



Chevelle Computing

JOURDAN J CLISH

Evolution in computing....

.....AND COMMUTING!

After 12 years of getting the suspension, stance, body and paint into reasonable condition, the HVAC, navigation and audio system in this 1967 Chevelle needed to be addressed. That required hardening the electrical generation and distribution systems, identifying an appropriate head end software program that supported a reasonable variety of radio and navigation accessories, and putting that together with easy to use reliable computing hardware.

For the engine we went with Accel EFI. For the Carputer Head End software we chose Centrafuse (www.centrafuse.com), which runs on the same Windows platform that the Accel CalMap engine management software does.

We tried both a hard installed PC and a Tablet computer solution to contrast the user experience and capabilities of both hardware systems with the chosen software combination. The computer is connected via USB to the I/O board in the back of the car. Mobile Internet connections for both computers were provided with a Kyocera KR-2 EVDO/WiFi/LAN router with a Verizon EVDO 3G card. This permitted using the built in WiFi from the tablet and the built in Ethernet port in the installed PC with equal ease. Hot Rod Service Company (www.hotrodservice.com) in Campbell CA. did the EFI work and the Vintage Air installation. The MAD Electrical (www.madelectrical.com) charging and distribution system upgrades, I/O board layout and wiring and computer installations were done by the author and Jeff "Obi-Wan" Soule of Penn Valley, CA. Auto Computing products came from MP3CAR (www.mp3car.com). Our other suppliers include the Original Parts Group (www.opgi.com) and Summit Racing (www.summitracing.com).





Engine Management was the First Priority

From Edelbrock to Accel EFI

The computing story begins with Engine Management. Our original choice for EFI was the Edelbrock Pro Flo EFI system. For it's time it was very advanced, but we really wanted sequential, not batch fire injection so it was time to step up to Accel EFI managed by their CalPro Software. Hot Rod Service Company removed the old harness and ECU and did the installation and most critically the final tuning of the new computer.

Second Priority

- Carputer

Pulling all the functions together

With the Engine Management Hardware and Software chosen it is time to build the computer system that will run the selected head end software and the engine management and monitoring software. We bought the Habey low power PC system and touchscreen from MP3CAR and a power supply to keep the voltages to the system and the touchscreen consistent.





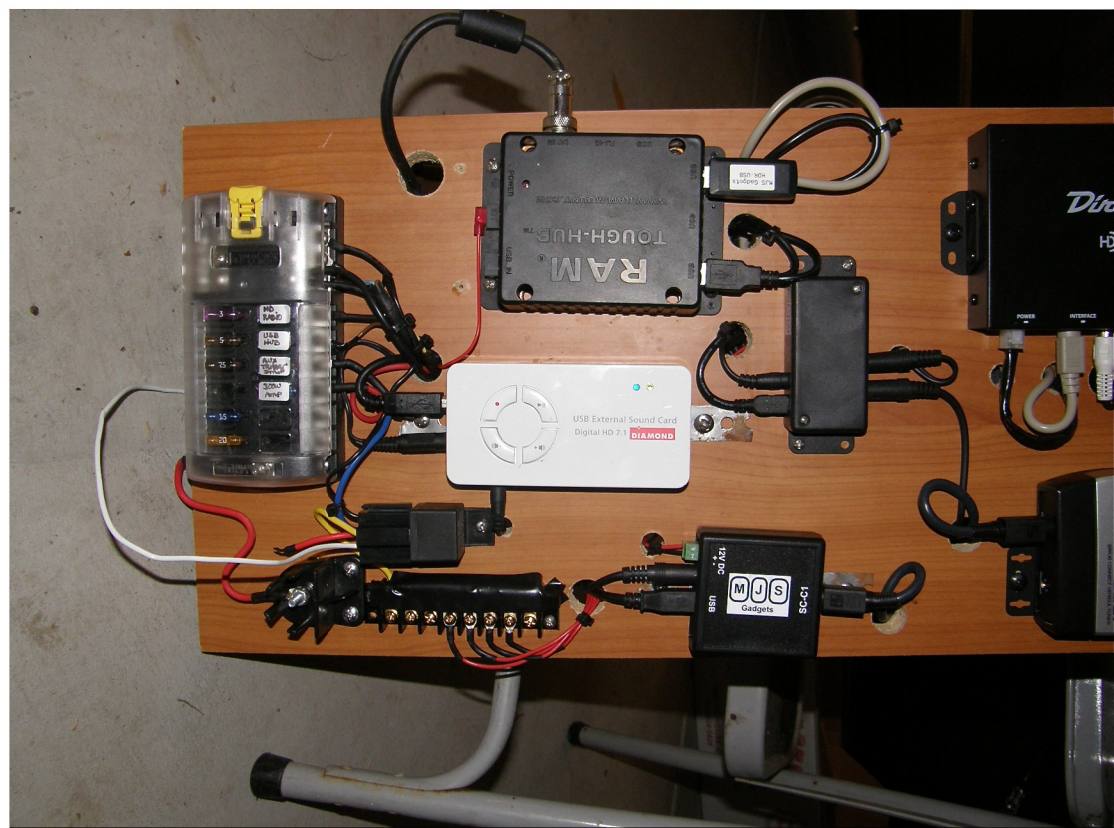
The First PC - Atom Based processor + 12V Case

