INTERVIEW WITH JON HAAS: PANTERA ELECTRONICS

By Dave and Linda Adler, Pantera International



Jon and Tatiana Haas, founders of Pantera Electronics.

In a world where innovation is often driven by large corporations, it is truly remarkable to see the ingenuity and determination of small business owners like Jon and Tatiana Haas, the founders of Pantera Electronics. Their company embodies iron-will perseverance, self-sacrifice, and a commitment to excellence that has resulted in solid, stable, and safe electronics for the uniquely niche Pantera community.

Through their work, they have elevated the Pantera experience, ensuring reliability and peace of mind for enthusiasts who cherish this extraordinary car. Jon and Tatiana's passion and knowledge shine through every solution they create, making them invaluable contributors to our community.

Please read this interview and learn from their knowledge and passion. They deserve our recognition, our support, and our gratitude for making the Pantera electrical system so much better for all of us.

With appreciation,
Dave and Linda Adler

1. Please provide us with a thumb nail description of your backgrounds for those of us that may not already know each of you.

My father was an Electrical Engineer and he taught me when I was about 8 years old how to make basic circuits and use the soldering iron. During college, I worked for a local Marine engine parts manufacturer converting crate engines into marine engines for the fishing and pleasure craft industry.

Later, I found a position in the semiconductor industry and worked there during the day while continuing college at night. I learned semiconductor assembly, which provided the knowledge to manufacture electronics, understanding not just design, but production.



Pantera Eelectronics Electronic Assembly area.

After college, I changed direction to marketing and new product development, applying my engineering experience in a different way. I developed an electro-mechanical device to disinfect water, which I patented. In 1986 I developed several gas detection monitors that are still being sold around the world today, nearly four decades later.

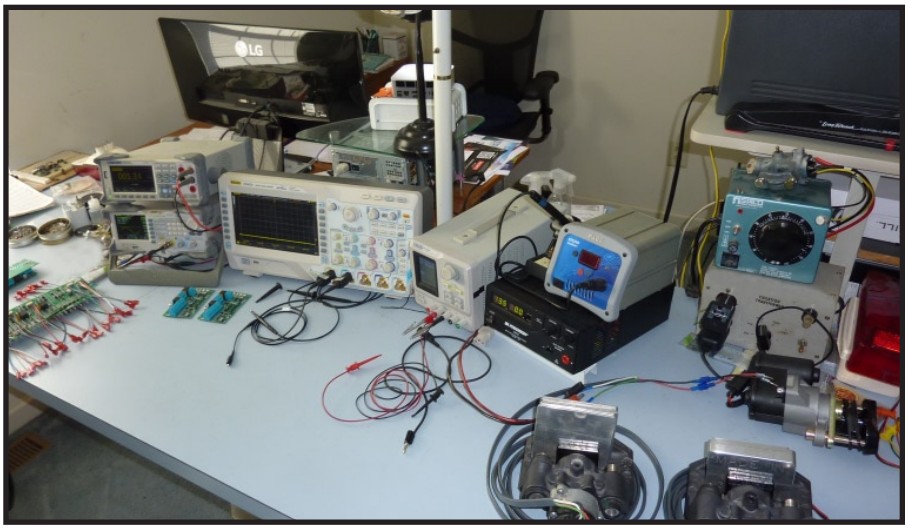
When I met Tatiana, I didn't just find a life partner, I found someone who is feminine and yet a business woman. In Russia, she earned a master's degree in accounting and finance and then operated her own boutique. She knows the numbers, margins, and demands that small business ownership requires.

When her first ventures in the States didn't pan out the way she'd hoped, she didn't give up. She rolled up her sleeves and learned entirely new skills—web development including Search Engine Optimization and social media marketing. She taught herself the digital side of business because she understood that's where the world was heading.

