

Quick Start Guide

Setting Up Your Handheld Controller

By this time you are ready to set your Handheld Controller up to run your engine. This is really easy and can be done by entering in just a few numbers in your Controller. Before you do this you need to check the system for fuel leaks. Remember to check ALL connections in the engine compartment as well as along the frame and back at the tank and pump. Do this process again after the car has been started just to make sure. It is easy to overlook tightening a fitting or two during the installation process. Be sure to re check that all hoses and fittings are secure and clear of heat and all moving components!

When you first power on your key you will hear

your fuel pump cycle on for a few seconds and your injectors will “CLICK” on. This process serves a few purposes. It pressurizes the fuel system getting it ready for the cranking and running conditions and also purges out the trapped air in the system as well as shoots a small amount of fuel into the engine. This is what we call “Prime”. Do this process two or three times and check for fuel leaks BEFORE attempting to crank or run your engine. When this process is done and you are certain that you have no fuel leaks you can leave the key in the “ON” Position and begin to do the Initial Setup required to get your Go EFI system set up for your engine combination.



Quick Start

There are two ways to navigate the Handheld Controller; you can use the Touchscreen with your finger, or the Joystick up and down. Pressing in the Joystick = Enter.

On the first screen - Main Menu, choose **#4 Go EFI Initial Setup** and select **Enter**.



The Calibration screen will appear. On the Calibration screen, select **#1 Engine Setup**.

NO.	Engine ..(online)	Cubes
01	Cylinders	8
02	Engine CID	383
03	Cam Mild-Wild 1-4	3
04	Rev Limit RPM	7000
05	Idle Speed Warm	870
06	Tach or 2Wire+Coil	TACH

Read from ECU Edit Send to ECU Back

NO.	Engine ..(online)	Cubes
01	Cylinders	8
02	Engine CID	383
03	Cam Mild-Wild 1-4	3
04	Sent to ECU Succeed	
05	Idle Speed Warm	870
06	Tach or 2Wire+Coil	TACH

Each time you make a successful entry the green succeed message will appear.

Read from ECU Edit Send to ECU Back

Above is the Main Menu for Setting Up Your Engine

(Note: When changing values on the Handheld Controller, you must depress the joystick button to SEND your info to the ECU. You will then see 'Sent to ECU Succeed' message which is a confirmation

that it was successful. Changing the number alone will NOT change the value in the ECU). Also – all items above have a factory default which may work for you – change only as needed!

- 1- **Cylinders** - Factory preset is 8 and shouldn't need to be changed for most installations.
- 2- **Engine CID** – Factory preset is 350 CID. To change value you can use touchscreen buttons (Edit, CLR value from screen, Enter your number now , press OK, then depress joystick button to enter). **Sent and Succeed message will appear.** This entire step can also be performed using the joystick.
- 3- **Cam Mild-Wild – 1-4** - While not everybody knows the exact specifications of their camshaft, you usually have a pretty good idea of whether your cam is a bone stock , (selection #1) or a full-on race cam (selection #4) or somewhere in between. The Go EFI system is a very powerful self-learning tool, so the exact information isn't necessarily required. A mild performance cam would be considered a #2, while a street strip cam would be a #3. Select the best for your engine, if you're not sure, pick # 2!
- 4- **Rev limit RPM** – This is a fuel and spark cut.

Please set at least 200 RPM above the maximum RPM you wish your engine to run to. This is not a soft touch rev limit and is a built-in safety feature.

5- **Idle Speed Warm** – The idle speed at which you wish your engine to run at 150 degrees and above. If you are using the Go EFI to control your electric fans, your idle speed will increase by 30 rpm, and will be higher when the engine is colder and will taper down to set speed by 150 degrees.

6- **Tach or 2-wire** – Important selection for Go EFI setup! If you are NOT using timing control, such as an HEI or MSD ready to run, or even an MSD 2-wire distributor, or equal, running a CDI box but NOT controlling the timing with the Go EFI you will select the **TACH** option and depress the enter button. If using the timing control option and locking out your distributor, such as outlined in Diagrams 11 &12 in the main Instruction manual, you will select the **2 wire + Coil** option and depress enter and then follow the schematic in the main instruction manual for wiring.

Congratulations. You have completed the Engine Set Up portion of your installation.

NO.	Ignitio..(online)	deg
01	Distr Base Timing	22.5
02	2Wire VR+Coil	TACH

Read from ECU Edit Send to ECU Back

Ignition Set Up

When done with Engine setup, hit the **Back** button and return to the Calibration menu. (If you are NOT running Timing Control, skip this step.)

