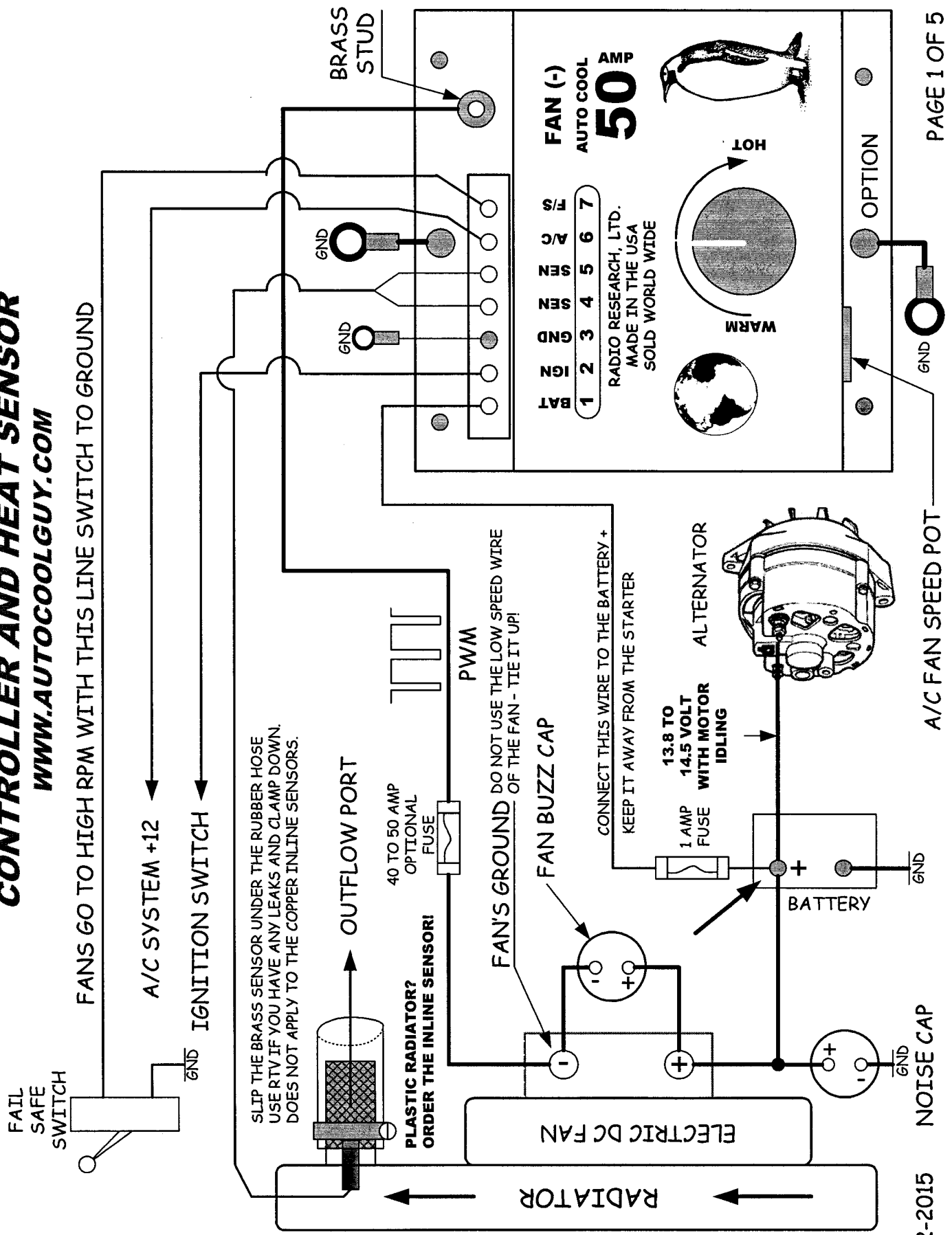


# INSTRUCTIONS FOR INSTALLING AUTO COOL 50 CONTROLLER AND HEAT SENSOR

[WWW.AUTOCOOLGUY.COM](http://WWW.AUTOCOOLGUY.COM)



