IMPACT ECU · IGNITION BUTTON GUIDE

Ignition Blend Tables

Blend tables let a tuner add or take away timing based on something other than RPM and load, like ethanol content, throttle position or a sensor you've added. There are four of them, and they're **off** in our tunes.

Leave them off unless we set one up for you.

WHERE TO FIND IT

- (A) **Ignition ▸ Ignition blend tables ▸ Ignition blend 1 bias** (and 2, 3, 4)
- (B) **Ignition ▸ Ignition blend tables ▸ Ignition blend table 1** greyed out while off

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 a blend works

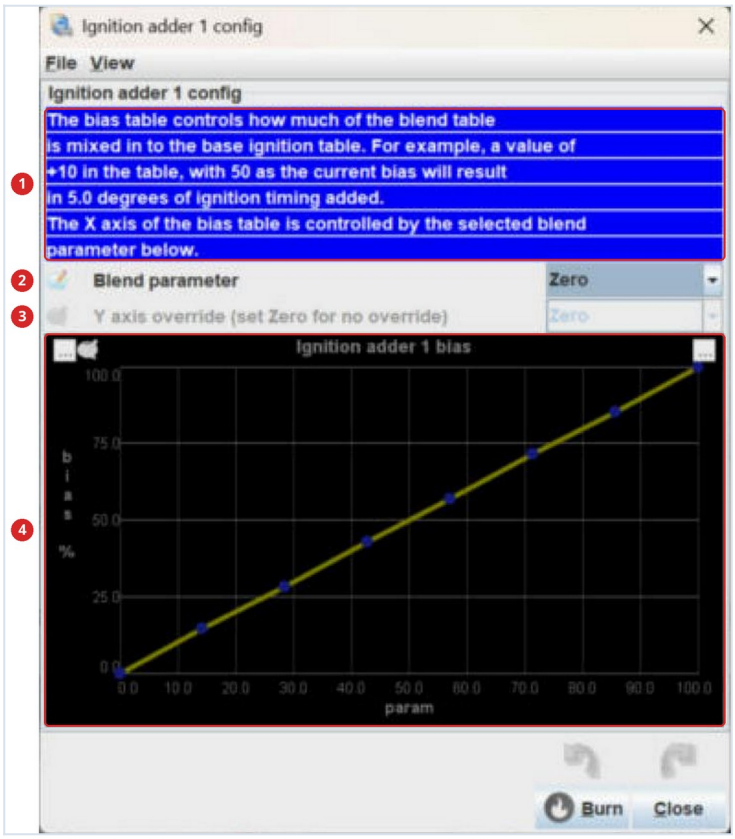
1. **Blend parameter:** the input the blend watches, like Ethanol (Flex) %. **Zero** means the blend is off.
2. **Bias curve:** for each value of that input, how much of the blend table to use, from 0 to 100%.
3. **Blend table:** degrees to add (+) or take away (−), by RPM and load.
4. The ECU adds **bias × table value** to the timing. The window's own example: **+10** in the table with a bias of **50%** adds **5 degrees**.

The four blends add up, and they work on both cylinders. Like the temperature corrections, they work while the engine runs, not while it's cranking. If the input's sensor fails, the blend adds nothing. In a datalog (a recording of what the engine is doing), **ignBlendOutput 1** to **4** show how many degrees each blend is adding: 0 while they're off.

ABOUT THESE PICTURES In our tunes the Blend parameter is **Zero**, so the bias curve is greyed out and the blend table can't be opened from the menu. For the table picture we set it to **TPS** for a moment with TunerStudio offline (not connected to a bike), then set it back to Zero without saving.

A Ignition blend bias

The window is titled **Ignition adder 1 config** (2, 3 or 4 for the other blends).

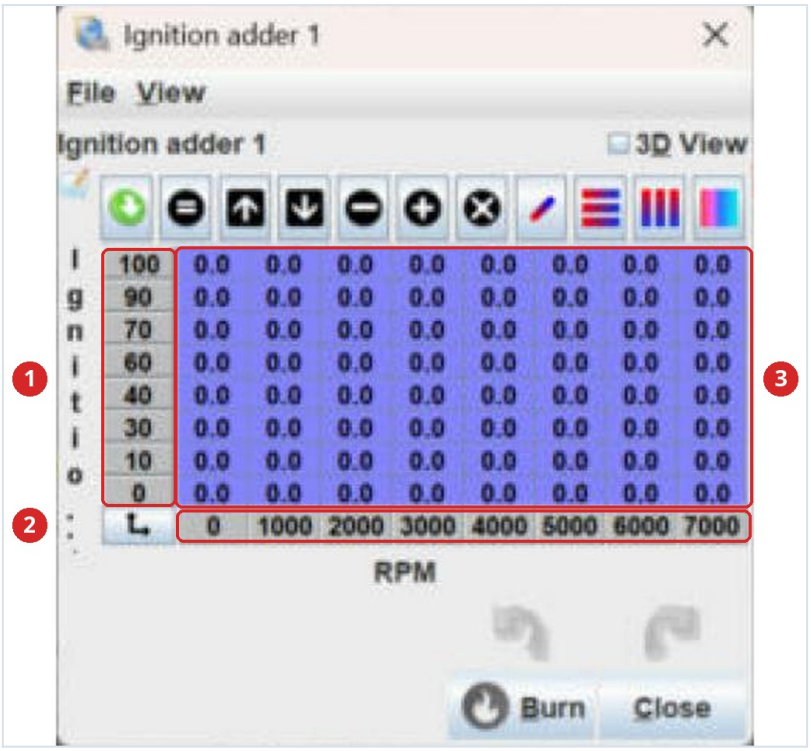


#	SETTING	WHAT IT DOES
1	**Help text** DISPLAY ONLY	Explains the bias, with the +10 and 50 example above.
2	**Blend parameter** ADVANCED	The input this blend watches. **Zero = off**, as in our tunes. Choices include TPS, MAP, engine and air temperature, Ethanol (Flex) %, battery voltage, RPM, gear, vehicle speed and spare sensor inputs.
3	**Y axis override (set Zero for no override)** ADVANCED	**Zero:** the blend table's rows are engine load (manifold pressure), like the main timing table. Another choice uses that input for the rows instead. Greyed out while 2 is Zero.
4	**Bias curve** ADVANCED	Across: the value of the input in 2 (**param**). Up: how much of the table to use (**bias**, %). Greyed out while 2 is Zero.

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

B Ignition blend table

The window is titled **Ignition adder 1** (or 2, 3, 4).



#	SETTING	WHAT IT DOES
1	**Ignition Load (kPa) rows**	Engine load (manifold pressure), like the main timing table, or the input picked in Y axis override.
2	**RPM columns**	Engine speed.
3	**Cells (deg)** ADVANCED	Degrees added (+) or taken away (−) at full bias. **0 everywhere** in our tunes.

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

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