Superchips Model 3705 MAX MicroTuner
1998½ -2002 Dodge Ram with
5.9L 24 Valve Cummins Diesel Engine
Vehicle Programming Instructions

PLEASE READ THIS ENTIRE INSTRUCTION SHEET BEFORE YOU PROCEED

Thank you for choosing the Superchips Model 3705 MAX MicroTuner, a state-of-the-art instrument that allows you to install a Superchips performance program specifically tuned for your Dodge-Cummins diesel truck and your driving requirements.

You can select between "HI-PERF" for maximum horsepower gain, "PERF-TOW" when you are towing less than 6000 lbs, and "TOW-SAFE" if you are towing more than 6000 lbs.

The Model 3705 MAX MicroTuner is intended for use <u>on unmodified stock engines</u>. Remove any performance enhancing electronic devices and make sure the PCM has been returned to STOCK if you have used another manufacturer's programmer before using the MAX MicroTuner.

Caution
Towing while the "HI-PERF" tuning level is selected may cause damage to your transmission or exhaust system that is not covered by your vehicle warranty or the Superchips warranty.

About Maximum Trailer Weight
The original manufacturer of your vehicle has specified a Maximum Trailer Weight for your vehicle. It may be found in your vehicle owner's manual.

This Superchips product is designed to increase your engine power and performance. It does not change the engine, suspension or drive train characteristics that limit the maximum trailer weight your vehicle is designed to tow. Towing trailer weights above the maximum trailer weight specified by the vehicle manufacturer may cause transmission or other damage.

If you wish to tow greater than the maximum trailer weight for your vehicle, modifications to your vehicle may need to be made. Consult your performance auto mechanic for the proper vehicle modifications.

Damage caused by towing weights greater than the maximum trailer weight specified for your vehicle shall not be the responsibility of Superchips, Inc.

Important Note Regarding Storage of Your MAX MicroTuner
It is recommended that you not store your MAX MicroTuner in your vehicle if ambient temperatures in your area fall below 32°F. Excessively low temperatures can cause malfunction or damage to the MAX MicroTuner that is not covered by the Superchips, Inc. warranty.

Refund Policy

If for any reason during the first thirty (30) days after your purchase of a new Superchips product ("Product"), you may return it to the place you bought it for a full refund of the purchase price, credit or a replacement Product at the dealer's discretion. This Guarantee does not apply to products purchased from auctions nor does it apply to Products purchased used. Follow these procedures to get your refund or replacement.

1. If you are returning a MicroTuner or Flashpaq, use the MicroTuner or Flashpaq to return your vehicle to the stock settings for the vehicle. Instructions are included in the user manual.
2. Put the Product back in its original packaging.
3. Make a copy of your sales receipt. The sales receipt must be from the location where you purchased your Product and must include the name of the business, its address, and the part number or description of the applicable Superchips Product. Invoices, credit card statements, or sales receipts from an online payment service company will not be accepted.
4. Return the Product in its original packaging with a copy of the sales receipt to the place of purchase.

Superchips, Inc.
Limited Warranty

What is Covered? This warranty covers any defects in materials or workmanship in any product sold by Superchips or its affiliates through its authorized dealers ("Product"). Warranty is valid only for new products purchased through Authorized Dealers; (Proof of purchase is required for all warranty claims).

How Long Does the Coverage Last? This warranty lasts for one (1) year from the date of purchase. Coverage terminates if you sell or otherwise transfer ownership of the Product.

What will Superchips Do? Superchips will repair or replace the defective or malfunctioning Product or any defective or malfunctioning part thereof at no charge. This warranty covers parts and labor only. Superchips will reimburse you for all reasonable shipping charges within the first thirty (30) days of purchase.