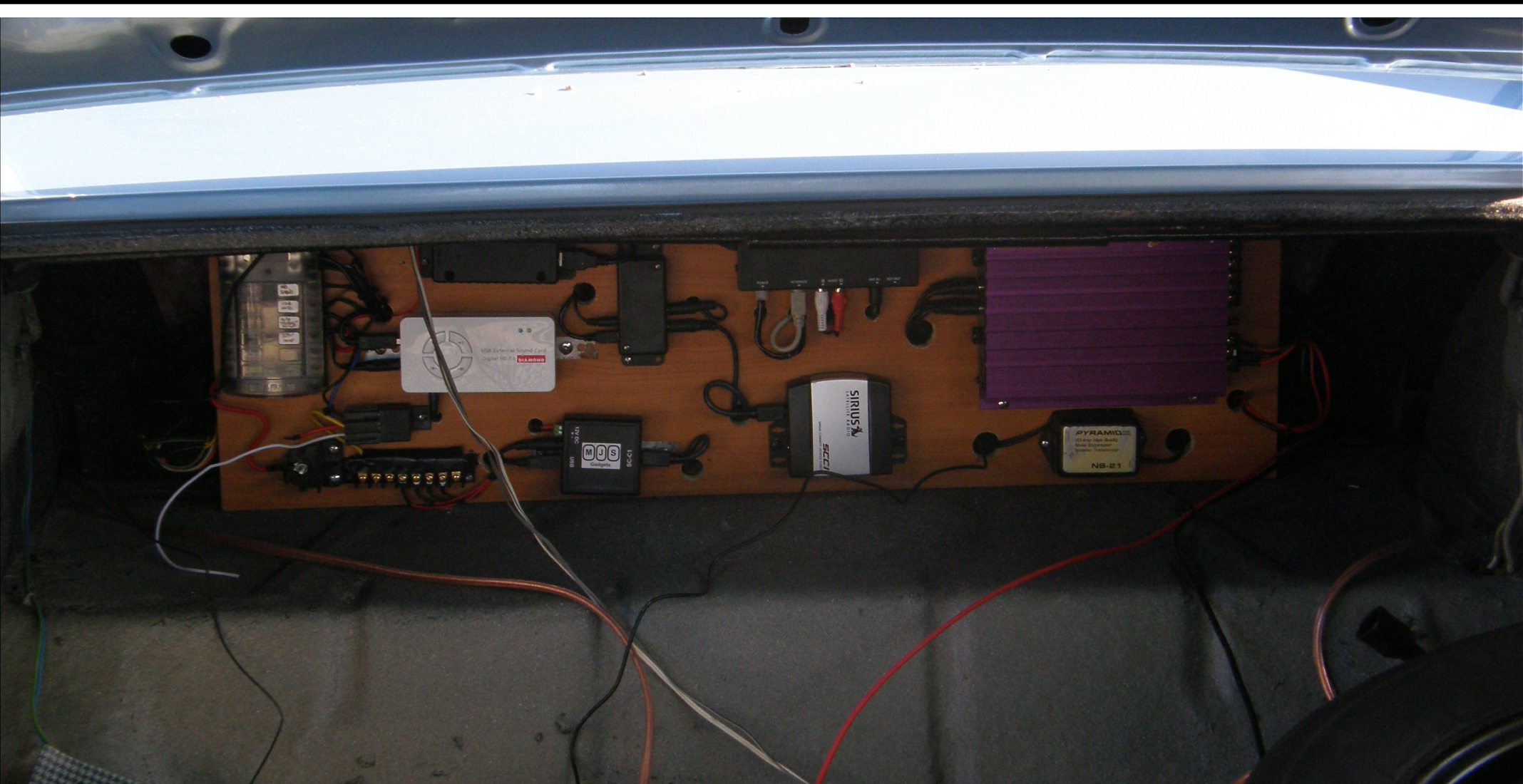
The silver box is a CarNetix CNX-P2140 185W Dual Output Intelligent DC-DC Regulator, the black box is a Habey BIS-6620-I Intel Embedded Z510 Based Ultra Low Power "Tiny" PC. The touchscreen monitor is the Xenarc 700TSV 7" TFT LCD.



