Brushless Automotive Cooling Fan Kit Installation Instructions:

Warning: Read the enclosed installation instructions in its entirety. Improper installation may harm you, or your vehicle and will void warranty. If anything is unclear, please contact us at support@deltapag.com or (212) 203 2912.

Dear Valued Customer,

Thank you for purchasing Delta PAG's high performance brushless cooling fan. Our team strives to offer you exceptional craftsmanship and engineering. Our brushless automotive cooling fan uses cutting-edge technologies to enhance reliability, efficiency & functionality. To learn more about the technologies incorporated in this product, please visit our website at www.deltapag.com.

Delta Performance Automotive Group designs and manufactures high performance automotive components using patented, state-of-the-art technologies. With these technologies, our mission is to develop components that exceed the performance and reliability found with traditional OEM parts. We pride ourselves in providing advanced technologies, quality & exceptional customer service.

If you have any questions regarding this product, please don't hesitate to contact us via email at support@deltapag.com or phone at (212) 203 2912.

Best regards,
The Delta PAG Support Team

Limited Warranty

Delta Performance automotive Group, LLC constant mission is to give our customers the highest quality products possible. Delta PAG extensively tests all products prior to shipping to ensure quality. Delta PAG warrants each product it sells to be free from defects in both workmanship and material for a period of one (1) year from the date of purchase, provided that the product is properly installed, subjected to normal use and that the product is not modified, disassembled or changed in any way, nor damaged because of negligence by customer or installer.

Our warranty service and repair facility is located at 14-44 30th Road, Astoria NY 11102. Customers who believe they have a defective product should either return it to the dealer from which it was purchased or ship it directly to Delta PAG, LLC along with proof of purchase and a complete description of the problem. The product must be returned in its entirety with freight prepaid. All components must first be returned including custom fabricated components in order to process. If a thorough inspection of the product by the factory indicates defects in workmanship or material, our sole obligation shall be to repair, replace or refund the product, in addition, your shipping cost will be refunded. Delta PAG is not responsible for shipping damage. It is the customer's responsibility to inspect the package and goods before accepting delivery from the courier. If damage is noticed after accepting the package, a claim must be filed with the courier no more than three (3) business days from delivery.

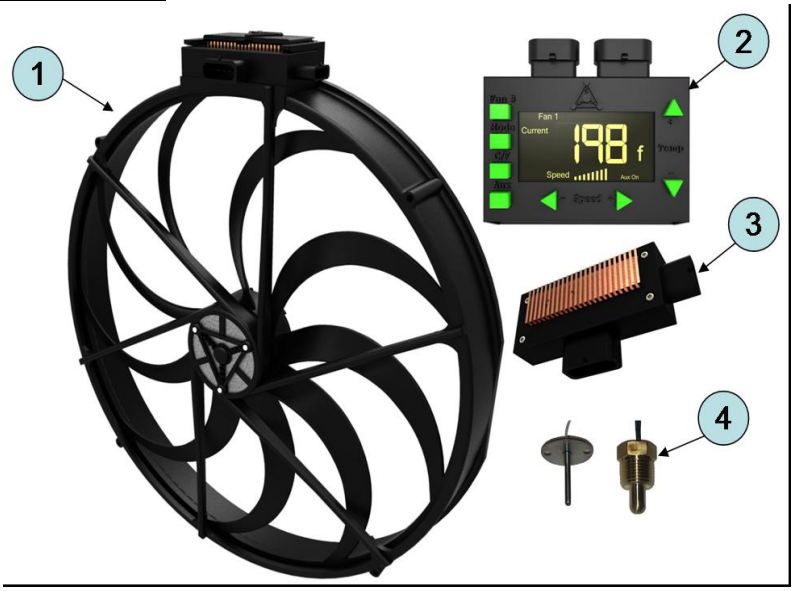
Warranty covers only the product itself and not the cost of installation or removal. Due to sensitive electronic components, please read the product manual in its entirety prior to installation.