What Does This Warranty Not Cover? This warranty does not cover any problem that is caused by abuse, misuse, acts of God, or improper installation or repair by non-Superchips personnel. This warranty does not cover Products purchased used nor does it apply to Products purchased from auctions or entities that are not Superchips' authorized dealers. This warranty does not cover damage to your vehicle. Use of the Product to change the performance characteristics of your vehicle could invalidate the warranty provided by the vehicle manufacturer. Consult your vehicle warranty before using the Product on your vehicle. **SUPERCHIPS SHALL NOT BE LIABLE TO YOU FOR ANY CONSEQUENTIAL, SPECIAL, OR INCIDENTAL DAMAGES. SOME STATES DO NOT ALLOW THE EXCLUSION OR LIMITATION OF INCIDENTAL OR CONSEQUENTIAL DAMAGES, SO THE ABOVE LIMITATION OR EXCLUSION MAY NOT APPLY TO YOU.**

How Do You Get Service? If something goes wrong with your Product during the warranty period, use the following procedure to return the Product to Superchips.

1. Call Superchips' Customer Service at 1-888-227-2447 Monday through Friday from 8:00 am to 5:00 pm EST to request a Return Authorization ("RA") number.
2. Mark the outside of the shipping package with the RA number. Packages that are not marked with the RA number will be refused.
3. Make a copy of your sales receipt. The sales receipt must be from the location where you purchased your Product and must include the name of the business where you purchased the Product and the address of such business. Invoices, credit card statements, or sales receipts from an online payment service company will not be accepted.
4. Send the Product, postage paid, the copy of the sales receipt, a brief written description of the problem, and your contact information to:

Superchips, Inc.
1790 East Airport Blvd
Sanford, FL 32773
Attn: Warranty Claims

We will inspect the Product and either repair it or replace it with a new or rebuilt Product. We reserve the right to use refurbished parts when making repairs.

Your Rights Under State Law: This warranty gives you specific legal rights, and you may also have other rights which vary from state to state.

Your Vehicle's STOCK Program
<u>Your vehicle computer must contain the manufacturer's STOCK factory program</u>. If you have used a programmer from another aftermarket company you must use their product to return your computer back to STOCK condition before proceeding. If you have a performance-enhancing chip installed, it must be removed.

Your Vehicle and Service Centers
If you need to return your vehicle to a service center, restore the vehicle program to its STOCK program as described below. The service center might reprogram your vehicle with an updated STOCK program without your knowledge. If your vehicle has not been returned to its STOCK program prior to service, the Superchips MAX MicroTuner will no longer be able to program your vehicle. Such a failure is not covered by the Superchips warranty.

Vehicle Preparation
Before connecting the MAX MicroTuner to your vehicle, make sure that all power-draining accessories are turned off. Radio, lights, cell phones, etc., all need to be turned off as the MAX MicroTuner needs full battery voltage to program. Ensure your vehicle battery is fully charged and not connected to a battery charger. Do not leave the MAX MicroTuner connected and unattended for any length of time to prevent unnecessary battery drain. Do not remove the programming cable during any programming sequence.

The MAX MicroTuner is intended for use on STOCK vehicle. Remove any performance enhancing electronic devices and make sure the PCM has been returned to STOCK if you have used another manufacturer's programmer before using the MAX MicroTuner.

1.   Connecting the MAX MicroTuner to your vehicle
With the ignition switch in the OFF position, locate the diagnostic connector under the dash near the steering wheel and connect the MAX MicroTuner cable to the diagnostic connector. (See Figure 2)

When connected, the MAX MicroTuner will run a self-test, displaying several start-up messages. Following the start up messages, <u>if the MAX MicroTuner has been previously used to program a vehicle, the MicroTuner will beep and display</u>:

Figure 2

MicroTuner is
VIN Locked

This indicates the MAX MicroTuner has been previously used to program a vehicle and can not program another. The MAX MicroTuner will continue to operate normally on the original vehicle and may be used as a DTC Reader on other Dodge or Chrysler vehicles.

In the event of an error during a programming sequence, the MAX MicroTuner will attempt to *Recover* the vehicle to the original stock program. The MAX MicroTuner will display a message that says

Locked Recovery
Mode Press '>'

Press the '**>**' key to continue. See *Recovery Procedure* at Section 11 for specific instructions.

