

BANISH ELECTRICAL DEMONS TO NEVERLAND

Design Details Are Engineered Before Upholstery

By Rick Sidney • Photos by Rich Boyd

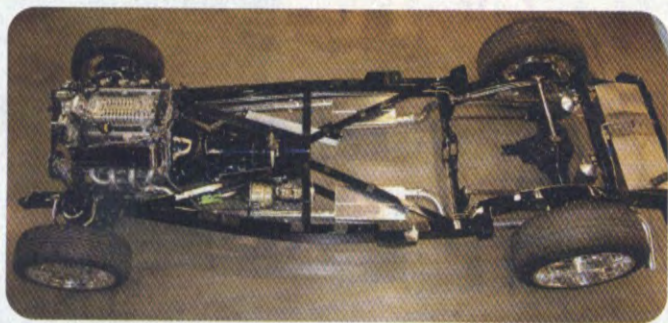
In the April 2008 issue of *The World of RODS* we passed along to readers some professional tips on preparation for paint of Rob Hervey's '37 Ford Tudor sedan from Huntington Beach, California. Between then and our latest visit to Hot Rods & Hobbies in Signal Hill, California, the sedan has emerged from the paint booth with a flawless deep blue metallic paint. Work was progressing on the sedan, so we took a close look.

Fortunately, we were present when the entire crew picked up the freshly painted body and placed it on the also freshly painted chassis that had by that time been assembled into a rolling chassis. The Street & Performance LS-1 and 4L60E electric automatic transmission were in the chassis, as was the coated exhaust system. The following two months several members of the Hot Rods & Hobbies crew addressed the various components and details of the electrical system including the Air Ride adjustable suspension, a rear-mounted Vintage Air A/C unit, the Specialty Power power windows, remotely activated door openers, overhead-mounted head unit, rear-mounted stereo system, instrumentation and assorted interior, and exterior lighting.

Our visit to the shop just days prior to delivery of the sedan to Fast Ed's Upholstery Shop in Torrance, California, allowed us a look into the unique details of the sedan's central nervous system. Robert Kropp II was in the final stages of wiring all of the elements to a bank of relays located behind the dash. Efforts were made to keep as much of the wiring out of sight, but not buried in an inaccessible part of the frame.

The solution to keeping all of the plumbing and wiring neatly hidden but accessible was a long center console that runs from the dash to the front of the rear bench seat. Extra-long A/C hoses run from the sedan's trunk forward under the console, and then pass through a firewall bulkhead to the engine compartment where they hook up to the compressor, dryer and condenser.

A simple wiring job can easily take 40 hours or more. Add special fabrication to the task and there can be several hundred hours involved installing a variety of modern conveniences. Obviously, there's no substitute for quality tools and experience. The decision to crimp or solder the ends of a wire can make or break a quality wiring job. Quality half moon and cleat crimping pliers cost around \$25 or \$30. Good wire strippers also cost around \$25. But, a safe and secure system is worth whatever it takes; the alternative is a possible "total" disaster.



The '37's rolling chassis has the brake and fuel lines plumbed. Plus, the exhaust system is coated with a baked-on high-performance coating that will resist rust and color changes.



Every crew member in the Hot Rods & Hobbies shop was called on to lift the freshly painted body off the paint dolly onto the rolling chassis. The body was slightly lighter without the dash, doors and trunk lid.



Once on the chassis the HR&H crew stepped back to check the stance and the wheel/tire fitment before the next phase of installing the electrical system began.



A Street & Performance LS-1 and 4L60E overdrive transmission were in the chassis, cooling will be handled by an aluminum radiator.



Nearing the end of the electrical system's assembly we see the trunk of the Tudor sedan will be the nerve center. The Vintage Air evaporator is mounted to the rear wall of the interior. Cool air will vent in the package tray behind the rear seat. The Air Ride air tank is mounted to the passenger side of the trunk. Note the generous use of Dynamat insulation. All of the mechanicals and wiring will be hidden by upholstered panels created by Fast Ed's Upholstery located in Torrance, California.



Kick panel speakers compete with A/C hoses and other plumbing reside on the passenger side under the dash. Note all of the electrical and plumbing is coated or wrapped for long lasting reliability.



Robert points out the location of the primary fuse panel. Also visible is the trunk-mounted hydraulic arm that will open and lift the sedan's large trunk lid.




The upholstered center console will provide a convenient mounting surface for four power window switches and the Air Ride Technologies suspension control panel. It also provides a convenient tunnel for routing A/C lines forward to the firewall.