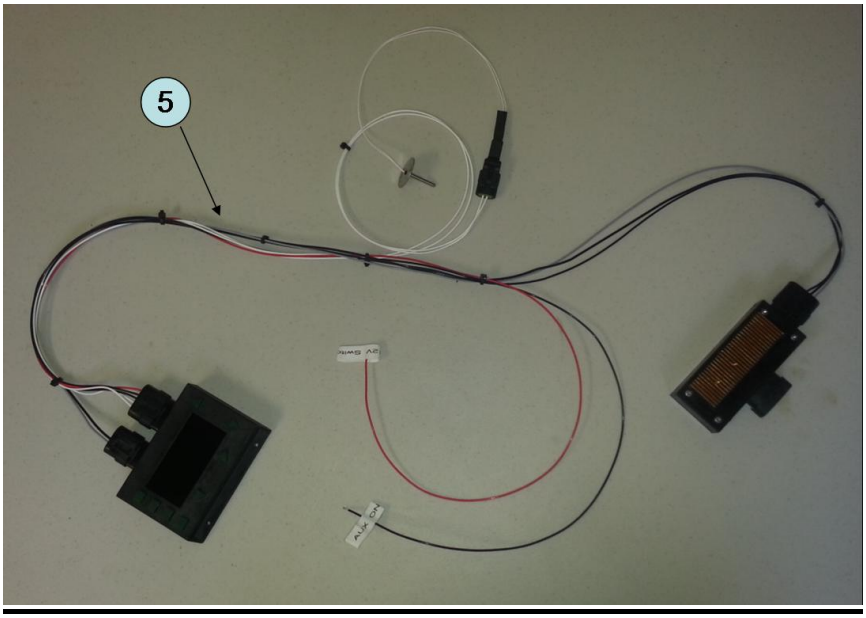
Warning: Do not operate the fan detached from the vehicle. The fan assembly may move and cause serious harm. Do Not, at any time place any objects or fingers between the fan blades. This is a high powered fan and can cause serious injury.

Delta PAG, LLC shall not be liable for any and all consequential damages occasioned by the breach of any written or implied warranty pertaining to this sale in excess of the purchase price of the product sold. If you have any questions regarding a product or installation, please contact us at (212) 203-2912 from 8:00am to 5:00pm EST, Monday through Friday.

Installation Instructions:

What's included in the kit:





1. Brushless Fan
2. Temp/Speed controller
3. Electronic control module (ECM)
4. Temperature Sensor (Choice of threaded or probed)
5. Wiring Harness

Wiring:

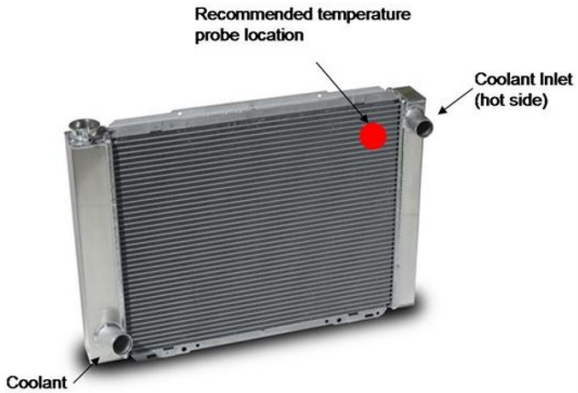
Battery wires:
Connect the thick 12 gauge black and red wires from the fan to the battery. The red wire is +12v and the black is Ground. Do Not reverse polarity at any time, this will short out the ECM. Do Not weld anywhere on the car while the ECM is connected. Welding on the chassis will send 400v through the ground wire and fry the ECM.

+12v Switched wire :
Connect the thin 18 gauge red wire to a +12v switched source, such as +12v ignition accessory. Do not connect to ignition coils, starters or any other high load/power device. Extremely high feedback from these components can short out the unit.

Aux On / AC wire (optional):
Connect the thin 18 gauge blue wire to a switched ground source. The thin 18 gauge blue wire is found on the wiring harness. Do Not connect to a +12v source at any time, this will short out the temp/speed controller. Wire for A/C, must use a 4 wire Trinary switch (see page12)

Temperature Sensor

Probed Sensor



Stainless steel temperature probe sensor should be pushed between the radiator core fins close to the inlet radiator hose (upper). Probe should be located on the front (grill side) of the radiator

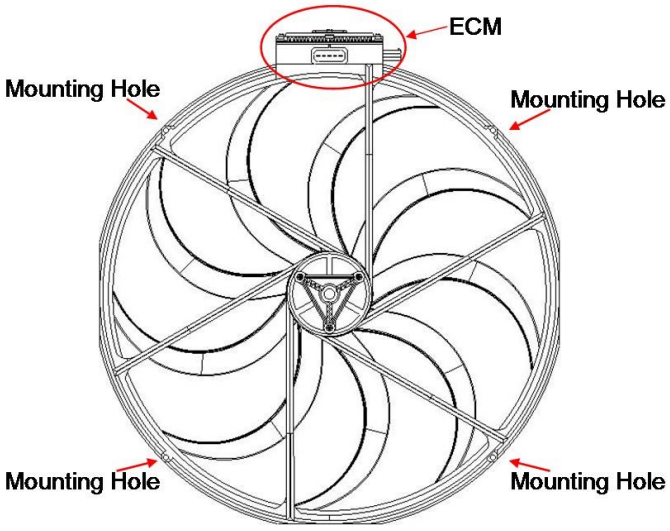
****Never apply flame to the sensor. Max operating temperature is 425F**

Threaded Sensor

Threaded (3/8 NPT) brass temperature sensor should be placed in the intake manifold as close to the thermostat as possible.