2. Do you own a Pantera yourself?

Our Pantera, THPNMK03613 is white with aluminum replica 16x8" and 17x11" wheels. I searched to find the best reproduction of the Campagnolo design since I wanted to be close to the factory appearance. The appearance scheme is white and chrome with a little blue accent, the same blue as in the marque. This scheme would be indicative of the era.

The engine is modified with after-market heads, cam, valve train, intake manifold, and carbure-



The lab and office area.

tor. Keeping the carburetor was a necessity. I happen to favor the fun of opening the large secondary's—it adds to the Pantera fun!

3. Is there any interesting backstory about your car?

In 2001, I bought a 1972 Pantera, #3613 from Medford, Oregon and had it shipped to Pennsylvania. It was in very good condition with 22K miles, originally purchased in California and spent most of its life there. The owner was a 747 pilot, so the Pantera had a very proper home.

A couple of years ago, the California owner who originally purchased our Pantera called me. He wanted to have the first right of refusal if I decided to sell the Pantera. He told me the story that his fianceé told him "Me or the Pantera" so he sold it. Only a few years later, she left him anyway. I hope that experience helps somebody who is reading this article.

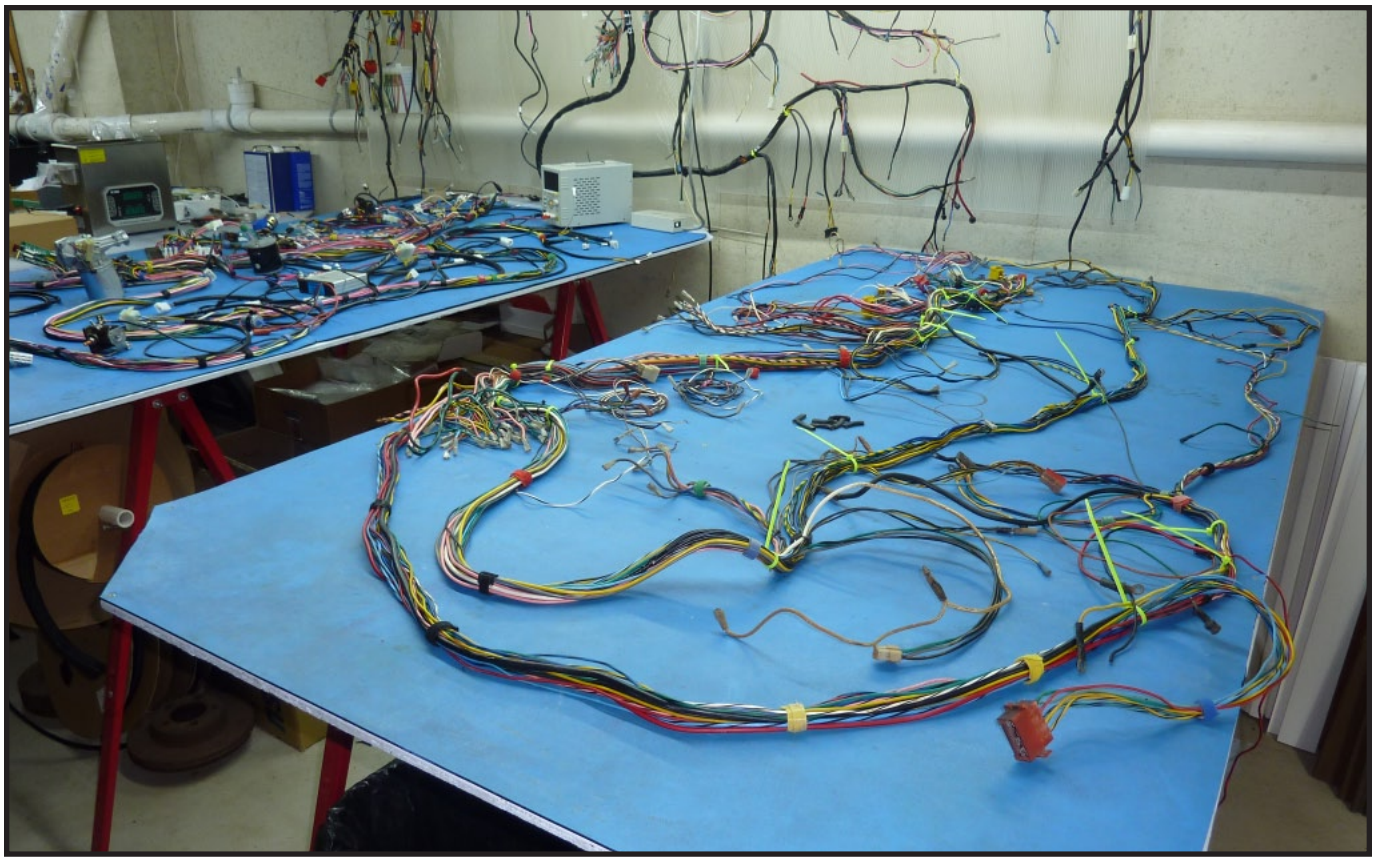
I restored it mechanically and updated it with electronics because I wanted to drive it without any concern for failure. I worked on each subsystem in the winter and was ready to drive every April. This cycle continued for several years until it was finished. I documented in detail the restoration including CAD drawings of the parts I had made. My goal was to make the Pantera as reliable as my daily driver.

