Thermostat Lost Power?

Vic Carnes, WBCCI # 21458, writes that he had a mechanical problem with the Climate Control in his Airstream travel trailer. Below he shares knowledge gleaned from this experience. Thanks to Vic for sharing his technical experience and to Bill Bucher, WBCCI # 1467, for the photo that illustrates the article.

"I couldn't get any 12-volt power to the thermostat and couldn't get any of the air or heat to operate. I told my technician that I previously had to have a control board replaced in the air conditioner. He checked the air conditioner wiring above the filters in the ceiling but couldn't find anything wrong. He went to the roof, removed the canopy, found the control board under a metal cover and removed it. The control board contained two jacks, like telephone jacks, but larger. He removed the jacks and found four spring flat wires in each slot that the connector wire plugs into. One of the slots had a spring flat wire that didn't spring and had some rust looking debris on it. He put the board back together and went inside and called the **DuoTherm** factory.

The factory indicated when you lose power to the thermostat there are two things that you need to do. First, is to remove the filters in the ceiling and pull the wires down (from the right side looking forward). You will find two rectangular plastic blocks (see attached photo). Each will have telephone-looking jacks plugged into them on one side. On the other side of the



blocks one will have a jack coming out and the other will not. The jack coming out is supposed to provide power to the thermostat. The other empty one is there in the event there is an optional second air conditioner on the roof. He was told to remove the jack coming out of the connector and plug it into the other connector to see if that will work the thermostat. What a relief when it did!

Consequently, he knew that the connector to the control board on the roof side of the air conditioner was bad, as he suspected, and wasn't providing power to the thermostat. If that were eventually to happen again with the new connection, he would have to replace the air conditioner control board on the roof to get power restored to the thermostat.

Second, if moving the jack wire had not worked there are four little solder dots on the center of the control board and you need to check their polarity. The top two dots are the power and the bottom two are used to check the polarity. If the polarity is good the board is good and the problem is in the wiring or connection as was discovered above. If the polarity is bad then the control board is bad. You have to have a volt meter to do that check."