

Full Functioning A/C mod. Courtesy of Hotrock59 from the Casita Forum

Parts needed: [Coleman 9330C755 Control Box](#), [Coleman 8530A3451 Digital Thermostat](#), about 10 feet of 8 conductor 18 gauge thermostat wire a hand full of 1/4" crimp on spade connectors(6), and (6) grey wire nuts. Second, tools needed: Screw driver with multi use tips, #2 square head, #2 Phillips head, # 2 common head, a pair of wire strippers, a pair of cable connector crimper, also a wire puller, 1/4" drill bit and cordless drill.Third is a lot of "Want to" , this you can't purchase, but a couple of cold beers or a glass of wine may get you by! Before you begin read all documentation of the new t-stat and controller to familiarize yourself with wiring connections and functions!

- (1) Start by removing the knobs on the a/c unit, then remove the filter covers and filters to expose the (4) #2 square head screws that hold the cover on, before you remove these, go ahead and turn breaker off to the a/c unit(control panel)
- (2) Remove the Phillips head screws on the tri-angle cover and the (3) wire nuts on the black, white, and ground conductors, carefully loosen the duct seal tape from plastic housing.
- (3) Now remove the (4) #2 square head screws from the plastic piece that holds the control, just let it hang there so you can loosen the wire connector and pull the power supply wires out of the box, and set this aside.Unplug heat strip if so equipped.
- (4) Now the more challenging work begins, remove the (2) wing nuts on the heat strip control box and remove the assembly, if not equipped go to next step.
- (5) Take your wire puller and insert it under carpet and push it towards the cabinet over the stove top/sink, there is a ridge where carpet is not glued, if you're careful you will have the puller to the curve down under cabinet.
- (6) Make a small hole to get puller cable out and pull thermostat wire through to this point, now from inside the cabinet push the wire puller through to the lower curve of carpeted contour, attach to t-stat wire and pull it through, pull 4 feet of wire through.
- (7) Drill a small hole(1/4") on an angle from left bottom of cabinet over sink into microwave cabinet, if you have a built in micro-wave you will have to drill hole straight down and run t-stat wire on the left wall above sink, to t-stat location.
- (8) Remove old bi-metal t-stat, drill out rivets that hold it and carefully remove it, disconnect the two brown wires that go to the gas furnace, if you don't have a furnace you will need to get 12vdc power adapter and plug it into power outlet in cabinet.
- (9) Now pull t-stat wire through into microwave cabinet, route wire above sink in cabinet at front bottom of cabinet, tuck under carpet edge, make a small hole in carpet to pull t-stat wire through wall where the 2 brown wires are.
- (10) Also if not furnace equipped, push 2 wire 12vdc wires through with t-stat wires, you may have to enlarge hole, be careful not to damage wires, now mount the new t-stat, and wire according to directions provided.
- (11) Going back to rooftop unit, install crimp on spade connectors on t-stat wires, you don't need red for 12vdc, depending on your t-stat wire you will need to connect wires by the their function.
- (12)Yellow to y on new controller, blue to B-, green to CH, black to CL, brown to elect heat(W), connect freeze stat to controller and wire high voltage to controller at this time, you will need to make a jumper wire from B- to a grounding screw.(blue wire)
- (12) Carefully put new controller in the space where the electric heat element was push it towards bathroom end of camper with t-stat wire terminals pointing down and brackets go between all thread hangers to keep it in place.
- (13) Insert the freeze-stat sensor into coil fins of evaporator coil, re-install the electric heat element and plug wire into new controller, be careful not to get freeze-stat sensor wire tangled in heat element, don't forget wing nuts.
- (14) You can now put everything back together in reverse of disassembly, optional to remove old control box, or leave in place, I removed mine, leaving the 2 knob holes open, leaving it in place does give option to re-connect if new box fails.....

(15) If you have been successful in following along my non-picture installation, turn your breaker on to a/c unit

Some notes: What color wire you use is not as important as the wires function, the two wires that go to gas furnace one is 12vdc+ the other will attach to wire from t-stat marked gas furnace wire, if you don't have a display on new t-stat then you need to switch those two wires. The wire nuts are for the connection of new t-stat wire to your thermostat wires, also, the new Coleman t-stat will automatically bring on gas furnace as well if the electric heat if it does not satisfy demand for heat, 5 deg. below set point. Also, you now can turn fan speed to low or high, and have full auto mode or fan on all the time.