4. Tell us the history of Pantera Electronics. When was the company founded? With so few cars ever made, why did you decide to provide so many products for such a small market niche?

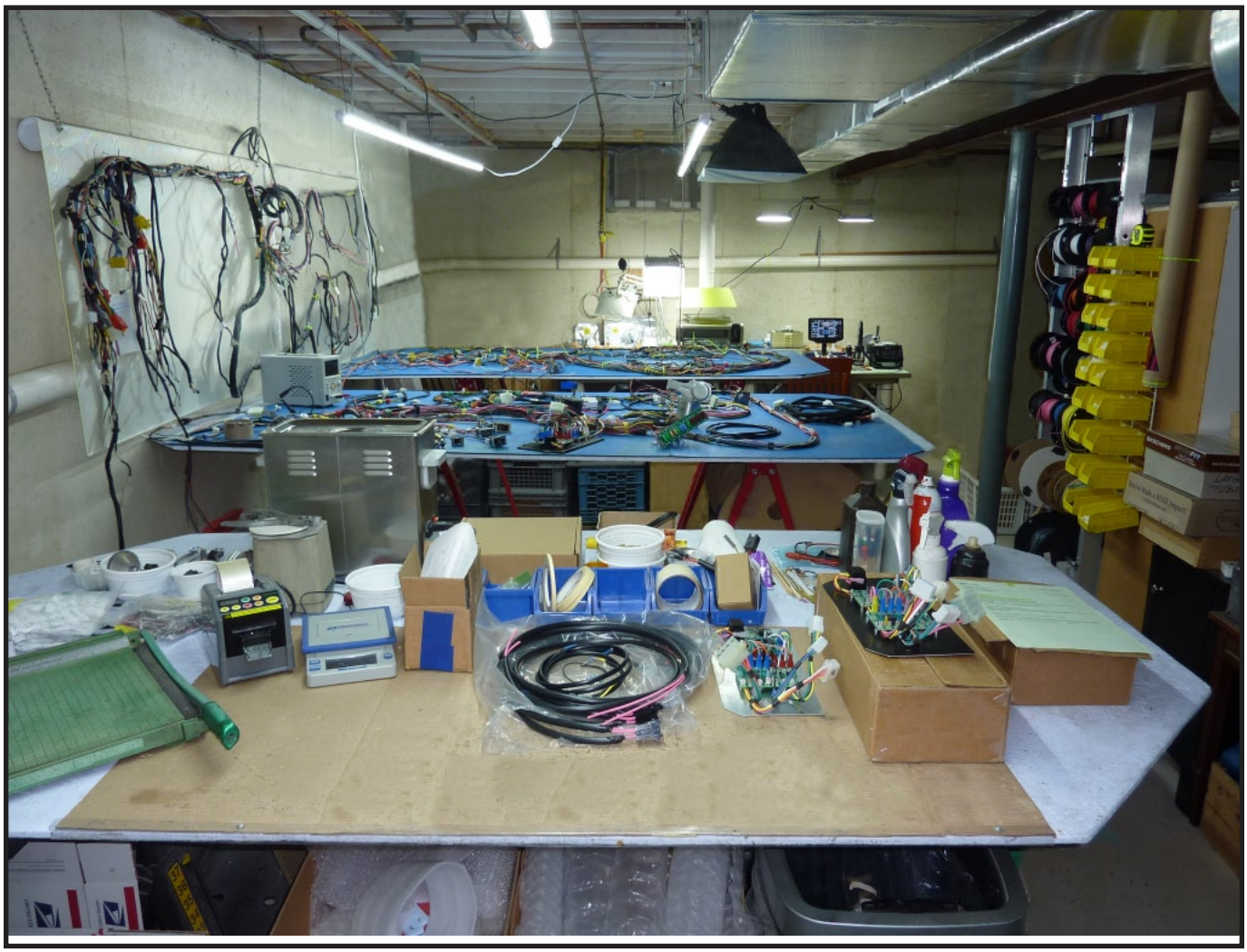
Just prior to Pantera Electronics, I was the Electronic Engineer designing controllers for small brush and brushless DC motors at a local company. Unfortunately, the owner of the company retired and sold the company. The new owner laid off many employees and moved manufacturing to Mexico. This left me in a very bad situation—an engineer in his mid-fifties without an income. There were few manufacturing companies left in the area I lived in. The only thing I had was the Pantera with its unique electronics and a few friends who believed in my work.

