# CANTCU – Differential Ratio Calibration

Differential ratio needs to be calibrated for proper functionality of the transmission. It is a simple process that requires driving at constant speed and observing/making adjustments of realtime values in CANTCU Configurator. The calibration can be performed on a lift. The higher the speed, the more precise the calibration will be. At minimum a speed of 50km/h is recommended to achieve a good calibration.

1. Open **CANTCU Configurator** and verify correct **Wheel Size** and **Differential Ratio** in the **Configuration**-section.
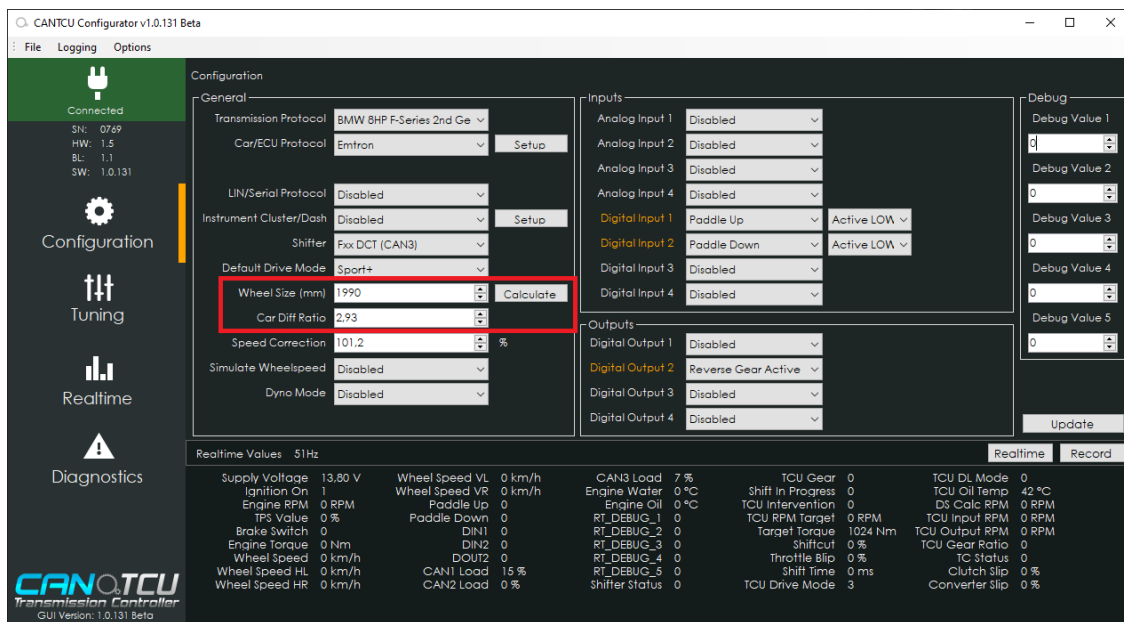
2. Drive the car and follow Realtime-values **TCU Output RPM** and **DS Calc RPM**. If you are unable to watch the values during driving, you can record a log and stop to check values afterwards.
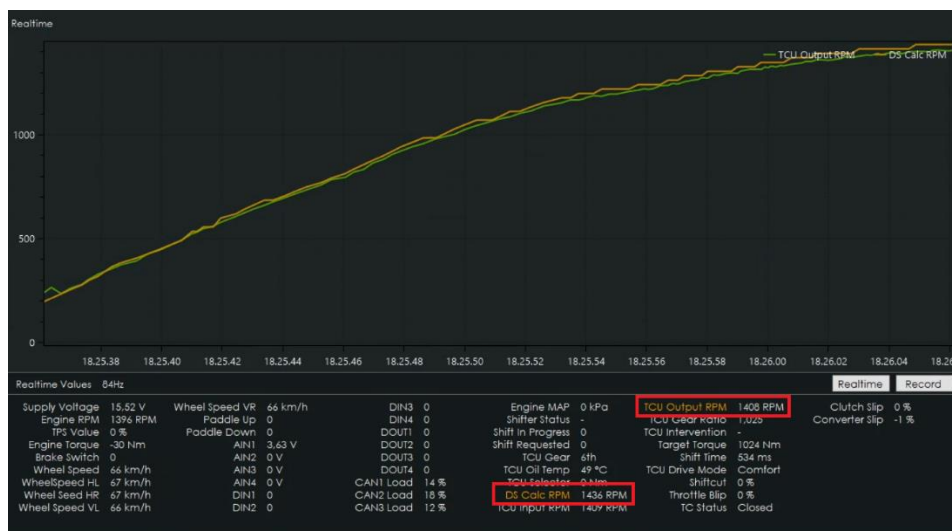