If recovery is not required, the MAX MicroTuner displays the following message:

Begin with Ign.
OFF Press '>'

Insure the ignition switch is OFF, then press the '**>**' key on the keypad.
The MAX MicroTuner displays the following messages:

Turn Ignition ON
Do NOT START Eng

Turn Ignition ON
Press '>' …

Turn the ignition switch to the ON position and then press the '**>**' key on the keypad.

2.   Selecting Tune Vehicle / Diagnostics
The MAX MicroTuner will beep and display the message:

A= Tune Vehicle
B= Diagnostics

Press the 'A' key on the keypad to continue with the tuning process.
Press the 'B' key to read and/or clear any Diagnostic Trouble Codes from the vehicle. See *DTC Reader Instructions and DTC Code Interpretation* in the separate manual provided for that purpose with your MAX MicroTuner.

3.   Vehicle Programming
Press the 'A' key on the keypad. The MAX MicroTuner will beep and display the message:

Establishing
Communications

The MAX MicroTuner is establishing communications with and identifying the vehicle computer. If the MAX MicroTuner has not yet been used to program a vehicle, no vehicle ID will be stored in the MAX MicroTuner. If the vehicle ID matches a stored vehicle ID, the MAX MicroTuner will go directly to the *Return to Stock* at Step 10 that follows.

If the vehicle ID does not match a stored vehicle ID, the MAX MicroTuner will beep and display the messages:

Not the Original
Vehicle/Program

Call Superchips!

Press '>' to
Continue...

Pressing the '>' key will cause the MAX MicroTuner to return to the *Selecting Tune Vehicle / Diagnostics* at Step 2.

If the vehicle ID matches the stored vehicle ID, MAX MicroTuner will beep and display the message:

Initializing
Please Wait...

Once the MAX MicroTuner has established communications, it will beep and display the message:

Turn Ignition
OFF Press '>'

Turn the ignition to the OFF position, then press the '>' key. The MAX MicroTuner will beep and display the following message:

Please Wait…

After initialization is complete, the MAX MicroTuner will beep and display the message:

Turn Ignition ON
Do NOT START Eng

Turn the ignition to the ON position, DO NOT ATTEMPT TO START the vehicle.

The MAX MicroTuner checks to see if the stock program it has identified can be found in its internal database. If it is not in the database but the application is supported, it will display the message:

Tuner Requires
an Update…

Call Superchips!

Press any key to
continue...

Please call Superchips Customer Service to have your product updated. Press any key; the MAX MicroTuner will then continue to *End of Programming & Exit Sequence* at Step 9 to insure correct vehicle operation.

If the vehicle stock program is not in the database and the application is NOT supported, the MAX MicroTuner will display the message:

Check Vehicle
Application

Call Superchips!

Press any key to
continue...

Please call Superchips Customer Service to check to see if support for your application has been added. Press any key; the MAX MicroTuner will continue to *End of Programming & Exit Sequence* at Step 9 to insure correct vehicle operation.

If the MAX MicroTuner has correctly located your stock program, the MAX MicroTuner will continue to Step 4.

4.   Installing the Superchips Performance Program
The 3705 MAX MicroTuner allows for three levels of performance tuning.

The "**HI-PERF**" tuning level provides the most aggressive performance gains. This level of performance permits ***No Towing !***

The "**PERF-TOW**" tuning level provides engine and transmission tuning enhanced for towing applications. The "PERF-TOW" tuning level should be selected when your vehicle is used for towing less than 6,000 lbs.

Caution
Towing while the "HI-PERF" tuning level is selected may cause damage to your engine, transmission or exhaust system that is not covered by your vehicle warranty or the Superchips warranty.

Use the "**TOW SAFE**" tuning level if towing over 6,000 lbs. Maximum trailer weight of a stock vehicle is specified by the original manufacturer. Towing loads greater than this may cause elevated exhaust gas temperatures and may damage the vehicle. Damage caused by towing weights greater than the maximum trailer weight specified for your vehicle, or EGT in excess of 1200°F shall not be the responsibility of Superchips, Inc. See the important insert regarding "Maximum Trailer Weight" in the packaging materials for your MAX MicroTuner for more information.

The MAX MicroTuner will Display the following:

Tuning Level:
xxxxxxxx

Pressing '<' and '>' on the keypad changes the tuning level setting.
Pressing 'YES' on the keypad saves the indicated tuning level setting.

