

X-Celerator Plus

**The Most Powerful and Advanced
Flash Tuner and Code Reader Available
For Your 99- 02 GM Camaro, Firebird
and 99-04 Corvette 5.7L Engines.**

**Tune your own engine!
Easy, Do-It-Yourself Installation!
No Special Tools Needed!**

**Calibrate engine tuning and torque for maximum power.
Recalibrate speedometer to match speed rating of your tires.**

Recalibrate for gear ratio from 3.08 - 4.10 on 1999 - 2004.

**Calibrate for undersize / oversize tires up to 34"
for 1999 - 2004 vehicles.**

Adjust transmission shift points.

Adjust shift firmness for longer transmission life.

Eliminate skip shift on manual transmissions.

Read diagnostic codes.

Erase diagnostic codes.

**With the X-Celerator Plus,
you can download and retune
your vehicle in 5 minutes!**

X-Celerator Plus

Installation Manual

**Hand Held Programmer Instructions
for 99- 02 GM Camaro, Firebird and
99-04 Corvette 5.7L Engines.**



**IMPORTANT!
KEEP THESE INSTRUCTIONS!**

CAUTION!
**FAILURE TO FOLLOW THE STEP-BY-STEP INSTRUCTIONS
MAY CAUSE COMPUTER TO MALFUNCTION AND RENDER
THE VEHICLE INOPERABLE.**

X-CELERATOR PLUS HAND HELD PROGRAMMER

“Y” Button
means YES when
choosing a
menu item.

“N” Button
means NO when
choosing a
menu item.



LCD Display
Provides screen
messages,
instructions and
flashing prompts
to guide you
through the
programming

“UP” Button
to scroll up to a
menu choice or
selection.

“DOWN” Button
to scroll down to a
menu choice or
selection.

INDEX

DLC Locations	Page	4
X-Celerator Plus Programming	Pages	5-9
DTC Codes	Pages	9-12
Other Great MOTORVATION Products	Pages	13-14
MOTORVATION Warranty	Page	15

CAUTION!

**FAILURE TO FOLLOW THE STEP-BY-STEP INSTRUCTIONS
MAY CAUSE COMPUTER TO MALFUNCTION AND RENDER
THE VEHICLE INOPERABLE.**

WARRANTY

MOTORVATION Inc. wants you to be happy with your purchase.

Our products come with a LIFETIME WARRANTY. We will repair or replace any defective product to the original purchaser. We guarantee complete satisfaction.

We stand behind our products 100%, however, we cannot be responsible for any vehicle down time or any expenses that may be incurred in the process. We also cannot be responsible for any damages occurring from improper installation.

Our products will not void your vehicle's factory manufacturer's warranty as our products meet or exceed C.A.R.B. requirements.

RETURNS

All products returned to MOTORVATION must state reason for return and have a RGA number attached. Call a MOTORVATION tech to check any problems you may have with your X-Celerator Plus. We are happy to assist you in any way with your purchase. We hope you enjoy the X-Celerator Plus. Tell your friends about MOTORVATION.

MOTORVATION

MOTORVATION CORPORATION

1864 Vanderhorn Drive
Memphis, TN 38134

BUS 901-821-0033 · FAX 901-821-0032

GREAT PRODUCTS FROM MOTORVATION



POWER STROKE MODULE



AIR FLOW SENSORS



CHIPS & MODULES



KOOLSTATS



MOTORVATED PULLEYS

READY FOR POWER AND EXCITEMENT!

Congratulations! You have purchased the most advanced Flash Tuner and Diagnostic Code Reader! You will discover after flashing your computer, your vehicle will have a better throttle response, more torque and more horsepower, all without sacrificing fuel economy. The X-Celerator Plus is specifically designed on a dynamometer and road tested for engine and transmission tuning. Absolutely, the most powerful handheld on the market. Each setting of the X-Celerator Plus will deliver optimized results.

The X-Celerator Plus hand-held programmer will allow you to tune your engine and transmission combination to your necessary needs of power, torque and economy. This can be done quickly, easily, and as often as you desire, by following these step-by-step instructions.

