

# Tesla Plaid Track Mode

The Tesla Team January 6, 2022





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Since Track Mode was released in 2018 on Model 3 Performance, we have actually taken the benefit of immediate motor torque to make cornering on the track feel as natural as the forward velocity.

This week, Plaid Track Mode is rolling out to Model S Plaid cars throughout North America. With Plaid Track Mode our objectives were easy: attain the quickest lap time for a production electrical automobile at Germany's Nürburgring, and enable specific adjustability of stability control, handling balance, and regenerative braking to offer chauffeurs more authority over car control at the racetrack.

Plaid Track Mode was established to take complete benefit of our tri-motor platform and more than 1,000 horsepower on tap, with includes consisting of:

- **Optimized Powertrain Cooling**

Track driving produces massive heat in the battery, motors, and brakes. Maximum track endurance is accomplished by handling this heat to keep these parts as cool as possible.

- When Plaid Track Mode is engaged, we drop the temperature level of the battery pack and motors to develop a considerable quantity of cooled thermal mass. Once track driving starts and heat is created, shared coolant loops in between the battery and motors keep the whole system cooler for longer.
- We likewise boost regenerative braking power, which has 3 significant advantages: re-capture more energy throughout deceleration, decrease the load on the friction brakes for much better thermal management and provide the chauffeur much better modulation and controllability with a single pedal.

- **Lateral Torque Vectoring**

Using the exact same structure as Model 3 Track Mode, Plaid Track Mode relies greatly on front and back motors to command rotation: extra torque used to the back axle assists turn the nose of the automobile into a corner; torque used to the front axle arrests rotation to pull the automobile directly.

- Building on this concept, Model S Plaid's double rear motors make it possible for complete lateral torque vectoring. With Track Mode triggered, Plaid instantly changes torque split throughout the back wheels, individually, which uses a torque predisposition to turn the automobile through turns; this increases turn-in action, enhances on-center steering feel, and provides even higher yaw control throughout a corner.
- Compared to conventional open- and limited-slip differentials, which should constantly contend inbetween turn-in reaction and optimum traction, our electrical motors change in milliseconds to offer the motorist both strengths allatonce, permitting for muchfaster turn-in, increased cornering speeds, and moredifficult velocity on corner exit.

- **Adjustable Vehicle Dynamics**

During typical roadway driving, our stability control systems are enhanced to limit tire slippage and make the most of grip to keep the chauffeur safe.

- In Plaid Track Mode, stability controls go into a race tuning to offer the motorist optimum control over the automobile's lateral motion. With Plaid Track Mode engaged, Tesla's Vehicle Dynamics Controller (VDC) examines guiding angle, accelerator, and brake pedal inputs to identify where the

chauffeur desires to locate the vehicle and will license tire slippage and instantly change torque split to offer the chauffeur even more authority and enhanced dexterity throughout high-speed cornering.

- For chauffeurs who desire extra adjustability over car characteristics, handling balance, stability help and regenerative braking can be altered separately based on their ability level and choices.

- **Adaptive Suspension Damping**

When Plaid Track Mode is engaged, adaptive suspension damping is enhanced for track managing: decreased pitch throughout tough braking and quick velocity, rebalanced damping to enhance responsiveness, and quicker settling of lorry disruptions over rough sections to boost motorist self-confidence. To assist in constant vibrant driving, trip height is set to Low on drive-off, and the suspension will no longer instantly raise to enhance convenience.

- **Performance UI**

We have included a track-focused user interface to offer vital efficiency information, consisting of a lorry thermals screen, lap timer, G-meter, dashcam video capture, and car telemetry, along with a number of other adjustable alternatives.

With Plaid Track Mode, we have included a host of brand-new functions to make Model S Plaid as fast around a racetrack as it is at the drag strip. Our technique focuses on permitting higher motorist control and adjustability while promoting chauffeur self-confidence, and like most elements of Tesla lorries, we'll continue to enhance Plaid Track Mode over time with future over-the-air updates.

For the supreme track experience, we advise the Model S Plaid Carbon Ceramic Brake Kit and Model 3 Track Package.

Source: [Introducing Plaid Track Mode](#).