If you use a "winter blend' fuel for low temperature operation, you may experience a starting problem when the vehicle is re-started when the engine is warm. If a "cold start" tune is available for your vehicle, when you press 'YES' the MAX MicroTuner will display the prompt:

Truck Driven in
Subzero temp Y/N

Press the 'YES' key to indicate that you commonly operate the vehicle in subzero temperatures and are using a 'winter blend' fuel. This "cold start" tune affects only the starting characteristics of your vehicle and does not otherwise change the tuning you have selected.

Selecting the Tuning Level
If "HI-PERF" tuning is selected, the MAX MicroTuner beeps once and displays:

Towing a Trailer
YES or NO

If the 'YES' key is pressed to indicate you plan to tow with the vehicle, the MAX MicroTuner beeps and displays:

Can't Tow using
HI-PERF Tuning!

Press >
to Continue…

If "PERF-TOW" tuning is selected, the MAX MicroTuner beeps once and displays:

Towing Over 6000
lbs? YES or NO

If the 'YES' key is pressed to indicate you plan to tow over 6000 lbs, the MAX MicroTuner beeps and displays:

Use Tow Safe
Only

Press >
to Continue…

Pressing '>' will then restart tuning selection.

5.   Editing the Custom Options Settings
All options selected will be saved in memory in case additional adjustments are needed. The MAX MicroTuner will beep and display the keys to use while editing the Custom Option settings.

Note
Keep the ignition **ON** while choosing options.

The MAX MicroTuner will beep and display the message:

Edit Custom
Opts? YES or NO

Press 'YES' to make changes to the Custom Option Settings.
Press 'NO' to bypass the Custom Options and go directly to *Viewing the Option Settings* at Step 6 that follows.

Adjust = < or >
Save = YES

Press Any Key
to Continue

Pressing '<' and '>' on the keypad adjusts the Custom Option setting.
Pressing 'YES' on the keypad saves the Custom Option setting.

Editing the Tire Height Option Setting
The Tire Height Option allows the user to correct the Speedometer/Odometer when tires other than stock size are installed. The Tire Height Option allows the user to set the Tire Height to STOCK or to 24.0 - 38.0 inches in 1/4-inch intervals. Tire height should be measured from the top of the tire to the ground at its highest point.

The MAX MicroTuner will beep and display the message:

Adjust tire
height? YES/NO

Press 'NO' and the MAX MicroTuner will continue to the *Viewing the Options Settings* at Step 6.
Press 'YES' and the MAX MicroTuner will beep and display the keys to use while editing the Tire Height Option setting:

Adjust = < or >
Save = YES

Press Any Key
to Continue

Pressing '<' and '>' on the keypad adjusts the Custom Option setting.

Pressing 'YES' on the keypad saves the Custom Option setting.

Press any key on the keypad to continue. The MAX MicroTuner will beep and display the message:

Stock Hght XX.XX   (xx.xx is Stock Tire Height)
>Up <Down Yes

Press '<' or '>' to select the Tire Height setting. Once a tire height change has taken place the MAX MicroTuner will display the message:

Tire Hght XX.XX   (xx.xx is Tire Height)
>Up <Down Yes

Press 'YES' to save the Tire Height Option setting.

6.   *Viewing the Options Settings*
The MAX MicroTuner will beep and display the message:

View Custom
Opt? YES or NO

Press 'YES' to view the present Custom Option Settings.

The MAX MicroTuner will beep and display the message:

Press Any Key
to Continue...

Press any key on the MAX MicroTuner keypad. The Custom Options current settings will be presented in order. Press any key to view the next Custom Option setting.

Press 'NO' to continue without viewing the Custom Option Settings.

Accepting the Options Settings
The MAX MicroTuner will beep and display the message:

Accept Custom
Opts? YES or NO

Press 'NO' to return to the *Installing the Superchips Performance Program* at Step 4.
Press 'YES' to accept the options and continue.

