# FAN CONTROLLER INSTALLATION PROCEDURE

## GENERAL DESCRIPTION AND FUNCTION:

The adjustable dual speed fan controller will operate 12 volt DC single or dual speed fan. It is for use with negative ground systems only. It can operate any combination of fans up to a maximum combined amperage draw of 50 amps. The fans are operated by both radiator temperature and AC activations.

**Temperature activation for dual speed fans**

The temperature is set by adjusting the ¾ turn trim pot on the controller box. Turning the screw clockwise increases the set point. Turning the screw counter clockwise decreases the set point. The low speed set point is adjustable and the high speed will activate at 10 degrees Fahrenheit higher than the low speed set point. When the temperature decreases 10 degrees Fahrenheit the high speed turns off. When the temperature decreases 10 degrees Fahrenheit more low speed turns off.

**Temperature activation for single speed fans**

The set point for the first fan/fans is set and the second fan/fans turn on 10 degrees higher. When the temperature decreases 10 degrees Fahrenheit the second fan/fans turn off. When the temperature decreases 10 degrees Fahrenheit more first fan/fans turn off.

**Air conditioning operation**

The controller connects to the positive wire of the AC clutch and operates the fans when the AC clutch is energized.

**Temperature operation**

The controller uses a temperature probe installed in the radiator fins. It is a thermistor type sensor that sends resistance signal to control box. When the resistance reaches the point of the set point, the ground circuit for the relay/relays is complete and fan/fans are turned on.

**Override operation**

For use on non AC vehicles the green wire can be connected to a switched 12 volts for use in an override.

## INSTALLATION

**Caution: Disconnect the positive cable from the battery. Cover the positive terminal of the battery with an insulated non electrical conductive material to prevent accidental short if contacted with a metal tool. Failure to do so can result in fire, bodily injury, vehicle damage or battery explosion.**

**Control box mounting**

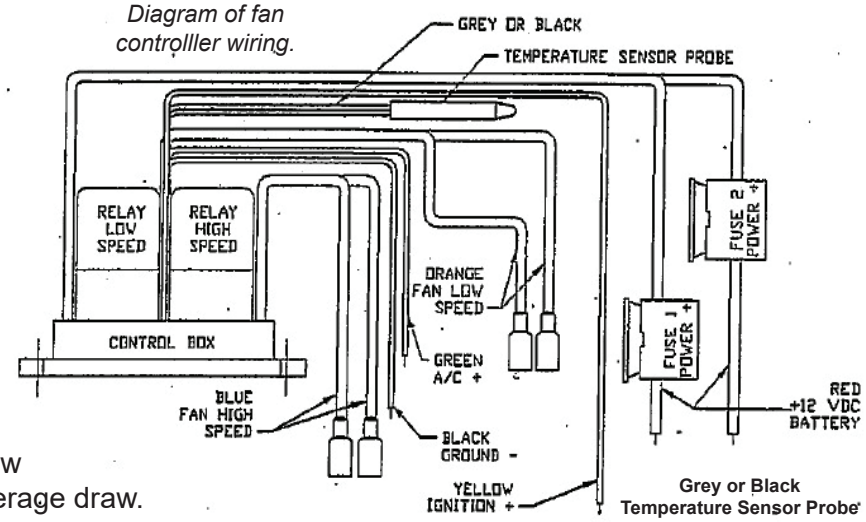
Select a mounting location avoiding high heat from exhaust components, Choose a location near the radiator. If necessary the probe wire to the probe can be increased. When using the plastic push rivets drill two 3/16 inch holes 3 and 1/2 inch apart center to center. Mount the control box using the plastic push rivets. When using a sheet metal screws (not provided) drill the correct size hole based on the size of the screw size. The center to center distance for the hole will vary based on the head diameter the screws used.

**Probe Installation**

Install the probe in the radiator fins near the radiator inlet using a plastic rod, button and pad as shown in the illustration. Cut off the excess mounting rod.

## WIRING

*Diagram of fan controlller wiring.*




**Grey or Black Temperature Sensor Probe**
**Relay Low Speed**
**Relay High Speed**
**Control Box**
**Blue High Speed Fan**
**Orange Low Speed Fan**
**Green A/C (+)**
**Black Ground (-)**
**Yellow Ignition (+)**
**Fuse 1 Power (+)**
**Fuse 2 Power (+)**
**Red (+) 12 VDC Battery**

**Black Wire (ground)**

Connect to a good ground.

**Red Wire (incoming fan power)**

Connect the positive battery terminal or a circuit with adequate amperage capacity. There are two more fused red wires. Use one wire for fans up to 25 amp combined draw and both wire for fans over 25 amperage draw.

**Yellow (controller power supply)**

Connect to an ignition controlled lead. This allows the fan/fans to operate only when the ignition is on. For automatic fan operation with the ignition either on or off connect the yellow lead to circuit that is always energized. **CAUTION: Connecting the fans to run with the ignition off can cause them to cycle long after the ignition is turned off and may result in draining the battery.**

**Green (AC or manual override)**

Connect to the positive wire of the AC clutch. Or for use as an override connect to a switched positive 12 volt source.

**Orange (low speed fan power)**

Connect one orange wire to the low speed wire of the fan. Refer to the fan manufacturer’s instructions to determine the low speed wire. When using a Hayden 3814 of 3817 fan connect to either the brown or grey wire. Remove or tie off the second orange wire if only one fan is used.

**Blue (high speed fan power)**

Connect one blue wire to the high speed wire of the fan. Refer to the fan manufacturer’s instructions to determine the high speed wire. When using a Hayden 3814 or 3817 fan, connect to either the brown or grey wire. Both the brown and grey wire must be energized to operate the fan on high speed. Remove or tie off the second blue wire if only one fan is used.