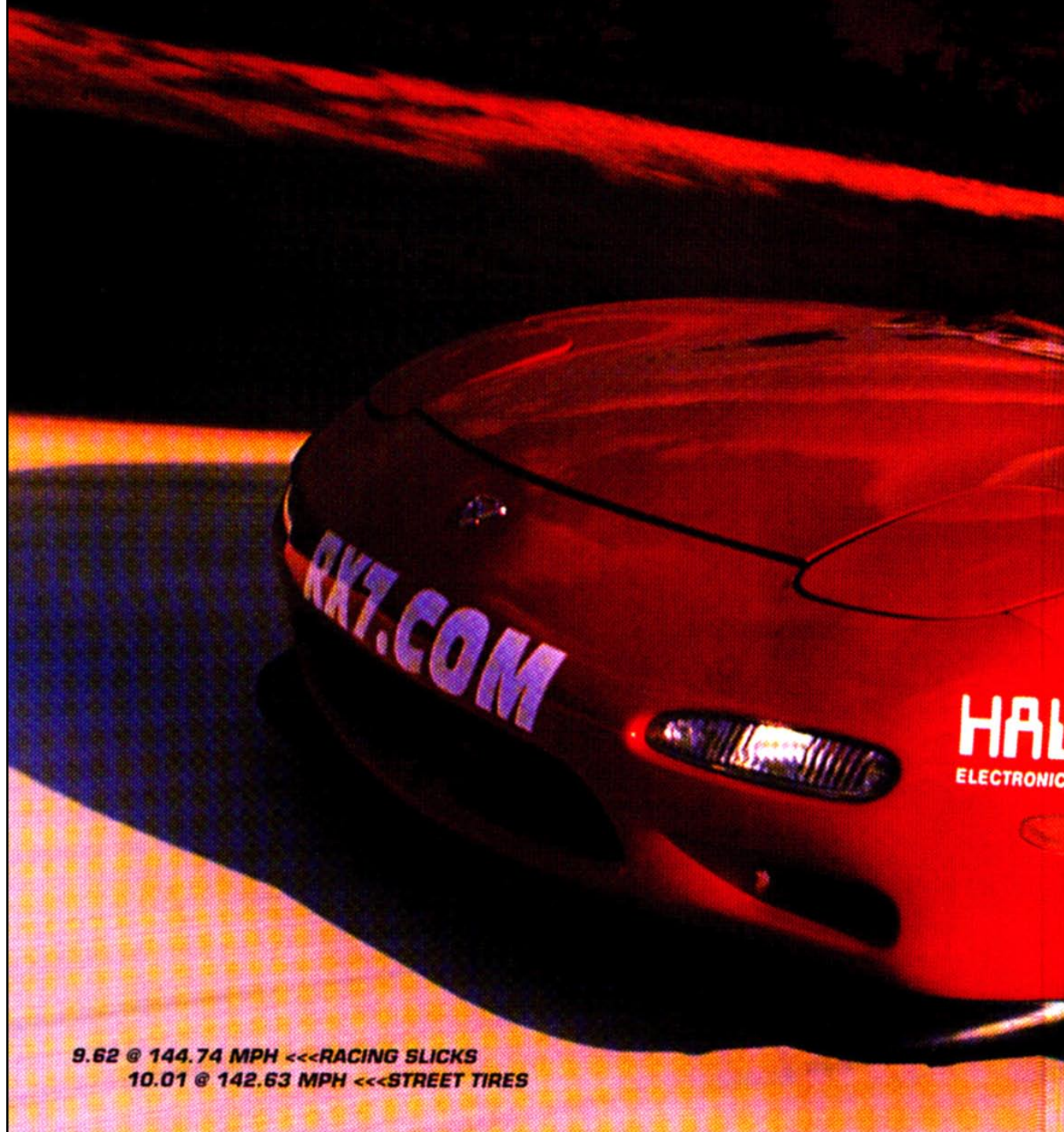




7-62 3B1 KA-7 10-01 845 7-62 3B1 KA-7 10-01 845 7-1B  
RX-SEVEN / SIX-HUNDRED FORTY-FIVE / FIVE-HUNDRED SIXTY-  
RX-7 10-01 845 7-62 3B1 KA-7 10-01 845 7-62 3B1 KA-7 10-01 845 7-1B

