



**INSTALL AND RIDE.  
EFI MADE EASY.**

Thank you for purchasing the Electronic Jet Kit (EJK) from Dobeck Performance. This EFI controller is designed to be used on stock or modified vehicles. The following instructions will walk you through a generic installation and go over controller tuning basics. More advanced install instructions, technical information, controller settings, etc...can be found at:

**[www.ElectronicJetKit.com](http://www.ElectronicJetKit.com)**

**PLEASE BE SURE TO CHECK OUT THE ADJUSTMENT DEMO  
LOCATED AT THE BOTTOM OF THE HOME PAGE!!**

**PLEASE READ ALL INSTRUCTIONS BEFORE STARTING  
INSTALLATION. BE SURE YOUR VEHICLE'S ENGINE IS COLD.**

**IMPORTANT – PLEASE READ CAREFULLY**

The EJK is legal ONLY for closed course vehicles. The EJK is not applicable, nor intended for use on Emissions Controlled street, highway or off-road vehicles. The EJK is not applicable, nor intended for use on aircraft.

**PACKAGE CONTENTS**

- FUEL CONTROLLER
- INSTRUCTIONS SET
- 3 x ZIP TIES
- VELCRO PATCH
- REFERENCE CARD (PURPLE #6)
- EJK Sticker
- Dobeck Performance Sticker

The following are optional parts:

- OXYGEN SENSOR BYPASSES

The following may be purchased separately:

- HANDLE BAR MOUNTING
- DP DOCKING STATION
- USB TO IRDA ADAPTER
- POWERLAB ACCOUNT

**Check out updated and advanced information at [www.ElectronicJetKit.com](http://www.ElectronicJetKit.com)**

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## TUNING INSTRUCTIONS

The EJK controller can be adjusted “on the fly” to tune your vehicle. No computer or other external device is needed to make tuning adjustments. All that is required is for your vehicle to be running which provides power to the EJK controller. Most EJK controllers come pre-programmed to the recommended base light settings which represents a typical stage 1 (intake + exhaust) vehicle modification. **It is recommended to install the EJK controller and take a test ride first before making any mode adjustments.**

Six modes are available to make adjustments. You enter the adjustment mode by pressing the MODE button. Correctly entering the adjustment mode will display flashing LEDs on the LED display. Pressing the MODE button repetitively will move you through all the modes. **Note: The MODE button is sensitive and will at times skip a mode.** Pressing the MODE button at the last mode will bring you back to the first mode. To exit the adjustment mode and return to operation mode you just wait several seconds until the LED display reverts back to solid LED colors.

The six modes available are distinguished by an LED color combination. The six modes in respective order are as follows: Green, Yellow, Red, Green-Blue, Yellow-Blue, and Red-Blue. All six modes have 15 possible light settings. The settings are adjusted by pressing the PLUS (+) and MINUS (-) buttons. For easy reference the LEDs are numbered 1 through 8. Half step settings are represented by two same color LEDs flashing (ex: 4.5 has 4th and 5th LEDs lit). The 0.5 setting is represented by the 1st LED blinking at a much faster rate. Modes 4, 5, and 6 are distinguished by the 8th LED also blinking blue.

Every mode represents an adjustable feature within your vehicle’s drive cycle. Reference the Example Drive Cycle diagram to gain a visual understanding. Each mode can be defined as either a **FUELING mode** or a **SWITCH POINT mode** as follows:

**FUELING MODES** - Modify the fuel amount compared to the stock fuel when the corresponding zone is active. The higher the light setting the MORE fuel is being added. The lower the light setting the closer you are to running STOCK fuel levels. Light settings for **GEN 3.5** controllers can be **SUBTRACTING** fuel from the STOCK fuel level.

**Note: The EJK controller can be set to stock fueling without uninstalling the unit.**

**GEN 3 controllers** – Set the FUELING modes all to light setting 0.5 to revert back to stock.

**GEN 3.5 controllers** – Stock FUEL settings vary according to application. Check ElectronicJetKit.com for info.

**SWITCH POINT MODES** – Determine the transition point between two corresponding zones. The higher the light setting the longer it takes for a zone to engage. The lower the light setting the faster a zone will engage.

**Note: Switch point modes do not have to be adjusted that frequently.**

### Mode 1 – GREEN – CRUISE FUEL

Represents fuel modification under CRUISE conditions. When the LED display shows solid GREEN lights then the GREEN zone is active and fuel is modified by this mode. **Mode has the largest affect on fuel mileage.**

### Mode 2 – YELLOW – ACCELERATION FUEL

Represents fuel modification under ACCELERATION conditions. When the LED display shows solid YELLOW lights then the YELLOW zone is active and fuel is modified by this mode.

