



**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)**

Dobeck Performance · 157 Progressive Drive, Belgrade, MT 59714 USA · Mon-Fri 9am-5pm MST  
PH: (406) 388-2377 · Toll Free USA: (877) 764-3337 · Fax: (406) 388-2455 · [info@dobeckperformance.com](mailto:info@dobeckperformance.com)

## 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 4 – GREEN-BLUE – MAX BOOST PRESSURE VALUE - 8<sup>TH</sup> LED DISPLAYING BLUE INDICATES BOOST ACTIVE

Represents the maximum amount of boost pressure the snowmobile can produce. Light position 0.5 will be stock boost pressure and a light position of 8 will be the max boost pressure for the snowmobile. **If this mode is set any higher than 0.5 the controller will require the purple to be T-Tapped to the brown wire.**

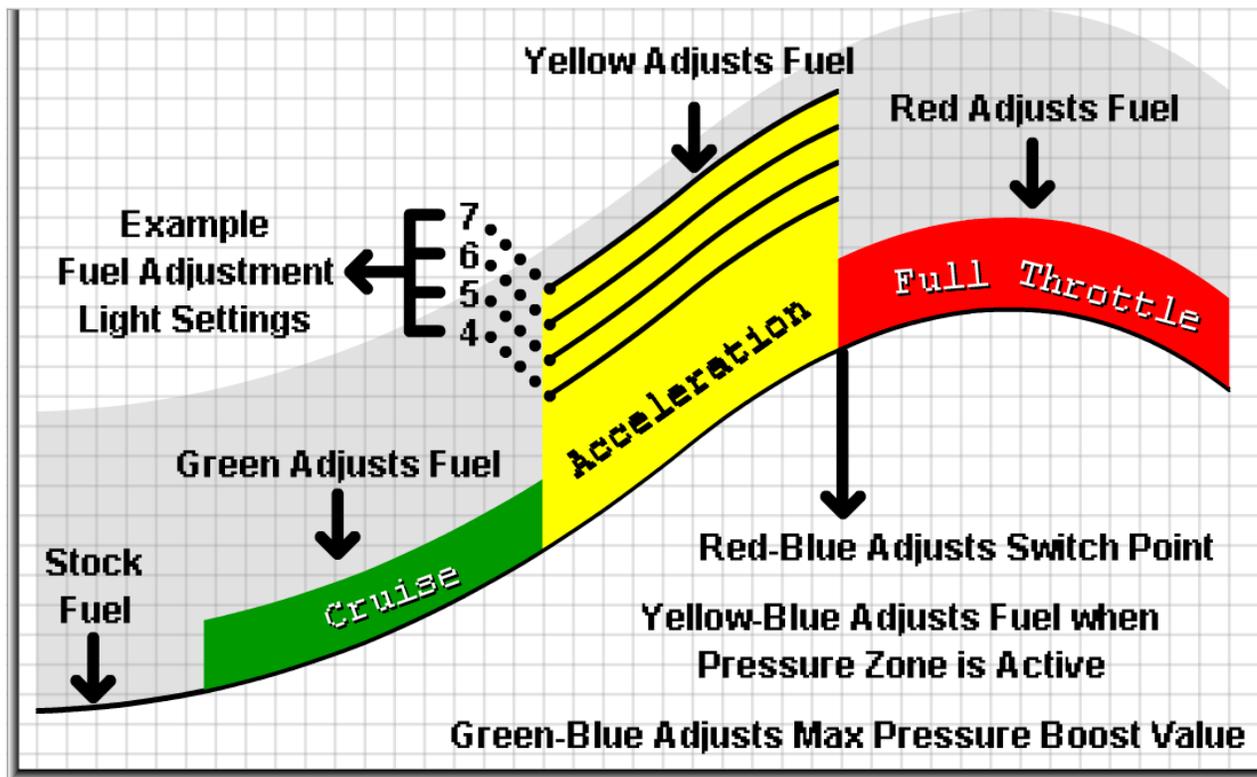
### Mode 5 – YELLOW-BLUE – MAX BOOST PRESSURE FUEL – 8<sup>TH</sup> LED DISPLAYING BLUE INDICATES BOOST ACTIVE

Represents fuel modification when snowmobile is higher than stock boost pressure. The Blue LED in the 8th position will reflect when the snowmobile is higher then stock boost pressure.

