



Performance **PROGRAMMER**

2004-2005 Cadillac CTS-V
1999-2002 Camaro/Firebird
1999-2004 Corvette
2004 Pontiac GTO
with LS1 and LS6 Engines



JET Performance Products

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GENERAL PREPARATION

1. Turn OFF all power draining accessories; Radio, Cell Phone chargers, A/C, etc.
2. Turn your headlights off when programming your vehicle for added safety against battery failure. See your owner's manual for vehicle specific information regarding your headlights.
3. Your vehicle may be equipped with daytime running lights and/or sensors that turn the headlights on automatically while the ignition is on. Please check your owner's manual for the proper procedure on temporarily disabling these lights to eliminate this extra drain on your battery during the programming process. This is sometimes done by pressing the "dome override" button two to four times or in the case of automatic headlights turning the headlight switch to the left.
4. Some vehicles require disabling various communication systems prior to programming so that the process is not interrupted, please note if your vehicle is listed below and follow the specific instructions for it. If it is not listed please continue to Installation Instructions Overview.

SPECIAL INSTRUCTIONS FOR 1999-2004 CORVETTE: SEE PAGE 17 BEFORE PROCEEDING

SPECIAL INSTRUCTIONS FOR 2004-UP CADILLAC CTS-V WITH ON STAR: SEE PAGE 20 BEFORE PROCEEDING

INSTALLATION INSTRUCTIONS OVERVIEW

Your vehicle has an onboard computer that controls the engine and transmission. The JET programmer reprograms your factory computer according to your specifications with JET Performance Products Tuning.

To reprogram your vehicle's computer, simply plug the programmer cable into the vehicle's diagnostic connector, located under the dash panel on the driver's side. Set the parking brake. Next, turn the ignition key to RUN but **do not start** the engine. It will then identify your vehicle and ask a series of questions on its LCD screen.

When completed, turn the key to OFF and disconnect the cable from the diagnostic connector. Now you're "Engineered for Power".

JET Performance Product's tuning can be stored in only one vehicle. When you install JET Performance Product's tuning program into your vehicle, the programmer reads and stores your vehicle's factory programming. You can use the Programmer to restore your stock programming if it should ever become necessary.

You may also reconnect your programmer at any time to modify the programming. Simply reconnect the JET Performance programmer, answer the necessary questions, and program your vehicle.

PROGRAMMING INSTRUCTIONS

1. Locate the Data Link Connector (DLC) under the driver's side of the dash panel.
2. Plug the Programmer cable into the DLC. Make sure the cable is plugged in completely to ensure a good connection.
3. Set the parking brake to turn off the DRLs (Daylight Running Lamps)

IMPORTANT:

- **DO NOT LEAVE THE VEHICLE WHILE PROGRAMMING IS IN PROGRESS.**
- **MAKE SURE THE VEHICLE BATTERY IS FULLY CHARGED BEFORE PROGRAMMING.**
- **THE KEY MUST REMAIN IN THE RUN POSITION, WITHOUT THE ENGINE RUNNING, DURING THE ENTIRE PROGRAMMING PROCESS.**
- **IF THE VEHICLE HAS BEEN PROGRAMMED USING ANOTHER MANUFACTURERS PROGRAMMER, YOU MUST RETURN THE VEHICLE TO STOCK PROGRAMMING BEFORE USING THE JET PROGRAMMER.**
- **DO NOT DISTURB OR UNPLUG THE CABLE UNTIL THE PROGRAMMER INSTRUCTS YOU TO DO SO.**
- **DO NOT OPERATE ELECTRICAL ACCESSORIES (RADIO, WINDOWS, WIPERS, ETC.) WHILE PROGRAMMING.**
- **IF THE VEHICLE IS EQUIPPED WITH AN ONSTAR SYSTEM, MAKE SURE THE SYSTEM IS TEMPORARILY DISABLED.**
- **DO NOT ATTEMPT PROGRAMMING WHILE THE VEHICLE IS CONNECTED TO A BATTERY CHARGER.**

4. The programmer will perform some self tests and then the following will appear on the screen:

TURN IGNTN ON, PRESS ANY KEY

5. Press **Y** to enter Programming Functions and continue with **step 6 UNLESS THE FOLLOWING MESSAGES APPEAR:**
- **“NOT FOR THIS VEHICLE”** If you get this message Call JET Customer Service
 - **“SOFTWARE NEEDS TO BE UPDATED”** If you get this message Call Jet Customer Service
 - **RESTORE FACTORY PROGRAMMING Y/N?** This message will appear after you have previously updated your vehicle with the JET Programmer, answer Y to this option to return your vehicle to its stock programming answer N to continue.