Cool air from the rear-mounted A/C evaporator will also be directed to the front of the sedan's interior through insulated pipes housed in the center console.

Any competent electrician has a test light to fine-tune the system after it's finished. Quite simply, electricity flows from positive to negative, leaks at the point of least resistance (a short) and makes wire coating look and smell bad when a short occurs. An important point: a superior ground is created when the battery is grounded to the engine rather than the chassis. Less resistance is created as a result.

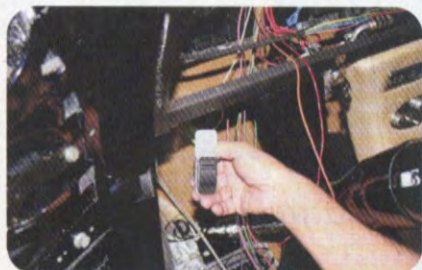
Here's a brief look at how the crew designed the electrical system to prevent the area behind the dash from becoming a mass of wires and from running important wire looms under floor carpet. The added benefits are a super clean engine compartment, organized and accessible hardware behind the dash, fewer unnecessary wires under the carpet and acoustic/heat insulation, and delivery of cool air to the interior that doesn't compromise the system by a front-mounted location. Check it out and see if you don't agree that this is well-designed and practical approach to installing all of the modern conveniences in a compact space. 



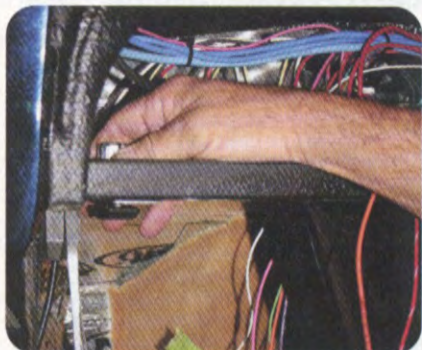
The Air Ride Technologies control panel is mounted close at hand in the center console in front of the power window switches.



In low light levels the Air Ride Technologies control panel's soft blue LEDs are more visible. This allows the system to be operational with greater ease even at night.



One of the last minute items Robert installed was a hidden trunk release switch. Here the switch is mounted in a small metal bracket.



Where to put the trunk release switch, while providing a convenient location without it being visible, was evaluated. Robert located the rocker switch to the left of the steering column; when the dash panel is in place it will be hidden from direct view of the driver, but easily touched to operate the power trunk release and lift.



Robert drilled two mounting holes in the bottom surface of the steel tube that supports the painted dash panel.



Two small bolts quickly fasten the bracket to the metal bar.



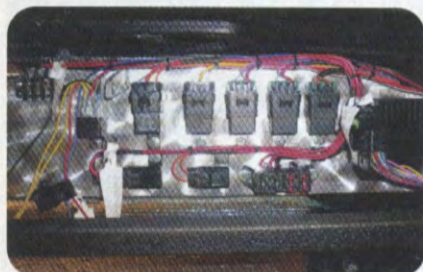
The coiled cable at the bottom of the fender well will eventually be installed to provide important emergency access (mechanical latch) to the sedan's interior in the remote event that there should be a dead battery.



Robert mounted the headlight dimmer switch in the driver's side kick panel to create a less obvious location and maintain a more effective moisture barrier by not drilling a hole in the sedan's toe board. Operation of the switch is still foot-controlled, only a slight sideways movement of the foot is required to trip the switch.



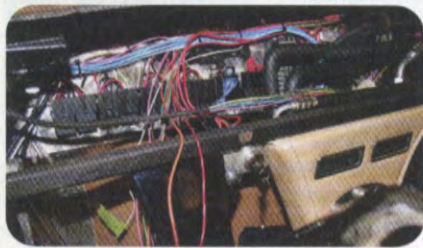
Behind the dash panel is where the electrical relays and terminal blocks are mounted neatly in groups. To the left are the power windows, center are the door poppers, and to the left are the Street & Performance EFI engine management relays.



The mounting surface for all the hardware is raised slightly to the interior side of the firewall. This keeps the engine compartment side of the painted firewall free from holes or mechanical fasteners.



Much of this area will become covered with A/C hoses that connect to the billet aluminum firewall bulkhead (below the dash on the passenger side).



Nearing the end of the plumbing phase we see a well-organized electrical system that has protective shrink wrap and tie wraps to prevent wires from being accidentally cut or wandering into an area where they might be damaged by friction or sharp objects. A/C hoses from the condenser and compressor lead to the center of the console and center-mounted outlets.



