

# THE IMPA



**D**elta, BC's Keith Biddlecombe is quite the car nut. He's owned, raced and shown his pro street '65 SS Impala at BCHRA events for many years, as well as collecting other 65's including wagons for over 25 years. But, when he bought this 1965 Chevrolet Impala convertible back in September 2005 many thought he finally lost it.

"I always wanted a candy red Impala convertible," he recalls, "...one with nostalgia, modern performance and elegant luxury melted together using the 409 engine technology."

One look confirms he got all this and more! Perhaps more amazing is that it all came together in under a year. Money talks, of course.

The 3,800-pound Chevy one-off was designed, engineered and built by Rod Nielsen of Hot Rod's Restos (aka. HRR) in Delta, BC, Canada. And, boy did these Canucks nail it!

The customized Impala body now sits on an Art Morrison chassis for performance handling while motivation – lots of it – comes by way of a rare vintage powerplant with modern trimmings that produce almost 700whp and 750lb-ft of torque.

"We went through four motors before we found a good solid block," recalls Biddlecombe, whose search for a standard 409 V-8 block finally led him to a 1965 grain truck named Betsy that's still sitting engineless in some random field near Saskatoon.

Now, it's the "biggest stroker 409 we're aware of and certainly one of the most unique with its custom Banks twin turbo system and independent in-board disc quick-change rear end."

The big steel block got bored and stroked to 505 cubic inches by Kelowna's K&S Machine with an Eagle 4.5-inch stroker crank churning up the eight JE 8.5:1 forged pistons.

"Lamar Walden sent us the very first set of cast aluminum 690 performance heads made for a 409," Biddlecombe points out. Plus the valve covers, water pump, oil pan and part of the lower intake tract.

A K&N filter tops the HRR custom intake system that feeds large, twin BBK throttle bodies and the aforementioned Banks twin-turbo arrangement where a Vibrant air-to-air intercooler and DEI Cry O2 system effectively cool the charge. Twin TIAL blow-offs and external wastegates help regulate pressure in the system. >>

# IPAL.HRR

Text by Shaun Keenan // Photos by Fred Lynch



# THE IMPALHRR

An HRR custom fuel rail and Aeromotive fuel pressure regulator feed Accel 83 lb/hr fuel injectors while spark and engine management is handled by the Motec EFI system.

Before going back to HRR for final installation, the heavy-breathing V-8 was hooked up to the K&S engine dyno. With 6psi of boost and minimal tuning, it was making 685whp and 745lb-ft of torque below 5,500 rpm right out of the box.

The stainless "turbo log headers" and downpipe are HRR customs. So too is the 3-inch stainless exhaust system, which is comprised of a pair of resonators and dual mufflers from Vibrant Performance, that makes this car sound as badass as it looks!

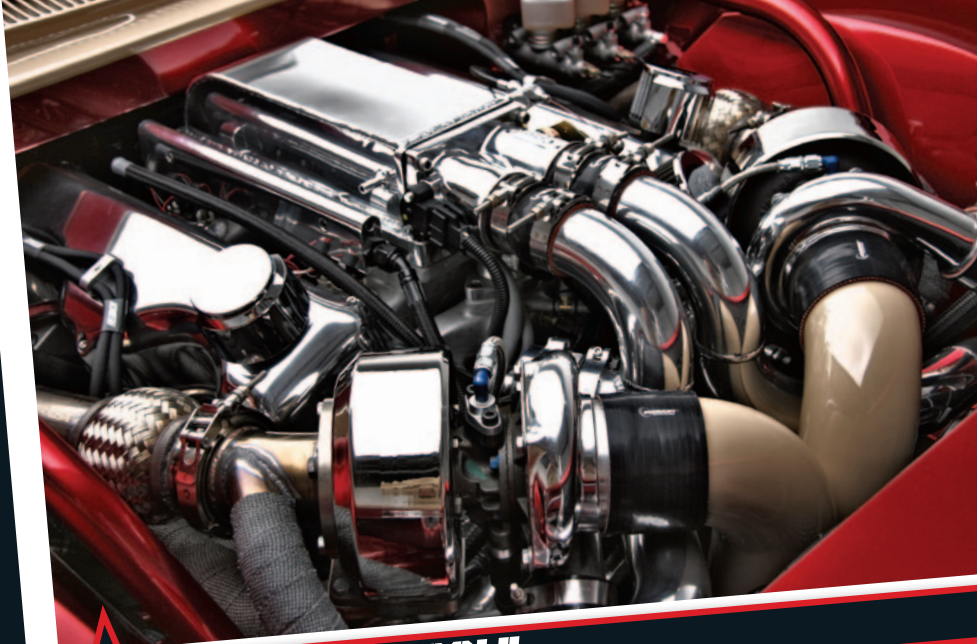
A 6-speed manual Tremec T56 transmission from a 2003 Viper is charged with putting power to the pavement through a CWI quick-change rear end. This nifty polished aluminum unit features a differential with swappable gears, a quad coil-over setup with in-board Wilwood brakes and chrome trailing arms. Back here you will find 11-inch slotted discs with 4-piston calipers. In the front is a complete Art Morrison independent front suspension featuring more Strange coilovers and 2-piece slotted/vented 14-inch discs with 6-piston calipers.