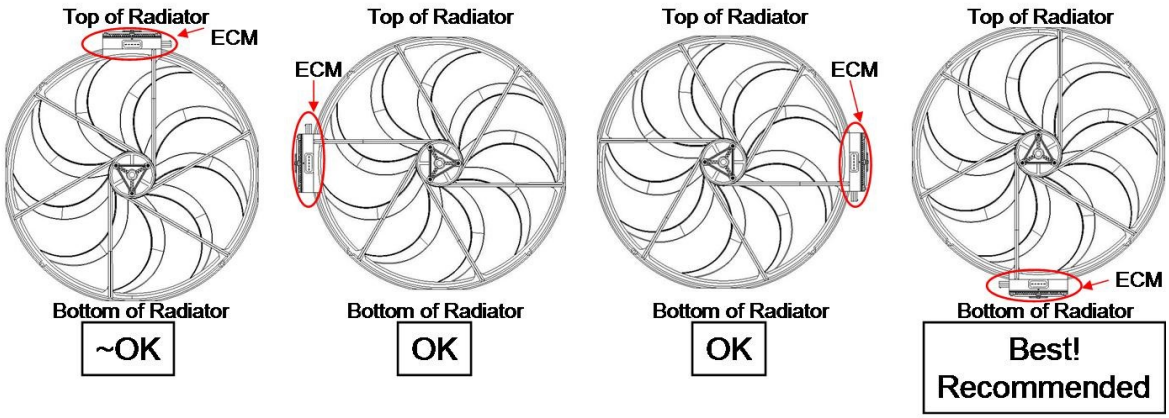
Fan Mounting and EMC Position:

The shroud has four (4) mounting points were you can run plastic straps through your core or 8-32 screws for custom aluminum shroud attachment. We recommend mounting the fan either against the radiator's core or attached to a custom aluminum shroud. The fan's circumference has silicone foam gasketing to ensure a vibration free surface mating. If you're interested in having us fabricated a custom aluminum shroud, please contact us, (212) 203 2912.

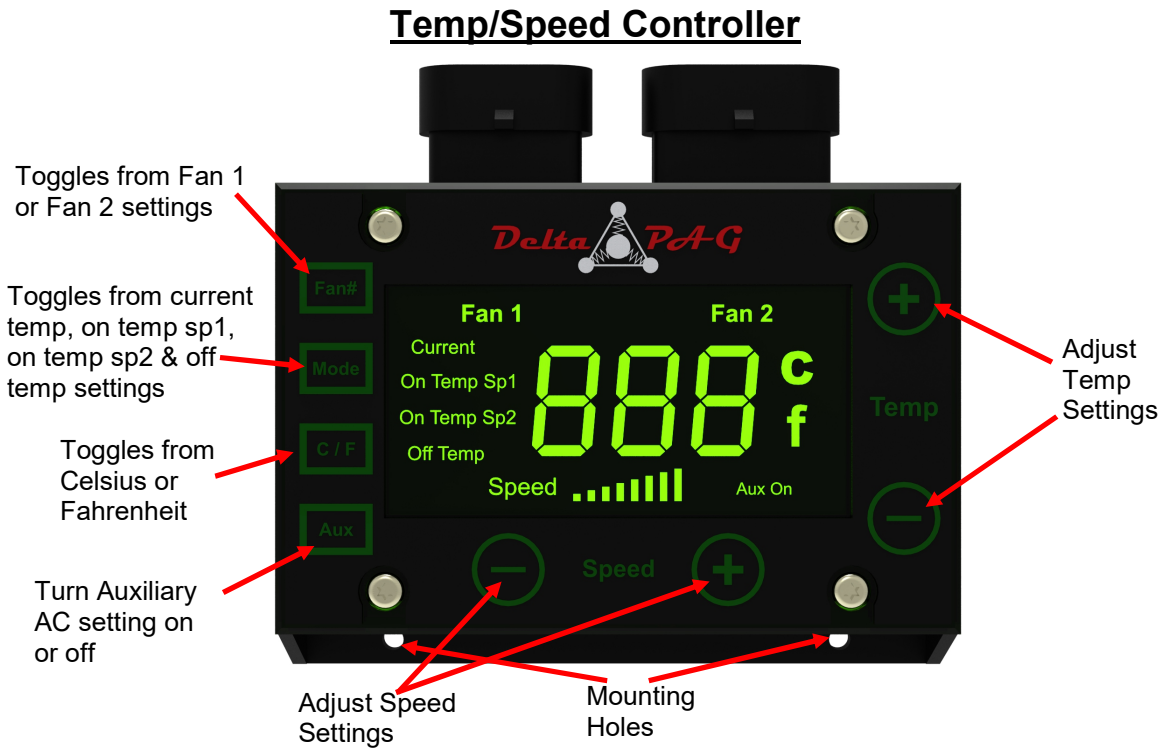


The ECM can be positioned in any direction. We highly recommend positioning the ECM downwards, towards the bottom of the radiator. This is the coolest underhood location and will ensure long operating life:

ECM Mounting Position:



Temperature/Speed Controller Programming:



The Temp/Speed controller has been designed to be intuitive and quickly programmable. This controller allows the user to adjust the on/off temperature and speed/airflow of the fan to fit their application. Two fans can be operated by one temp/speed controller. All settings are automatically saved and will be stored even if you remove the battery. If properly set, constant adjustment is not necessary. No complicated wiring, relays or temp switches are necessary.