# BY THE NUMBERS

THE POSTER CHILD FOR STREET HEAT



9.62 @ 144.74 MPH <<<RACING SLICKS  
10.01 @ 142.63 MPH <<<STREET TIRES



561 RX-7 10.01 645  
RX-SEVEN / TEN POINT ZERO ONE / NINE POINT SIX / RX-SEVEN / SIX-HUNDRED FORTY-

RX-SEVEN / SIX-HUNDRED FORTY-FIVE / FIVE-HUNDRED SIXTY-ONE / TEN POINT  
RX-7 10.01 645 RX-7 10.01 645

## —ARI YALLON'S ROTARY PERFORMANCE RX-7

BY JUST THE NUMBERS, there is a great deal of potential being realized in this 1993 Mazda RX-7. One of the most prolific street machines we have seen, this FD belts out 645 hp at the wheels, runs 10.01 on street-spec tires and 9.62 on slicks—impressive numbers indeed. ☐



TEXT EVAN GRIFFEY PHOTOGRAPHY HENRY DEKUYPER

# BY THE NUMBERS

## ENGINE

RP Street Ported 13B

## TRANSMISSION

Stock Mazda Five-Speed

## TURBO

Modified GReddy T78 Kit

## BOOST

1.75 bar w/ GReddy PRofec B

## NITROUS

Nitrous Express  
75-horse Spool-up Kit

## EXHAUST

GReddy Downpipe, GReddy  
Power Extreme Exhaust

## INTAKE

Custom Cold Air

## FUEL

RP Competition Fuel Pump,  
RP Large Secondary Injector Kit

## ENGINE MANAGEMENT

Haltech E6K

## PULLEYS

RP Triple Race Pulley

## INTERCOOLER

GReddy Front-Mount Air-To-Air

## IGNITION

Jacobs Rotary Pro Pak,  
Rotary Ultra Coils (Leading),  
And Wires, NGK Racing Plugs,  
J&S Knock Sensor.

## CLUTCH

Bönez Racing Clutch,  
Stock Flywheel

## SUSPENSION

Tokico Struts, Suspension  
Specialties Springs, Cusco  
CF Rear Strut Bar

## BRAKES

Bönez Brake Upgrade

## REAR END

Stock Mazda w/ 4.3 Gears,  
KAAZ LSD, RP Custom Axles,  
RP Drag Launch Kit

The rx7.com Mazda has gained unprecedented bragging rights in the tightly knit world of rotary performance — and this stature has come quite quickly. While Adam Saruwatari is the most well-known name in RX-7 circles, Ari Yallon, Chris Ott and Rotary Performance have taken FD performance where Adam and A&L Racing couldn't. Adam's RX-7 ran 10.12, 10.15 and 10.17 on slicks in stock driveline configuration. The crew swapped to a G-Force gearbox and wet 9.63 at first asking. The aftermarket transmission put Adam in the Outlaw Class, but the beauty of the deal was a quick swap back to a Mazda gearbox and he was cleared for takeoff in the Quick Class.

Ari and Rotary Performance took their FD to 10.01 on street tires, then merely swapped to slicks and blasted a 9.62 — all via the stock Mazda driveline.