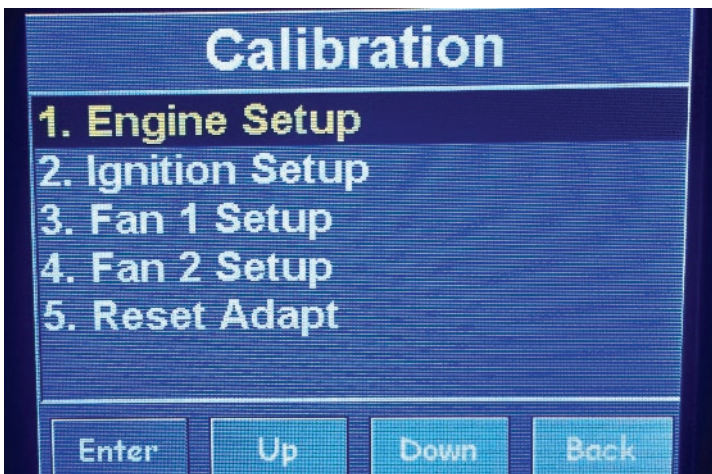
If you are running Timing Control, select **Ignition Setup** from the Calibration screen and enter in the following:

#01) Distributor Base timing. This is the timing you want your engine to idle at (For example, 15 degrees at 750 rpm).

#02) Is redundant from the first page and will show the previously made selection.

Select **Back** button and return to Calibration screen.

Fan Set Up



Fan 1 Setup (Go EFI 4 #30001 & 30002)

On the Calibration screen, follow these steps:

If using an electric fan, go to option # 3 and select **Enable** , then press Enter or depress the joystick button to **send info to the ECU**. If not using an electric fan, select **Disable** and continue the Enter/Send steps above

Note: This step is important to eliminate a fault code from appearing when not using an electric fan, and also eliminating the idle speed from increasing when the fan "ON" temperature is achieved and no fan is used.

If fan is enabled, follow these next steps:

#1) Fan 1 ON Temp - Enter desired temperature, Enter/ depress to **send to ECU**. Idle speed will increase when fan is activated. Idle speed increase is not user programmable in basic calibration (Go EFI 4)

#2) Fan 1 OFF Temp - This is usually set approxi-

mately 5 degrees lower than Fan ON temperature, but is up to user preference. Note: Setting must be lower than fan ON temperature for fans to shut off.

At this point you have made all of the selections you **NEED** to start your engine! **BUT WAIT!!!!**.

Please turn your key to the OFF POSITION and wait for about 30 seconds for the ECU to store these changes. This is a one-time setup and the changes are permanently stored in the ECU even if you disconnect the battery! They can be changed at any time in the future but no battery power is needed for the ECU to keep these selections in its memory.

Starting Your Engine:

You are now ready to start your engine for the first time! (Remember that there is air in the fuel lines and you may need to purge that out so it may take a few extra cranks for the engine to start. Also if you have installed the Fuel Command Center you must follow the priming instructions to properly fill your Command Center's fuel tank). Turn your key to the "ON" position and listen for a CLICK, this is the injector squirting a small amount of fuel into the engine and getting the engine ready to go. Now crank the engine and look for an RPM signal on your Dashboard window on the Keypad. Your engine should start right up and begin to run. If it does not, turn the key to the OFF position, wait a few seconds and repeat the process, as there is air

trapped in the lines and that air needs to be purged out. Waiting for the "CLICK" before cranking is a good practice to get into but not 100% necessary. We do recommend it for consistent starting. Closed loop will start correcting your AFR almost immediately and your engine will begin to run smoothly. When your engine reaches 130° F the Go EFI Self Learning feature will begin to take effect and start dialing in your system for your engine! You will not even know this is happening but you can see it by looking at the CL trim And CL Learn values.

Setting Your Idle

If your engine is running too slow and your idle is low you may need to turn in your idle screw (located in the front right of the throttle body) a turn or so to open the butterflies. We recommend that you raise the idle OVER THE DESIRED TARGET IDLE SPEED and then key off the engine. This will reset the throttle position sensor to above the zero position and allow you to lower it to the desired rpm after the restart. The ECU will automatically reset to zero when you key off and does not require any special calibration mode. It is good practice to key off after you change the idle adjustment screw to a HIGHER RPM.

Setting Timing:

If you are using the Go EFI as a FUEL ONLY system (no timing control) please make sure that you set your timing to the manufacturer's specs for your engine. If you do not know what it is supposed to be, consult with your distributor manufacturer. Please confirm this is correct before moving forward. Ignition and fuel go hand in hand and work together to make your engine run smooth and powerful. One cannot compensate for the other.

Phasing your distributor for Programmable Timing

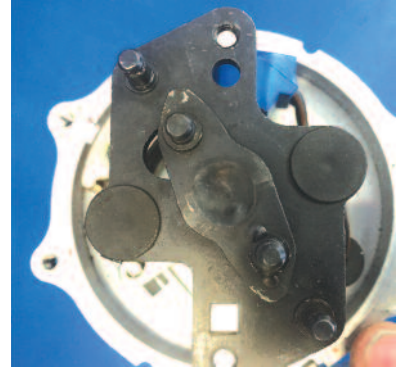
Locking the distributor:

When using the Go EFI internal timing control feature it is important to lock out the distributor advance mechanism and phase the rotor on your distributor. You will need a 2-wire distributor with a magnetic pickup such as an MSD or equal aftermarket brands from Summit or Jeg's. We recommend using an MSD adjustable rotor #84211. Locking the distributor consists of removing the counterweights and springs and following the man-

ufacturer's instructions to eliminate the centrifugal advance mechanism. Videos are usually posted on Youtube showing how to do this, which is a simple process. What you are trying to achieve is a distributor that has the rotor connected directly to the drive gear! The ECU will be controlling the timing not the old fashioned springs and weights.