The Input - Output Board

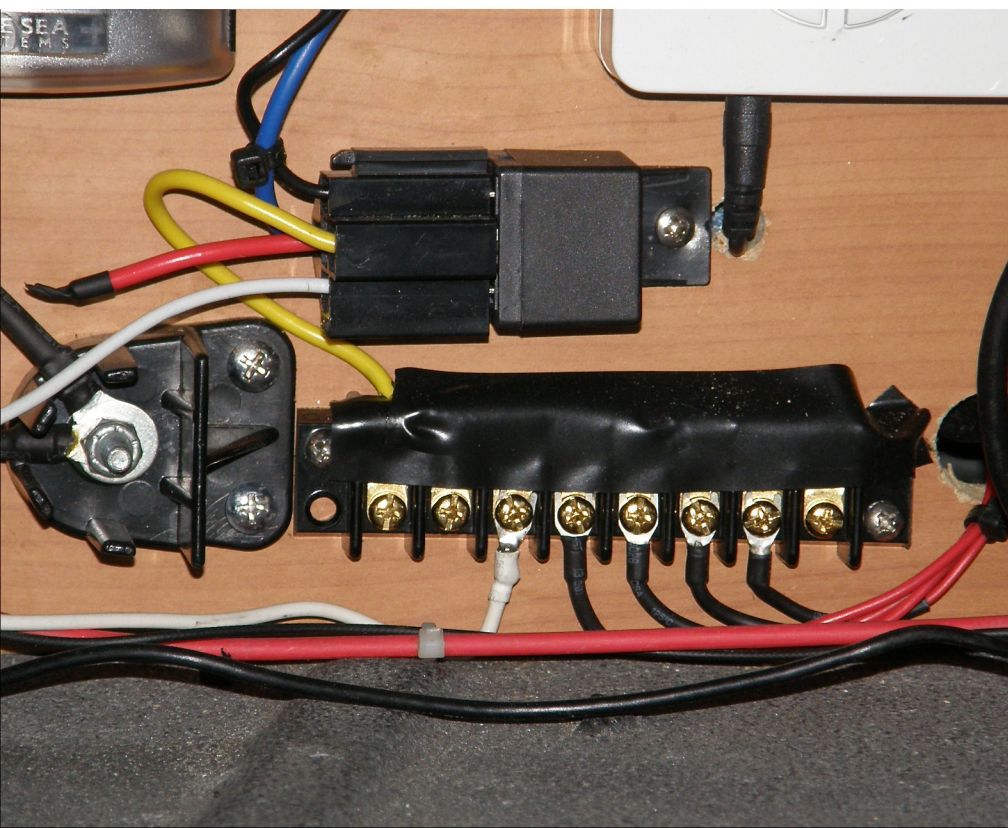
The Blue Sea 12 circuit fuse block feeds power to a RAM mount USB hub, the Directed HD radio, and the Sirius SCC1 radio and the MJS SC-C1 controller. The MJS Gadgets HD Radio controller and the MJS audio switcher are USB powered.