The exterior is so crazy that I've decided to let the photos do most of the talking. Rod and the Crew at HRR performed the modifications and the finishing tasks were left to Steve Crompton and Gary Salamon with Gary getting the task of laying down the custom 2-tone Sherwin Williams Planet Colour paint job. Every panel has at least one body modification. Some highlights you might otherwise miss include the modified split front bumper with PIAA driving lights and polished grillwork, stretched bottom front fenders, squared door corners, shaved trunk, door handles and trim plus six LED tails. The list goes on.

Likewise, every inch of this Buckskin leather-lined interior is full custom. From the all-metal construction dash with one-off billet gauge insert by Infanti Rides to the fine stitching by Mark Reid and Marlene Falk, four people can roll in total comfort in their own bucket seat. A full length center console and Spal windows offer more cake while the 5,200-watt Arc Audio system is definitely the icing.

Having met Arc Audio's Fred Lynch at the 2006 Sacramento Autorama, even Biddlecombe was taken aback by the quantity and quality of ICE goodies that were set aside for this show-stopping masterpiece whence construction began in early '07.

"Assisted by HRR's Brad Goodman, Fred and Rod Nielsen spent several months working on multiple ways to get all of the product into the vehicle," he explains. "They figured out the best way to apply the front stage speakers into the factory dash bezel area without taking away from the Impalas historically-recognized large oval bezel design." Placing the six Arc Audio FD Series amplifiers and six 12-inch subwoofers was another popular debate. After relocating the instrument cluster to the center of the vehicle, a pair of Arc Audio FD6000 mids were positioned on each side of the cluster in 0.3-cubic foot metal enclosures. These vent straight to atmosphere through openings in the fenders. The midrange drivers and tweeters are mounted in a traditional bi-pole configuration, which is concealed behind mesh grilles so the listener is forced to use their ears to evaluate the stereo system. >>



## MODERN MUSCLE

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## SOUNDWAVE

The Arc Audio amps landed in the trunk on a trick motorized three-layer rack made from sturdy steel box tubing. The top layer pivots, slides and folds down to allow multiple viewing configurations.

The trunk is home to a set of 2.6 cubic-foot sealed woofer enclosures packing two Arc Audio FD Series 12s tuned to 32 Hz. Two Arc Audio FD series components sets with 5-inch and 6-inch drivers are also mounted on the inside of the trunk lid to create a real second stage. It too is motorized along with the front seats and rear seat backs. Not insane enough for you? Everything interfaces through the alarm system via a channel expander and can be synchronized via remote at car shows big and small. This system has full remote control of all settings and various positions of the motorized amp rack, trunk, front seats, rear seats and more to show off the system and craftsmanship.

Amazingly, this was not the toughest part of the install. This honour goes to the two front subwoofers, which were ultimately put in 1.15 cubic foot sealed enclosures inside the front kick panels on both sides. "To accomplish this (without intruding too greatly into the occupants foot wells) the front firewall was pushed

forward by four inches and then, using all sheet metal and ribbed tubing, enclosures were welded into the car by the HRR team," says Biddlecombe.

"To eliminate resonating from the thinner areas of the structure, multiple layers of sound deadening material were applied followed by a lining of open cell foam. And, finally, since the subs were to be hidden, facial covers were made from sheet metal, deadened with insulation and then reupholstered with color-matched cloth."

In the end, Biddlecombe says all goals were met and the overall sound requirements exceeded. "Most people think that when the front subs are on that the rears are too, even when they're not playing."