With the X-Celerator Plus you can:

- Customize your vehicle or return to stock with the push of a button
- Calibrate speed limiter to match the speed rating of your tires
- Recalibrate the speedometer for gear and tire changes
- Calibrate for gear ratio from 2.73 to 4.10
- Calibrate for under/oversize tires from 24" to 34.75"
- Adjust the cooling fan switch from stock, 210°, or 190°
- Change engine tuning from stock to performance or performance with an exhaust catalytic converter back exhaust modification
- Adjust automatic transmission shift points and firmness or manual transmission for the 1-4 shift skip shift

Before you begin the programming process:

- Read this entire instruction booklet carefully. The step-by-step directions will make using your X-Celerator Plus much easier. X-Celerator Plus will perform many steps automatically.
- Be sure the vehicle's battery is fully charged before using the X-Celerator Plus.

Do not attempt to reprogram your computer if your battery is low or while connected to battery charger.

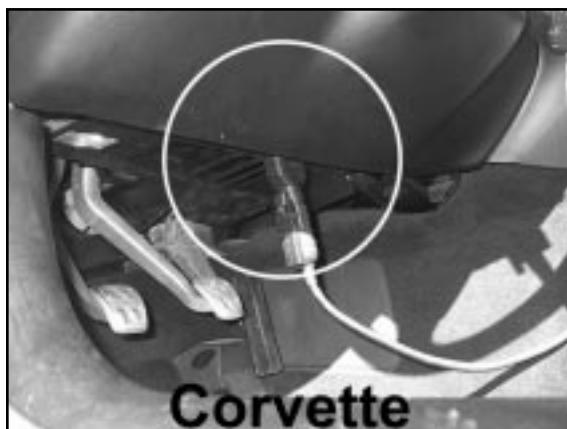
- Turn off all electrical systems, lights, radio, air conditioning, CD/DVD players, power amplifiers, cellular phones, etc.
- Set the parking brake. This turns the Daytime Running Lights (DRL) off. If left on, this may interfere with programming.
- Pre-determine your choices before starting your programming session (measure tires and determine gear ratio, etc.).
- Before any action is taken in this process, make certain the key is turned off! Make sure all doors are closed (the door chime can interrupt the programming process).

GAS ENGINE PROGRAMMING INSTRUCTIONS

WARNING:

- Failure to follow the directions can cause engines not to start! Do not attempt to stop downloading or programming process at any time by removing the cable, turning the ignition key off or disconnecting the battery power! Wait for the X-Celerator Plus “remove X-Celerator Plus” prompt before disconnecting programmer cable from the OBDII link connector.
- Keep all doors closed during the program process, the door chime can interrupt the programming process.
- Before any action is taken in this process make certain the ignition key is turned off!