Phasing the Distributor: (The Easy Way)

Phasing is a term that simply means lining up your rotor with the post on the cap so that when the ECU sends the spark, it will have a nice short direct gap to fire creating a strong spark and little chance for a misfire. This is not necessary with a mechanical advance distributor because the rotor turns with the springs and weights and it always stays aligned in the



center of the post on the cap making for a nice short spark. When switching to computer controlled spark advance, the ECU or computer is telling the distributor when to fire the spark and the distributor is LOCKED in place and does not advance or retard with engine rpm or vacuum. This is why we need to move the rotor to a HAPPY spot in the cap where the spark will be short and strong throughout most of the engine's operating conditions. It is a complicated term but very easy to do so don't be afraid to get in there and try. Follow these steps and you will be assured success.

1- Bring your engine to #1 TDC on the compression stroke and Stop at your desired BASE timing. EXAMPLE 10° BTDC. Check with your engine specs but most performance engines like between 8° and 20°. We will use 10° for our example. Your Buick 430 may like as little as 3°, but that is not rel-



evant for this setup example. Drop your distributor in place like you normally would with the rotor pointing at the #1 spark plug position.

2- On the keypad you will input this number under Ignition Setup Distributor Base Timing This can be done later during the setup mode. We are just showing you where you will be entering this number and where it comes into play.

NO.	Ignitio..(online)	deg
01	Distr Base Timing	10.1
02	2Wire VR+Coil	VRCOIL

Read from ECU Edit Send to ECU Back

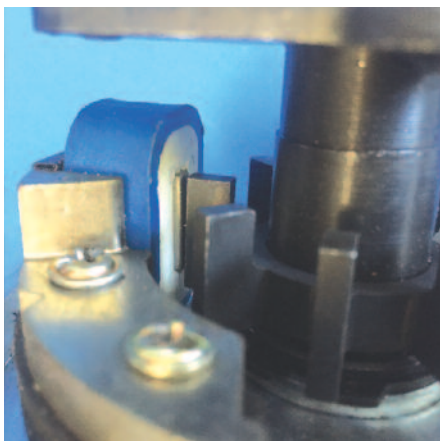
Don't be concerned with the decimal point.

3- Make a mark on the distributor housing on the center of the #1 spark plug post and remove the cap. See photo directly below.



4- Line up the center of the reluctor wheel (this is the 8 paddle wheel) with the center of the pickup on the distributor. See the photo at bottom of page. Use a light to make sure you are centered and snug down the

distributor. You may need to move the distributor slightly later to get final synchronization with the

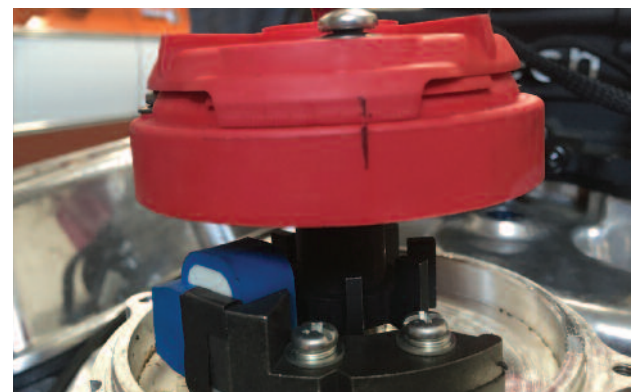


ECU. Make sure the rotor is in the center position and that it is pointed at the mark you made for the #1 spark plug location. Remove the rotor if it helps you see the reluctor position better.



5- With your adjustable rotor installed determine if your distributor rotates clockwise or counter clockwise when the engine is running. (You should know this by the firing order and the direction you will be placing your wires on the cap) If it turns clockwise (Chevy), twist your adjustable rotor to the second long line (from center) clockwise and lock down with the screw. If your Distributor rotates counter-clockwise (small block Ford) twist your rotor to the second long line (from center) counter-clockwise and lock it down with the screw.

This is easier to see when you have the rotor off of the distributor. We like to make a mark so you can line it up easy on the engine as shown below. Be sure to tighten down the Philips screw snug! NOTE: each mark is 1* on the rotor. You will notice that you are only moving the rotor 10*! Don't worry, this is actually 20* of crankshaft timing since the crank turns 2 times for every 1 time the distributor turns.



6- Install your Distributor cap and wires in the correct order and you are ready to go.

Synchronizing your Timing

Start your engine and bring to an idle. Look at the Dashboard of your Handheld Controller to determine the initial timing. You can set your desired distributor BASE timing in the setup menu when you selected the 2-wire option in the ignition setup menu. With a timing light attached to the engine rotate the distributor until the engine timing reads the

same as the timing displayed on the dashboard screen. You may want to do this at 2000 RPM to eliminate the IDLE spark correction feature built into the GO EFI systems since this makes the synchronization at idle a bit difficult . Lock the distributor firmly down and you are done. Final timing adjustments can now be made with the Handheld Controller on the fly!