An assortment of various sizes of ThermOSleeve, a brand of polyolefin heat shrink tubing, are used to keep wires from seeing any damage from friction or accidentally being cut by a sharp object.



The rear quarter windows are also fully operational and have compact SPW cable-operated window lifts as well.



The windows are raised and lowered by Specialty Power Window cable-operated lifts. We noticed the remote door poppers, an item manufactured by AVS door actuators, employs a reliable metal rod to open the door latch (www.specialtypowerwindows.com and www.airbagparts.com).

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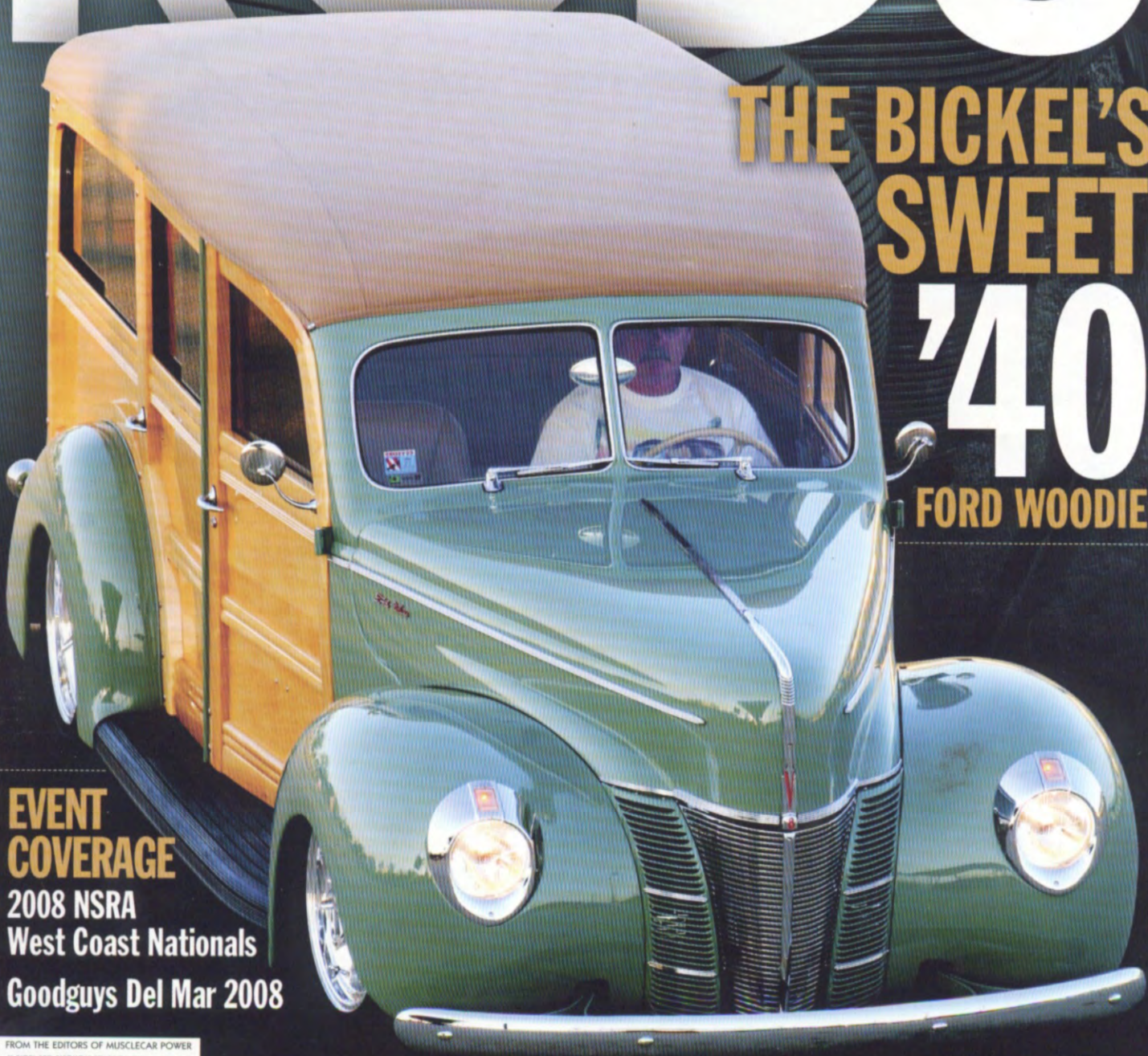


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