### 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



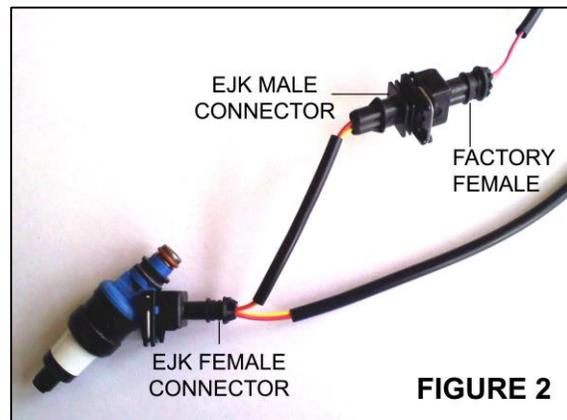
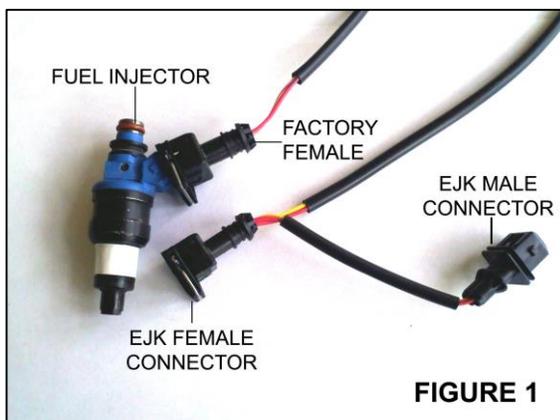
## RECORD INITIAL RECOMMENDED SETTINGS

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**

### **Arctic Cat 1100 Turbo 2010-Newer**

For reference in the following instructions, EJK is used to refer to the physical Electronic Jet Kit or EFI controller you are installing on your vehicle.

1. Make sure the vehicle is completely cool before starting the installation.
2. Remove left side panel on clutch side by removing cotter pin located behind the front a-arm.
3. Locate fastener on rear of panel, lift ring and twist to release.
4. Locate Factory Injector Harness.



5. Plug matching EJK Harness into Factory injector harness.



6. Locate stock Map Sensor



7. Unplug Stock Map sensor. Plug EJK Mating harness into factory harness and into the MAP sensor.



8. Locate the Waste gate control Solenoid.



9. Unplug harness from the solenoid.

10. For this next step a straight pick will be needed. You will need to remove the pins from the factory connector. From the front of the connector gently pry up on the pin's locking tab. While holding the tab up gently pull the corresponding wire out of the back of the connector. Repeat the step on the next wire. Connector will be used in later steps.