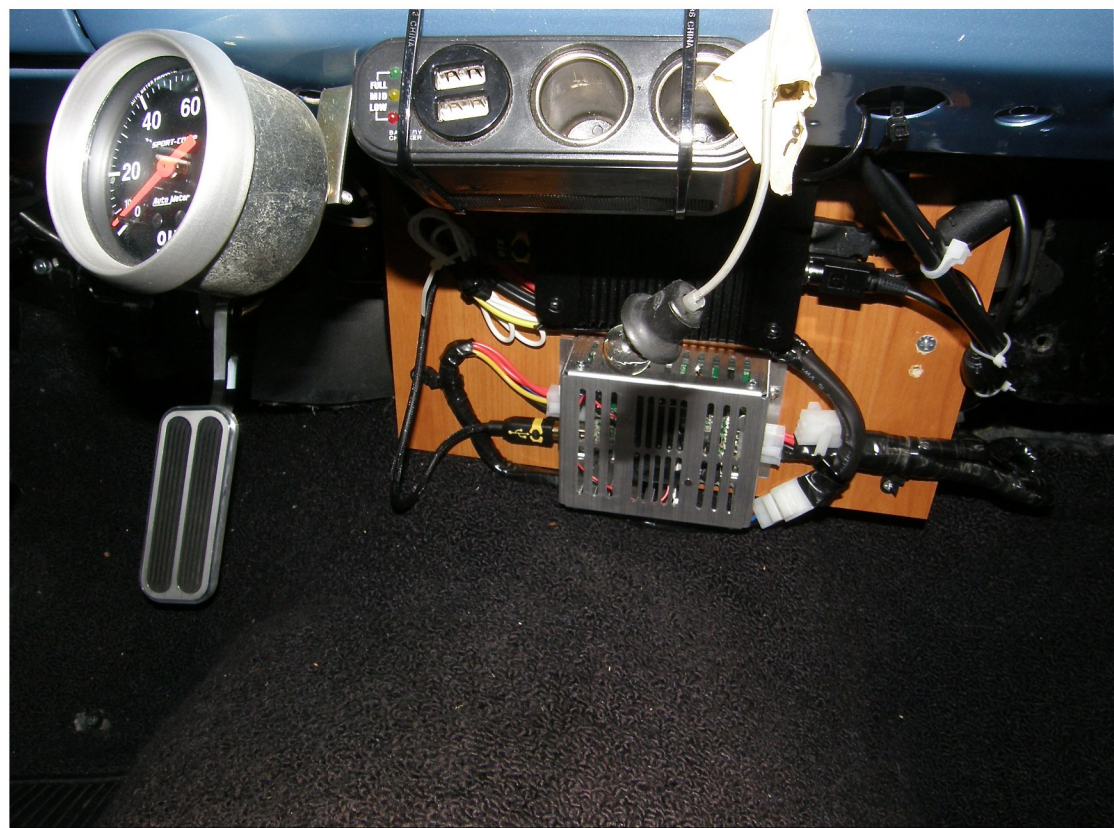