# DETAILS ON HOW TO INSTALL YOUR AUTO COOL 50 CONTROLLER

## HOW TO WIRE UP THE SEVEN (7) PIN BLACK TERMINAL:

PIN 1. WIRE THIS PIN TO THE BATTERY POSITIVE. YOU MAY PUT A 1 AMP FUSE IN THE LINE FOR PROTECTION.

PIN 2. WIRE THIS PIN TO THE IGNITION SWITCH SO + 12 VOLTS TURNS ON THE CONTROLLER.

PIN 3. TIE THIS PIN TO GROUND WITH A SMALL LUG TO CAR CHASSIS METAL.

PIN 4 & 5. THE SENSOR WIRES ARE CONNECTED TO THESE 2 PINS - NO POLARITY TO WORRY ABOUT.

PIN 6. CONNECT THIS PIN TO THE AIR CONDITIONING SYSTEM - TURNS ON FANS AND PRESET FAN RPM WITH POT ON THE BACK SIDE OF THE CONTROLLER - JUST REMOVE PLUG TO ACCESS SMALL POT.

PIN 7. CONNECT THIS PIN TO THE FAIL SAFE SWITCH MOUNTED ON THE DASH. SEE INSTALL DRAWING.

## HOW TO INSTALL THE TEMPERATURE SENSOR:

PULL THE OUTFLOW RUBBER HOSE BACK AN INCH OR TWO TO EXPOSE THE OUTFLOW PORT OF YOUR RADIATOR. THEN, PLACE THE SENSOR ON TOP OF THE OUTFLOW PORT AND THEN SLIDE THE HOSE BACK ON TOP OF THE OUTFLOW PORT. BE SURE THAT THE SENSOR BRASS TO THE OUT FLOW PORT IS CLEAN FOR GOOD HEAT TRANSFER TO THE SENSOR. YOU MAY USE SOME RTV TO HELP SEAL ON TOP OF THE SENSOR AND HOSE TO PREVENT LEAKS.

IF YOUR RADIATOR OUTFLOW PORT IS PLASTIC, YOU WILL NEED THE SPECIAL COPPER SENSOR,

## HOW TO WIRE UP THE FAN OR FANS:

CONNECT THE PLUS (+) OF THE FAN TO THE BATTERY. YOU MAY WANT TO USE A 40 TO 50 AMP FUSES FOR EXTRA PROTECTION TO THE CONTROLLER. AUTO COOL 50 IS HAS AN INTERNAL 50 AMP (RESETTABLE) CIRCUIT BREAKER. USE AT LEAST # 10 AWG WIRE FOR THIS LINE. SMALL WELDING CABLE WORKS GREAT AND EASY TO FIND AT WELDING SHOPS.

TESTING THE FAN AND AIR FLOW DIRECTION: (BEFORE YOU START THE ENGINE) SHORT THE **BRASS FAN** TERMINAL TO GROUND TO TEST THE FAN AIR FLOW DIRECTION. IF THE FAN OR FANS FAIL TO SPIN - YOU HAVE AN OPEN CIRCUIT.

## CONTROLLER NOT WORKING WITH HOT MOTOR: (AFTER YOU HAVE ALL WIRES INSTALLED)

START THE ENGINE AND VERIFY +13.8 TO +14 VOLTS FROM PIN 1 TO PIN 3 (BLACK TERMINAL) WITH VOLT METER. NEXT, VERIFY +13.8 TO +14 VOLTS FROM PIN 2 TO PIN 3 GROUND. NEXT, SHORT OUT SENSOR PINS 4 & 5: THIS SHOULD PUT THE FANS INTO HIGH RPM. TURN ON THE IGNITION AND APPLY +12 VOLTS TO PIN 7: THIS SHOULD PUT THE FANS INTO HIGH RPM.