3. If the difference of the two aforementioned values is greater than 15 RPM at decent speed (>50km/h), you need to adjust the **Speed Correction** factor (in **Configuration**-section).
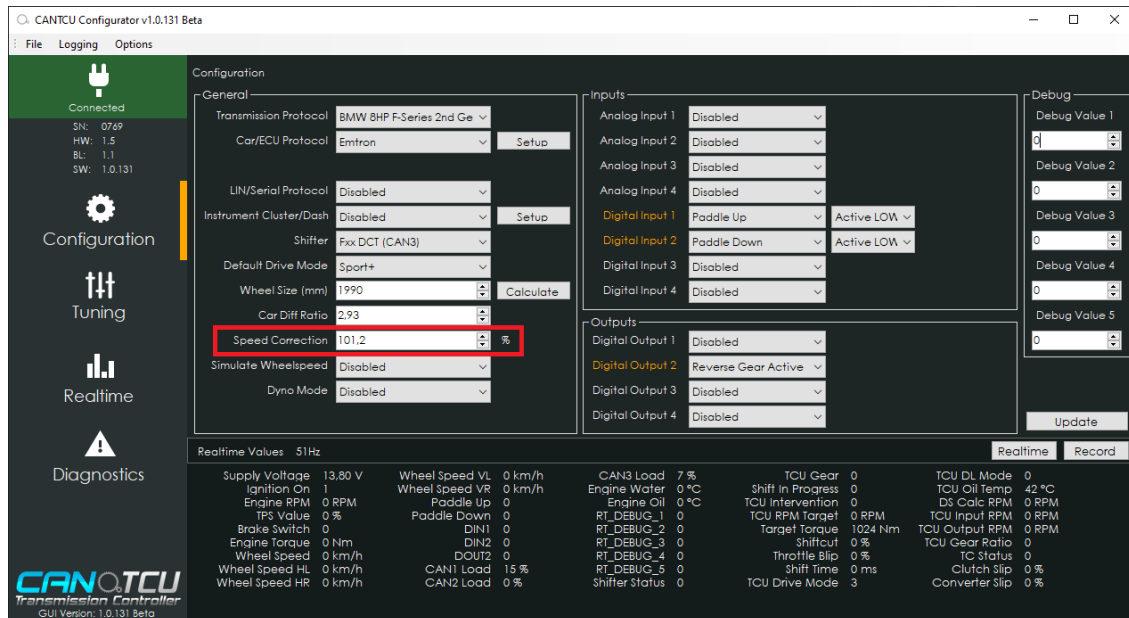
    I.   **DS Calc RPM** < **TCU Output RPM** → Decrease **Speed Correction** factor
    II.   **DS Calc RPM** > **TCU Output RPM** → Increase **Speed Correction** factor

Adjust the **Speed Correction** factor using 1-2% increments until you are close, then fine tune using 0.1% increments.

4. After a properly adjusted Differential Ratio Calibration, the learned differential ratio needs to be reset and relearned. In the **Diagnostics**-section, perform a information **Read** to check the current learned differential ratio. If it is not matching with real differential ratio, click **Reset Diff Ratio**. Then perform a new calibration by driving normally until the correct ratio has been fully relearned. The relearn status can be checked by clicking on the **Read** button again.