DLC Locations



GREAT PRODUCTS FROM MOTORVATION



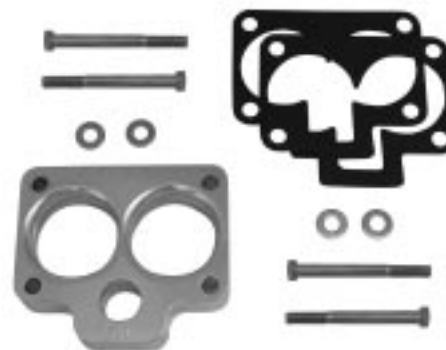
X-CELERATOR PLUS FOR GM VEHICLES



X-CELERATOR FOR DIESEL TUNING FOR DODGE AND FORD VEHICLES



WIDE SELECTION OF MOTORVATORS



MOTORVATOR KIT

DIAGNOSTIC CODE READER

P1134	H02S Time Ratio Bank 1 Sensor 1
P1153	H02S Switching Bank 2 Sensor 1
P1154	H02S Time Ratio Bank 2 Sensor 1
P1220	Throttle Position (TP) Sensor 2 Circuit
P1221	TP Sensor 1- 2 Correlation
P1258	Engine Coolant Protection Mode Active
P1275	APP Sensor 1 Circuit
P1276	APP Sensor 1 Performance
P1280	APP Sensor 2 Circuit
P1281	APP Sensor 2 Performance
P1285	APP Sensor 3 Circuit
P1286	APP Sensor 3 Performance
P1380	Misfire Detected - Data Not Available
P1381	Misfire Detected - Brake Control Module
P1415	AIR System Bank 1
P1416	AIR System Bank 2
P1431	Fuel Level Sensor 2 Performance
P1432	Fuel Level Sensor 2 Circuit Low Voltage
P1433	Fuel Level Sensor 2 Circuit High Voltage
P1441	EVAP System Flow During Non-Purge
P1514	Throttle Body Performance
P1515	Throttle Actuator Position Performance
P1516	TAC Module Performance
P1517	TAC Module Performance
P1518	TAC Module Serial Data Circuit
P1539	A/C Clutch Feedback Circuit High Voltage
P1546	A/C Clutch Feedback Circuit Low Voltage
P1571	Traction Control Torque Request Circuit
P1574	Stop Lamp Switch Circuit
P1575	Extended Travel Brake Switch Circuit
P1626	Theft Deterrent Fuel Enable Signal Lost
P1630	Theft Deterrent Learn Mode Active
P1631	Theft Deterrent Start Enable Not Correct
P1635	5 Volt Reference 1 Circuit
P1637	Generator L-Terminal Circuit
P1638	Generator F-Terminal Circuit
P1639	5 Volt Reference 2 Circuit
P1652	Power train Induced Chassis Pitch Output
P1689	Traction Control Delivered Torque Output

GAS ENGINE PROGRAMMING INSTRUCTIONS

PERFORMANCE PROGRAMMING BEGINS HERE:

1. Plug the cable small end into the top of the X-Celerator Plus unit.
2. Plug the cable large end into the OBDII link connector under the lower edge of the dash.

Camaro/Corvette

3. The first screen message, (as shown at left) will appear in the LCD window after X-Celerator Plus has been plugged into the OBDII link connector. It tells you the application and hardware version of your unit, along with the date the program was loaded into the unit.

X-Celerator Plus V1.00
Motorvation Corp

4. The next screen message appears automatically. It gives the X-Celerator Plus software version.

Current tuning
is Stock

5. The next screen message appears automatically telling you your vehicle is tuned at factory stock settings.

This tuning is for Non ...
Accept Y/N

6. The next screen message is a scrolling notice that this unit is for non super/turbo charged engines only. **(Using this tuning with super/turbo charged engines may cause engine damage.)**

You are required to accept or decline. If you accept it moves to the next prompt, if you decline the programming process ends. Make the choice by pressing Y (YES) or N (NO) button. If you select Y(YES) programming proceeds. With the selection of N (NO) the programming ends.

Turn Ign. Key On
Do Not Start Eng

7. The next screen message tells you to turn the ignition key on but **DO NOT** start the engine. Twenty seconds is provided to take this action. If the key is not turned on in the time provided, a "No communication with car error" message will be displayed and the program process must begin again at **Step 1**.

Leave Key On
Do Not Start Eng

8. The next screen message appears telling you to leave the key on while you are programming but **DO NOT** start the engine.

Checking VIN #
To Car VIN #

9. Next, the VIN number is being verified and locks it into the computer. Only your vehicle can use this X-Celerator Plus.

GAS ENGINE PROGRAMMING INSTRUCTIONS

Unlocking PCM
Do Not Disturb

10. Next the PCM is being unlocked. **DO NOT** disturb, unplug or push any X-Celerator Plus buttons during this function.

Do Not Disturb
Saving Stock

11. Next the stock settings are being saved and stored. **DO NOT** disturb, unplug or push any X-Celerator Plus buttons during this function.

■ Tune Car or
Get DTC Codes

12. Next the prompt provides a choice, to tune the car or retrieve the DTC codes. To

make your desired selection, scroll the flashing cursor to your choice by using the UP or DOWN buttons. Then push the Y (YES) button to enter your selection. (This process for selecting your choices is used throughout the programming process). If you press the N (NO) button programming ends.