Press **N** to enter DTC Reader Functions (see page 8)

ENGINE TUNING

6. Press **Y** to install **JET EZ Programming** (The JET EZ Programming option is engineered to give you the best performance with the easiest installation. By selecting this option the JET Performance Programmer will download the most up to date JET Performance tuning software to increase horsepower and torque based on your Stage One, Two or Three Tuning selection (See page 4 for a detailed explanation of each tuning selection). In addition, automatic transmission equipped vehicles will get improved shifting patterns and increased shift firmness. JET EZ Tuning is a great choice when you want more power without the need for custom tuning.)

Press **N** to enter **Custom Programming** Options (The Custom Programming option on the JET Performance Programmer allows the user to install JET Performance Engine tuning based on your Stage One, Two or Three selection (see page 4 for a detailed explanation of each tuning selection). In addition it allows the user to select custom changes such as shift points, shift firmness, rev limits, and speed limiters based on tire ratings. If you have changed the tires or gears on your vehicle and need to correct the speedometer because of the changes this is the program you will want to use.)

Stage One Engine Tuning is the best selection for most applications. This tuning will work excellent for stock vehicles as well as slightly modified applications with aftermarket air filter, air intakes, exhaust, etc.

Stage Two Engine Tuning is engineered for vehicles with an aftermarket air intake system, cat back exhaust system and a lower temperature thermostat than installed at the factory. The Stage Two tuning may cause detonation in vehicles even with these modifications installed depending on the quality of the fuel used, if detonation occurs using the Stage One Engine Tuning will achieve better results.

Stage Three Engine Tuning is **ONLY** for applications that have an aftermarket air intake system, cat back exhaust with headers and a 160 degree thermostat. The Stage Three Engine tuning WILL cause detonation and engine damage in a stock application and should not be used unless the above modifications are met.

7. Use **Arrow keys** to scroll through the tuning options and press **Y** to select. Premium fuel must be used for your vehicle or detonation and engine damage may occur.

AUTOMATIC TRANS ? Y/N

8. Press **Y** if you have an automatic transmission; if you had previously selected **JET EZ** Programming, programming will begin immediately see **step 22**, if you are doing Custom Programming continue with **step 9**.

Press **N** if you have a manual transmission and please note the following; If you had previously selected **JET EZ** Programming, programming will begin see **step 22**, If you are doing Custom Programming continue with **step 11.5**

MODIFY SHIFT POINTS ? Y/N

This allows you to change the Wide Open Throttle (WOT) shift points in your Automatic transmission for 1-2, 2-3 and 3-4 shift points. You can select to increase or decrease your shift points based on the mile per hour you want to raise or lower the shift points. NOTE: If you raise your shift points more than 1 or 2 MPH it may be necessary to raise the RPM Limiter also.

9. Press **Y** to modify shift points and continue with step 10, Press **N** to leave shift points stock and continue with **step 11**.

10. Press **Y** to modify 1-2 shift, use **Arrow** keys to move mph up or down and press **Y** to select, do the same for 2-3, 3-4 shifts. Press **N** to leave stock.

MODIFY SHIFT FIRMNESS ? Y/N

11. Press **Y** to increase shift firmness, Press **N** to leave the shift firmness stock and continue with **step 12**.

DISABLE CAGS ?Y/N

This allows you to disable the 1-4 Skip Shift feature that is installed from the factory on some manual transmission applications.