In 2009, I started converting the handmade Pantera electronics into production versions. My plan was to earn enough income from just Pantera sales until retirement. Since the Pantera is the only vintage car I owned, it would be the platform for the products. I still had to design new products in addition to what was installed, because of the many other problems that had to be solved.

5. What products do



Wire Harness Restoration tables.



The Shipping table.

you offer for the Pantera?

We manufacture electronic replacements such as Fuse Panels, Rocker Switches and Relays, Controllers to solve more complex problems. We also offer safety enhancement products such as LED conversions for the taillights, front parking lights, license plate lights, and side marker lights.

For LED interior lighting, there are gauge lamps, dome lights, door jamb lights, floor lights, and courtesy lights. All of these lighting products are easy to install and require no wiring changes.

We also provide services for ammeter upgrades, dimmer repair, wiper switch repair, and wire harness restoration.

6. Do you have any parts for other DeTomaso automobiles such as the Mangusta?

We need a sample vehicle in order to design the products, and we can't afford to purchase cars for development.

We do have a close friend who owns a Mangusta and are welcome to use it as a reference vehicle. We now have a replacement fuse panel for the Mangusta and are presently working on an LED taillight conversion.

7. What is the most common problem Pantera owners experience with their cars? What solutions do you offer for the problem?

Fuse panel failures. Solution: PE fuse panel replacement with indicators for open fuses and incoming power.

Ignition switch failures. Solution: PE Ignition Switch Controller. This Controller preserves the original switch and keeps the original appearance and functionality. This is especially critical since the switch is part of the locking steering column.

The supply of exact replacements as NOS is now no longer existent so it's more important than ever to preserve the switch.

Rocker Switch failures. Solution: PE Console Switch Interface. There are few options to replace the rocker switches as they fail. Most replacements on the market are manufactured outside of the U.S. and do not have the quality necessary for the

level of current. Our approach is to reduce the current load on the factory switches by using modern electronics.