NOTE: If you select the “Get Codes” option and this is the first time you have used X-Celerator Plus, you must unplug the unit and begin the process from step one again. X-Celerator Plus must initialize the computer at least one time before the DTC code function is operable.

If the Tune Car option is selected proceed to the next screen message. If you select the GET DTC Codes option go to page 9 and follow the instructions.

5.7L Eng–Year 02
4L60E Trans

13. This automatic screen message is a reading that identifies the engine and transmission in your vehicle.

■ Custom Tune Car
Return To Stock

14. The next prompt provides choices to custom tune the vehicle or return it to a stock configuration. Using the arrow and yes button

method described in step 10, make your selection. If the custom Tune Car selection is made, go to the next prompt. If the Return to Stock option is selected, the vehicle will be returned to stock configuration.

Speed Limiter
■ Stock 98 MPH

15. The first custom choice is the vehicle speed limiter. When the screen message appears, the flashing cursor will be beside the

Stock 98 MPH selection. Using the UP and DOWN buttons, scroll to your selection and press the Y (YES) to activate your choice.

Each selection offered has a specific tire rating that must be used:

Stock	98 MPH	SR rated tires or better must be used.
130 MPH	130 MPH	HR rated tires or better must be used.
Unlimited	130+ MPH	ZR rated tires must be used.

DIAGNOSTIC CODE READER

P0449	EVAP Vent Solenoid Control Circuit
P0452	Fuel Tank Pressure Sensor Low Voltage
P0453	Fuel Tank Pressure Sensor High Voltage
P0461	Fuel Level Sensor Performance
P0462	Fuel Level Sensor Circuit Low Voltage
P0463	Fuel Level Sensor Circuit High Voltage
P0480	Cooling Fan Relay 1 Control Circuit
P0481	Cooling Fan Relay 2 and 3 Control Circuit
P0500	Vehicle Speed Sensor (VSS) Circuit
P0506	Idle Speed Low
P0507	Idle Speed High
P0522	EOP Sensor Circuit Low Voltage
P0523	EOP Sensor Circuit High Voltage
P0530	A/C Refrigerant Pressure Sensor Circuit
P0562	System Voltage Low
P0563	System Voltage High
P0567	Cruise Control Resume Switch Circuit
P0568	Cruise Control Set Switch Circuit
P0571	Cruise Control Brake Switch Circuit
P0601	Control Module Read Only Memory (ROM)
P0602	Control Module Not Programmed
P0604	Control Module Random Access Memory
P0606	Control Module Internal Performance
P0608	Vehicle Speed Output Circuit
P0645	A/C Clutch Relay Control Circuit
P0650	Malfunction Indicator Lamp Control Circuit
P0654	Engine Speed Output Circuit
P0704	Clutch Switch Circuit
P0705	Trans Range Switch Circuit
P0706	Trans Range Switch Performance
P0712	TFT Circuit Low Input
P0713	TFT Circuit High Input
P0801	Reverse Inhibit Solenoid Control Circuit
P0803	Skip Shift Solenoid Control Circuit
P0804	Skip Shift Lamp Control Circuit
P1111	Intake Air Temperature (IAT) Intermittent High Voltage
P1112	Intake Air Temperature (IAT) Intermittent Low Voltage
P1114	Engine Coolant Temperature (ECT) Intermittent Low Voltage
P1115	Engine Coolant Temperature (ECT) Intermittent High Voltage
P1120	Throttle Position (TP) Sensor 1 Circuit
P1125	Accelerator Pedal Position (APP) System
P1133	HO2S Insufficient Switching Bank 1 Sensor 1