Right now, the so-called IMPALHRR has a sole purpose to entertain at shows. But, after the buzz dies down in a few years, the owner is eager to start taking it on regular road trips, power tours and pleasure cruises! **PAS**



**OWNER: KEITH BIDDLECOMBE**  
**LOCATION: DELTA, BC**  
**VEHICLE: 1965 CHEVY IMPALA SS**  
**VEHICLE: 685WHP / 745LB-FT**

### ENGINE

1965 409ci Chevy (stroked to 505 ci)

### ENGINE & PERFORMANCE

Eagle stroker crank  
 Eagle rods  
 JE 8.5:1 forged pistons  
 Lamar Walden ported aluminum heads  
 ARP fasteners  
 K&N filter  
 HRR custom intake  
 BBK twin 61mm throttle bodies  
 Banks twin turbo kit  
 Vibrant air-to-air intercooler  
 TIAL twin 50mm BOVs, external wastegates  
 DEI Cryo2 system  
 HRR custom turbo log stainless headers  
 HRR custom Vibrant 3-in. stainless dual exhaust  
 HRR custom fuel rail  
 Aeromotive fuel pressure regulator  
 Crane hydraulic roller cams  
 Accel 83 lb/hr fuel injectors  
 Accel DFI ignition management, dual sink distributor,  
 EDIS coils packs (x2), ignition wires, spark plugs  
 TIAL 40mm wastegates  
 BBK twin throttle body  
 SPAL twin fans  
 BeCool radiator & overflow

### DRIVETRAIN

Tremec T56 Dodge Viper transmission  
 Centerforce billet flywheel  
 LMC clutch

### WHEELS & TIRES

HRR/Andrew Kerr Design (widened by Greens Automotive)  
 and Pirelli P-Zero Nero tires  
 -Front: 20x10-inch, 285/30ZR20  
 -Rear: 20x13.5-inch, 335/30ZR20

### SUSPENSION/BRAKES:

Strange coilover suspension (fr/r)  
 Energy Suspension urethane bushings  
 Art Morrison I.F.S., front control arms  
 CWI quick-change rear end (quad coil-overs, inboard  
 brakes, polished aluminum, chrome trailing arms)  
 Wilwood 6-piston/380mm front brakes  
 Wilwood 4-piston/330mm rear brakes  
 Earl's SS brake lines

### EXTERIOR

HRR custom bumpers (fr/r), integrated rear valance  
 Modified fenders, lower front fascia  
 PIAA driving lights  
 PIAA HID headlights  
 United Pacific Industries LED taillights  
 Custom quarter panels, rear corners and under trunk  
 Shaved trunk lid, handles, trim  
 Spal door poppers  
 Custom billet ImpalHRR emblems  
 Custom hinged steel rear tonneau cover  
 Door corners squared  
 Entire firewall, wheel wells, and floor have been custom  
 fabricated, with custom radiator cover  
 Sherwin Williams paint (Planet Color, Liquid Fire  
 Cabernet Candy with Buckskin base clear)

### INTERIOR

All metal construction custom dash with one-off billet  
 gauge insert by Infanti Rides  
 Redline Gauge Works custom gauge face  
 Buckskin leather with distressed inserts  
 Automated amp racks, front and rear seats, truck lid  
 via actuators, controlled by computer

### AUDIO / MULTIMEDIA

Kenwood DDX6019 AM/FM/CD/DVD/NAVI head unit  
 Arc Audio 12-inch FD12 subwoofers (x6)  
 Arc Audio Foose Design FD6000 component sets (x4)  
 Arc Audio Foose Design FD5000 components sets (x2)  
 Arc Audio FD1200.1 mono block sub amplifier (x3)  
 Arc Audio FD4150 4-channel midrange amplifier (x3)  
 Arc Audio XEQ parametric EQ (x2)  
 Arc Audio IDZ 3-way active EQ  
 Batcap batteries - 2000 (x2), 400 (x6), 800 (x2)  
 Scosche wiring, fuses, interconnects  
 DEI Boom mat sound deadening

### SPONSORS

Accel DFI, Aeromotive, Arc Audio, Banks Engineering,  
 BATCAP, BBK, Be Cool Inc., Centerforce, Classic Industries,  
 Crane Cams, Dakota Digital, DEI Design Engineering Inc.,  
 Eagle, Earl's Fittings, Flaming River, Green's Automotive,  
 Infanti Rides, JE Pistons, JR Distribution, Lamar, Walden,  
 Lokar, Painless Wiring, PIAA, Pirelli, Planet Colour, Sherwin  
 Williams, Powermaster, Redi-Strip, Redline Gaugeworks,  
 Rick's Hot Rod Shop, Scosche, Spal, Superior Plating, TIAL,  
 United Products Corp., Vibrant, Wilwood