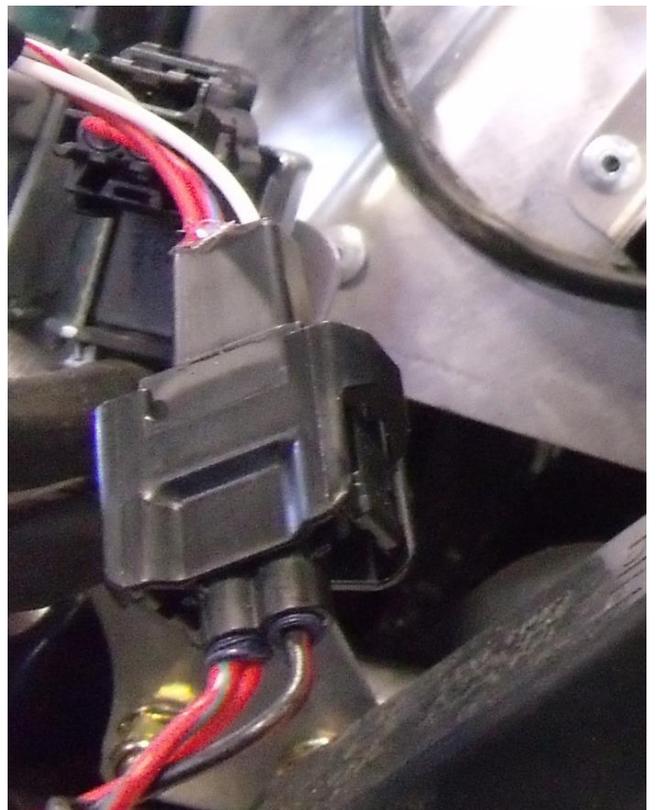
11. Once pins are removed located the black connector on the harness that has no wires inserted.



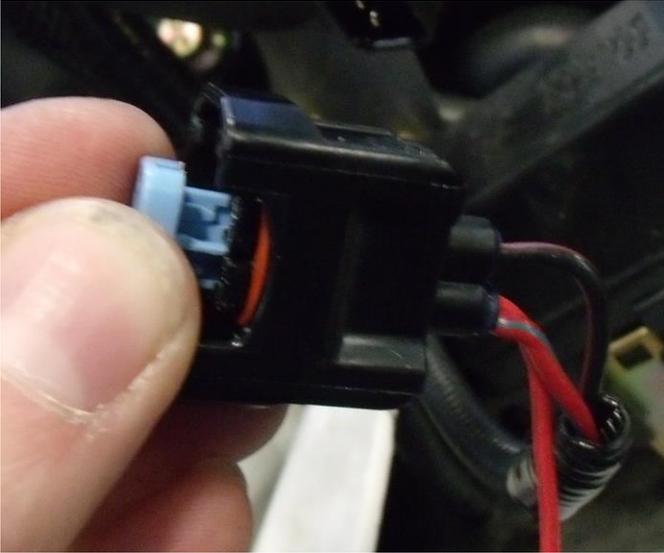
12. The above connector will plug back into the EJK mating connector. The Pins that were remove from the stock solenoid connector need to be inserted into this connector.

\*\*\*\*VERY IMPORTANT\*\*\*\*

The Arctic Cat Black with Red stripe needs to line up with the EJK White Wire.  
The Arctic Cat Red with Green stripe needs to line up with the EJK Red Wire.



Once pins are inserted push blue pin lock into connector.



14. The EJK harness will have 2 pins without a connector on them. One will have a Red wire and the other will have a White with a Red Stripe. These will plug into the stock solenoid connector from step 10.



13. Plug the assembled connector into the mating EJK connector.



15. Plug connector back into Waste gate solenoid.

16. Attach the ground wire to chassis.

17. Start the snowmobile. The LEDs should scroll green from left to right and back for a couple of seconds. The display should then go to 1 or 2 solid green LEDs or very slow blinking LEDs. This indicates a proper installation.

18. Snowmobile reassembly is opposite of the disassembly procedures listed beforehand.

### **Final Installation Note**

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

### **Tuning**

The controller has the ability to adjust max boost pressure of the snowmobile. If the Green/Blue mode is adjust higher than 0.5 light setting make sure to T-Tap the purple wire to the brown wire. Recommend using an AFR (Air Fuel Ratio) Gauge when tuning the vehicle in conjunction with a Vacuum/Pressure Gauge.



### **Troubleshooting**

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 EJK and make sure they are connected to the proper wire of your snowmobile's stock harness. The EJK unit only needs power and a proper ground to show this error display.

If the snowmobile 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 EJK units 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 at 1-877-764-3337.