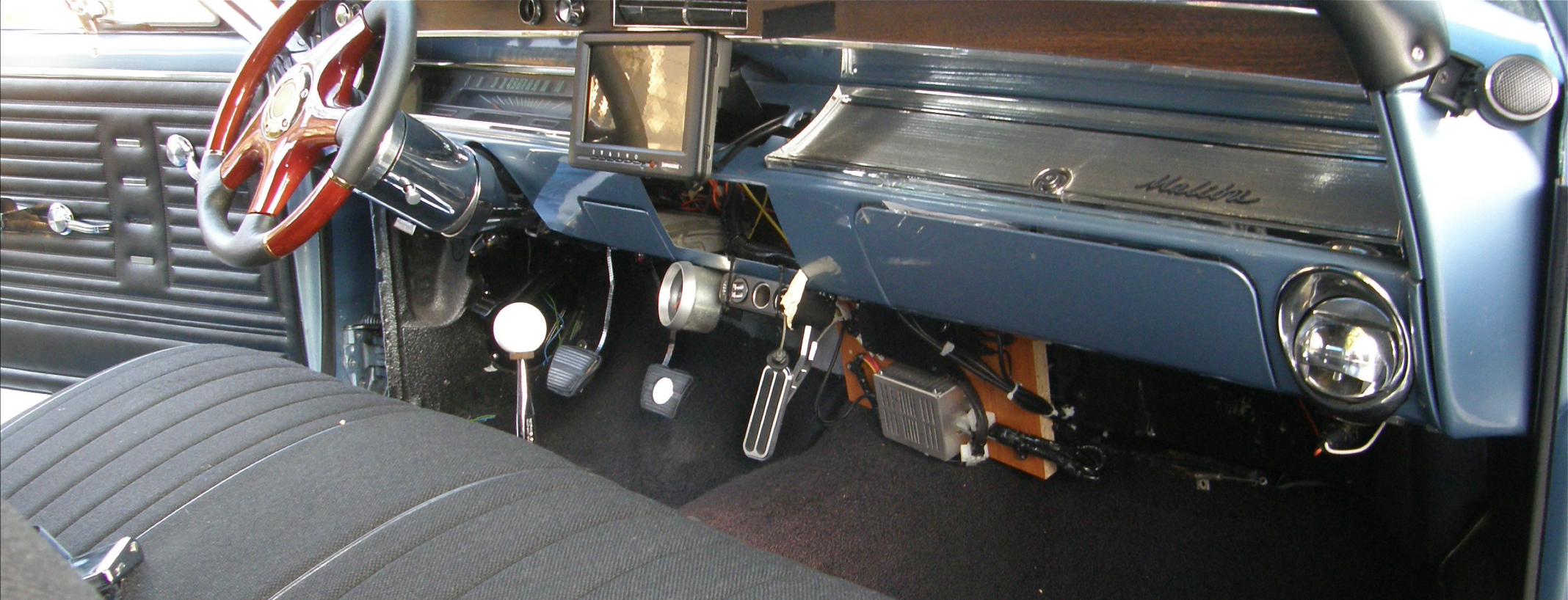