Dim Taillights: This is from poor lamp sockets and missing reflective coating makes for an unsafe drive at night, especially weak brake lights! PE LED lighting conversions offer the most advanced lighting technology to make the Pantera visible with brake lights that are 140-200 milliseconds faster than incandescent lamps!

8. The original electrical system of the Pantera from the outset, was subject to criticism. What types of problems did the system have, taken as a whole and considering 1970-71 technology, what could the factory have done differently to make the car more trouble-free?

The wire harness has several weak areas. The factory made improvements to the 1973 and 1974 Pantera wire harnesses which addressed some of the issues, but not all of them. The quality of switches and other components were typical of that era in Europe. Most of the switches were not rated by the manufacturer for the level current in the circuits, so from the beginning, failure was eminent.

9. Were the original gauges that the Pantera came with of good quality? I know that my temperature gauge always left a lot to be desired and I didn't want to put a resistor in the wiring to lower the reading.

The quality and technology of the gauges was typical for the time period and there are some issues with them in the Pantera. The ammeter is not safe or reliable because mistakes in design and manufacturing will result in catastrophic failure. These flaws are not simple and can only be corrected by component replacement. We offer a service to update and restore the ammeter to safely support current in excess of 100 amps. We accomplish this by disassembly, changing internal parts, assemble and test.

The 230˚ temperature gauge for 1971 and 1972 is correct, but the installation of the sender in the expansion tank and the poor wiring cause inaccuracy. Since the gauges do not use the matching Veglia sender, the Ford senders are an approximate of what would be ideal. This causes inaccuracies for the gauges as well, since the Ford temperature sender looks like any of four different resistive values that are available, and only one is the correct sender. Pantera owners over the years replaced the factory-installed one with what version that looked correct. This adds to the inaccuracy problem and is difficult to detect in the field.

The 260˚ temperature gauge installed in 1973 and 1974 with the red and blue color ranges has the greatest inaccuracy. We analyzed the gauge and found the range was a modification of the 230 degree temperature gauge. We solved this issue with our Temperature Compensator that corrects the reading without installing nonlinear resistors.

10. Have you encountered a problem with the Pantera's electrical system that you couldn't solve? What was the most complicated problem you have run into that you were able to solve?

We solve most Pantera electrical issues by pictures and communications by email. This can be challenging, but we are successful in the end. Since we work with the owner, it gives him a sense of accomplishment and more knowledge about the Pantera electrical system. I can solve any Pantera electrical prob-



Completed wire loom, ready to be shipped out.

lem if I am working hands-on with the problem and the tools of choice.

11. From your experience with Pantera owners thus far, how would you describe the average customer's technical capabilities? Can most customers install your upgrades themselves or should they only be handled by a technician with electrical skills?

About 70% of our customers choose to install themselves, the others use a local restoration shop to install. I designed the products to be as straightforward as possible since many Pantera owners are do-it-yourself types. The products are labeled with the color of the wire at the terminal, and the installation manuals are printed in color to help with the installation.

The average Pantera owner's technical skills level is far below what is required to solve the problems. In terms of the electrical issue, very few can logically troubleshoot a problem. If the light doesn't work then the light is the problem. Not the switch or the wiring or the supply of power, but the light itself is defective. If a Pantera owner purchases a $200 electronic product from us, installs it, and the problem isn't solved, they blame the new product. This amazes me.

Sometimes restoration or vintage automotive shop electrical technicians have difficulty with installation because they have not read the installation manual.

The key is to be able to read and comprehend the installation instructions, recognize the wire colors, and apply this information to the Pantera. It can be anyone who is willing to approach the installation in this manner.

12. I have heard you speak to Pantera audiences numerous times. I always learn a lot when you speak. You know this area so well. What takeaways are there on your part from Pantera owners you have spoken to?

I need to make sure they understand that the products perform a real function and will not fail like the factory components. I hear the comment, "It works now, why change it?" It is difficult to explain why the component will eventually fail in layman's terms without a highly technical explanation.

