

# HOT PEPPER



## MAZDA MX-3

**Mike Pale wanted a system as hot as his MX-3—but not as eye-catching to thieves.**

A red jalapeno. That's what immediately came to the minds of Micah Sheveloff and Paul Silva when they first laid eyes on Mike Pale's bright-red 1992 Mazda MX-3. Soon, the two system designers at Audio Coupe in Fairfield, Connecticut, found that the nickname they gave the sleek sports coupe would take on a greater meaning.

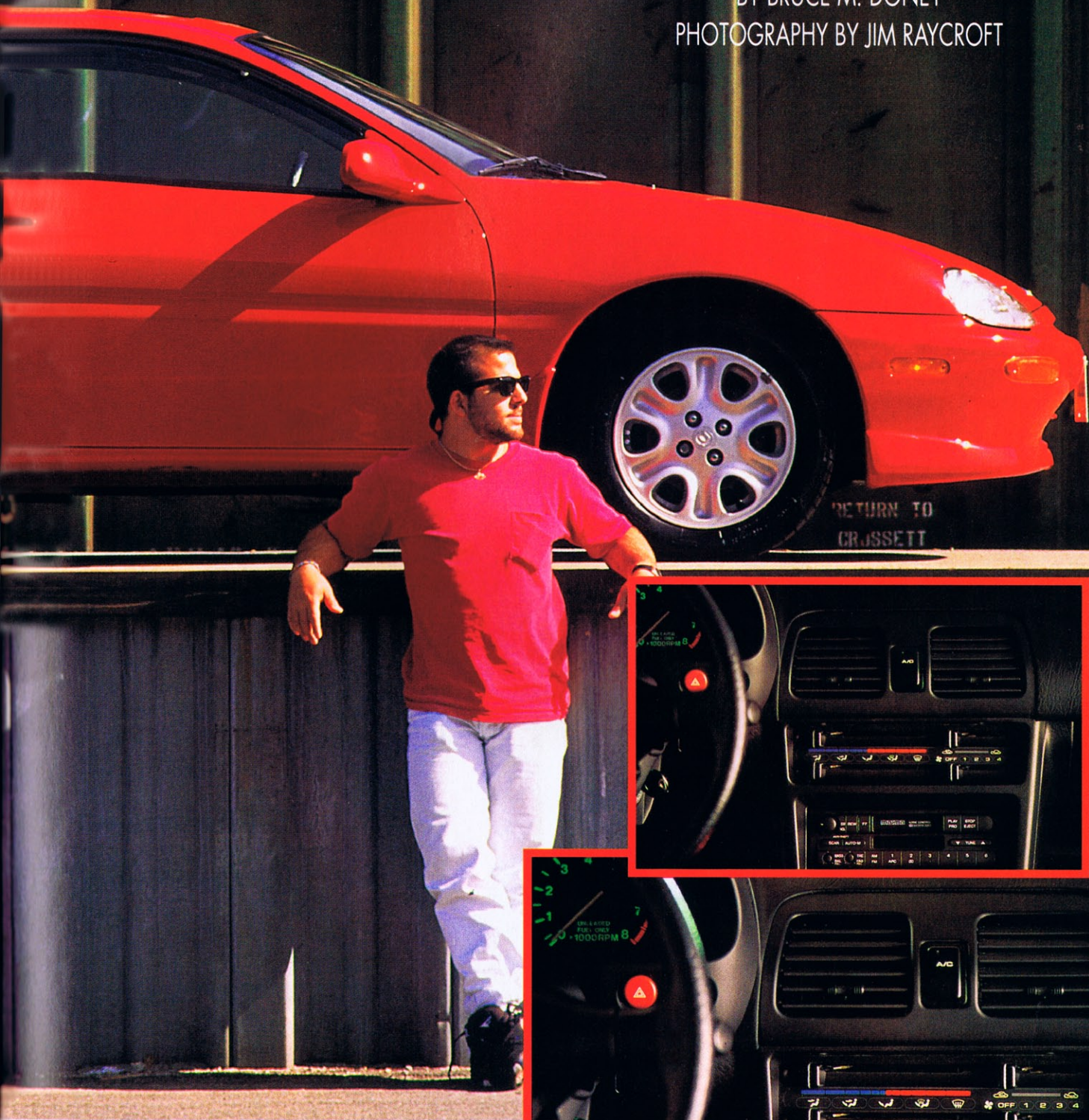
Pale, an 18-year-old college student from Monroe, Connecticut, wanted a nice-sounding audio system, but he also wanted to keep his MX-3 looking stock. The strict confines of this hot little car presented a challenge to the Audio Coupe team, but Sheveloff and Silva were not intimidated. They carefully chewed on the idea for awhile, and then eagerly swallowed the project whole.

