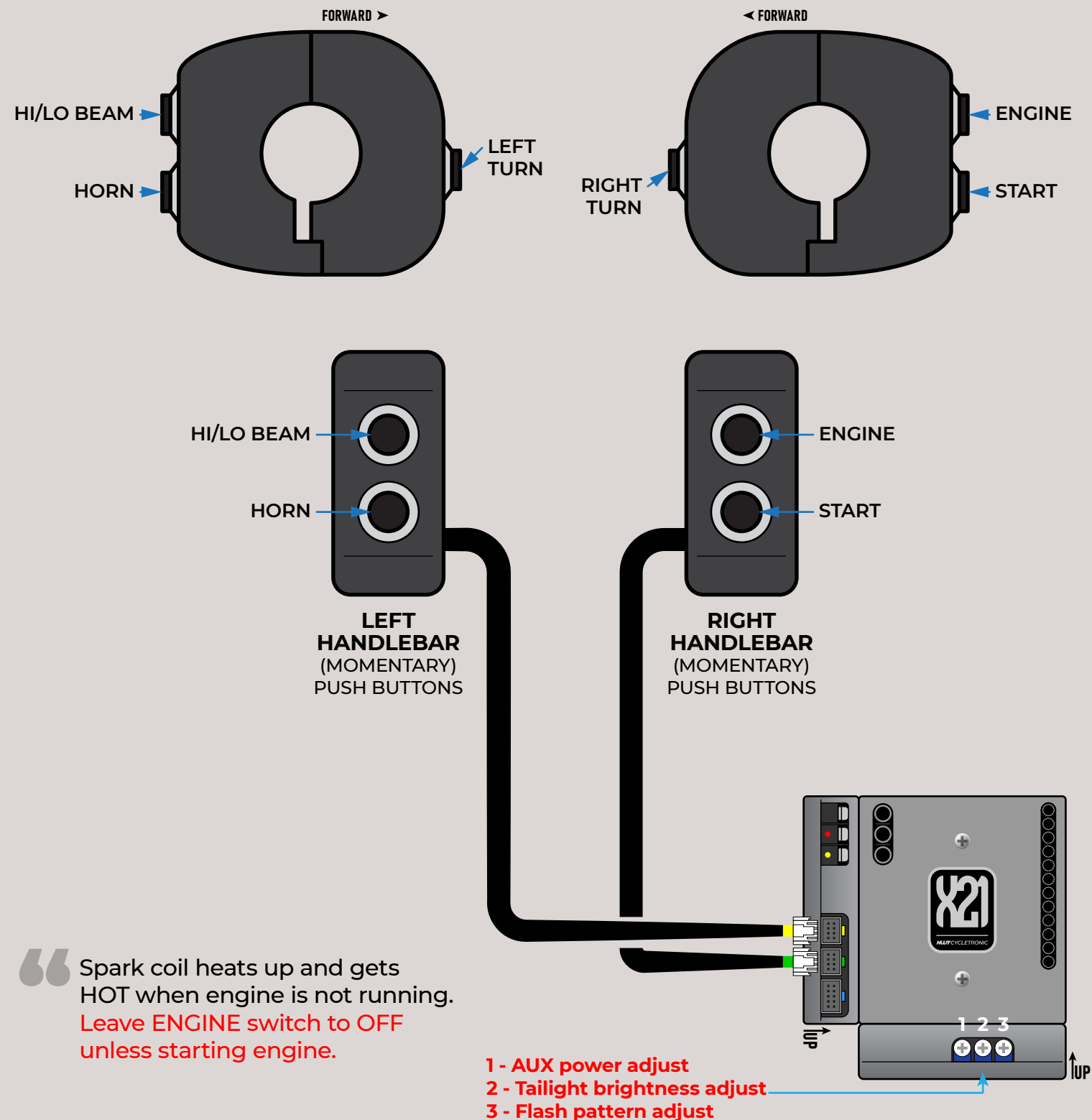


OPTION X
MANY MORE...

NEED ASSISTANCE?
Email make, model, year of bike to techservice@nwtcycletronic.com

1. Do a visual once over on the wiring job.
2. **Have all switches and key in the OFF position & gear in NEUTRAL position.**
3. Install MAIN fuse.
4. Turn **KEY SWITCH** to **ON** position.
= X21 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
= taillight marker ON
= front marker/DRL/Halo lights ON (if installed)
= dash backlight ON
Slowly rotate **TAILLIGHT BRIGHTNESS ADJUST dial** either direction to desire taillight brightness level.
6. Check **FRONT** and **REAR** brake switch.
= brake light quickly flashes a few times then ON solid
**** AUTO BRAKE LIGHT HOLD feature ****
While engine is running and on idle and in neutral gear
= Brake light ON
7. Tap **HI/LO BEAM** button **3 times**
= front marker/DRL/Halo lights OFF (if installed)
= LO beam ON
= headlight LO "soft start" ON
(light will gradually come to full brightness)
Tap **HI/LO BEAM** button **3 times**
= LO beam OFF
= front marker/DRL/Halo lights ON (if installed)
Tap **HI/LO BEAM** button **3 times**
= front marker/DRL/Halo lights OFF (if installed)
= LO beam ON
= headlight LO "soft start" ON
(light will gradually come to full brightness)
8. Tap **HI/LO BEAM** button **2 times**
= HI beam ON and HI indicator ON, LO beam OFF
Tap **HI/LO BEAM** button **2 times**
= HI beam OFF and HI indicator OFF, LO beam ON
**** AUTOMATED PASSING LIGHT feature ****
Tap **HI/LO BEAM** button **1 time**
= LO beam OFF, HI beam flashing
Tap **HI/LO BEAM** button **1 time**
= Flashing HI beam OFF
HI beam and PASSIGN LIGHT always available regardless of MASTER LIGHT switch position.

9. Push **HORN** button.
= horn ON while pushed
10. Tap **LEFT TURN & RIGHT TURN** buttons **1 time**
= ALL signal lights ON and turn indicators ON
Slowly rotate **FLASH PATTERN ADJUST dial** in either direction to set desired flash pattern.
**** TURN INDICATOR LIGHTS are steady flashing and not affected by the different signal light flash pattern****
Tap **LEFT TURN & RIGHT TURN** buttons **1 time**
= ALL signal lights OFF and turn indicators OFF
Check LEFT TURN, check RIGHT TURN
(1 tap ON, 1 tap OFF)
= signal lights ON and turn indicator ON to button pushed
**** 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 3.5minutes if NOT cancelled manually
11. Tap **ENGINE** button **1 time**
= engine ON
While NEUTRAL indicator ON or CLUTCH pulled
(if clutch switch is installed), hold **START** button
= engine CRANKING and headlight OFF during
If engine not ready to run, install spark plug to Spark Coil, then spark plug body to ground, check for spark.
While engine is ON, tap **ENGINE** button **1 time**
or hold **ENGINE** button
= engine OFF
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 rapid if engine is running and oil switch is triggered
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**



NEED ASSISTANCE?
Email make, model, year of bike to
techservice@nwtcycletronic.com

SYSTEM CHECK (**PLUS-P**)

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, duct tape, twist wires and whatever the fuck else you used to mount your shit down.
8. Thoroughly inspect all connection points.
9. **REPEAT Section H.**

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