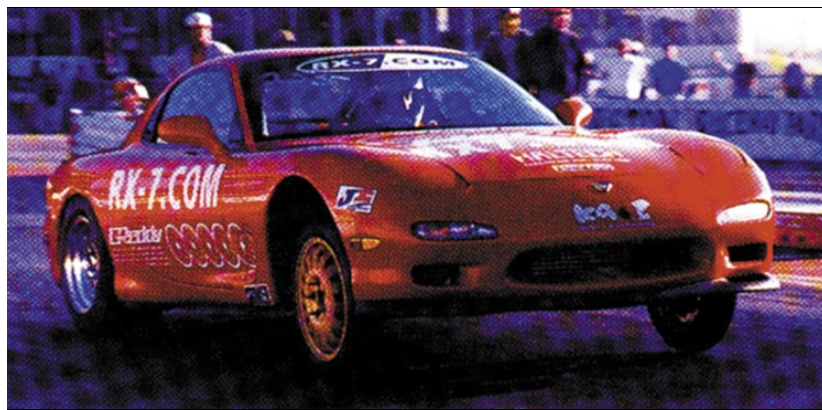
The rx7.com Mazda is street registered and capable of prowlin' the streets at will (as it did for our photo shoot) but with the shop's reputation riding along with the car, you'd think the red rocket

sees the strip more than the street. This is not all together true.

"This car has always kept to the philosophy of remaining streetable. Even today we test drive, tune, joy ride and even occasionally race the car on the street. It has always been street registered, inspected and runs quite smoothly in around-town situations," said Yallon. "No one ever expects the performance contained beneath its red body. Having the original suspension and clean, not overly flashy, appearance, the Mazda takes people by surprise. Being in Texas, weekend racing attracts a lot of 'red-necks' who laugh at and heckle the RX-7 as it 'tries' to race their V8s and pumped-up pickup trucks. They don't laugh for long, usually about half a pass. We've also frequently crashed the parties of exotic car owners [and end up] beating Vipers, 'Vettes and even Ferraris."

## ROTOR TECH

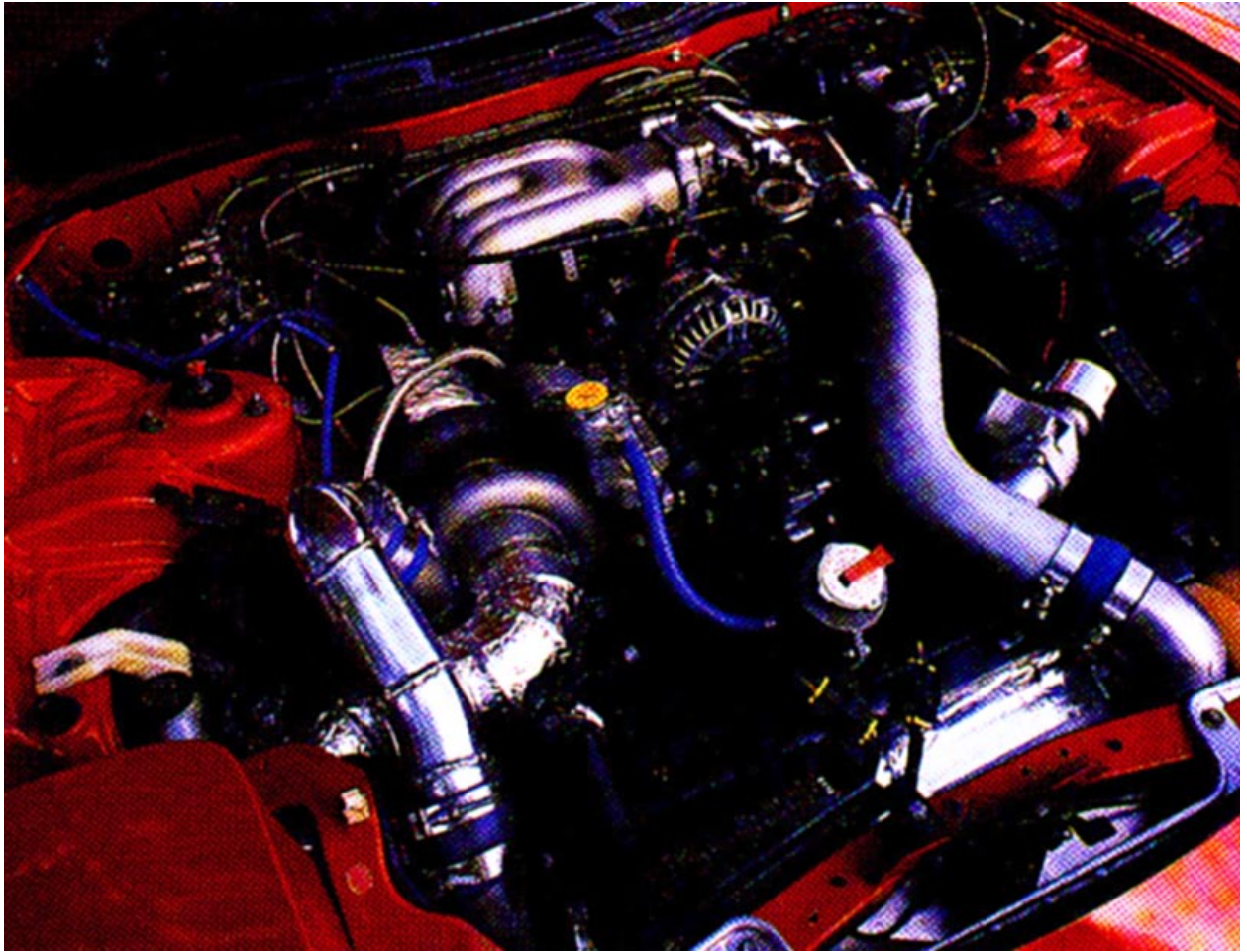
Rotary Performance prepped the 13B rotary engine for high-power output. The RP crew custom street



