IMPACT ECU · IGNITION BUTTON GUIDE

Engine Temp & Air Temp Timing Corrections

These two tables adjust the timing for temperature. A hot engine and hot intake air knock more easily, so the ECU takes a little timing out when it's hot.

A negative number takes timing out, a positive number adds it, and 0 means no change. Your tune came with these set for your bike. Leave them as they are: they protect the engine on hot days.

WHERE TO FIND IT

- **A** **Ignition ▸ Engine Temp timing correction**
- **B** **Ignition ▸ Intake Air Temp timing correction**

The numbers in these pictures come from one example bike. Your tune's numbers will be different, so don't copy them. Units are Metric (°C, kPa, km/h). Red numbers in each picture match the table below it.

How they work

- The number is added to the timing from the ignition advance table, for both cylinders. The two corrections add up.
- The ECU blends between neighboring cells. Past the edges it uses the edge: above 120 °C, for example, it keeps using the 120 °C numbers.
- They work whenever the engine is running, but not while it's cranking or when Timing Mode is on fixed.
- If a temperature sensor fails, its correction is 0, so the engine loses this heat protection. Have a failed sensor fixed before riding hard.

A Engine Temp timing correction

Window title: **Warmup timing correction**. In our tunes it works when the engine is hot.



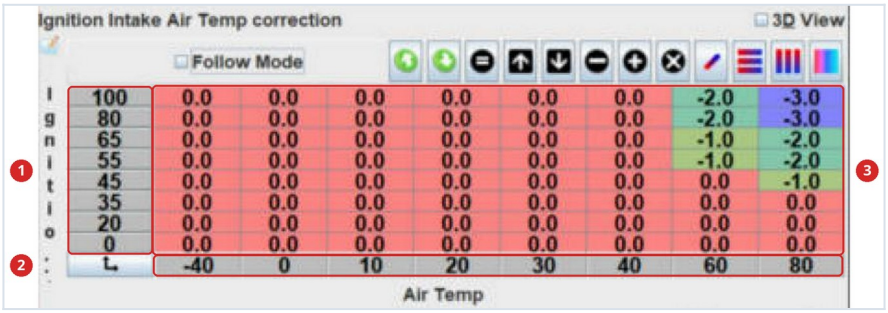
THE NUMBERS IN THE PICTURES (A AND B)

#	SETTING	WHAT IT DOES
1	**Ignition Load (kPa) rows**	Up the side: engine load, measured as manifold pressure.
2	**Temperature columns (°C)**	Along the bottom. **A:** engine temperature (**CLT Temp**; CLT is short for coolant temperature). **B:** intake air temperature (**Air Temp**).
3	**Correction cells (deg)** LEAVE AS SET	Degrees of timing added (+) or taken out (−) at each temperature and load.

In this example: no change up to 80 °C (176 °F). At 100 °C (212 °F) it takes out 1° at 35 kPa, 2° at 70 kPa and 3° at 105 kPa. At 120 °C (248 °F) it takes out up to 4°. The 105 and 140 kPa rows are above what an engine without a turbo or supercharger reaches (about 100 kPa at sea level): at full throttle it takes out about 3° at 100 °C and almost 4° at 120 °C.

B Intake Air Temp timing correction

Window title: **Ignition Intake Air Temp correction**.



In this example: no change up to 40 °C (104 °F). At 60 °C (140 °F) it takes out 1° to 2° from 55 kPa up. At 80 °C (176 °F) it takes out 1° to 3° from 45 kPa up.

Burn means save. Changes go to the ECU as you make them, but they are only kept after you click **Burn**.

Hot intake air usually comes from heat soak: sitting at a light or riding slowly on a hot day. In a datalog (a recording of what the engine is doing), **Ign: CLT correction** and **Ign: IAT correction** show what these tables are doing.

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