*Note, the LED display turns off after 3 minutes if no buttons are being pressed. Press any button to re-illuminate. The controller is still functioning as long as there's power from the +12v switched wire.

Mounting/Placement: The temp/speed controller can be mounted either in the engine compartment or under the dash. Attach with screws (not included) via the two mounting holes on the base of the controller. If installing under the hood, place the controller away from high heat such as headers or turbo.

Temp/Speed Controller Buttons:
There are a total of eight (8) buttons on the temp speed controller. Please refer to the image above for their function.

Temperature/Speed Controller Programming (Cont.):

-Fan#: You can control two fans with one Temp/Speed controller. Toggle from fan1 or fan2 settings. if you are running two fans, you will need to program Fan1 and Fan2 separately.

-Mode: Toggle from current temperature, On Temp and Off Temp.
"Current" displays the current temperature. Temperature adjustments can only be made in "On Temp SP1, SP2" or "Off Temp" modes. Press the vertical arrow buttons to make the desired adjustments. Press and hold the temp arrows for faster dialing.

Adjust the on/off temp settings to desired vehicle operating temperature. You need to know your thermostat rating & your desired optimal operating temperature to properly adjust these settings. Your desired operating temperature should be between your "on temp" and "off temp" settings. Since every vehicle is different, we recommend setting the Off temp first.

> Off Temp Setting:
> The "Off Temp" is the temperature that the fan turns off. This needs to be below the "On Temp". 15 degrees difference is recommended. Also, the **off** temperature **Must** be, at min, 10 degrees above your thermostat rating. This is to ensure that your thermostat remains open. If this is set incorrectly, you will be burning through ECMs quickly.
>
> On Temp Setting:
> The "On Temp SP1" is the temperature that the fan turns on, with less than full speed. This should be 10 degrees above your off temp setting. On Temp SP2 is the second temperature setting that increases the speed of the fan and is usually 5 degrees above SP1
>
> Example:
> Thermostat is rated at 180f
> You would like your vehicle to operate at 195f
> Min temp settings should be: Off Temp 190f, On Temp SP1 195f, On Temps SP2 205f

-C/F: Toggle from Celsius and Fahrenheit display.

-Aux: Turns on/off the Aux function indicated by an illuminated "Aux On" on the bottom right of the display. When the Aux function is "on" and the Aux wire is connected to a grounded switch (switch to ground) fan will operate at full speed regardless of engine temperature. This is used for A/C operation. You must use a Trinary switch. The A/C switch has four wires, two are for the compressor clutch pulley and the other two (usually blue) are for fan.

Temperature/Speed Controller Programming (Cont.):

If your receiver drier switch is only two wires, then you will require A/C Trinary switch part# TR4AC.

*Only connect the Aux On wire to a switched **Ground** wire. Do not ground constantly. Any other connection will short the temp/speed controller.

