

# Xtra potent by Joe Sage

We've driven a number of electric vehicles by now, including (in ascending order of power) the tiny-outside-huge-inside Mitsubishi i-MiEV, with a 49 kW, 66-hp, 145-lb-ft motor that feels like more; Nissan Leaf, with an 80 kW, 107-hp, 206.5-lb-ft motor, pushing time and distance to the limits of its charge; the first-gen Chevrolet Volt, with a 111 kW, 149-hp, 368-lb-ft drive motor, in its 30-plus-mile pure electric mode; and the original Tesla Roadster, with a 215 kW, 288-hp, 273-lb-

ft track-capable motor. Across that broad range, each delivered the gratifying, pleasantly neck-snapping right-from-the-line full-torque power only an electric can provide.

But we had not driven the current star of the Tesla lineup, the Model S, notably popular in the Valley, sure to be spotted dozens of times a day. With this, the EV specifications really take a leap: two motors with up to 568 kW delivering 762 hp and 687 lb-ft of torque.

Compare this with Mitsubishi's Pikes Peak championship electric racer—whose three motors combine for 450 kW, 322 hp and 443 lb-ft of torque. Tesla Model S specs beat that by far, every day, in a production sedan.

Enter the Tesla Model X. With sales of the Model S not only healthy but coveted, and with the economies of scale suggested by Tesla's huge expanding investment in battery technology, brand expansion was inevitable—and arrives in the form of a crossover. The

underpinnings are evolved from the Model S, though some 70 percent of Model X content is new. The top-power P90D model matches top Model S's 762 hp and beats Model S torque at 713 lb-ft. (Model X 90D has 518 hp; the P90D's extra horses are applied at the rear wheels.)

With the success of Model S as a foundation, Model X has what independent sources suggest are some 30,000 preorders.

Tesla recently came to Arizona during a 30-city Meet Model X Tour. Purchase reservation holders gathered at Tesla's Scottsdale Airport service center to experience their new crossover in person for the first time. The event was completely booked, and over 100 drives were taken over the course of three days. Those who had not yet configured their Model X could meet with a personal Owner Advisor after a test drive, to walk through the configurations and finalize their order.

We arrived early to catch our own drive.

Electric power is applied throughout the vehicle—the doors open and present themselves in much the manner of a multi-hundred-thousand-dollar Rolls-Royce and close

firmly and silently as you get seated.

The three-row Tesla Model X is available as a six- or seven-seater. "Falcon wing" rear doors also open and close under power, and—as with the back hatch—will stop short of any overhead obstacles, such as the inevitable garage door ceiling. Door and hatch operation can be overridden manually, as well.

With no engine up front, already generous cargo space is augmented with what Tesla cleverly calls a "frunk"—the front trunk.

The Model X interior has premium style, finish and feel throughout. The touchscreen interface is one of the first things that catches your eye—a case where bigger is better—very well laid out, its features very clear. The 17-inch screen size is used not to cram more distraction into every screen, but rather to make information clear, with some welcome white space. With headquarters in Silicon Valley, it's a fair bet Tesla has snagged a few top GUI designers for these efforts.

The Model X all-wheel-drive system comprises dual motors that digitally and independently control torque to the front and rear wheels, not only for traction control but also boosting both performance and efficiency.

We eased out of the parking lot onto an empty street and gave it the pedal through a sweeping curve. Model X not only provides stunning acceleration, but its battery place-

ment is slim and low, for the stance and handling of a low-slung sports car. It weighs in at close to three tons, but has power enough to erase that mass from your experience.

Tesla's Autopilot system uses cameras, forward radar, ultrasound and navigation data to automatically steer and maintain lanes, change lanes with the flick of a turn signal, and adjust speed in response to traffic using adaptive cruise control and automatic emergency braking components. Some of these features sound familiar, but in this case show every sign of being more advanced. We put the distance and lane-keeping functions into play on the boulevards, where we dealt with other drivers of varying speeds, stoplights, multiple lanes defined by combinations of striping and curbing, exit lanes, left turn lanes—the works. Not all braking systems come to a full stop when someone in front of you does, but Tesla Model X does. Not all lane-keeping systems stay on indefinitely, but Tesla's does.