*The RX-7 is as at home in the burnout box as it is in the drive-thru at the local burger joint. At the strip in street-class trim, the RX-7 flexes Mickey Thompson ET Streets wrapped around Weld Racing Aluma Stars. This combo nets 10.01-second e.t.s at 142mph. Slapping on some MT slicks nets 9.62-second, 144 mph performance. This is our kind of street car!*



# BY THE NUMBERS



*The 13B was built and tuned by Rotary Performance out of Garland, Texas. Chris Ott and crew performed a street port, added trick 3-mm apex seals and enlisted a GReddy turbo system to give the engine a hearty power curve...they like everything big in Texas.*

ported the rotors to its own secret specs. Porting a rotor housing is the equivalent of porting the head on a piston engine, and increasing the airflow into the engine increases the power potential of the motor. A set of special Rotary Performance 3-mm apex seals were added to keep the engine together under high-boost operation. The 13B runs a stock intake manifold that is fed by an upgraded rx7.com throttle body. A GReddy Power Extreme system is in charge of expediting the flow of exhaust gases while a 94-mm tip provides a nice finishing touch. Beyond

the mods, the Rotary Performance crew credits immaculate engine assembly as another major factor in the FD's durability and consistency at the strip and its civilized nature on the street.

## **GIVE ME BOOST**

The Mazda's original sequential twin-turbo configuration has been altered to single turbo status. The rotary engine is dutifully pressurized by a GReddy turbo upgrade package featuring the company's race-proven T78 turbocharger. Rotary

Performance has set max boost to 28 psi and called on a big air-to-air GReddy intercooler to cool the charge air as it heads to the engine. A GReddy PRofec B is in charge of regulating boost in conjunction with a Type R wastegate.

## **NO FUELIN'**

Rotary Performance attacked fuel enrichment with a set of upgraded 550cc main injectors and 1600cc secondary injectors. RP custom fabricated the fuel rail and added one of its high-flow, in-tank fuel pumps.

# BY THE NUMBERS



*A Haltech E6K engine management computer runs the show. The E6K system is very similar to the E6S series used on many of the quickest Diamond Stars but it offers double the microprocessor speed, an internal barometric pressure sensor, additional PWM outputs and updated software. The E6K has data-logging capability that allows the user to see data in real time to better facilitate accurate tuning adjustments. As far as the act of programming is concerned, the Haltech system allows the manipulation of graphs in lieu of inputting numbers to control fuel delivery or tune ignition timing maps.*



key component because the firing cycle of a rotary is much more complex than that of a piston engine.