### Major Consideration

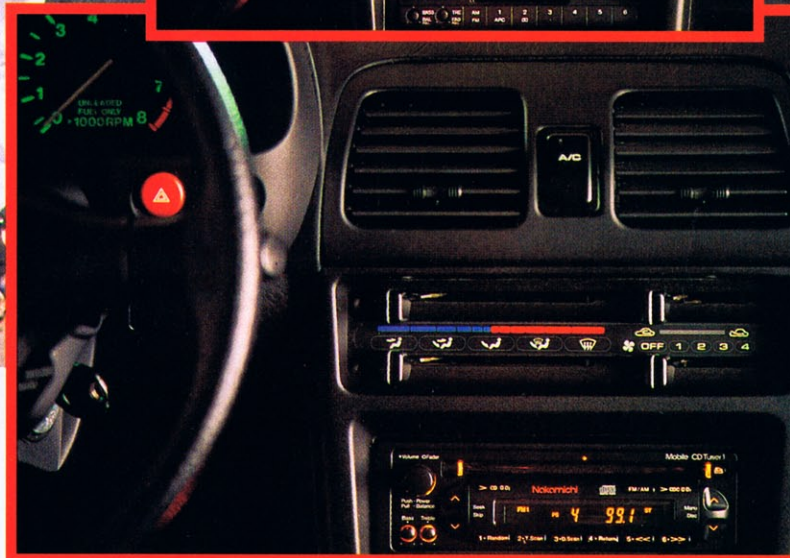
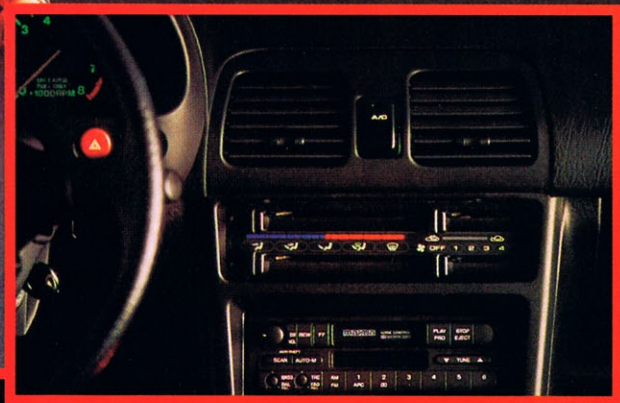
Security was a major consideration for Pale. "I bought the car in January and originally went to Audio Coupe for a security system,"

