

To connect a Wideband Sensor to the ECU you need a complete set of a Wideband Sensor and matching Wideband Controller with 0-5 Volt output. It is not possible to connect a LSU or NTK Wideband Sensor direct to the ECU. It is even not possible to use the Honda Semi-Wideband Sensor or AF-Sensor from the RSX on a PRA ECU.

## HARDWARE

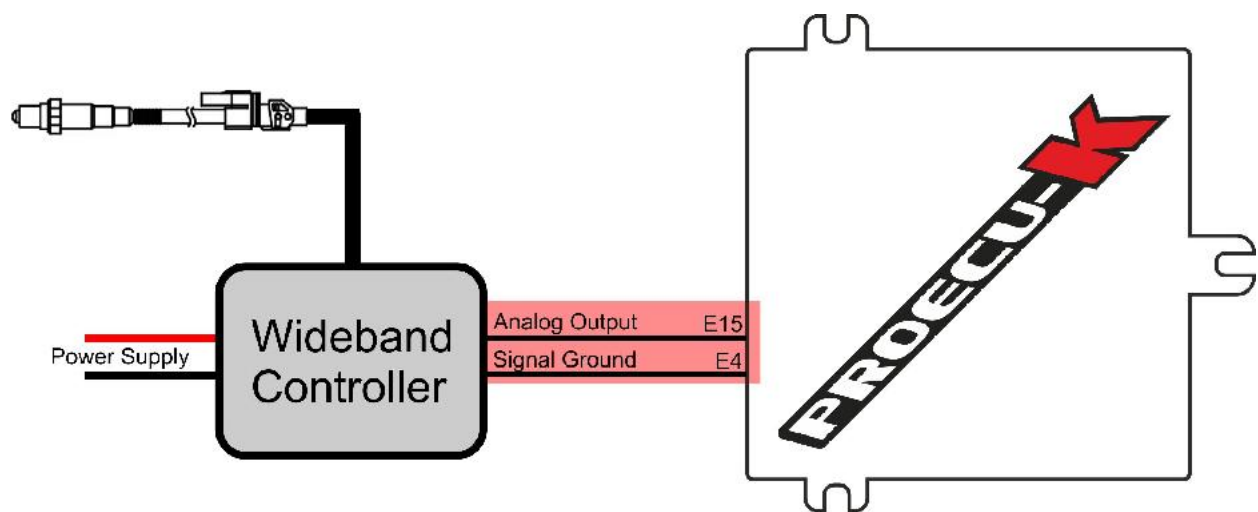
Connect the Power of the Wideband Controller as in its document recommended.

Connect the 0-5 Volt output of the Controller to the ECU's Pin E15 (ELD).

If the Wideband Controller has a dedicated Analog Ground (Like the AEM X-Series or WBO2/Tech-Edge) connect this wire to the ECU's Pin E3 or E4.

If there is already a wire connected to E15, you need to disconnect this wire and connect ONLY the wideband analog signal to E15.

If there is a wire connected to E3 or E4 you need to splice into the wire and DON'T cut the existing connection.



## SOFTWARE

Here are two ways for two reasons.

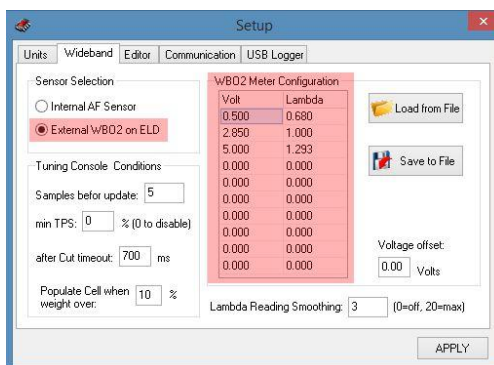
**First, the Wideband is only installed temporary, like for tuning.** Or the Wideband controller travels with the tuner. So it's better to let the tuning Laptop the work to calculate the Lambda value from the voltage measured on the ELD input. All configurations are stored on the (tuner's) Laptop.

Setup the software in this way:

### Under Setup->Wideband:

External WBO2 on ELD to set the source of the Lambda Channel so, that the Laptop do calculate the Lambda from the voltage.

WBO2 Meter Configuration: here you need to set the conversion Table from Voltage to Lambda. You can find the necessary information in the documentation of your wideband controller. We have included some configurations from popular models with our software. Use the "Load from File" button. You can find the files under [your documents]\ProECU-K Data\AddOns.

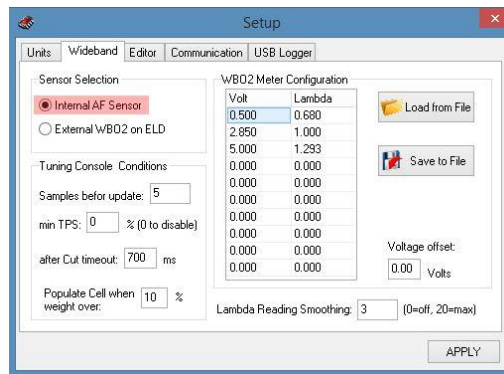


**Second, the Wideband is installed permanent into the car.** The external wideband is used for logging, tuning or even to run closed loop. In this case, the ECU needs to calculate the Lambda from the voltage, because it needs to run and operate even without a connected laptop.

Configure the software in this way:

**Under Setup->Wideband:**

Sensor Selection to "Internal AF Sensor". So the Lambda Source is what the ECU calculates.

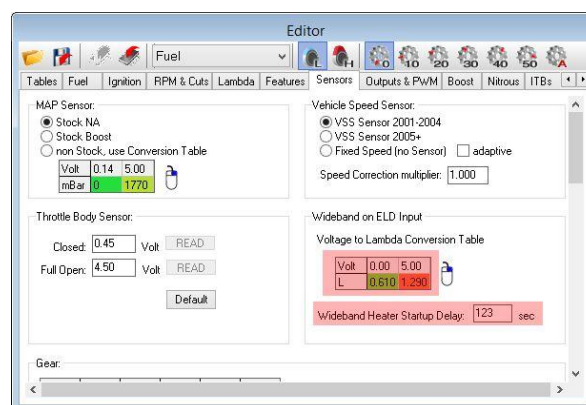


**Under Editor->Sensors->Wideband on ELD Input:**

You need to set the Voltage to Lambda Conversion Table. You can find the values in the documentation of your wideband controller. We even have some configurations of popular controllers included with our software. You can import by clicking on the table with the right mouse button and click "Import". You can find the files under [your documents]\ProECU-K Data\AddOns.

Set the Wideband Heater Startup Delay to the time the wideband controller needs to get ready from a very cold state. The most controller needs around 30 to 45 seconds.

This is only used for the closed loop operation of the ECU. This time must be passed before closed loop operation will start.



**To run closed loop from the external wideband controller** you need to use the PRB codebase. The PRB codebase is the only which is able to run closed loop from a wideband sensor/controller. The PRA codebase works only with narrowband O2 sensors.

If you not already have your tune with a PRB codebase you can easily convert from PRA to PRB.

1. Save the calibration to disc.
2. Press and Hold the CTRL and the ALT key when clicking on the "File Open" Button
3. Select the saved calibration file
4. after that you'll ask for the codebase to use, here click PRB

Now you can use the function "use external Wideband on ELD".

To have this function working properly you need to configure the external wideband as described above. (Under Sensors: Voltage to Lambda, Warmup delay).