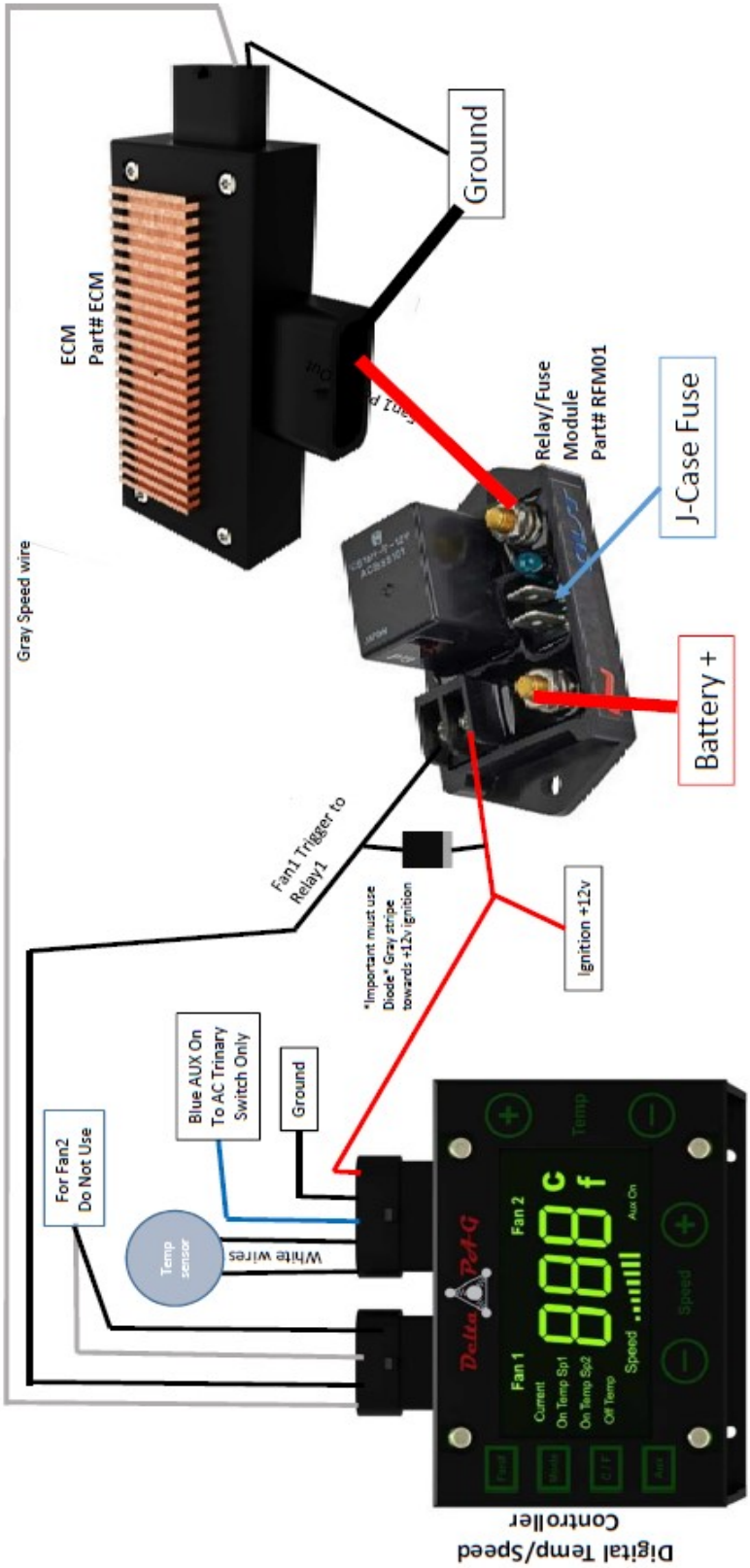
Speed: Adjust the speed of the fan to meet your airflow needs. There are 8 speed settings and are adjusted with the horizontal arrow buttons. Most vehicles don't require max airflow for all driving environments. Reducing the speed reduces amp draw and reduces fan noise and prolongs the life of your alternator and other electrical components. Also, reducing airflow increases the amount of time the fan stays on and reduces on/off cycling. Too many on/off cycles may reduce the life span of the ECM controller.

Determining the appropriate speed/airflow setting:
Determining the appropriate airflow should be done after you have programmed your on/off temp settings. Speed settings should be determined on the hottest day of the year and at idle. Colder days will require less airflow since temperature variation is greater, therefore temperature dissipation from your radiator is easier.

We recommend approx 3 minutes on-time for the recommended 15 degree temperature drop.