# R T H E R I N

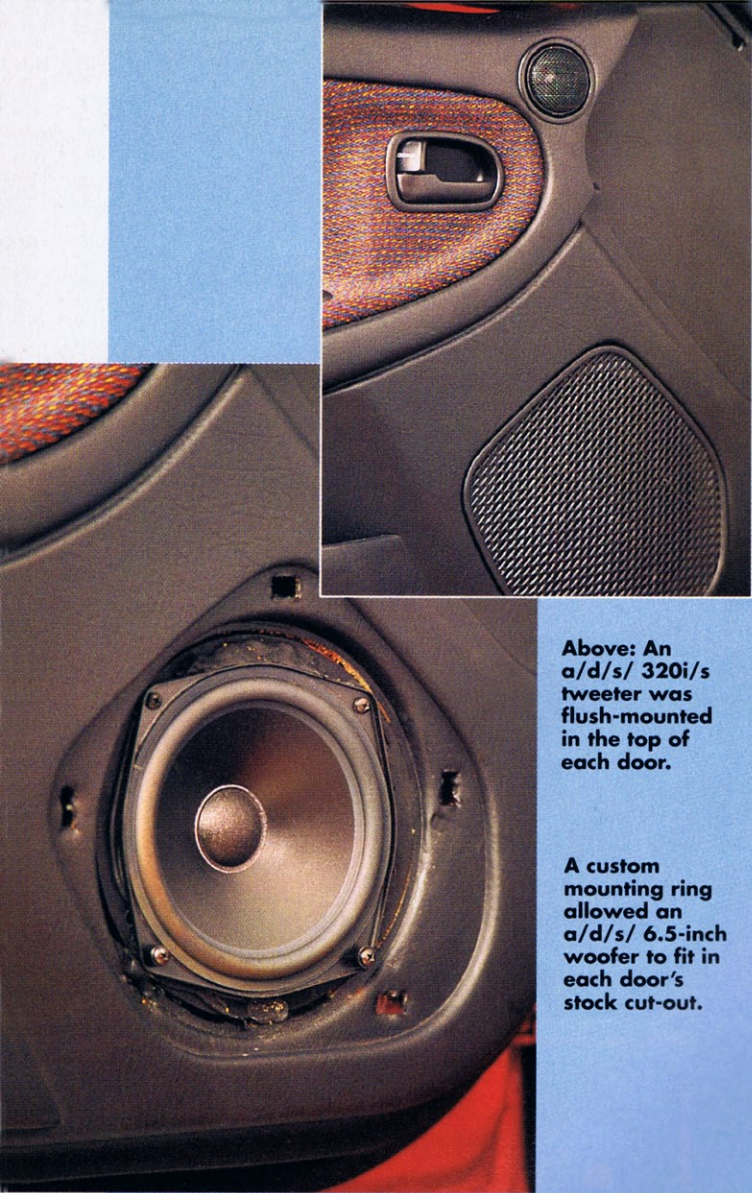
BY BRUCE M. DONEY  
PHOTOGRAPHY BY JIM RAYCROFT



RETURN TO  
GRISSETT



The faceplate of the Mazda's original radio (above) serves as a decoy when the Nakamichi CD Tuner 1 (below) is removed from the dash.



**Above: An a/d/s/ 320i/s tweeter was flush-mounted in the top of each door.**

**A custom mounting ring allowed an a/d/s/ 6.5-inch woofer to fit in each door's stock cut-out.**

he recalled. "Micah took me to the sound room to listen to a few speaker and CD player combinations." That was all it took.

Once Pale gave Sheveloff the green light for the audio system, the security issue intensified. Fortunately for Pale, Sheveloff had lots of experience designing systems that are functional yet unobtrusive—"discreet," as he likes to put it.

The first line of defense for the MX-3 is a Clifford Intelliguard 200 security system. Sheveloff, a system designer with more than ten years experience, claims to be a veteran of more than 200 Clifford installs, and the detail that went into providing security really shows. For example, much of the alarm wiring was hidden in the car's existing wiring harnesses.

"We installed [the security system] so discreetly," Sheveloff boasted, "the Mazda dealer could find no trace of it other than the LED."

In addition to the Clifford security system, great care was taken to maintain the stock looks of the MX-3 so as not to encourage theft. A couple of minor exceptions to the all-stock motif are the low-key a/d/s/ tweeters flush mounted in the doors and a single LED for the Clifford alarm on the dash.

### Hard To Beat

With security achieved, attention focused on the sound system. The stock radio was replaced with a Nakamichi CD Tuner 1. Sheveloff carefully dissected the Mazda's original radio, removing the faceplate for use as a decoy when the Nakamichi head unit is removed from the dash. The dummy faceplate fit perfectly, so no modifications were necessary.

For front-stage highs, tweeters from a/d/s/ 320i/s separates were used. Silva installed each of the 1-inch tweeters in the top portion of the door panels using an

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**Right: Stock grille in hatch area conceals an a/d/s/ 200i plate speaker.**

**Far right: Micah Sheveloff displays custom aluminum mount for 200i plate speaker.**



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Stock carpet helps the subwoofer box blend in with the rest of the hatch.

The sub box, which contains one 10-inch woofer, folds down with the rear seat.

a/d/s/ AK3 flushmount kit.

At Sheveloff's urging, the 5.25-inch drivers from the 320i/s system were swapped for a pair of 6.5-inch woofers from an a/d/s/ S6.2i plate speaker. Sheveloff said he preferred using the larger drivers because they provide "more bottom end and a better blend between the satellite and the subwoofer."

The 3-inch mounting depth required for each S6.2i woofer was more than what was available in the stock locations at the bottoms of the doors. To overcome this obstacle, Silva constructed mounting rings out of 0.6-inch MDF (medium-density fiberboard). This provided enough room for the drivers to be mounted in the stock cut-outs without interfering with the Mazda's stock grilles.

These a/d/s/ speakers receive a full-range signal. How do the larger S6.2i woofers work with the crossovers intended for the 320i/s 5.25-inch woofers?

"The 6.2 woofers fall

within an acceptable frequency range," Sheveloff explained. "A more powerful front stage is what we wanted. The a/d/s/ tweeters and the larger woofers create a blend of drivers that is hard to beat."

An a/d/s/ AX2e two-way electronic crossover is located behind the head unit. It splits the signal for the rest of the speakers: a set of a/d/s/ 200i plate speakers for rear fill and a single a/d/s/ S-10 subwoofer. The AX2e sends the rear speakers a signal from 130 Hz on up; everything below 85 Hz is directed to the sub.

The 200i plate speakers were installed in the rear stock locations, which are part of the seat-belt housings. They're still covered by stock grilles. As with the front speakers, room—or lack of it—became a factor.