### Mode 3 – RED – FULL THROTTLE FUEL

Represents fuel modification under FULL THROTTLE conditions. When the LED display shows solid RED lights then the RED zone is active and fuel is modified by this mode. **Mode has the largest affect on tuning for the vehicle’s top horsepower value.**

### Mode 4 – GREEN-BLUE – VOLTAGE CONTROL LOWER SWITCH POINT – INDICATED BY 8<sup>TH</sup> LED DISPLAYING BLUE

Represents transition between idle and factory closed loop. When the LED display shows a solid BLUE light in the 8th position then the controller is interfacing with the ECU closed loop mode. **Mode rarely needs to be adjusted.**

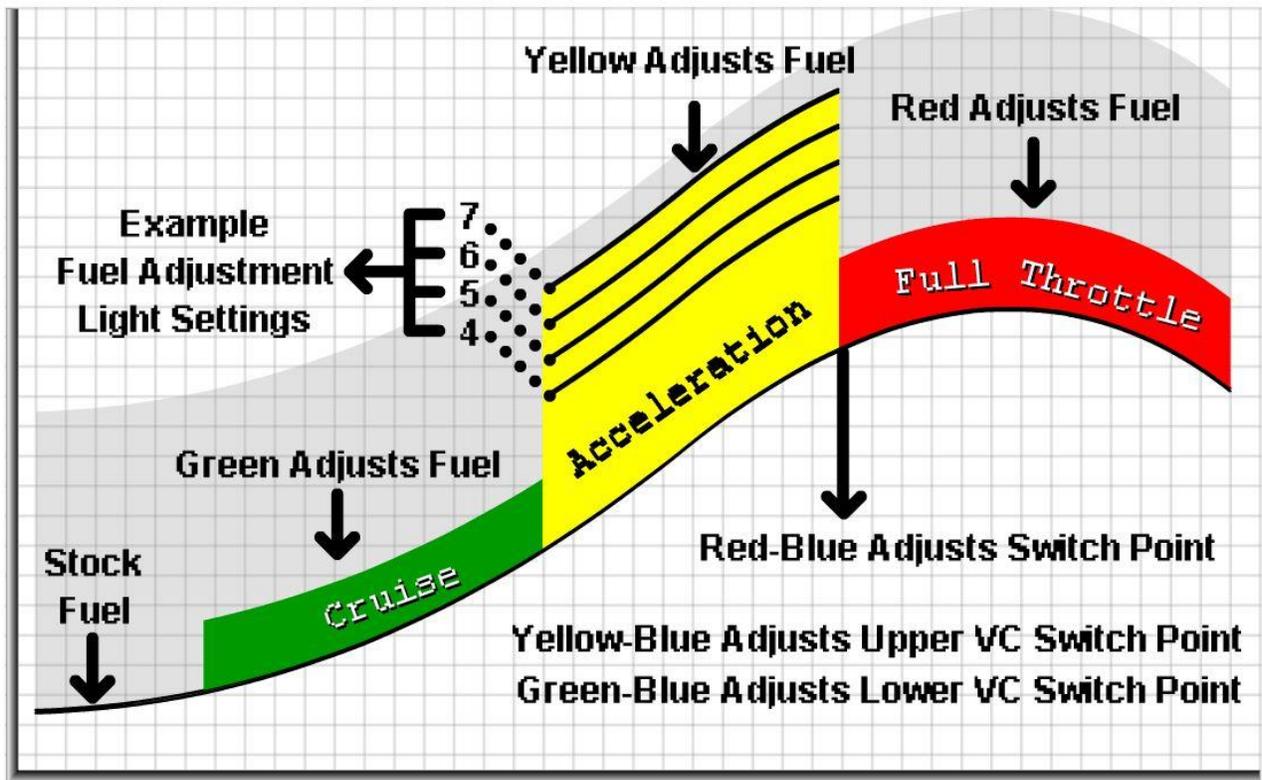
### Mode 5 – YELLOW-BLUE MODE – VOLTAGE CONTROL UPPER SWITCH POINT – INDICATED BY 8<sup>TH</sup> LED DISPLAYING BLUE

Represents transition between factory closed loop and open loop. When the LED display shows a solid BLUE light in the 8th position then the controller is interfacing with the ECU closed loop mode. **Mode rarely needs to be adjusted.**

### Mode 6 – RED-BLUE MODE – FULL THROTTLE SWITCH POINT

Represents transition between YELLOW and RED zones which relates to accelerating and full throttle conditions. The RED zone is load based and engages differently between gears and riding conditions.