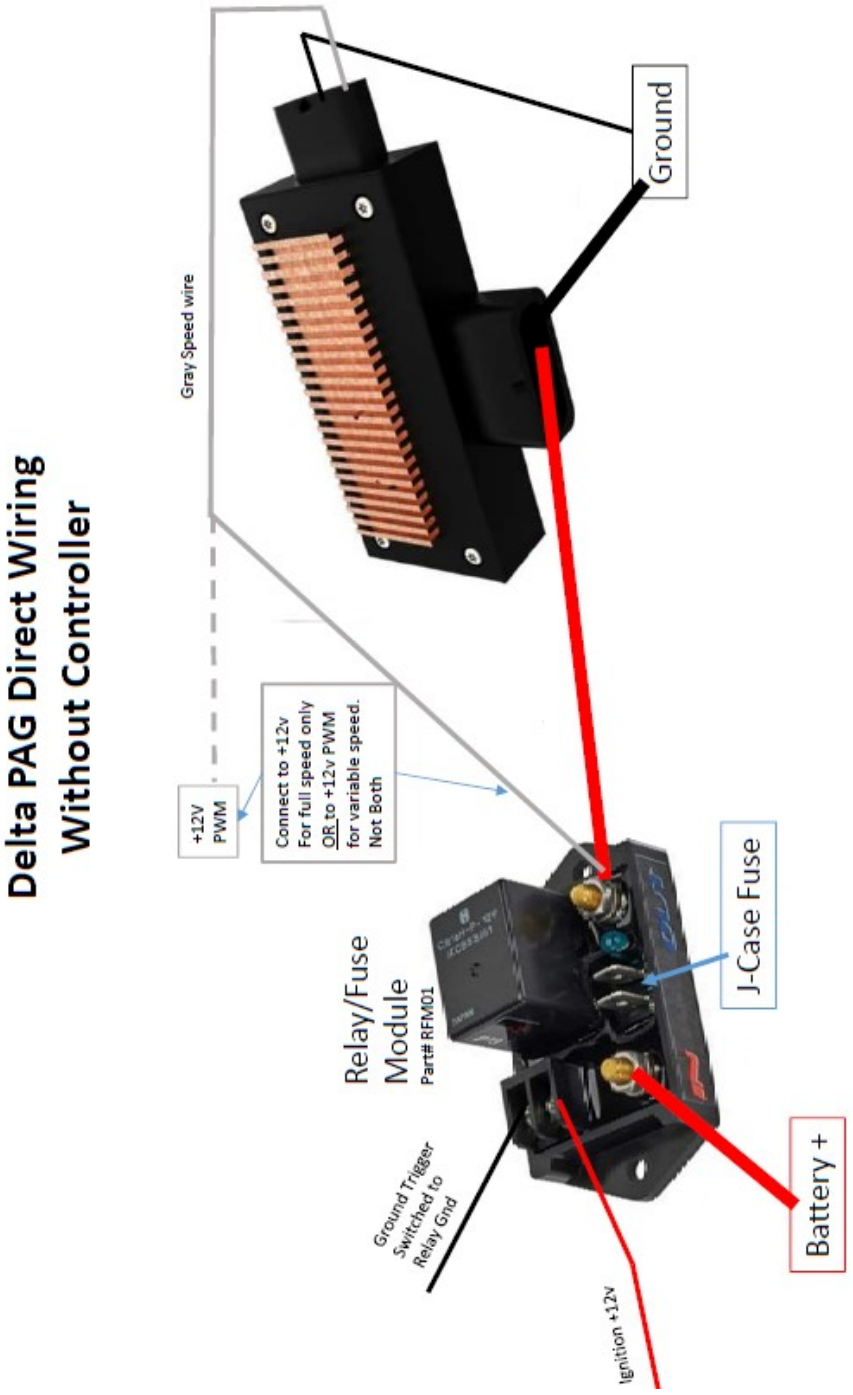
Initially, set at the highest speed and start your engine. Observe the digital "current" temperature gauge and confirm the fan turns on at the programmed "on temp". Once the fan engages, ensure the temperature is dropping. If the temperature drops 15 degrees and the fan turns off in less than 2 minutes, reduce speed by pressing the left arrow button once.

Delta PAG Digital Controller
With DeltaPAG Single Fan Wiring



LS Wiring Schematic (optional)