- 11.5 Press **Y** to Disable, Press **N** to leave stock and continue with **step 12**. **NOTE: This option will only appear if you selected Manual transmission.**

MODIFY RPM LIMITER ? Y/N

This allows you to change the Factory programmed RPM limiter in your vehicle by increasing the limit 100 RPM at a time up to the maximum change of 800 RPM. As noted in the shift point section it may be necessary to change this if you change the shift points.

12. Press **Y** to modify RPM limiter and continue with **step 13**. Press **N** to leave RPM limits stock and continue with **step 14**.
13. Press **Arrow** keys to select RPM limit change and press **Y**.

MODIFY SPEED LIMITER ? Y/N

This allows you to modify the factory speed limit that is programmed into your computer. Most vehicles have speed limiters based on the tires that are installed on the vehicle from the factory. Each tire has a speed rating that is indicated by a letter designation. For your safety and the safety of others never exceed the speed rating on your tires or the posted legal speed limit at any time. The user assumes any and all responsibility for modifying the speed limiter. In the case where a reduced speed limiter is required, JET has included the option to lower the speed limiter.

14. Press **Y** to Modify Speed Limiter and continue with **step 15**. Press **N** to leave stock and continue to **step 16**.
15. Press **Arrow** Keys to modify speed limiter based on tire rating and press **Y**.

MODIFIED TIRE SIZE ? Y/N

Use this selection to fix your speedometer and shift points if you changed your tire size. You can select from 24 to 30 inch tire sizes in half inch increments.

16. Press **Y** to correct for tire size changes and continue with **step 17**. Press **N** for no changes and continue with **step 18**.
17. Press **Arrow** Keys to select correct tire size and press **Y**.

MODIFY GEAR RATIO ? Y/N

Use this selection if you have changed the gear ratio in the differential. The selections include both factory and aftermarket gear ratios that may or may not be available for your vehicle.

18. Press **Y** to correct for gear ratio changes and continue with **step 19**. Press **N** for no changes and continue with **step 20**.
19. Press Arrow Keys to select correct gear ratio and press **Y**.

MODIFIED THERMOSTAT ? Y/N

This allows you to modify the Fan Turn On temperature based on the temperature of your thermostat. We have included selections for Stock, 195 Degree, 180 Degree and 160 Degree Thermostats.

20. Press **Y** to change fan Turn On temps for modified thermostat and continue to **step 21**, or Press **N** for no changes and continue to **MODIFY CHOICES**.
21. Press Arrow Keys to select correct thermostat temperature and press **Y**.

MODIFY CHOICES ? Y/N

This allows you to go back and modify any choices you have made before programming begins, if you select **Y** you will be returned to the beginning of the choices to change or confirm your selections. If you select **N** programming will begin.

22. Programming has begun, **do not disturb the cable, key position or operate anything in the vehicle during the programming process.**

NOTE: During programming, vehicles equipped with driver information centers will display various service messages - these are nothing to be concerned about and will go away when programming is complete.

23. When programming is complete, the Programmer will display Programming Complete, turn the ignition off and unplug the cable from the Data link connector (DLC).
24. That's It! Programming is now complete. Please store your Jet Performance Programmer in a safe dry place in its original packaging, You will need the programmer in the future to return your vehicle to stock or modify your settings.
25. If you had to previously disable your On Star system or install the JET/GM programming adaptor, reinstall the fuses that you removed to the correct locations and/or reinstall the factory connectors.
26. Start the vehicle and verify that the service engine light is **NOT** on. If your vehicle will not start, see below for details on what to do if your vehicle won't start after programming.
27. **NOTE: Some vehicles may run poorly for the first few minutes after programming, poor idle quality will be the most noticeable issue. This will go away in a short period of time and is nothing to be concerned about.**

What To Do If Your Vehicle Won't Start After Programming

In some vehicles with the Vehicle Anti-Theft System (VATS), the programming process will set an error in the VATS module which will prevent vehicle from starting. To clear this error disconnect the ground (-) cable from your battery for one half hour. Then reconnect the ground cable to the battery and start the vehicle.

