

Air Conditioning System

THERMOSTATS

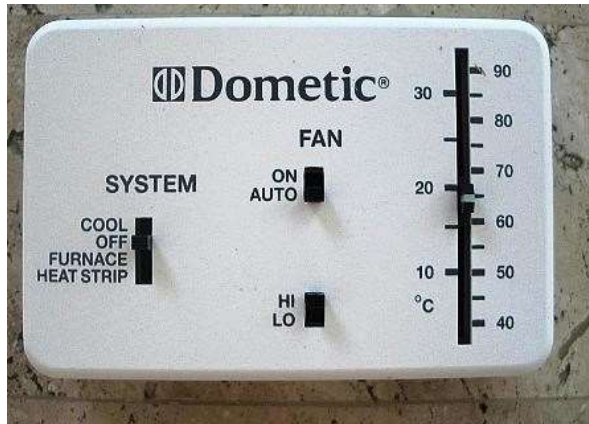


Figure (17) Analog Thermostat

Figure (17), illustrates a typical analog thermostat, which is designed to control your furnace, air conditioner, and if available a heat strip. These new combination thermostats are nice because they use one temperature monitoring system (with sensor and temperature setting) that serves the entire climate needs for the RV.

Older RV's have a simple thermostat that just handles the furnace, which is virtually identical to the older home units. These are inexpensive and available at any Hardware store. Older units have controls for the air conditioner and heat strip on the ceiling unit itself, with a manual temperature adjustment.

The most advance thermostats are the digital Climate Control Centers that provide control for all of the RV temperature related equipment. These can include multiple location sensors, air conditioner, furnace, heat pump and heat strip. There can be four different zones with a different set of climate control equipment in each zone. This one CCC allows you to monitor and adjust different temperatures for each piece of equipment in the RV. Once it is set up correctly and you learn how to use it the CCC, illustrated in Figure (18) provides the ultimate in RV comfort.

The 4 button units are now obsolete and no longer supported with spare parts. If they fail the only recourse is to obtain a used rebuilt unit. They can be replaced with a five button CCC, however, this requires that the A-C control board also be changed. The newest CCC is a 12-button unit (for multiple zone use) or a 4button unit for single zone operation, These are

illustrated in Figure (19). The newest CCC's also require that the old control boards be replaced if you are going to update your control center.



Figure (18) Four & Five Button CCC



Figure (19) New Signal and Multiple Zone CCC

Figure (20) illustrates a 5-button CCC conversion kit for replacing an old 4-button unit that has failed. It is a complex conversion and not a project for a complete beginner. In addition to the board and CCC components, a freeze prevention circuit (part of the kit) must be installed.



Figure (20) 5 Button CCC Conversion Kit

If your A-C is older than 15-20 years, you should just buy a new unit and not try to update it. If it is running fine and is less than 10 years old, then updating the CCC has some merit.

Appendix (A) describes how to upgrade a 4-button CCC to a newer thermostat. Charles Gregory, one of our WBCCI members, had a failing 4-button system and decided to convert his dual A-C system to the newest 12-button CCC 2 thermostat.

Occasionally a voltage spike or power failure occurs that results in the CCC not working correctly. The first thing you should do is perform a system reset which turns on the CCC in installation mode and resets the computer. I have fixed a number of systems using this simple procedure.

To do a **System Reset, for a 5-button CCC** turn the **ON/OFF** switch to **OFF**. Simultaneously depress and hold the **MODE** and **ZONE** buttons while turning the **ON/OFF** switch to **ON**. **FF** should appear in the LCD display until the **MODE** and **ZONE** buttons are released.

To do a **System Reset, for a 5-button CCC** turn the **ON/OFF** switch to **OFF**. Simultaneously depress and hold the **MODE** and **ZONE** buttons while turning the **ON/OFF** switch to **ON**. **FF** should appear in the LCD display until the **MODE** and **ZONE** buttons are released.