

## SymTech FCD Installation Instructions (420A):

Locate the MAP sensor on the left hand side of the intake manifold: there are three wires coming from the sensor; a yellow/black wire, a black wire, and a green/yellow striped wire. The yellow/black wire will need to be cut and spliced, and the black and green/yellow wires will need to be tapped.

You will also need to locate a switched +12V source; wires for this can be found throughout the engine bay and interior - where you tap into this depends on where the FCD will permanently be mounted. If in doubt when choosing a wire, use a multimeter to test voltages.

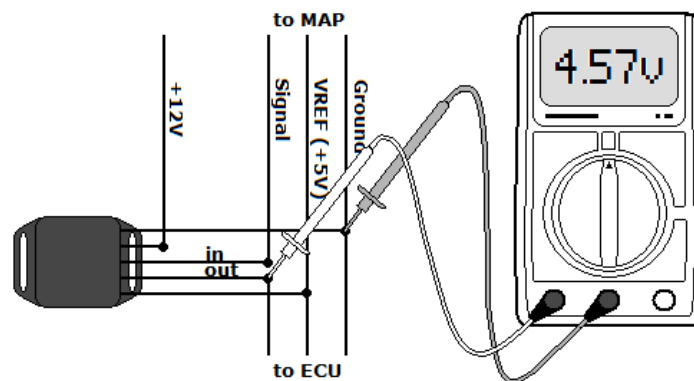
The wire connections are fairly straight forward. Crimp style and blade-type connections will work fine, but solder and heat shrink tubing is better.

Begin by cutting the yellow/black wire from the MAP sensor. Connect the yellow wire on the FCD, ("IN") to the side of the signal wire closest to the MAP sensor. The orange wire ("OUT") connects to the side of the signal wire leading to the ECU. The black wire (ground) needs to tap into the black wire from the MAP sensor. The red wire ("Vref +5V") taps into the green/yellow Vref wire coming from the MAP and, finally, the green wire ("+12V") taps into the nearest switched 12V source.

Keep the FCD unit as far away from engine heat as possible: a cooler spot of the engine bay (i.e. above the cruise control unit) will work, but the interior of the car is ideal. The resistors are temperature sensitive, and extreme heat may compromise precision. The unit will resist engine chemicals and fluids, and mild heat.

After you have the FCD installed and situated, you may choose to fine tune it. Remove the cover on the FCD, and you will find a small trimmer on the board that can be adjusted using an electronics screwdriver or otherwise. There is no special formula for tuning the FCD, as each car is different and each owner may want to set the maximum voltage to different levels.