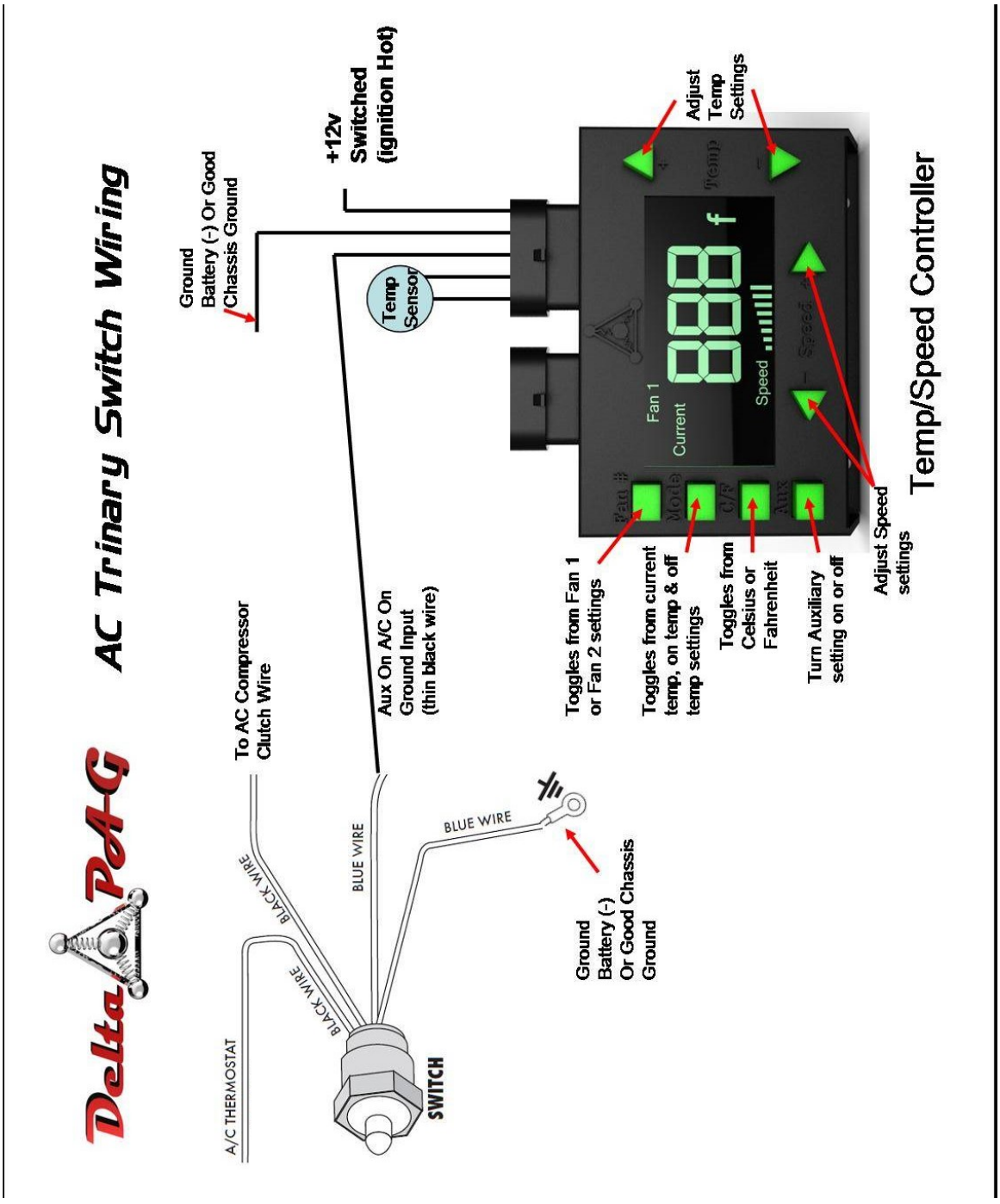
Will omit the Temp/Speed Controller. Used when fan is triggered by an OEM or aftermarket computer. Also can be used if fan is triggered manually with a toggled switch as an auxiliary fan.