JET DATA TROUBLE CODE READER INSTRUCTIONS

The JET Performance Programmer also functions as a Data Trouble Code (DTC) reader for GM OBDII equipped vehicles. This allows the user to read and clear any stored data trouble codes in the system.

We have included a list of DTC's so you will know what code is stored in your vehicle. (This list may or may not include all available codes for all vehicles. Check a factory repair manual for your vehicle.)

Please NOTE: The DTC reader included in the JET Performance Programmer is not designed to be a complete scan tool or a diagnostic device. It is included as a convenience only. The interpretation of these codes and their effects are best left to an experienced automotive technician. **The JET technical department WILL NOT help you interpret or diagnose any codes, please see your local dealer or technician.**

Connecting the JET Programmer DTC code reader:

1. Locate the Data Link Connector (DLC) under the driver's side of the dash panel.
2. Plug the Programmer cable into the DLC. Make sure the cable is plugged in completely to ensure a good connection.
3. The programmer will perform some self tests and then the following will appear on the screen.

TURN IGNITION ON PRESS ANY KEY

Now turn the ignition key to the **RUN** position but **do not start** the vehicle and the following screen will appear:

Y PROGRAMMING

N DTC READER

4. Press N to continue to the DTC reader function of the JET Programmer and the following screen will appear:

GET DTCS Y/N

5. Press Y to continue and get DTC's or N to continue to the clear DTC's screen.

If you selected **Y** and there are any **DTC's** stored in the system they will be displayed in numerical order, use the arrow keys to scroll through any stored codes. If no **DTC's** are found the message on the screen will read **NO DTCS** stored. You can press any key to continue to the **CLEAR DTCS** screen.

Press **N** and the programmer will return to the starting screen..

6. If there are **DTC's** stored and you want to clear them continue to the **CLEAR DTCS Y/N** screen and select **Y**.

1999-2004 CORVETTE SPECIAL INSTRUCTIONS

JET PROGRAMMING ADAPTOR INSTALLATION INSTRUCTIONS

Programming a Corvette requires the use of a programming adaptor that is included with the JET Programmer. (see photo 1)



Photo 1

The adaptor needs to be installed into a wiring harness connector so the JET Performance Programmer can communicate properly with the vehicle. The adaptor effectively disables the communications between the PCM and other computers in the vehicle during the programming process. This adaptor **MUST** be used anytime you are programming a Corvette.

INSTALLATION:

1. Remove the passenger side floor mat. (see photo 2)



Photo 2

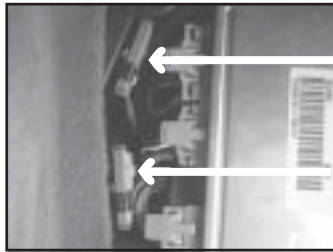
2. Locate the passenger kick panel as shown. (see photo 3)



Photo 3

3. Lift the latches that retain the kick panel and pull it forward from the top of the panel.

4. Locate the two connectors located to the left nearest the center of the car.
(see photo 4)



CONNECTOR

Photo 4

CONNECTOR

5. Remove the caps from both of the connectors as shown. (The connectors may or may not have tape on them as shown. If so remove the tape). To unplug pull up on both sides of the connectors as shown. (see photos 5 & 6)



Photo 5



Photo 6

6. Plug the JET Programming adaptor into the bottom (lower) connector as shown. The side with the two pins goes to the bottom of the connector as shown. (see photo 7)



Photo 7

NOTE: If during the programming process you get an error message “No Communication” from the JET Programmer you will need to turn the ignition off and unplug the JET Programmer from the DLC connector. Remove the adaptor from the bottom connector and move it to the upper connector. The reason for this is that some vehicles have the connectors reversed from the factory. After reinstalling the adaptor, start the programming process over.

7. Go back to the start of the programming instructions and follow the step by step procedures for installing JET Performance tuning in your Corvette.
8. After the programming is complete, follow the onscreen instructions on the JET Programmer. Unplug the programmer from the car.
9. Remove the programming adaptor from the harness and reinstall the two Caps that you removed previously. Make sure the caps are seated and snapped into place.
10. Reinstall the kick panel and floor mat. **DO NOT lose the programming adaptor.** You will need it anytime you program your Corvette.