13. Do you have any new products currently under development? If so, can you provide details? A sneak preview in other words.



Jon's Pantera #3613 as it was when he bought it in 2001.

I have much less engineering time than in the beginning, so the new product list doesn't receive much attention now.

Gear Shift Plate—details proprietary.

Engine Bay Controller—for the peripheral components relating to the engine: Fuel Pump, Choke, A/C Compressor, Oil Pressure Interlock.

Ignition System—A compact size and without the need for a separate ignition coil.

14. Tatiana, what is your role at Pantera Electronics?

Just a little bit of everything. I'm the marketing department, running our campaigns and managing social media, the sales team, the shipping dock, and the bookkeeper who knows whether we're actually profitable or just really good at looking busy.

I am responsible for our website Search Engine Optimization that took us from "page five where nobody ever looks" to "page one where Pantera customers can actually find us." I respond to daily inquiries, make quotes, plan customers shipments and generate promotional literature.

Then there's the invisible stuff: running our household so my husband can focus on business, being his sounding board for ideas and decisions. I'm his steady ground when things go sideways and his biggest cheerleader when things actually work out. I'm the person who occasionally is reminding us that we're married and should probably have a conversation about something other than the status of business.

Some days I can't tell if I'm the marketing manager, the shipping coordinator, or the relationship referee. Usually all three before my second cup of coffee.

15. Do you both work full time at your business?

Both Tatiana and I work full time, as much as 12 hours a day if needed. We try not to work on the weekend, but it still happens when we are especially busy.

16. Besides DeTomaso automobiles, do you serve any other marque or just DeTomaso?

Basically only DeTomaso, although in the early days to jump-start the business, we designed and manufactured a few products for Grand National Buicks. Today we have a few products for English automobiles, but have not promoted or marketed them other than listing them on Ebay.

Our volume product is an Electric Parking Brake controller. We can provide the electronic controller, caliper brackets, switches and wire to replace the cable operated E-brake in the Pantera. By just pressing a button the electric calipers close and lock the rotors.

We sell the majority of these controllers to the performance automotive and EV conversion markets which is a large marketplace.

17. Have you ever visited the factory or met deTomaso family members? If so, please tell us about your experience with the founder or others.

In 2006 (before PE) I met Santiago de Tomaso at the factory. I have a friend who lives in Italy, and I had him call the factory to let them know I was coming. Perhaps my



Tom Tjaarda applying his signature to Jon's dashboard.

friend called the wrong person to let them know because when I arrived at the entrance, the automatic gates were closed with no other way in. I waited until a car was coming back from lunch and dove in behind them, just making it in. Apparently that was highly disliked, and a group of employees including Santiago rushed out and stood on the sidewalk, not one of them with a smile.

I spoke directly to Santiago and told him about the electronics I had added to the Pantera, but the frown stayed. Finally, I remembered the articles I wrote for you to publish in the magazine. Like magic, he smiled and said, "You know Dave Adler." I said, "Yes!" He said, "Come in." The entire group went back into the building. We spent about an hour talking about various things. It was a nice time.

18. We last saw you at the Pantera Palooza event in Anaheim, California a few months ago. I am sure you met a lot of your customers. What was your overall impression of that event?

It was a nice event, we saw more Panteras than I ever saw gathered in one place. We would like to have more time to spend with Pantera owners and speak to them about their Panteras because this gives us ideas for the new products. The club did a good job, well organized, provided a nice space and support for us to show products.

19. Looking forward, do you believe that there will be a continuing need for electrical components for the Pantera, or will the marque simply fade away as time goes by?

I don't believe the marque will fade away any time soon. The newer Pantera owners are more open to the PE products and are enthusiastic about installing them. This alone has made PE a solid company.

20. Your website shows a lot of different components for the Pantera. Are all of these items kept in stock or do you build them as they are ordered?

