Set up Phase-Lock Loop, RTC, Serial, Interupts
Initialization of Ports / Variables
Sample MAP sensor and save as Barometer
Copy Configuration and VE variables from Flash to RAM
Copy Flash Burn Routine from Flash to RAM

Main Loop:

Perform Table Lookup for Barometer and Air Density Correction
Perform Table Lookup for Coolant and MAP Linearization
Determine if in Fast-Idle Mode
Compute RPM, Determine if Engine is Cranking or Running and Flood-Clear
Calculate Warmup and After-start Enrichment
Calculate Acceleration Enrichment/Enleanment
Calculate EGO Enrichment
Calculate VE from 2-D Table Interpolation
Compute Total Enrichment Value (Accel, Baro, Air Density, EGO, and Warmup)
Compute VE Contribution
Compute MAP/Baro
Calculate REQ_FUEL
Calculate Battery Voltage Compensation
Calculate Final Pulse Width

Goto Main Loop

Initialization and Main Calculation Loop

Ordered Table Search Routine
Linear Interpolation Routine
32 X 16 Unsigned Multiply
Flash Programming Routine

Subroutines

Increment 100 Microsecond Count
Check for New Injection Event
Check for Injection Event Complete
Check for PWM Enable Event
Check RPM and Turn Off Pump If Engine Stalled
Check/Increment Milliseconds
Initiate New ADC Conversion
Check/Increments 0.1 Seconds
Check/Increment Seconds

Timer Interrupt Routine

Increment ASE and EGO Step Counters
Enable Fuel Pump
Check for Injection Enable and Schedule Injection

IRQ Interrupt Routine

Retrieve New ADC reading
Average with last ADC reading, and Store
Increment ADC Channel Pointer

ADC Conversion Complete Interrupt Routine

Retrieve SCI Character
If "A" Then Enable Transmit of All Real-Time Variables
If "B" Then Jump to Flash Burn Routine
If "C" Then Enable Transmit of SECL variable
If "V" Then Enable Transmit of Entire VE Table
If "W" Then Receive Offset and New Byte to Save

SCI Receive Interrupt Routine

Transfer Byte to Transmit Register
If Last Byte to Transmit, then Disable Transmit Mode

SCI Transmit Interrupt Routine

MegaSquirt Embedded Microcode Flow Description