## EXAMPLE DRIVE CYCLE



## CONTROLLER LAYOUT



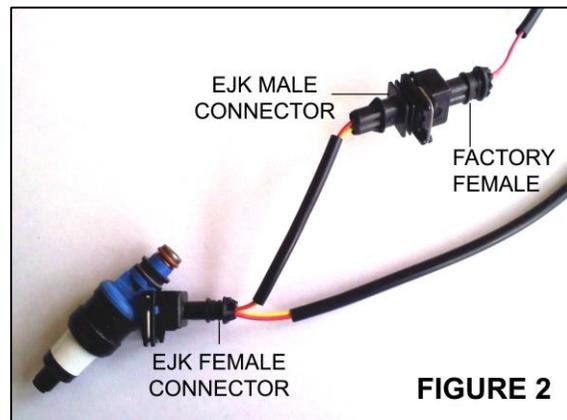
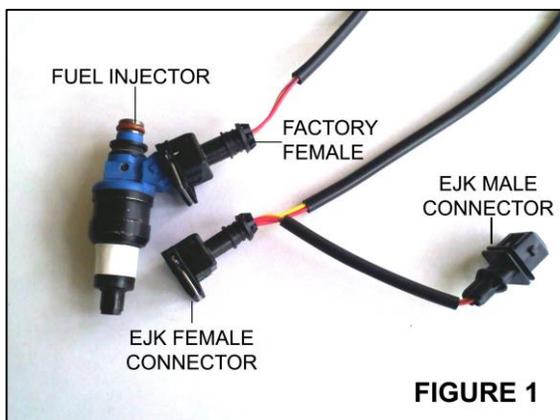
## RECORD INITIAL RECOMMENDED SETTINGS

We highly suggest recording the preset settings before you start changing any of the modes. Your vehicle will need to be started in order to go through the modes. You can also find the initial preset settings at [ElectronicJetKit.com](http://ElectronicJetKit.com).

| GRN | YEL | RED | G/B | Y/B | R/B |
|-----|-----|-----|-----|-----|-----|
|     |     |     |     |     |     |

## GENERIC EJK CONTROLLER INSTALLATION INSTRUCTIONS

1. Make sure your vehicle is cold before starting the installation.
2. If your vehicle is equipped with a battery then remove components to gain access and disconnect the negative lead going to the battery. If your vehicle is not equipped with a battery then locate the common grounding location on the frame of the vehicle.
3. Remove necessary components to locate the fuel injector(s) which are typically on the throttle body. The throttle body is positioned between the engine and the air box. If the application has multiple injectors then there will be multiple throttle bodies. **NOTE: Some applications plug into a sub-harness and NOT directly onto the injectors.**
4. Determine where you will mount the EJK controller. Mount in a safe location that will not affect the operation of the vehicle. Suggested locations are underneath the seat, rear tail section, side covers, etc. **We do suggest keeping the controller accessible for more advanced tuning if necessary.**
5. Attach EJK BLACK ground wire and negative battery cable back to the negative post of battery. If no battery then connect the black ground wire to the common grounding location on the frame.
6. Route the harness along the frame to the injector(s). Make sure to keep the harness away from hot and moving parts. Use zip ties to secure where necessary.
7. Unplug factory connector from the injector. Then plug matching EJK connector on to the injector (these are female connectors). **NOTE: For multiple injector applications it usually does not matter which EFI connector pair goes to which cylinder. For reference though the connector pair with a double pinned RED and YELLOW wire is the EFI's channel #1. For V-Twin engines we do recommend to install channel #1 on the front cylinder. The controller is powered up through the double pinned RED wire.**
8. Plug male EJK connector into the factory female connector. Repeat steps if there are multiple injectors. **Refer to Figures 1 & 2 below. The pictures show an example of a single factory injector harness plugged in. The EJK harness is plugged in line with factory connections.**
9. **IMPORTANT: Make sure all connections are firmly secure and allow a little slack at the connections to prevent engine vibration from damaging/breaking a wire on the harness.**
10. Make sure you can view the EJK and **START** your vehicle. **DO NOT SIMPLY TURN THE KEY ON!** The LEDs on the EFI will energize and may scroll back and forth for several seconds. **Some installations DO have a zero (0) second start-up time and WILL NOT SCROLL.** With a **PROPER** installation the EJK will stop scrolling the LEDs and go to a steady or slow flashing GREEN LED(s) on the left. With an **IMPROPER** installation you may not see any LEDs or you may see the #1 LED flashing along with the #8 LED flashing. Flashing #1 and #8 LEDs occurs when the EJK is not receiving a proper injector signal. Re-check the wire connections for any defects.  
**IMPORTANT: The flashing #1 and #8 LEDs is COMMON for a proper installation during the following scenarios:**
  - De-acceleration - Stock fuel maps may shut off the fuel injectors during this process.
  - Turning the key on – Some ECU systems provide power to the injectors with just the key on.
  - Turning the key off – Some ECU systems perform diagnostic tests for SEVERAL minutes after key off.
11. Replace removed parts in reverse order to complete the installation.