We try to keep all products in stock, only two products are made to order and even those have typical 2-to-3 day lead-times.

21. I saw a Pantera that was just a shell and the car builder was fabricating all steel GT5-S body panels. The wiring loom was torn out of the car and was laying on the floor of the workshop. If an owner wanted to replace every bit of wiring in the whole car, from stem-to-stern, how expensive would that be? Would it be worthwhile to use the stock wiring system as the backbone and just add upgrades from Pantera Electronics, or should the baby be thrown out with the water?

We have been restoring complete wire harnesses since the beginning; that's 16 years of experience. We do not promote this on our website, but the orders just seem to grow. Our position is to restore the wire harness, keep as much of the original as possible yet correct the factory



Pantera Electronics' LED lighting conversions make the Pantera visible with brake lights that are 140-200 milliseconds faster than incandescent lamps!

mistakes, add the wiring for the PE products and a final hot test which makes the harness a "Plug and Play" installation for the Pantera owner.

The cost with the wire harness core, is $3,600.00 for the basic upgraded wire harness. Additional wiring for PE products adds to the cost incrementally. We work with the customer until it's exactly what he needs. Each wire harness becomes a custom component for the Pantera owner.

22. When you provide wiring components, such as new wiring, what is different from what you supply and what the factory supplied?

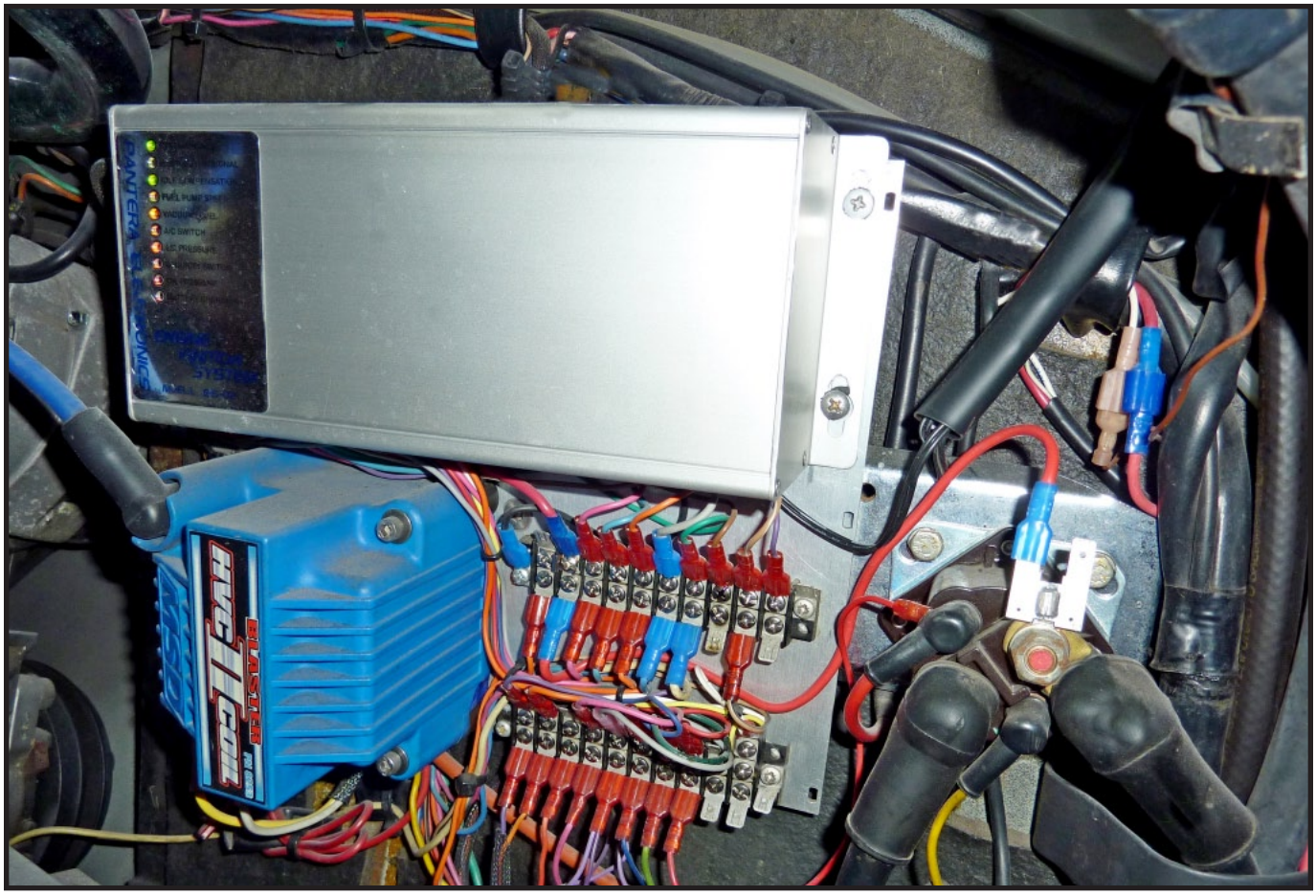
The factory used a metric wire size with PVC insulation of the era, so the insulation is large in diameter and heavy. We use modern automotive standard gauge wire TXL with cross-linked polyethylene insulation that is more resistant to petroleum, abrasion, and aging. This insulation is superior to 1970's automotive wire and is used in modern production vehicles. This allows us to add wire yet minimize the increase in harness diameter and weight, reducing the effort to install. The outer sleeve on the section behind the dash is a woven flame-resistant material instead of the original solid PVC to improve protection and ease of installation.