The MAX MicroTuner will beep and display the message:

Please Wait…

After a brief wait The MAX MicroTuner will beep again and display the message:

Install Tuning?
YES or NO

Press 'YES' to continue with the programming process at Step 8.

Press 'NO' to not apply any changes to your vehicle. The MAX MicroTuner will then continue to *End of Programming & Exit Sequence* at Step 9 to insure correct vehicle operation.

IMPORTANT NOTE
Do not interrupt the MAX MicroTuner programming cycle or disconnect it from your vehicle until the programming cycle is complete. The entire programming cycle can take several minutes.

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7.   *Programming Section*
The MAX MicroTuner will beep and display the message:

Ready to Install
New TUNING

Important! Leave
the IGNITION ON

Press '>'
to Continue…

Press the '>' key. The MAX MicroTuner will beep and display the following message:

Install Tuning
*****

The bottom line of the display shows the programming progress. During programming, the "Wait to Start" light will flash and that this is normal.

Once the programming sequence has been successfully accomplished on a vehicle, the MAX MicroTuner becomes LOCKED to that vehicle. The MAX MicroTuner may not be used to tune any other vehicle. The MAX MicroTuner may be used on other Dodge or Chrysler vehicles as a DTC Reader.

The MAX MicroTuner will then continue to *End of Programming & Exit Sequence* at Step 9 to insure correct vehicle operation.

8.   End of Programming & Exit Sequence
When the programming sequence is completed the MAX MicroTuner beeps and will display:

Turn IGN OFF
Press '>'

Turn the ignition to the OFF position. ***Do not disconnect the MAX MicroTuner from the vehicle.*** Press the '>' key. The MAX MicroTuner will beep and display the following message:

Please Wait …

The MAX MicroTuner will begin to re-initialize. After initialization is complete, the MAX MicroTuner will beep and display the message:

Turn IGN ON
Do NOT START

Turn the ignition to the ON position. The MAX MicroTuner will blink the following message:

Please Wait…
Do NOT Remove!

At this time, if a speedometer correction needs to be installed, the MAX MicroTuner will blink the following message:

Adjusting Speedo
Please Wait…

Once the speedometer programming is complete, the MAX MicroTuner will display:

Adjusting Speedo
Complete!

If the Superchips Performance Program has been installed, the MAX MicroTuner will beep and display the following messages:

TUNING Installed
Turn Ign OFF

Remove the
MAX Tuner…

Press '>'
To Continue …

If the Stock Program was re-installed, the MAX MicroTuner will beep and display the following messages:

Stock Installed
Turn Ign OFF

Remove the
MAX Tuner…

Press '>'
To Continue …

Press '>' to return to *Selecting Tune Vehicle / Diagnostics* at Step 2 or turn the ignition OFF and remove the cable from the diagnostic port.

9.   Return to Stock Sequence
The *Return to Stock Sequence* is used to reprogram a vehicle previously tuned with the Superchips MAX MicroTuner with a copy of its original stock tuning. Follow the steps described in *Connecting the Superchips MAX MicroTuner to Your Vehicle* at Step 1.

Following the typical start up messages, if the MAX MicroTuner has been previously used to program a vehicle, the MAX MicroTuner will beep and display:

MicroTuner is
VIN Locked

This indicates the MAX MicroTuner has been previously used to program a vehicle. It should not be used program another vehicle. The MAX MicroTuner will continue to operate normally on the original vehicle.

Turn the ignition switch to the ON position. Press the '>' key on the keypad.

The MAX MicroTuner will beep and display the message:

A= Tune Vehicle
B= Diagnostics

Press the 'A' key on the keypad to continue with the tuning process.
Press the 'B' key to read and/or clear any Diagnostic Trouble Codes.

If the 'A' key is pressed, the MAX MicroTuner will beep and display the message:

Initialization…
Please Wait…

After establishing communications, the MAX MicroTuner will display the following message:
RETURN to STOCK?
YES or NO

If 'NO' is pressed, the MAX MicroTuner will return to *Installing the Superchips Performance Program* at Step 4.