"Each 200i plate had to be mounted on a custom aluminum mount in each rear seat-belt housing," Sheveloff explained. "It was an extremely tight fit, and we had to caulk all the edges very carefully to make



it airtight. But the rear fill amazed us in the end."

## Invisible Sub Box

The subwoofer was actually something of an afterthought for Pale. At first, he didn't think his system would need one.

"I had listened to the S-10 in the sound room, but wasn't impressed with it at the time," Pale recalled. "But after driving around and listening to my system for a couple of weeks, I felt I needed more bass. So I decided to get the S-10. I'm glad I did. It made a world of difference."

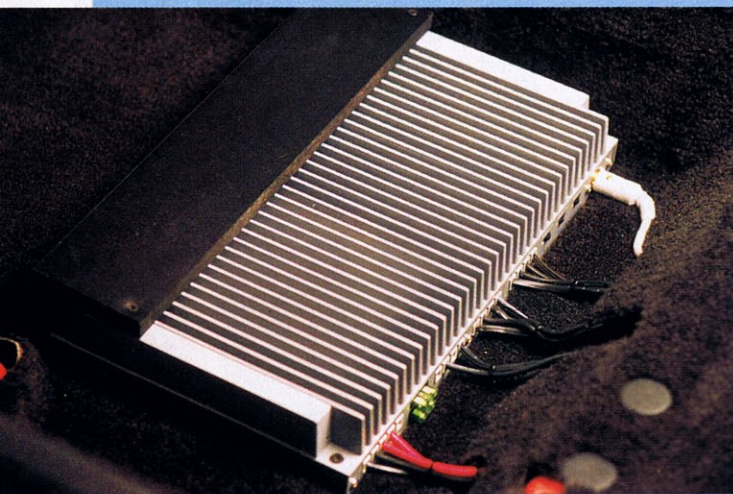
Since Pale goes skiing at least a couple of times a year, he wanted to keep the storage space in his MX-3 as usable as possible. This meant he couldn't allow a large subwoofer box to take up most of the hatch.

According to Sheveloff, the Audio Coupe team invested more than 30 hours designing, constructing, and installing the sealed enclosure for the S-10 subwoofer.

Designed to follow the shape of the back of the rear seat, the box runs the entire width of the seat and is bolted to the seat's steel



The a/d/s/ amplifiers and crossovers were mounted on the floor beneath the seats.



A single a/d/s/ PH15 amplifier in five-channel mode runs the entire system.

Crossovers and amp each have a shroud made of MDF to protect them from back-seat passengers' feet.



frame. In addition, the rear seat was left unhindered and can still fold down with the box attached to it.

The back of the box—the part that faces the rear of the car—was curved to blend in

face for the shroud to be attached. The amp shroud was a little easier since Silva was able to mount it directly to the amp's chassis. To blend in with the interior, the shrouds were laminated

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with the rest of the hatch. A custom slipcover, cut and stitched from Mazda carpet, covers the entire box and helps hide it further.

In addition, the subwoofer's wires were looped back under the enclosure, which allows them to remain out of view even when the rear seat is down. Even the screws used to construct the box are recessed and hidden.

Pale was impressed, and so were his friends. "When my friend Luke came down from college, I asked him if he wanted to see my subwoofer box," Pale recalled. "When I opened the [hatch], Luke's only remark was 'Where is it?'"

### Protection From Feet

All the speakers are driven by a single a/d/s/ PH15 amplifier running in five-channel mode. The front and rear speakers each receive 50 watts per channel, while the subwoofer gets 100 watts in mono.

The PH15 is mounted under the passenger seat, while the passive crossovers for the front speakers are located under the driver's seat. To protect these components from skis and clumsy feet, the installers built custom shrouds over them with 0.6-inch MDF.

The crossovers were first mounted on a plate made of MDF bolted to the floor. The plate provided a sur-

black as a final touch.

StreetWires power cables were used throughout the system, and a/d/s/ DIN cables connected all the a/d/s/ electronic components.

When Pale was asked if he wanted to add anything more, his answer was short and direct: "This is it," he replied. "I'm very happy with this system."

### Installer Perspective

Considering this was the first MX-3 he has encountered, Sheveloff was equally pleased with the way the system turned out. "The car was kind of fun to do," he said. "It provided some interesting speaker locations and some neat challenges. The most difficult task in this install was enlarging the Molex plugs for the Esoteric cables in the doors.

"It's not a crash/boom system," he added. "It's smooth."

Some prefer the easy and mild. Others look forward to the piquant flavor of red jalapenos. The challenges Sheveloff and Silva were asked to overcome might have caused some installers to roll their eyes and push their customer for a milder menu. Some would have chosen to pass altogether.

But from the looks of the finished system, the Audio Coupe crew enjoyed the taste of this hot pepper. ▲