



# TRACK CAL

## MUSTANG GT CUSTOMER INSTRUCTIONS v1.0

Thank you for purchasing the Ford Racing Track Cal (Ford Racing part number **M-14204-MGTT**C) for your 2013-2014 Mustang GT equipped with a manual transmission. This document describes how to use the features that are unique to Track Cal. For the latest version of this document, please visit [www.trackkey.ford.com](http://www.trackkey.ford.com). If you have any questions or comments, contact the Ford Racing Techline at **1-800-FORD-788** between 8:30 am and 5 pm Eastern time, Monday through Friday. Before calling, please be prepared to provide the VIN of your vehicle.

To install Track Cal on your vehicle, register for your Procal, SD card, and CARB EO label by following the instructions on the enclosed voucher. Note that you will need your VIN and PCM part number to complete the registration.

Track Cal technology has been designed to optimize your Mustang GT for track use and utilizes many of the same software algorithms and features employed in some of our Ford Racing turn-key race cars, such as the Boss 302R, Boss 302S, and Cobra Jet.

Track Cal changes many engine control characteristics to be more suitable for the track, including:

- Ignition timing
- Twin Independent Variable Cam Timing (TiVCT)
- Wide-open throttle fueling
- Engine braking
- Accelerator pedal map
- Idle speed
- Throttle response
- Cooling fan activation temps

In addition, the following features are unique to Track Cal:

- Driver adjustable Launch Control, or "2-step engine speed limiting"
- Driver adjustable Pit Lane Speed Control
- Lopey idle

## LAUNCH CONTROL:

The launch control feature of Track Cal comes from the Ford Racing Cobra Jet and Boss 302S race cars. It is designed such that when the clutch pedal is depressed, the maximum engine speed is limited to a driver selectable value. When the clutch pedal is released, the engine is allowed to accelerate to the normal maximum engine speed limit. This allows for more consistent launches at the drag strip or at the starting line of a road course.

The launch control engine speed set-point is driver adjustable via the speed control switches on the left side of the steering wheel:



To adjust the speed set-point, the engine must be running, the vehicle must be stationary, and the brake pedal must be depressed. Hold down the "+ SET" speed control button for 2 seconds to enter set mode. The tachometer will sweep to 9000 rpm and return to the current set-point to indicate the set mode has been entered. Use the "+ SET" and "- SET" buttons to select the desired launch speed in increments of 100 rpm. Once the desired launch speed is shown on the tachometer, press the "ON" button to store the new value. The tachometer will sweep to 9000 rpm, then pause briefly at the speed set-point, before returning to normal operation. Launch control will now be enabled whenever the vehicle is stationary and the clutch pedal is depressed. The speed set-point is maintained after vehicle shut-down so it does not need to be set every key cycle unless a new speed set-point is desired. To disable launch control, adjust the set-point to its maximum value.

To use launch control, the vehicle must be stationary and the clutch pedal fully depressed. After making sure there are no obstructions in front of the vehicle, select first gear and press the accelerator pedal to the floor while keeping the clutch pedal fully depressed. Engine speed will be held to the driver selected value until either the clutch pedal is released or the vehicle starts to roll, whichever comes first. When you are ready to launch the vehicle, release the clutch pedal very rapidly while holding the accelerator pedal to floor. To avoid bogging the engine, it is highly recommended that you disable traction control prior to using launch control. A launch control speed set-point of approximately 2600 rpm is a good starting point with the production tires on dry asphalt. Never use launch control in any gear other than first, or severe clutch damage may result.

## PIT LANE SPEED CONTROL:

The Pit Lane Speed Control feature included in Track Cal comes from the Ford Racing Boss 302R and Boss 302S race cars and is intended to limit maximum vehicle speed

while the vehicle is in the pit lane of a race track. It is designed such that when activated by the driver, it will limit the maximum vehicle speed, regardless of gear and accelerator pedal position, to a driver selectable value.