## Installation Instructions – 2014-2016 Ural All Models

1. Before installing the EJK you must first disconnect the negative lead from the battery.
2. Determine a safe location for the EJK unit. We recommend mounting the EJK on the air box or beneath the seat with the supplied Velcro attachment. For initial tuning the box can be mounted where it can be seen and adjusted by the rider. For Installation, make sure your motorcycle is cold.
3. Locate the oxygen (O2) sensors. The O2 sensors can be found at the front of the bike by tracing the wiring of the sensor in the exhaust up to the connector (FIG 1). Run the female and male O2 connectors from the EJK along the underside of the fuel tank or along the frame of the motorcycle (the more care you provide routing the harness, the fewer problems you are likely to experience in the future).
4. Disconnect the factory O2-sensor plugs. Fit the male and female plugs of the EJK into the OEM connectors (FIG 2). The O2 harness and injector harness are cylinder specific. The O2 harness with a pink w/ yellow stripe and brown wire corresponds to the injector harness with a yellow wire. The O2 harness with the purple wires corresponds to the injector harness with a green wire. It does not matter which cylinder the harnesses go on as long as the corresponding O2 and injector harness are connected to the same cylinder.
5. Locate the fuel injector connectors on the right & left side of the bike on the throttle bodies and disconnect (FIG 3). Plug the male and female connectors of the EJK into the OEM injector and wiring harness connectors (FIG 4). On the EJK, locate the black ground wire and attach to the frame or ideally to the negative pole of the battery (FIG 5).
6. Next, we need to get keyed up power for the EJK. Typically we get power from the fuel injector, but the Ural injectors stay powered on all the time. Locate the brake light switch on the right side of the bike with 1 pink wire (FIG6). This is where we will get keyed up power for the EJK. Remove the shrink tubing from the bottom connector and cut the black wire. Strip the wire and crimp on the supplied spade connector and terminal. You can now connect the supplied power up harness and hook up the power wire on the EJK to the power up harness (FIG 7).
7. Use zip ties to secure the wiring from the EJK to the frame or OEM wiring loom. Avoid chafing or squashing the cables and wires. **NOTE:** Do not attach zip ties too close to the injector and avoid creating sharp bends in the cable.
8. Reassembly of the bike is opposite of the disassembly.
9. Now the bike can be started. The EJK will start in a few seconds. You should either have a slow blinking green LED lit up or a solid green and blue LED lit up. **NOTE:** Light functionality for the Ural is different from our standard light sequences. Green/Blue LEDs showing on the controller mean the bike is close looping using the stock O2 sensors.

### **Final Installation Note**

Re-check your wire routing and the controller location to make certain that in no way the wires can come into contact with any moving parts or high heat source. The controller should be mounted in a way as to not cause a handling problem with the machine.

### **Troubleshooting**

Please make sure you are trying to **START** your vehicle and NOT just turning the key on. If the number 1 LED is flashing green and the number 8 LED is flashing red at **IDLE** then this indicates a connection issue. Re-check the wires from the controller and make sure they are connected to the proper wire of your vehicle's stock harness. The controller only needs power (RED wire) and a proper ground (BLACK wire) to show this error display.

If the motorcycle fails to start then you will also need to re-check the wiring. If you have not connected the ground wire to the negative post of the battery then make sure you have attached the wire to a proper grounding source on the frame.

### **Support**

All controllers are backed by a great support team. First contact your dealer or product representative where you purchased the product and check if they can assist you. If all else fails then feel free to contact the manufacturer directly to gain additional support. Call toll free within the USA at 1-877-764-3337 or 1-406-388-2377 for international customers.

Figure 1



Figure 5



Figure 2



Figure 6



Figure 3



Figure 7



Figure 4