DISABLING THE ON STAR/AUDIO SYSTEM IN 2004-2005 CADILLAC CTS-V APPLICATIONS

Programming a CTS-V that is equipped with the On Star System requires the removal of the **AUDIO** fuse.

The fuse needs to be removed during the programming process so the JET Performance Programmer can communicate properly with the vehicle. Removing the fuse effectively disables the communication system so there is no interference from the system during the programming process. This fuse **MUST** be removed anytime you are programming a CTS-V with On Star.

INSTALLATION:

1. To gain access to the fuse panel in a CTS-V you must remove the rear seat cushion (see photo 1). To remove the seat, lift up on the front of the seat to release the front locks. Pull the seat forward and remove it from the vehicle.



PHOTO 1

2. Locate the fuse panel as shown. It is located on the drivers side under the carpet (see photo 2).



FUSE PANEL COVER
PHOTO 2

3. Push the latches that retain the fuse panel cover and lift the cover off of the panel to gain access to the fuses (see photo 3).



PHOTO 3

4. Locate the fuse labeled **AUDIO** in the fuse panel as shown (see photos 4 & 5).



PHOTO 4



PHOTO 5

5. Remove the AUDIO fuse from the fuse panel and return to the start of the programming instructions and follow the step by step procedures for installing JET Performance tuning in your CTS-V.
6. After the programming is complete, follow the onscreen instructions on the JET Programmer. Unplug the programmer from the car.
7. Reinstall the AUDIO fuse and the fuse panel cover.
8. Reinstall the rear seat making sure you guide the seatbelts through the slots in the cushion and align the rear locks and the front locks for the seat.



WHAT TO DO BEFORE TAKING YOUR VEHICLE IN FOR SERVICE

If a problem occurs that may require you to take your vehicle to a mechanic or dealership for service, first remove the JET Program and program back to stock. If the problem goes away when you remove the JET Performance Product, call JET and we will troubleshoot the product. However, if returning to stock does *not* cure your problem, there is nothing wrong with your JET Performance Product and you will need to have your vehicle serviced.

Anytime a diagnostic machine is to be used, the vehicle must be back to stock. Diagnostic machines expect to find the original stock program and often cannot correctly analyze the problem if other devices are installed. Failure to reinstall your system back to stock can result in unnecessary and costly repairs not covered by JET. Before you have any work done on the vehicle that you feel may have been related to the JET Programmer, please call JET at 714-848-5515.

Limited Warranty

JET Performance Products warrants Chips, Modules and Programmers to be free from defects in material and workmanship under normal use and if properly installed. This 2 year warranty is to the original purchaser, provided all information requested is furnished. If found to be defective as mentioned above, it will be replaced or repaired at the sole discretion of JET if returned prepaid along with proof of date of purchase.

All other products and services performed by JET are warranted in defects in material and workmanship for a period of 6 months from date of purchase. This warranty is to the original purchaser for as long as he or she owns the vehicle on which the product was originally installed. Repair, Replacement, or Credit will be based on the date of purchase. Costs for labor are specifically excluded and are the sole responsibility of the purchaser.

This warranty does not apply to Custom Programming or any product incorrectly installed, modified by the purchaser, or to any product that has been subjected to misuse, negligence or accident.

To obtain warranty service and Return Authorization Number, contact our Customer Service Department at 714-848-5515 between 8 am and 5 pm Pacific Standard Time, Monday through Friday.

Defective Products may be brought or sent prepaid (with Return Number) to JET Performance Products, 17491 Apex Circle, Huntington Beach, CA 92647.

Consumer Bill of Rights

The installation and use of the product does not void the new-vehicle warranty nor should it be cause for the vehicle to fail an emissions test. Notify the product manufacturer if either of these situations occur. If you are unable to adequately resolve either situation with the vehicle manufacturer, you may contact the Environmental Protection Agency (EPA) at 202-233-9040, if the vehicle manufacturer fails to honor emission-warranty claims, or the Federal Trade Commission (FTC) at 202-326-3128, if federal protection is denied.

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