## **MIST-A-FY**

For extra thrust, a Nitrous Express wet-manifold system has been plumbed into the works. The laughing gas has been jetted to a conservative 75 hp and, while its 36-percent oxygen content by weight adds power, the cooling effect of nitrous also comes in handy, especially in the harsh summer heat that hits the Lone Star State.

The system is used as a spool-up assist that creates extra "cylinder" pressure. This leads to more exhaust gases, which, in turn, speeds the spool-up of the turbo. While this usage is nothing new, it should be noted that Chris has the nitrous programmed to stay on until a whopping 22 psi (most systems turn off at 5 to 7 psi). There is

*A GReddy T78 turbo is harnessed to 28 psi by a PROtec B boost controller and Type R wastegate. The turbo is part of a kit that comes complete with GReddy plumbing and its trademark blue hoses. A GReddy air-to-air intercooler is also part of the turbo system.*

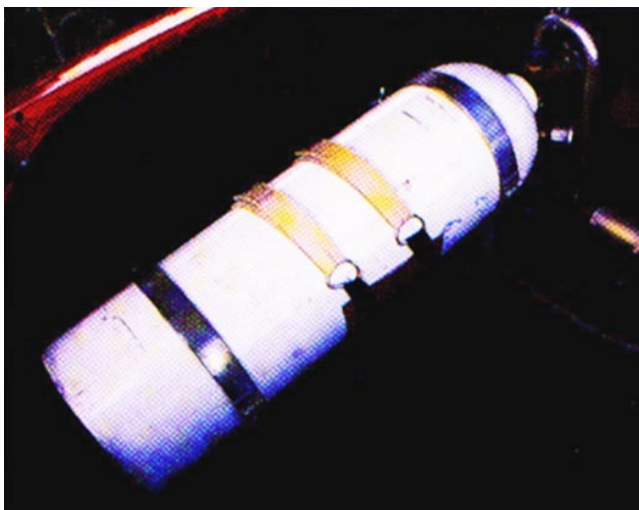
*We have always liked the way this GReddy intake piece helps dress up the engine bay while smoothing the flow of air into the tenacious turbo rotary powerplant.*

*A 75-hp Nitrous Express wet-manifold system acts as a spool-up assist. Brought online at launch, the nitrous creates extra "cylinder" pressure which leads to more exhaust gases which, in turn, speeds the spool-up of the turbo. While this usage is nothing new, it should be noted that CHRIS has the nitrous programmed, via the Haltech, to stay on until a whopping 22 psi. Ari has a steering wheel-mounted override that can pump out the funny fog for the entire run when activated. Yes, that is a big bottle, but no, it is not a converted Scuba tank.*

## **HEY SPARKY**

On the ignition side, the Mazda runs a Jacobs Rotary Pro Pak, Jacobs race-

spec coils, Jacobs plug wires and NGK racing plugs to keep the Wankel running efficiently at full song. The Pro Pak is a





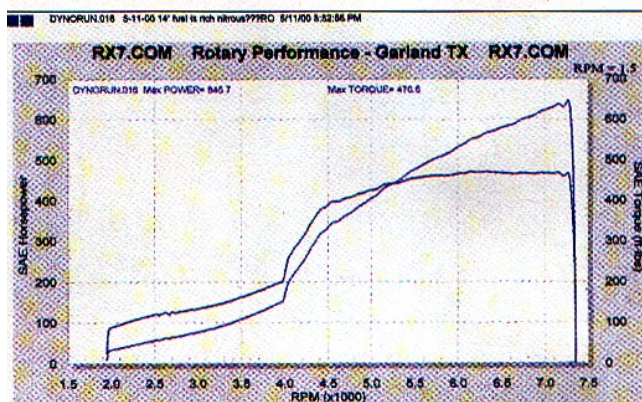
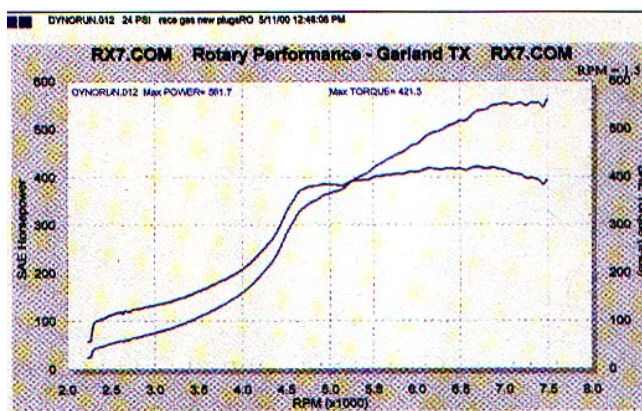
# BY THE NUMBERS

