

# The Volt Vette Project

## Chapter 36

### Air Conditioning Part One

With a large glass windshield, a huge glass hatchback, and a “lightweight” glass roof, the car is a real hot box on sunny summer days.

I think long and hard about this problem.  
Here are the options:

1. Run the original air conditioning compressor off the tail shaft of the main motor. Problem. In a direct drive car, you lose your cool when the car is at a stand still.
2. Take a cooler filled with ice. Have a fan blow air across the ice. Cheap and dirty. Problem. Must add ice every day and enough ice to do the job could take up a lot of space.
3. Cover the auto glass with high-tech heat rejection film. I like this idea. I see a demo of this film at a 3M annual meeting. It could block infrared heat waves while letting 90% of the visible light shine through!



Problem. No one sells the stuff and no one knows how to apply it to auto glass, which is probably why no one sells it. I buy some Gila brand heat rejection window film. Problem. I find it difficult to cut to the appropriate size and it will not hold to curved glass for more than a day or two.



4. Give a small window air conditioner a major make-over and stick it, some where, in the car. Problem? Lots of problems.
5. Get the best electric air conditioning compressor I can find, and pay a custom shop to mate and plumb the old system with the new. Problem. Parts are expensive and hard to find.
6. Buy a 12 volt fan and mount it so that the fan will blow air into your sweaty face. Cheap and not too difficult.



I give it a try. Problem. When the temperature gets above 85F in the car, the fan does not cool very well.

7. Do nothing. It's cheap. It's easy. It's very popular. No problems, just sweat the summer away.

I check in on the internet chatter. One guy had heard that the Mastflux Sierra was one of the best compressors around. But he didn't know where you could get one or how much they cost.

I finally get to a blog where a guy is doing a high-end conversion of a BMW.

He is using a Masterflux compressor that he bought from Revolt Custom Electric. It looks like I'll have to pay the bucks and open Door #6. I e-mail Revolt. They tell me they can ship me a 156 volt compressor in 10 to 12 weeks.



But, a week or two later I get the compressor and a controller to command it. The controller came in an anti-static bag so care needed to be taken to avoid damage from static electricity. Rolf, an electrical engineer, knows how to deal with static sensitive components, so I let him open the bag.



As you can see in the photo the controller looks well made. But it is naked and will need a protective case.

Time to make a new fiberglass box? No. Time to learn a new skill.

Next chapter: The Volt Vette at 3,000 Miles