**Lebowski Arlo Leaf settings**

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| --- | --- | --- |
| 1. **Mode** | Hall sensors | Comment |
| 1. **PWM Parameters** |  |  |
| 1. PWM Freq | 6kHz | Best setting |
| 1. Deadtime | 3.1us | Calculation says 2.1us + some overhead |
| 1. Duty | 50% |  |
| 1. High side polarity | Low | Volt inverter uses open collector signals |
| 1. Low side polarity | Low |  |
|  | Autocomplete |  |
| 1. **Current settings** |  |  |
| * 1. Sensor transimpedance | 2.85 | Volt current sensors |
| * 1. Max motor currents | 500A | Set 100A for start |
| * 1. Max batt currents | 300A | Set 100A for start |
| * 1. Max battery current regen | 200A | Set 0A for start |
|  | Autocomplete |  |
| 1. Braking phase current | 200A |  |
| 1. Offset filtering | 0A |  |
| 1. Max field weakening current | 200A | Set 0A for start |
| 1. **Throttle setup** |  |  |
| * 1. Calibrate Throttle 1 |  | Calibrate inside car |
| * 1. Calibrate Throttle 2 |  |  |
| * 1. Throttle setup | 1.2, 2 , 0 | Fast acc after innitial struggle |
| * 1. Regen setup | -0.4, 0, 0 |  |
| 1. **Erpm limits** |  | eRPM=Mechanical RPM\*Pole pairs |
| * 1. Acceleration limiter forward | 42, 50 | 40K for 10.000rpm? |
| * 1. Acceleration limiter reverse | 15, 18 | 4000rpm |
| * 1. Regen rampup | 2500, 4500 | 1000rpm releases torque, 600rpm frewheel |
| * 1. Direction change | 400 | 100rpm |
| * 1. Drive 2 | 300 |  |
| * 1. Drive 3 | 1000 |  |
| * 1. Acc limiter | 7, 10 |  |
| 1. **Battery** |  |  |
| 1. Battery voltage | 360V |  |
| 1. **Current sensor calibration** |  |  |
| * 1. Restore calibration | Autocomplete |  |
| * 1. Perform offset calibration (connect drivers) | Yes |  |
| 1. **Control loop coeff** |  |  |
|  | Autocomplete |  |
| 1. **Filter bandwiths** |  |  |
|  | Autocomplete |  |
| Perform impedance measurements | Yes |  |
| Pulse with | 150us |  |
| Check for spinning motor | Disable |  |
|  |  |  |
| 1. **FOC measurement** |  |  |
|  | Autocomplete |  |
| * 1. FOC motor measurement current | 100A |  |
| * 1. FOC measurement erpm | 11.98Kerpm |  |
| * 1. Perform impedance measurement |  |  |
| * + - Inductance | 180uH |  |
| * + - resistance | 48mOhm |  |
|  |  |  |
| 1. **Recovery** |  |  |
|  | Autocomplete |  |
| 1. pulse width | 150 |  |
| 1. check for spinning motor | Disable |  |
|  |  |  |
| 1. **Hall sensors** |  |  |
|  | Autocomplete |  |
| 1. Calibrate hall mode | Yes |  |
| 1. PLL damping bandwith | 100Hz |  |
| 1. PLL damping factor | 0.85 |  |
| 1. **miscelanious** |  |  |
|  | Autocomplete |  |
| 1. Low side pulsing drive 0 | Disabled |  |
| 1. Minimum cycles from 2 to 3 | 35000 |  |
|  |  |  |

resistor measurement is not very accurate, better to experiment like Arlo1 did (ie he tried several values and ended up with a higher value). Inductor measurement is much more accurate, the 180uH is close to Arlins 178. Did you set a small current for the online current sensor calibration (i believe option m in current menu) ?

P.s about trying resistor values, I would manually try different values and go logarithmically. With a factor 1.5 for instance. So try 10, 15, 22, 33 etc, each time multiplied by 1.5 higher. Keep the L at 180 as that is close to what Arlin found too

Prius AC compressor settings

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| 1. **Current settings** |  |  |
| * 1. Sensor transimpedance | 40 | Volt current sensors |
| * 1. Max motor currents | 20A | Set 10A for start |
| * 1. Max batt currents | 10A | Set 10A for start |
| 1. **FOC measurement** |  |  |
|  | Autocomplete |  |
| * 1. FOC motor measurement current | 5A |  |
| * 1. FOC measurement erpm | 11Kerpm |  |
| * 1. Perform impedance measurement |  |  |
| * + - Inductance | 2550uH | Best is 2550uH |
| * + - resistance | 600mOhm | Measured 60mOhm, best start at 600mOhm |

Outlander rear motor

|  |  |  |
| --- | --- | --- |
| 1. **FOC measurement** |  |  |
|  | Autocomplete |  |
| * 1. FOC motor measurement current | 100A |  |
| * 1. FOC measurement erpm | 11.98Kerpm |  |
| * 1. Perform impedance measurement |  |  |
| * + - Inductance | 230uH |  |
| * + - resistance | 180mOhm |  |