DIAGNOSTIC CODE READER

P0141	HO2S Heater Performance Bank 1 Sensor 2
P0151	HO2S Low Voltage Bank 2 Sensor 1
P0152	HO2S High Voltage Bank 2 Sensor 1
P0153	HO2S Slow Response Bank 2 Sensor 1
P0154	HO2S Insufficient Activity Bank 2 Sensor 1
P0155	HO2S Heater Bank 2 Sensor 1
P0157	HO2S Low Voltage Bank 2 Sensor 2
P0158	HO2S High Voltage Bank 2 Sensor 2
P0160	HO2S Insufficient Activity Bank 2 Sensor 2
P0161	HO2S Heater Bank 2 Sensor 2
P0171	Fuel Trim System Lean Bank 1
P0172	Fuel Trim System Rich Bank 1
P0174	Fuel Trim System Lean Bank 2
P0175	Fuel Trim System Rich Bank 2
P0200	Injector Control Circuit
P0230	Fuel Pump Relay Control Circuit
P0300	Engine Misfire Detected
P0325	Knock Sensor Module Performance
P0327	Knock Sensor (KS) 1 Circuit
P0332	Knock Sensor (KS) 2 Circuit
P0335	Crankshaft Position (CKP) Sensor Circuit
P0336	Crankshaft Position (CKP) Sensor
P0341	CMP Sensor Performance
P0342	CMP Sensor Circuit Low Voltage
P0343	CMP Sensor Circuit High Voltage
P0351	Ignition Coil 1 Control Circuit
P0352	Ignition Coil 2 Control Circuit
P0353	Ignition Coil 3 Control Circuit
P0354	Ignition Coil 4 Control Circuit
P0355	Ignition Coil 5 Control Circuit
P0356	Ignition Coil 6 Control Circuit
P0357	Ignition Coil 7 Control Circuit
P0358	Ignition Coil 8 Control Circuit
P0410	AIR System
P0412	AIR Solenoid Control Circuit
P0418	AIR Pump Relay Control Circuit
P0420	Catalyst System Low Efficiency Bank 1
P0430	Catalyst System Low Efficiency Bank 2
P0440	EVAP System
P0442	EVAP System Small Leak Detected
P0443	EVAP Purge Solenoid Control Circuit
P0446	EVAP Vent System Performance

GAS ENGINE PROGRAMMING INSTRUCTIONS

Calibrate Speedometer Y/N

YES moves you to the next screen message to select tire height. Selecting NO takes you to the prompt to select cooling fan (step 19).

Rear Axle Ratio ■ 2.73

buttons, scroll to your selection and press the Y (YES) button to activate your selection. Check the GM RPO code list located inside the driver's door jam for correct factory stock gear ratio option.

GEAR RATIO RPO CODE (LOCATED ON THE DRIVERS DOOR JAM)

2.73 GU2	3.15 G90	3.42 GU6
3.08 GU4	3.23 GU5	3.73 GT5

NOTE: Choosing an gear ratio that is different from what is in your vehicle does not change the gear in the axle. For example, if you have 2.73 gears, selection of a gear ratio other than 2.73 will not change the gear. An actual gear change is a manual process that is made in the axle, not in the programmer.

Tire Height From ■ Ground – 24.00

Using the UP and DOWN buttons, scroll to your selection and press the Y (YES) screen message to activate your selection. Tire height selections range from 24.00 to 34.75 and are offered in 1/4 inch increments.

NOTE: Tire height measurements should be made from the ground to the top of the tire with the tire inflated to its proper pressure on level ground.

Set Thermostat ■ Cooling Fan Stk

DOWN buttons to scroll the choices. There are three selections: Stk, 210° or 190°. (NOTE: set fan temp. to 190° if using an aftermarket thermostat or 210° for OE thermostat)

Engine Tune ■ Org. Stock

Performance with exhaust modifications. Each mode has varying degrees of torque management ignition timing and fuel curve alterations to deliver optimum performance for each selection. At the flashing cursor prompt Use the UP and DOWN buttons to scroll the selections.

GAS ENGINE PROGRAMMING INSTRUCTIONS

- Trans Enhance
■ Org. Stock
21. Trans Enhancement screen message provides choices of shift firmness. Using the UP or DOWN buttons at the flashing cursor prompt, scroll the choices. The two choices are: Org Stock settings or High Performance Mode.
- Trans Shifting
■ Org. Stock
22. This screen message offers automatic transmission shifting options. Using the UP or DOWN buttons at the flashing prompt, scroll the choices. The two choices are: Org Stock settings or High Performance Mode.
- Skip Shifting
■ Org. Stock
23. This screen message offers manual transmission shifting options. Using the UP or DOWN buttons at the flashing prompt, scroll the choices. The two choices are: Org Stock settings or Skip Shift Off mode.
- Install Tuning ?
Select Y or N
24. Install Tuning screen message is a fail-safe choice. If you are ready to download the selected changes, use the Y (YES) button to activate and download your new configuration.