The Output Chain

The USB Sound Card feeds the pyramid amplifier via a filter and is fed by the MJS switcher that takes the active output from either the Radio or the Satellite Radio as the head end SW on the computer commands.







First PC Installed

We knew this first PC would be a temporary mount. Here is the Xenarc up front with the computer and power supply. The PS and the IO board connect to the PC with a long USB cable. GPS and Satellite Radio antenna are placed under the rear window.

HVAC Conversion

From Factory Air to Vintage Air

Back to Hot Rod Service Company for the Vintage Air Gen IV Factory Fit Air Conditioning System installation. The Factory lever control system ate space I wanted for power ports! HRSC fabricated a new replacement panel to accommodate a Vintage Air 491223-RUA control panel and provide well grounded and fused outlets on the dash for the wireless router, powering USB devices and any other required 12V accessories.







Vintage Air

FAN

A/C

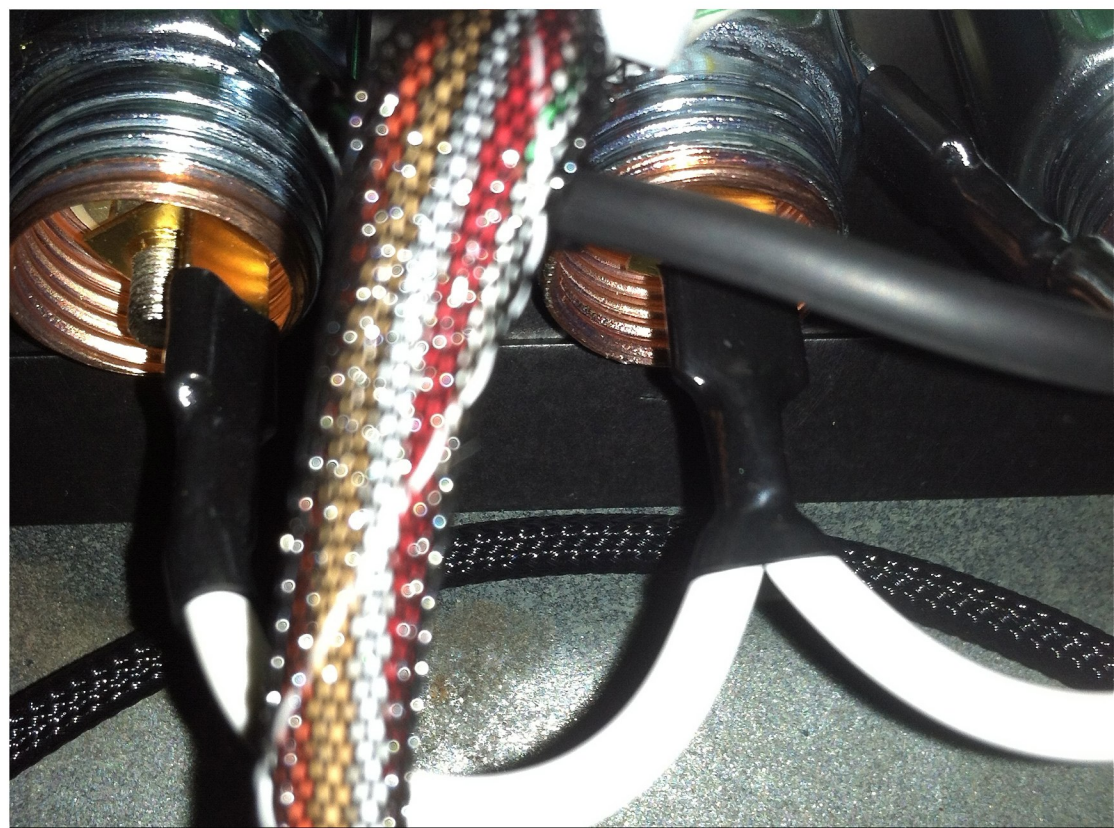
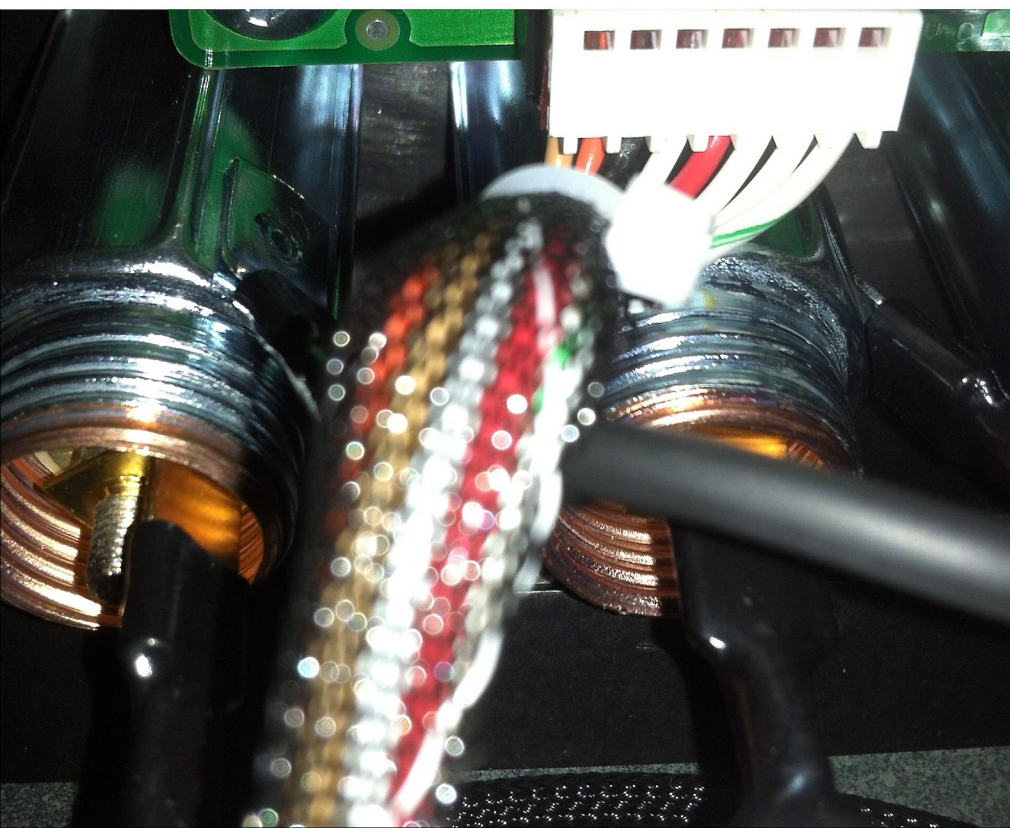
C