If the 'YES' key is pressed when the MAX MicroTuner will beep once and display the following message:

Ready to Return
To Stock

Important! Leave
the IGNITION ON

Press '>'
to Continue…

Press '>' and the MAX MicroTuner will beep once and erase the present program. The MAX MicroTuner will blink the following message:

Erasing Present
Program...

After the program has been erased, the MAX MicroTuner will blink the following message:

Return to STOCK
******

The bottom line of the display shows the progress of the programming sequence. During programming, the "Wait to Start" light will flash and that this is normal.

When the programming sequence is completed the MAX MicroTuner beeps and will display:

Stock Restored
Press '>'…

Press '>' and the MAX MicroTuner will then continue to *End of Programming & Exit Sequence* at Step 9 to insure correct vehicle operation..

10.   Recovery Procedure

In the event of an error during a programming sequence, the MAX MicroTuner will attempt to recover the vehicle to the original stock program. It is necessary to follow the screen prompts requiring multiple "Ignition OFF" and "Ignition ON" sequences, to correctly return the vehicle to stock settings.

Unplug the cable from the vehicle diagnostic port. With the ignition key in the OFF or LOCKED position, plug the MAX MicroTuner into the vehicle diagnostic port once again. If an error in programming was detected by the MAX MicroTuner, after the initial screen prompts, The MAX MicroTuner will display the following message:

> **Locked Recovery**
> **Mode Press '>'**

Press the '**>**' key to continue. The MAX MicroTuner will then display the prompt:

> **Please Read Inst**
> **Manual Press '>'**

The prompt is referring to this Section in the instructions. Press the '**>**' key to continue. The MAX MicroTuner will then display the following messages:

> **Attempting Stock**
> **Recovery!!**
>
> **Turn Ignition**
> **OFF Press '>'**

To be sure that the recovery process continues correctly, turn the ignition switch to the OFF or LOCKED position and remove the key. Press the '**>**' key to continue. The MAX MicroTuner will then flash the prompt:

> **Please Wait…**

After a short delay the MAX MicroTuner will then flash the prompt:

> **Remove ENG Ctrl**
> **Fuses from PDC**

The Power Distribution Center (PDC) is a fuse box located under the hood attached to the fender on the driver's side of the vehicle. Figure 3 shows the diagram that is printed on the cover of the PDC. Remove the cover and use the diagram to locate two fuses labeled <u>ENG CONT 1</u> and <u>ENG CONT 2</u>. Remove these fuses. Keep them available for re-installation in a short while.

When the MAX MicroTuner has detected the removal of the fuses, it will flash the display:

> **Please Wait…**

After a delay of <u>30 seconds</u>, the MAX MicroTuner will then flash the prompt:

> **Replace ENG Ctrl**
> **Fuses in PDC '>'**

Replace the fuses into the same locations from which they were removed. Replace the cover on the PDC.

Figure 3

Press the '**>**' key to continue. The MAX MicroTuner will again flash the display:

> **Please Wait…**

When the MAX MicroTuner has detected the replacement of the fuses, it will then display the prompt:

> **Turn Ignition ON**
> **Do NOT START Eng**

When the MAX MicroTuner has sensed that the ignition has been turned on, it will begin returning the vehicle to Stock condition. The MAX MicroTuner will blink the following message:

> **Erasing Present**
> **Program...**

After the program has been erased, the MAX MicroTuner will blink the following message:

> **Return to STOCK**
> **********

The bottom line of the display shows the progress of the programming sequence. When the programming sequence is completed the MAX MicroTuner beeps and will display:

> **Stock Restored**
> **Press '>'…**

Press '>' and the MAX MicroTuner will then continue to *End of Programming & Exit Sequence* at Step 9 to insure correct vehicle operation.

Error Notification

In the event recovery is successful and you are able to start your vehicle, you may now attempt to use the MAX MicroTuner to program your vehicle again. Follow the on-screen prompts. If recovery is unsuccessful, or for any reason the MAX MicroTuner fails to complete its programming cycle, an error message will be displayed on the unit. Please make note of the message displayed and contact Superchips Customer Service. If you need assistance please contact your local dealer or call Superchips Customer Service at (407) 585-7000, M-F 8:00 AM till 5:00 PM. EST.