Drivers are reminded to keep their hands on the wheel and maintain their own full human responsibility for the car.

Another feature we did not have a chance to try is Summon—which enables Model S or Model X to drive itself in and out of your garage once you arrive home, allowing for a tight fit. Once prompted, Tesla will do the work for you: opening your garage door, entering your garage, parking itself and shutting down—then the reverse when it's time to head back out.

Autopilot and Summon lay the groundwork for fully autonomous operation. Over-the-air software updates will keep you current.

Our P90D had the Ludicrous Speed Upgrade, a \$10,000 option which adds a high-capacity electronics pack to unlock more power and acceleration. We have seen dra-

matic viral videos of unsuspecting passengers experiencing Ludicrous Speed for the first time, so we were surprised when told to turn it on as we were about to make a left-hand turn at a light. It had struck us more like a quarter-mile dragstrip feature. But it works fine in traffic, sort of a high-steroid version of familiar sport modes.

Our freeway miles included a lane-changing demo. Not only will the vehicle keep you within your bounds, it will also semi-automatically move you on over. We accelerated into a center lane, then checked our neighboring traffic (this is still the driver's job), and upon applying the righthand turn signal, smoothly and precisely changed lanes automatically. Turn the signal off and then on again to change another lane—and now we were exiting. We're sure we can still do this for ourselves, but it's an impressive demonstration.

We wondered whether the Model X might have some tow capacity, given its crossover status—thinking maybe 1500 pounds, typical for a carlike crossover. Model X surprised us with a 5000-pound tow capacity, matching the high end of SUV benchmark Ford Explorer.

Had we had more time, we could have driven the Model S, too. It would be a very similar experience, as they are built upon essentially the same platform—low center of gravity, the ballastic acceleration of a high-performance electric powertrain, the space age luxury of its post-modern cabin, premium touches and top-end electronics.

And of course Ludicrous Speed mode, to drive all points home.

There is, in fact, nothing ludicrous about the over-the-top Tesla lineup—just a maximum expression of EV art and science at its high end. It's just what you might expect from Elon Musk, the same Wunderkind who brings us everything from PayPal to SpaceX. ■



## 2016 TESLA MODEL X P90D

<b>ELECTRIC MOTORS</b> .....front: 259 hp / rear: 503 hp	
.....combined torque: 713 lb-ft	
<b>DRIVETRAIN</b> .....Performance AWD	
<b>ACCELERATION 0-TO-60</b> .....P90D 3.8 seconds	
w/ Ludicrous Speed Upgrade P90D 3.2 seconds	
<b>QUARTER-MILE</b> .....P90D 12.2 seconds	
w/ Ludicrous Speed Upgrade P90D 11.7 seconds	
<b>TOP SPEED</b> .....155 mph	
<b>RANGE</b> .....250 miles	
<b>WEIGHT</b> .....5441 lb	
<b>DRAG COEFFICIENT</b> .....0.24 Cd	
<b>MPGe</b> .....P90D: 89 MPGe	

<b>MODEL X P90D</b> Performance All-Wheel Drive	
250 miles range (EPA est.)	
3.8 seconds 0-60 mph	
155 mph top speed	

<b>BASE PRICE (P90D)</b> .....	<b>\$132,000</b>
<b>Ludicrous Speed Upgrade</b> .....	\$10,000
3.2 seconds 0-60 mph	

**P90D w/ Ludicrous Speed Upgrade**...\$142,000

<b>MODEL X 90D</b> All-Wheel Drive	
257 miles range (EPA est.)	
4.8 seconds 0-60 mph	
155 mph top speed	

**BASE PRICE (90D)**.....\$132,000

<b>MODEL X 70D</b> All-Wheel Drive	
220 miles range (EPA est.)	
6.0 seconds 0-60 mph	
140 mph top speed	

**BASE PRICE (70D)**.....\$80,000