Musical note icon

Musical note icon

Blue T-shaped symbol





Trying the Tablet

The Samsung Slate 7 XE700T1A is a Windows 7 based tablet PC with an 11.7" screen, 128GB SSD Hard Drive and 4G of Memory. It easily took the Centrafuse and CalMap software installations and the drivers associated with all the USB gear in the back on the I/O board. Again, one USB cable connects Tablet computer in the front to the Input / Output board. The Samsung has very good battery life and is easily plugged into the newly added 12V power ports in the dash if needed.

We fabricated a tablet mount using Samsung and RAM Mount parts. That is RAM cupholder also.





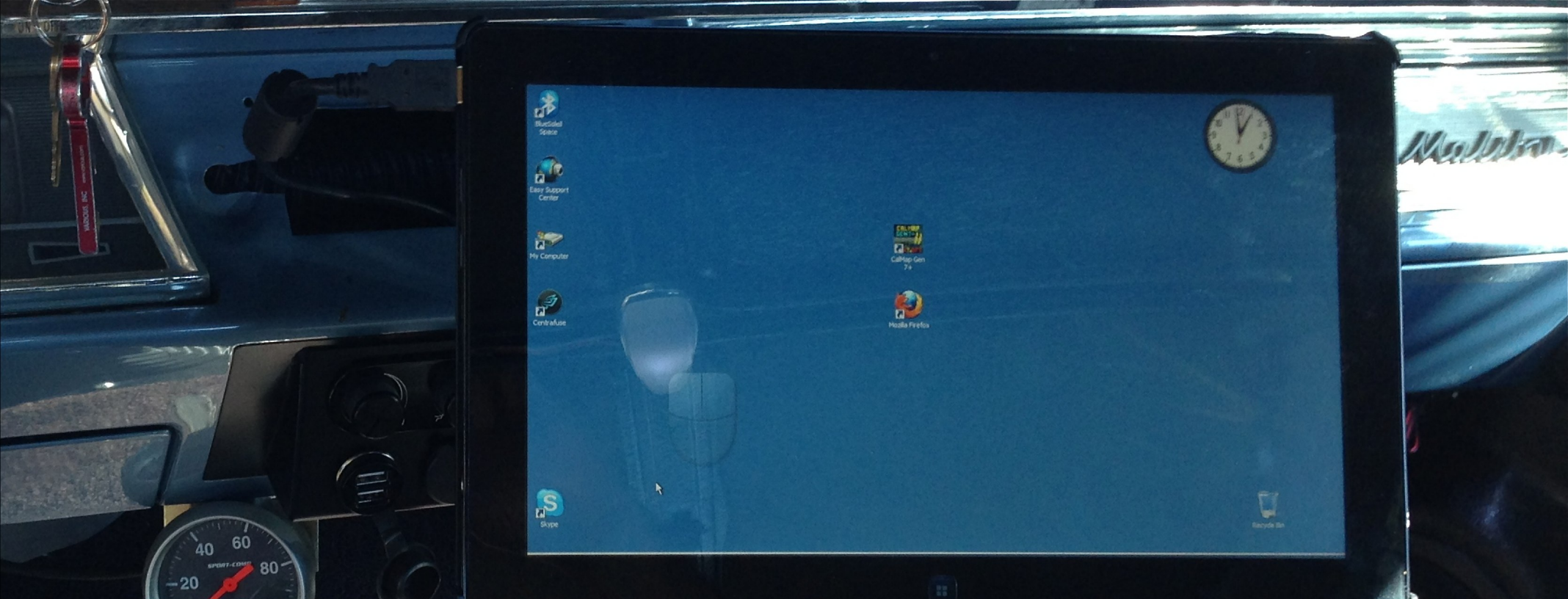
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CENTRAFUSE

MENU





HD



Radio



Sirius



TuneIn



Bluetooth Audio



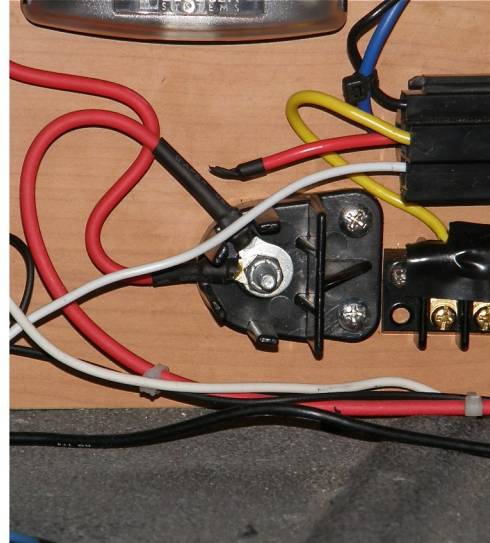
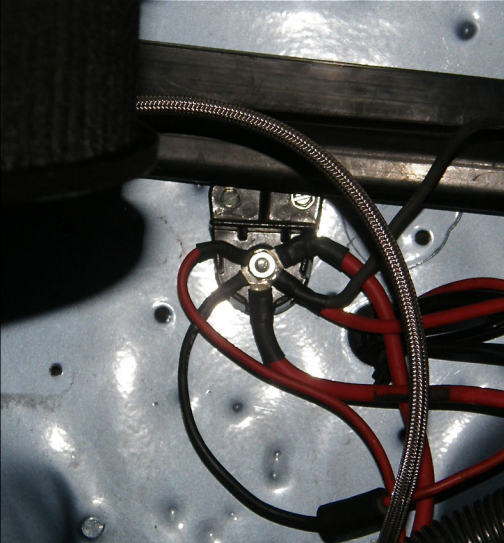
iPod



Mixer

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CENTRAFUSE





WHAT WILL COME NEXT?

The Systems are out there!