## TIME TO START THE ENGINE:

WHEN YOU START THE ENGINE AND ITS COLD, THE FAN OR FANS WILL NOT START TO SPIN UNTIL THE RADIATOR GETS WARM TO HOT. AS THE ENGINE WARMS UP, THE FANS WILL START TO SPIN SLOWLY AND SPEED UP AS THE ENGINE WARMS UP. AT FREEWAY SPEEDS, THE FANS WILL BE CLOSE TO OR AT ZERO RPM. WHEN YOU STOP WITH THE ENGINE RUNNING. THE FANS WILL SPIN TO CONTROL THE TEMPERATURE AT THE SET POINT.

## HIGH PULSE CURRENT CAUSING PROBLEMS:

WHEN THE FAN IS WORKING AND "IF" HIGH PULSE CURRENT IS CAUSING PROBLEMS IN THE CAR'S ELECTRICAL SYSTEM, INSTALL A LARGE CAPACITOR ON THE PLUS (+) SIDE OF THE FAN TO GROUND. YOU CAN USE A 1,000 TO 2,500 uF CAPACITOR AND FIND ONE AT 100 TO 150 VDC FOR THE HIGH CURRENT. ALUMINUM ELECTROLYTIC CAPACITORS CAN BE FOUND AT [WWW.MOUSER.COM](http://WWW.MOUSER.COM) or [WWW.DIGIKEY.COM](http://WWW.DIGIKEY.COM). CALL IF YOU NEED ANY DIRECTION ON THIS.

## FAN BUZZING NOISE:

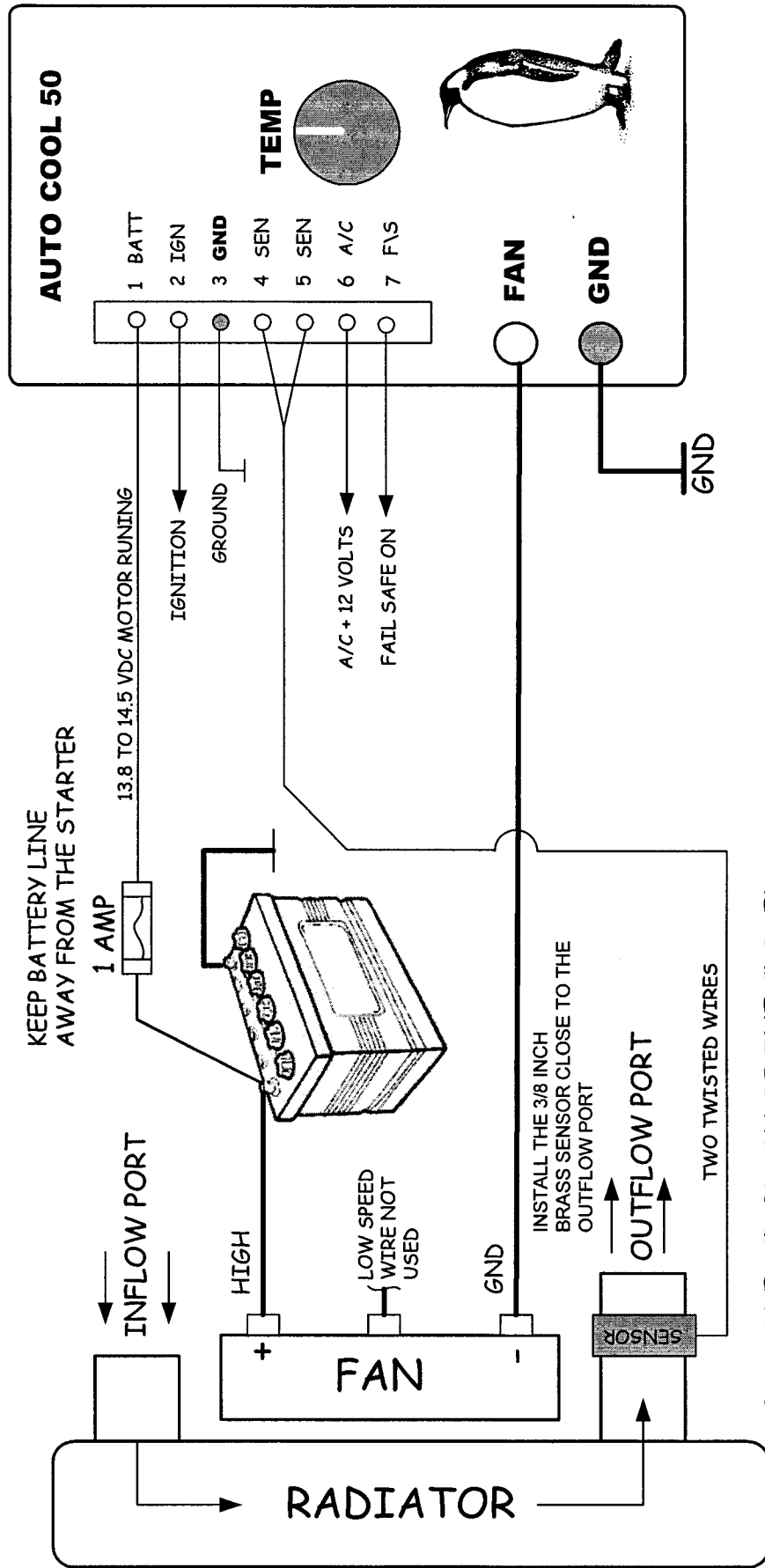
1. INSTALL THE CAPACITOR ACROSS THE FAN. BE VERY SURE YOU HAVE THE CAP + TO THE FAN +. THIS CAP STORES ENERGY DURING THE OFF CYCLE OF THE CONTROLLER.
2. INSTALL AN OTHER VENDOR'S FAN. A SMALL AMOUNT OF VENDORS WILL MAKE MORE NOISE THAN OTHERS.