a steering wheel-mounted override that, when activated, pumps out the funny fog for the entire run.

## PLEASE STAY TUNED

Rotary Performance handled all the tuning and utilized its Dynojet chassis dyno to chart the progress. Many of the actual tuning runs were performed on the street. The Wankel is controlled by a Haltech E6K engine management computer. The E6K is very similar to the E6S series used on many of the quickest Diamond Stars, but it offers double the microprocessor speed, an internal barometric pressure sensor, additional PWM outputs and updated software.

The E6K has datalogging capability that allows the user to see data in real time to better facilitate accurate tuning adjustments. As far as the act of programming is concerned, the Haltech system allows the manipulation of graphs in lieu of inputting numbers to control fuel delivery or tweak ignition curve maps. Operating parameters can be tuned in 500-rpm increments up to 10,500 rpm. With the Haltech system on the job, Chris has extracted some impressive power numbers from the 13B. On the Rotary Performance Dynojet, the RX-7 spun the rollers to the tune of 561 hp and 421 lbs-ft of torque off the bottle. With the Nitrous



top to bottom

*On Rotary Performance's Dynojet, the RX-7 pumped out 561.7 hp and 421.3 lbs-ft of torque at the wheels. This run was a turbo-only run.*

*With the funny fog, the 13B laid down 645.7 ponies and 470.5 lbs-ft of torque. The Nitrous Express wet-manifold system is configured as a spool-up assist providing nitrous until 22 psi. An override button allows Ari to squeeze the Wankel for the entire pass when track conditions permit.*

*The Cusco rear strut tower bar adds to the stability of the RX-7, which helps the car while blasting down the strip and powering up canyon roads.*

*The street-ported Wankel is muffled by a GReddy Power Extreme exhaust system.*



Express system activated, the 13B That'll get you down the highway generated 645 pavement-pounding and then some. horsepower and 470 lbs-ft of torque.

# BY THE NUMBERS

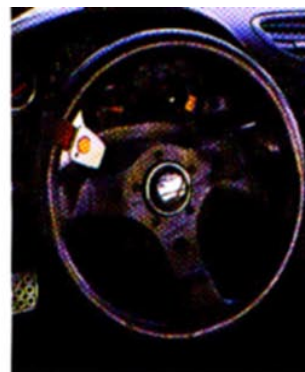


*The interior retains most of the stock amenities. For safety, a welded-in chrome-moly roll cage, NHRA-approved to 7.50-seconds is on call.*

*For style, a Grant steering wheel is joined by a trick aluminum shift knob.*

## HOOD 'N' COOK

The RX-7 is a leading-edge performance machine right out of the box. In fact, early R1 "race-spec" models were sprung so stiffly that even racers complained. With such a good foundation, RP only had to add a few well-placed tweaks to get big-time 60-foot performance. Tokico five-way adjustable shocks and Suspension Specialties springs give the Mazda the correct stance while a KAAZ limited-slip differential and special rx7.com axles ensure precise and durable power transfer. Gear selection is attained via an rx7.com shifter and Bőnez clutch. The shock and spring combo are



certainly doing their job as the Mazda nails 1.54-second 60-foots on street tires and 1.27-second 60-foots on slicks.