To use Pit Lane Speed Control, the orange / green speed ("cruise") control indicator light must first be off. Next, the "RSM" button must be pressed twice within 1 second. The speed control indicator light on the instrument cluster will flash green twice per second to indicate that Pit Lane Speed Control has been activated and will continue to flash until Pit Lane Speed Control has been deactivated by the driver. This will prevent the vehicle from exceeding the speed set-point in any gear on a level or uphill surface. The default set point is 44 mph (71 km/h). To deactivate Pit Lane Speed Control, press the "RSM" button once. Be aware, if the accelerator pedal is near wide open when Pit Lane Speed Control is deactivated, the vehicle can accelerate rapidly. Pit Lane Speed Control and speed control cannot be activated simultaneously.

To adjust the speed set-point, the engine must be running, the vehicle must be stationary, and the brake pedal must be depressed. Hold down the "- SET" speed control button for 2 seconds to enter set mode. The speedometer will sweep to 180 mph to indicate set mode has been entered. Use "+ SET" and "- SET" buttons to select desired speed limit, from 28 mph (77 km/h) to 85 mph (137 km/h). Once the desired speed limit is shown on the speedometer, press the "ON" button to store the new value. The speedometer will sweep to 180 mph then pause briefly at the set-point, before returning to normal operation. The speed set-point is maintained after vehicle shutdown so it does not need to be set every key cycle unless a new speed set-point is desired.

**Note:** The Electric Power Assist Steering (EPAS) unit varies the electric power steering assist according to the vehicle speed message sent out on the network from the Powertrain Control Module (PCM). While the set-point is being changed, the PCM is sending a false vehicle speed message to the instrument cluster so that the driver can select the desired set-point. The EPAS unit will interpret this as actual vehicle speed and can move the steering wheel suddenly if it is turned slightly. Consequently it is recommended to have the steering wheel pointing straight ahead prior to entering the Pit Lane Speed Control set mode. Note also that if the parking brake is engaged, the cluster will ding because the vehicle believes it is in motion. If the auto door lock feature is activated, the doors will lock as well.

### LOPEY IDLE:

Lopey idle is an industry-first technology that utilizes the Twin Independent Variable Cam Timing (TiVCT) capability of the Mustang GT engine to make the engine sound and feel like a race prepped engine. For lopey idle to be enabled, three conditions must first be satisfied. The first condition is that 130 seconds must have elapsed since the engine coolant temperature reached 170 °F (77 °C) while the engine is running. The second condition is that the engine must not currently be idling (Note that it is sufficient just to rev it up in neutral or drive away once the other conditions have been met and lopey idle mode will be enabled). The third condition is that there must not be any detected failures of engine control related sensors or actuators.

## LOPEY IDLE DISABLE:

To request all of the Track Cal functionality without ever entering lopey idle mode, hold down the "OFF" button on the left side of the steering wheel while starting the engine, and continue to hold it down for at least 5 seconds after the engine starts running. The tachometer will sweep to 9000 rpm indicating that lopey idle disable mode has been requested. This will prevent lopey idle mode from enabling until the next time the engine is started.

## Frequently Asked Questions:

*Where do I put the sticky label I received in the mail after having Track Cal installed?*

- A self-adhesive CARB Executive Order (EO) label will be shipped to your address. Once it arrives install it under-hood on the driver's side shock tower. Failure to display this label in a prominent place can result in state vehicle emissions test issues, depending on the state in which your vehicle is registered.

*Why can I not perform TSB's that require PCM recalibration?*

- Track Cal is a Ford Racing Performance Parts product and as such is not distributed through the normal IDS production calibration download system. If a TSB requiring a PCM recalibration is performed, the Track Cal software will be overwritten and the unique functionality will be lost. If there is any doubt whether or not a certain TSB should be performed, call the Ford Racing Techline at 1-800-FORD-788, with vehicle VIN, voucher ID, and TSB number.

*I hear slight "pinging" on engine acceleration from low speed. Should I be alarmed?*

- Track Cal alters the ignition timing and knock sensor calibrations taking full advantage of premium fuel to deliver the maximum torque and throttle response available from the engine. Some slight "pinging" on acceleration from low engine speed may be audible initially but should rapidly subside.

**NOTE: The Track Cal software and calibration are copyrighted works of Ford Motor Company and are legally protected under US copyright law. They may not be uploaded or copied for any purpose including, but not limited to, calibration modification and/or distribution.**