NOTE: If however, you do not want your vehicles existing computer configuration changed, use the N (NO) key and the data will NOT be downloaded to your computer.

- Restoring To
Stock Data
25. X-Celerator Plus is putting the stock data back into the computer in preparation for receiving the selected changes.
- Making Changes
To Stock Data
26. This automatic prompt tells you the changes are being made to the stock data.
- Installing Tune
DO NOT Disturb 20
27. This screen message tells you the tuning data is being downloaded to the OBDII computer. This will take a few moments.
- Please Wait For
15 Seconds
28. This screen message tells you the Computer is verifying all changes and selections. This will take a few seconds.
- Tuning Installed
Remove Excelerator Plus
29. This screen message tells you the programming is complete. Turn the key off and unplug X-Celerator Plus from the OBDII connector.

SERVICING YOUR VEHICLE

At some point, you may have to take your vehicle to a mechanic or a dealership for service. You must remove the X-Celerator Plus custom tuning and restore your vehicle back to its stock settings. Failure to program the vehicle back to stock can result in unnecessary and costly repairs not covered by Motorvation Corporation. Before you have any work done on the vehicle, make sure the X-Celerator Plus custom tuning is removed. If you have failed to return the vehicle back to its stock condition and the vehicle is re-flashed, due to updates, your X-Celerator Plus may not work correctly, which is not covered by the Motorvation Corporation warranty.

DIAGNOSTIC TROUBLE CODES

DIAGNOSTIC CODE READING PROCEDURE

X-Celerator Plus must initialize the computer at least one time before the DTC code function is operable, see page 6, item #12 for details.

- Tune CarOr
■ Get DTC Codes
1. Plug the X-Celerator Plus cable into the DLC (pulling fuses is not necessary to check for codes). Follow steps 1-12 listed on pages 5-6 to arrive at the choices on the LCD shown above.
- Using the UP and DOWN scroll buttons place the blinking cursor beside "Get DTC CODES" then press the Y button to activate your selection.
- Getting DTC'S
2. X-Celerator Plus will retrieve the trouble codes for you to review and record (DTC codes are listed on the following pages 9-12.
- DTC XXXX
Y = Clear DTC
3. After recording the code, the code(s) are cleared by pressing the Y button. Removing the code will cause the check engine light to go off.
- Turn Key Off And
Remove X-Celerator Plus
4. With the code reading procedure complete, the X-Celerator Plus may be removed.

NOTE: The code reader is a diagnostic tool, not a conclusive problem solver. Further research is required before replacing parts. Full diagnosis should be done by an authorized dealer.

MAKE SURE YOU RETURN YOUR VEHICLE TO STOCK SETTINGS BEFORE IT IS TAKEN IN FOR SERVICE.

- P0101 MAF Sensor Performance
- P0102 MAF Sensor Circuit Low Frequency
- P0103 MAF Sensor Circuit High Frequency
- P0107 MAP Sensor Low Voltage
- P0108 MAP Sensor High Voltage
- P0112 IAT Sensor Low Voltage
- P0113 IAT Sensor High Voltage
- P0117 ECT Sensor Low Voltage
- P0118 ECT Sensor High Voltage
- P0125 ECT Insufficient Fuel Control
- P0131 HO2S Low Voltage Bank 1 Sensor 1
- P0132 HO2S High Voltage Bank 1 Sensor 1
- P0133 HO2S Slow Response Bank 1 Sensor 1
- P0134 HO2S Insufficient Activity Bank 1 Sensor 1
- P0135 HO2S Heater Bank 1 Sensor 1
- P0137 HO2S Low Voltage Bank 1 Sensor 2
- P0138 HO2S High Voltage Bank 1 Sensor 2
- P0140 HO2S Insufficient Activity Bank 1 Sensor 2