## INSIDE, OUT

The car has been sprayed Vintage Red by Krause Paint & Body, fitted with 1999 RX-7 taillights (from a Japan-spec model) and adorned with vinyl graphics. The use of graphics allows Ari to look the part. At the strip they can get 9-seconds worth of PR with the stickers. Peeling the vinyl transforms the car to a sleeper, so Ari can take down the pretenders on the street.

While in full-cruise mode, the Mazda runs Yokohama AVS Sport

rubber and SSR Integral five-spoke aluminum wheels. At the strip in street class trim, the RX-7 flexes Mickey Thompson ET Streetswapped around Weld Racing Aluma Stars. Mickey Thompson ET Drag slicks are bolted on when 9-second e.t.s are needed. For safety, a chrome-moly roll cage, NHRA-approved to 7.50-seconds is on call. The RP crew fabricated a control panel that commands the Nitrous Express system. The panel is housed in the center console and can be easily concealed, keeping the street stealth illusion alive. For weight balance, the battery has been moved inside the car;

### on street tires

60'	1.543
330'	4.294
1/8	6.515
MPH	109.31
1000'	8.431
1/4	10.010
MPH	142.63

### on slicks

60'	1.376
330'	4.024
1/8	6.206
MPH	111.74
1000'	8.071
1/4	9.626
MPH	144.74





# BY THE NUMBERS



*This center console-mounted switch panel commands the Nitrous Express system. It can be easily hidden, adding to the stealth-like aura of the RX-7.*

to keep its street heritage intact, the stock stereo system has been retained.

The Mazda can bump it in many ways. The car is a silent assassin. Since it runs a complete exhaust system the stereo can be played around town. At the strip, the Mazda can bump it by bumping off the competition — 10.01 on street tires is a tough nut to crack. Swapping to slicks and

running 9.6 puts the RX-7 near the top of the food chain in the Quick Class.

Since the RX-7 is a street car, it makes most of its strip passes under the street class banner. Going by the numbers — and they are impressive — the rx7.com Mazda has taken stock-spec rotary performance to never-before-seen heights.



*In cruise mode on the street, the Mazda runs 17-inch Yokohama AVS Sport rubber and SSR Integral five-spoke aluminum. Tokico five-way adjustable shocks and Suspension Specialties springs give the Mazda the correct stance while a Kaaz limited-slip differential and special rx7.com axles ensure precise and durable power transfer.*

## THE SOURCE

### GREDDY PERFORMANCE PRODUCTS

Dept. THP, 9 Vanberbilt  
Irvine, CA 92718  
(949) 588-8300

### HALTECH

Dept. THP, 2156 W. Northwest Hwy, Ste. 309  
Dallas, TX 75220  
(972) 831-9800

### JACOBS ELECTRONICS

Dept. THP, 500N. Baird St.  
Midland, TX 79701  
(800) 627-8800

### KAAZ / NEWPORT EXOTIC CARS

Dept. THP, 935-A Sunset Dr.  
Costa Mesa, CA 92627  
(949) 631-0990

### MICKEY THOMPSON TIRES

Dept. THP, 4670 Allen Rd.  
Stow, OH 44224  
(216) 928-9092

### NAKAYAMA RACING SPORTS (SSR WHEELS)

Dept. THP, 21818 Lassen St. #C  
Chatsworth, CA 91311  
(818) 998-2988  
[www.nakayamaracing.com](http://www.nakayamaracing.com)

### NITROUS EXPRESS

Dept. THP, 4923 Lake Park Dr.  
Wichita Falls, TX 76302  
(940) 767-7694

### ROTARY PERFORMANCE

Dept. THP, 311 E. Buckingham Rd.  
Garland, TX 75040  
[www.rx7.com](http://www.rx7.com)

### TOKICO

Dept. THP, 1330 Storm Pkwy.  
Torrance, CA 90501-5041  
(310) 534-4934

### YOKOHAMA TIRES

Dept. THP, 601 S. Acacia Ave  
Fullerton, CA 92631-5106  
(800) 366-TIRE  
[www.yokohamatire.com](http://www.yokohamatire.com)

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