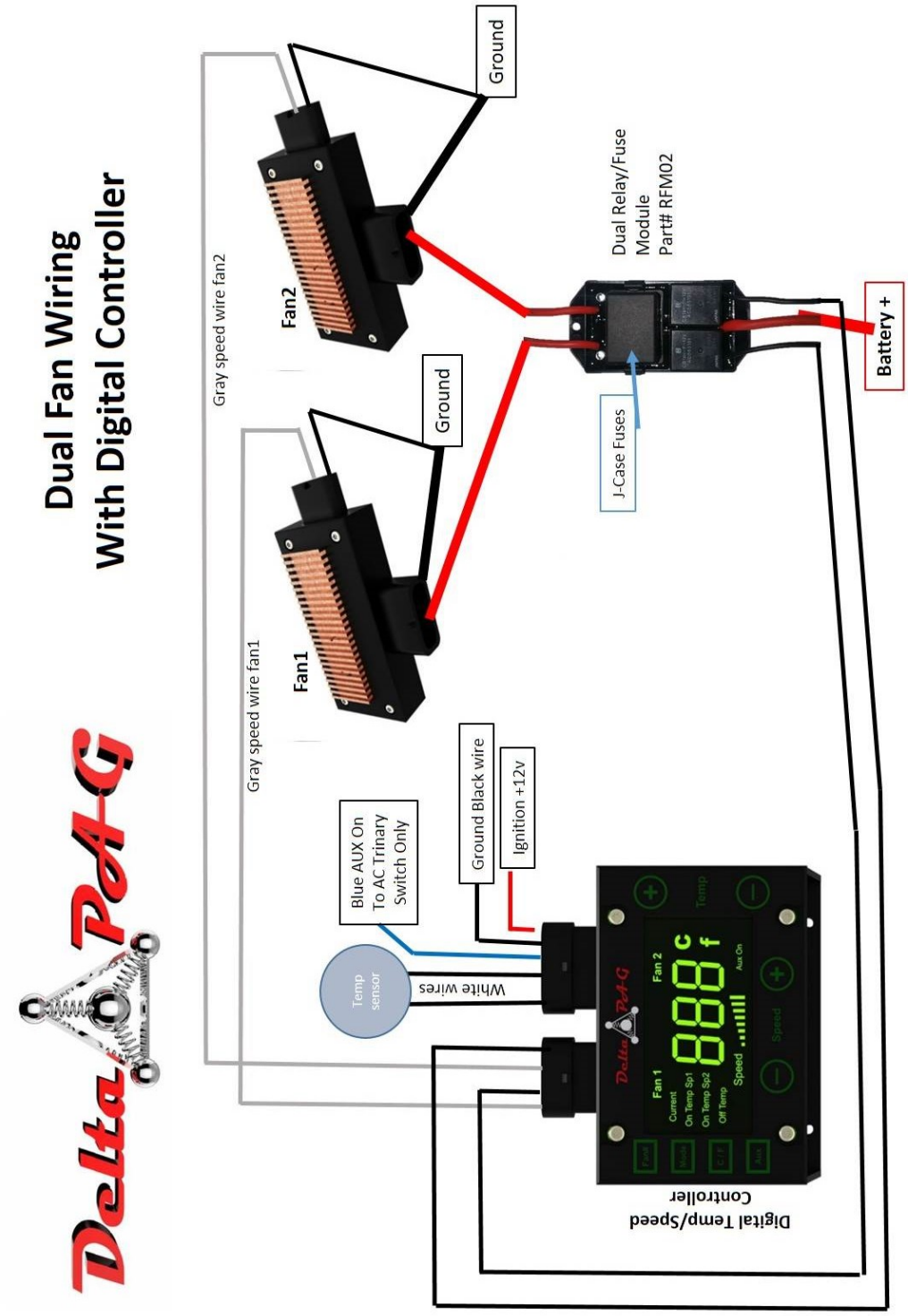


AC Components (optional):

Trinary Switch:

Used only if you have a two wire receiver drier switch. This four wire switch activated both your AC compressor clutch and brushless cooling fan.




Dual Fan Wiring
With Digital Controller
Ground
Fan2
Gray speed wire fan2
Dual Relay/Fuse
Module
Part# RFM02
Battery +
Ground
J-Case Fuses
Fan1
Gray speed wire fan1
Ground Black wire
Ignition +12v
Blue AUX On
To AC Trinary
Switch Only
Temp
sensor
White wires
Digital Temp/Speed
Controller

Notice:

This product is protected under USPTO Patents:

Pat.# 08251674

Pat.# 08267673

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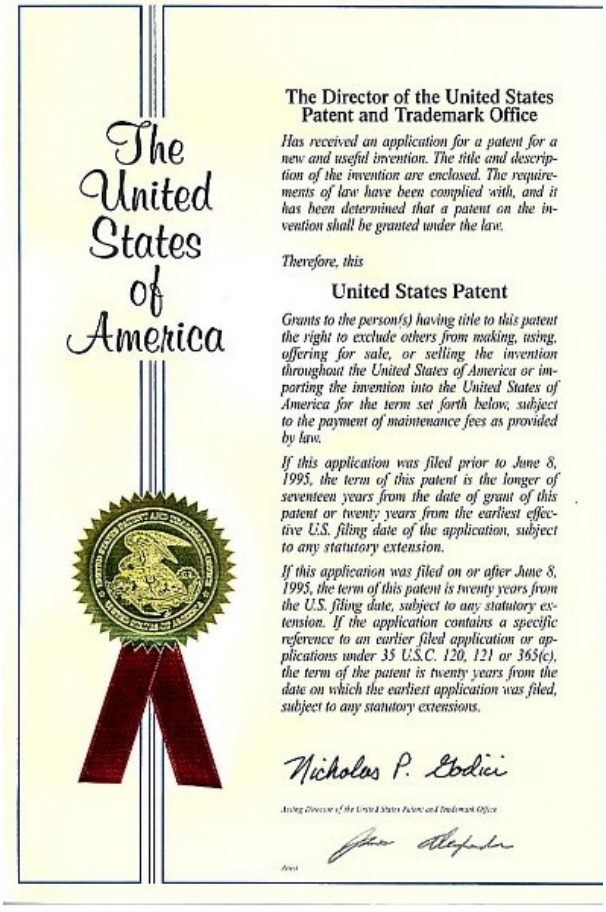

The United States of America

The Director of the United States Patent and Trademark Office

Has received an application for a patent for a new and useful invention. The title and description of the invention are enclosed. The requirements of law have been complied with, and it has been determined that a patent on the invention shall be granted under the law.

Therefore, this

United States Patent

Grants to the person(s) having title to this patent the right to exclude others from making, using, offering for sale, or selling the invention throughout the United States of America or importing the invention into the United States of America for the term set forth below, subject to the payment of maintenance fees as provided by law.

If this application was filed prior to June 8, 1995, the term of this patent is the longer of seventeen years from the date of grant of this patent or twenty years from the earliest effective U.S. filing date of the application, subject to any statutory extension.

If this application was filed on or after June 8, 1995, the term of this patent is twenty years from the U.S. filing date, subject to any statutory extension. If the application contains a specific reference to an earlier filed application or applications under 35 U.S.C. 120, 121 or 365(c), the term of the patent is twenty years from the date on which the earliest application was filed, subject to any statutory extensions.

Nicholas P. Godici