Global MX-5 Cup Car Technical Service Bulletin #2-28-17C

OPTIONAL: 2017 Global MX-5 Update: Pit lane speed limiter

2017 ECU Update – Optional Pit lane speed kit

1. Pit Lane Speed Kit – Mazda P/N 0000-08-PITL

New Features:

1. **Pit Speed Limiter Update** (Hardware required to Activate, in addition to the ECU update)
   a. The Pit Speed Limiting feature is built into the GEMS 01L30 firmware. The 01L30 Firmware update is a mandatory update for all MX-5 Cup Competitors, however use of the limiter is optional. To use the limiter, a pit speed switch harness and switch kit (Mazda Part Number 0000-08-PITL) is required.

   b. The pit speed switch harness is made up of a rotary selector switch and an On/Off button that connects to the AiM MXL2 dash. When a pit speed is selected on the rotary switch and the on button is engaged, the speed limit feature is triggered through CAN Channel outputs set in the AiM MXL2 configuration.

   c. A standard MXL2 configuration with Pit Speed Settings is available from LRR and Mazda Motorsports. It is recommended that if you are not running the Pit Lane Speed Switch Harness that you do not run the AiM configuration set up for the pit speed controller.

Installation:

Pit Speed Limiter:

1. Follow all safety standards and wear the appropriate safety gear.
2. Remove center console, and drill a 3/8" clearance hole next to the Parking Brake for installation of the rotary switch.

3. Run wires under center console up to steering column and plug the Pit Speed Selector harness into Channel 05 of the AiM MXL2 analog inputs, secure wires with zip ties.
4. Attach the On/Off button to the steering wheel using Max Papis Innovation Single or Double External Button Holder.
5. Update the AiM MXL2 configuration to include CAN Outputs for Pit Speed Control. A standard base

configuration is available from LRR and Mazda Motorsports, or the CAN Output section can be updated with the following parameters:

    a. Bit Rate Protocol = 500k bit/s

    b. CAN ID (hex) = 0x175

    c. Byte 0 and 1, Channel = Channel 05, Multiplier (a) = 11, Offset (b) – 0, Num Bytes = 2 bytes.

6. To operate the pit speed selector select 1 of the 4 speed options: 1. 30 mph, 2. 35 mph, 3. 40mph, 4. 45mph and then Click the On Button. All the way counter-clockwise is channel 1, and all the way clockwise is channel 4. If the AiM configuration has been updated with the LRR Base configuration there will be an alarm to tell you that speed limit is set and which speed was selected. To change speeds simply adjust the rotary switch position. To disable, click the On/Off button.

7. Note that you will still have to decelerate to below the pit speed limit before engaging the limiter. If engaged while over the pit speed selected you will not be able to match rpms downshifting while slowing down because of the engine cuts happening to limit speed.

8. Please also be aware that if you are going downhill you may still be able to exceed the limit. The system is a driving aid, but it is still up to the driver to be aware of and control their speed.

9. 30mph is meant to run in 2nd gear, 35 mph is meant to run in 2nd or 3rd gear, 40 and 45 mph are meant to run in 3rd gear. Depending on if you are going uphill or downhill changing gears may help smooth out the overall feel while the limiter is engaged.

If you have any questions about this Technical Bulletin, please contact Glenn Long at:

GLENN@LongRoadRacing.COM or 919-614-4797