23. On the later Panteras, such as the GT5-S or the Si, were the electronics improved over the original wiring system, or was it basically the same as original?

We have little experience with GT5-S Panteras and no experience with the Si Panteras. The GT5-S Panteras seem to be very similar to the 1974 Pantera wire harness but with changes for HVAC controls and other minor changes.

24. If an owner has a completely stock wiring set-up that is performing perfectly fine, what changes if any would you recommend that would improve upon the stock system?

The average Pantera owner does not realize what a properly functioning electrical system is. We found this out when the fuse panel first reached the field and Pantera owners told us many things are operating better than they thought possible. Everybody thinks their Pantera is in great operating condition but in reality they don't know because they have not experienced it.



Pantera Electronics Engine Management/Ignition System.

25. Is it within your capabilities to offer an ABS braking system for the Pantera? If so, describe.

Presently ABS braking is not in our capabilities and I don't believe it would be of a widespread interest at the price. I think the average Pantera owner would not spend the money and the installation effort for ABS. I see this with the electric power steering conversion, not many are sold due to the cost and modifications required. Many years ago we were working on a EPS rack approach but the cost of development versus the return on investment would not make business sense. Everybody wants the "new product" but when it comes to the price very few will purchase it.

26. What invention or creation are you proudest of?

My answer to this is a sad contradiction. The PE Engine Management System designed for engines with a carburetor was the most capable product that improved the Pantera drivability while still retaining the factory appearance. It provided all of the controls needed for the engine and related components, even including a trickle charger for the battery. It was similar in size to the typical engine ignition system box. It had unique capabilities but most of the time it was over-looked. We stopped manufacturing it due to low manufacturing volume. RIP

27. Thank you for answering all of our questions and all that you have done for the Pantera Community. It is remarkable how you began with such humble beginnings and grew your company into an important part of the Pantera enthusiast.

I have met so many good and interesting Pantera owners from all over and it would not have happened if Pantera Electronics didn't exist. The beginning of the company was an ordeal with stress levels at times high enough to quit. But because the early Pantera customers had success and good experiences with our products, we kept moving forward.

It gives us a good feeling when Pantera owners come to us and praise how our products have improved performance and instill them with the confidence to enjoy driving their Panteras more frequently.