## COOL DOWN TIMER SELECT: (Post ignition turn off)

1. Pull the knob and cover off the controller and remove the cover.
2. For a long ONE minute cool down timer, remove the small jumper next to TB1 -J1
3. For a short 10 second cool down timer, install the small jumper next to TB1 - JI

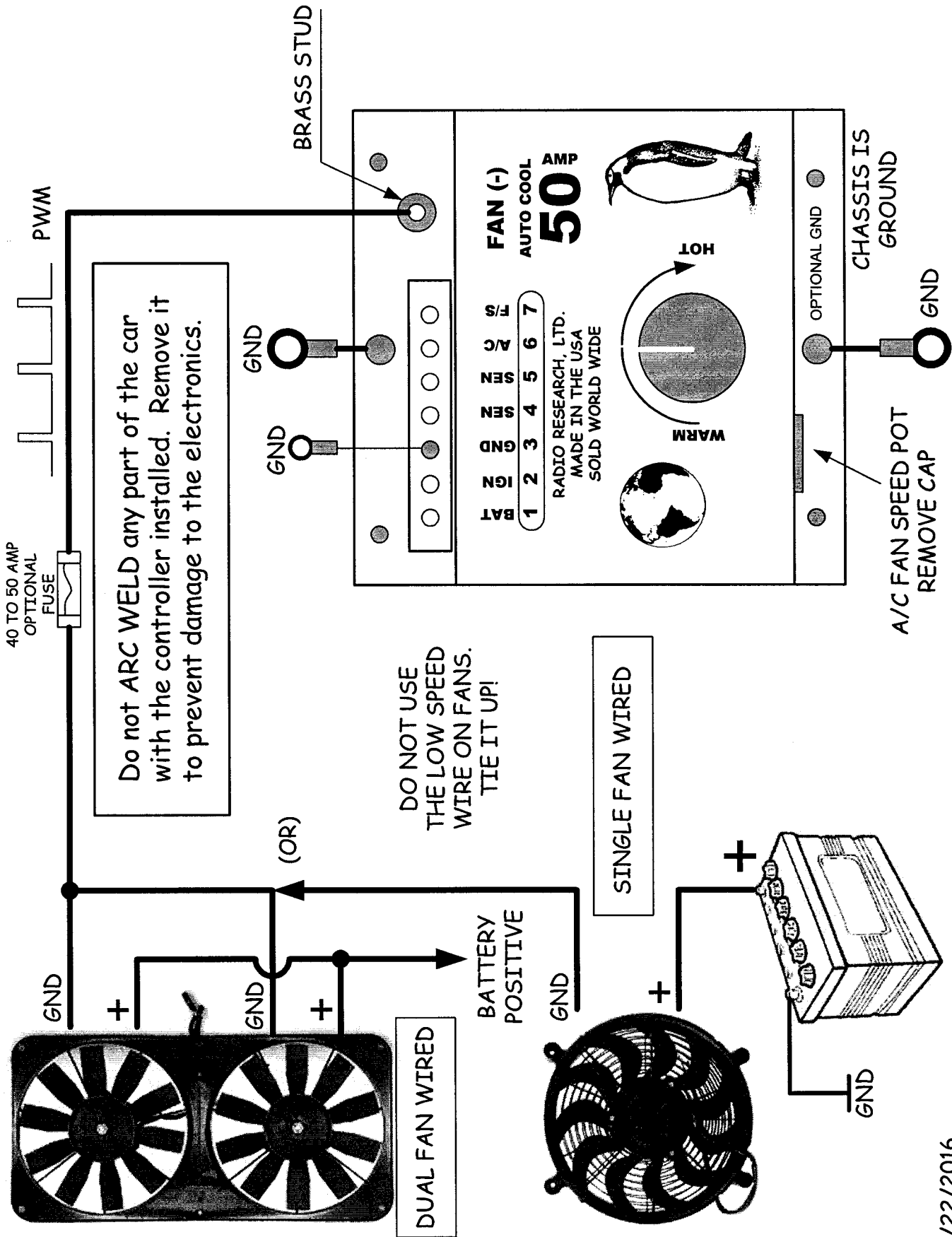
- \* RADIATOR TEMPERATURE CONTROL WITH THE FAN RPM & ITS FULLY AUTOMATIC
- \* AUTO COOL CONTROLLERS USE SOLID STATE DEVICES TO SWITCH FANS - NOT RELAYS
- \* NO RELAYS TO ARC, BURN AND FAIL OVER TIME AND MILES
- \* NO MORE OVER HEATING IN SLOW OR STALLED TRAFFIC
- \* NO MORE BOIL OVER TOWING UP MOUNTAIN ROADS
- \* AVOID TEMPERATURE & PRESSURE PEAKS IN HOT WEATHER.
- \* MORE HORSE POWER WHEN THE TRAFFIC LIGHT TURNS GREEN
- \* SELECT THE CONSTANT TEMPERATURE OF YOUR RADIATOR
- \* NO PROGRAM TO SET UP OR WORRY ABOUT.
- \* ONE YEAR WARRANTY ON ALL AUTO COOL CONTROLLERS.

**DO NOT INSTALL THE CONTROLLER IN A AIR TIGHT BOX.**



BASIC DESCRIPTION OF THE CLOSED LOOP SYSTEM OF TEMPERATURE CONTROL WITH THE AUTO COOL 50 CONTROLLER

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USE THE AUTO COOL 50 AS A ELECTRIC PUMP CONTROLLER  
 SAVE ENERGY AND HORSE POWER WHEN YOU NEED IT