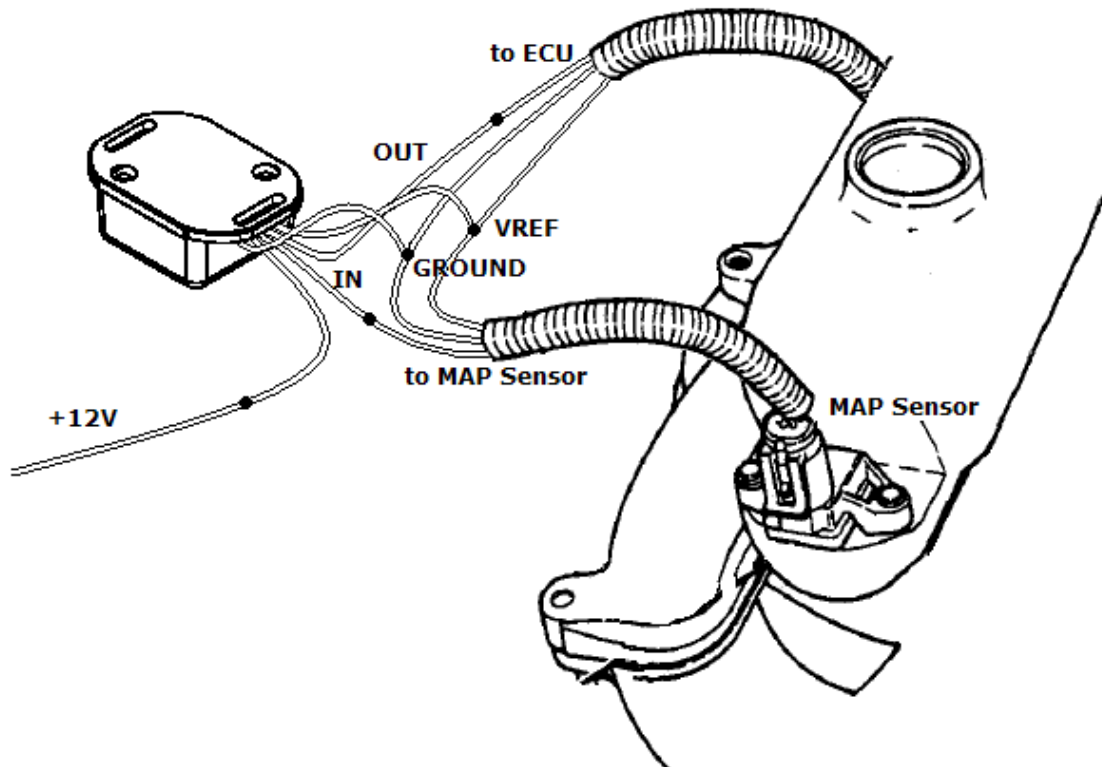
There are two methods to fine tune a SymTech FCD. The first is to turn the key to the "on" position, while the car is off. You will need to pressurize the intake manifold/tract to at least 1-2 psi. Using a multimeter (with the positive lead connected to the FCD output and the negative lead connected to ground), measure the output voltage. Adjust the trimmer until the voltage reads 4.70V or lower.



The vehicle can also be driven, while periodically stopping and adjusting the trimmer until all fuel cut is eliminated.

The CEL may or may not appear. If you live in a state that does emissions testing, you can temporarily bypass the FCD to suppress a CEL. To bypass the FCD, simply run a jumper wire (gauge 22 wire or larger) between the orange and yellow wires of the FCD. This will effectively take the FCD out of the MAP/ECU signal loop, and it should prevent any CEL codes from recurring after resetting your ECU. and adjust the trimmer until you've eliminated all fuel cut. This isn't as accurate, though, and you won't know what the maximum output voltage is - as with the first method.

## Installation Diagram



### WARNING

The addition of an FCD, while necessary for serious performance enthusiasts, removes protection from overboost. It is recommended that the air/fuel ratio be carefully monitored before and after the installation of an FCD. Serious engine damage can occur if the set boost pressure exceeds that of the engine's or turbocharger's capabilities. SymTech Laboratories assumes no responsibility for losses or damages due to installation of this product.

### LIMITED WARRANTY

SymTech warrants to the original customer purchasing products directly from SymTech that all such products sold will be free from defects in materials and workmanship affecting form, fit and function. SymTech, at its option, will repair, replace, or provide a credit or refund of either the original purchase price or fair market value, whichever is lower, of any product that is determined by SymTech to be defective during the warranty period.

Any claim must be made within one (1) year from the original date of shipment by SymTech; SymTech shall have no liability thereafter. Customer must notify SymTech within one (1) year from the original date of shipment. The foregoing warranty granted on SymTech products is to the initial customer end-user and is non-transferable.

This warranty is in lieu of any and all other warranties, whether oral, written, expressed, implied or statutory. Implied warranties of fitness for a particular purpose and merchantability are specifically excluded and shall not apply. The above warranties cover only defects arising under normal use and do not include malfunctions or failures resulting from misuse, abuse, neglect, alteration, problems with electrical power, usage not in accordance with product instructions, acts of nature or improper installation or repairs made by anyone other than SymTech or a SymTech-authorized third party service provider. SymTech reserves the right to substitute functionally equivalent new or serviceable used parts.

### COPYRIGHT NOTICE AND DISCLAIMER

This document and its content is copyright of "SymTech Laboratories" - © "SymTech Laboratories" 2006. All rights reserved.

Any redistribution or reproduction of part or all of the contents of this document in any form is prohibited.

You may not, except with our express written permission, distribute or commercially exploit the content. Nor may you transmit it or store it in any other website or other form of electronic retrieval system.