



3.5 Touch Screen LCD

553-108

User Manual



QUICK START GUIDE

A CAN/power harness is supplied with the 3.5 TSLCD. Connect the black wire to negative and the white wire to a switched +12V circuit.

Connect the harness from the CAN connector on the vehicles main harness to the 3.5 TSLCD using the supplied 4' CAN/Power extension

Once all connections have been made, the Holley EFI 3.5 Touch Screen LCD may be powered up. After a brief initial loading sequence the gauge display will appear

PACKAGE CONTENTS



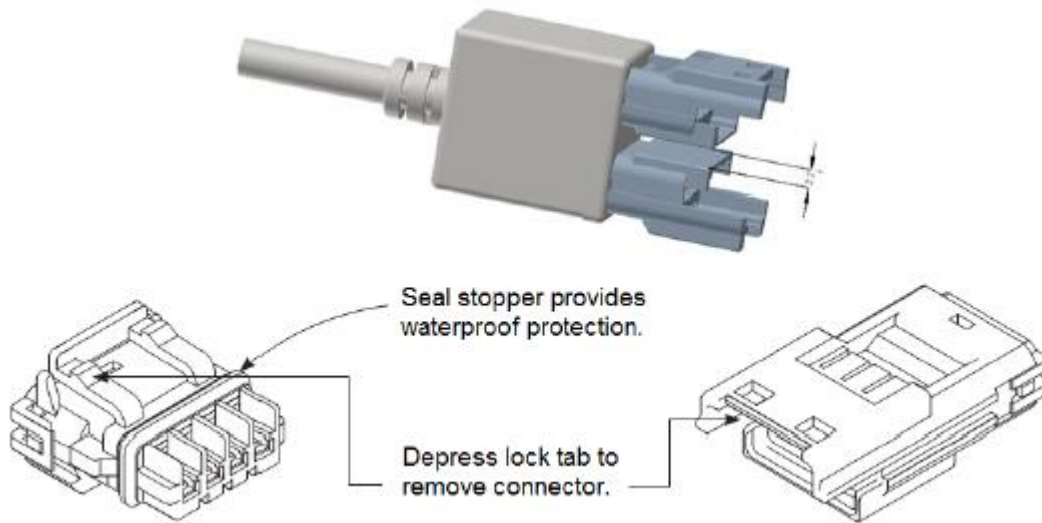
MOUNTING

The 3.5 TSLCD comes with a sleeve that can be mounted in the vehicle with the included double-sided foam tape.

CONNECTORS

CAN1/POWER

A 4 pin Mizu-P25 male receptacle connector is used to connect main power and to a Holley EFI. The dual connector allows the product to be connected to multiple devices on the CAN bus.



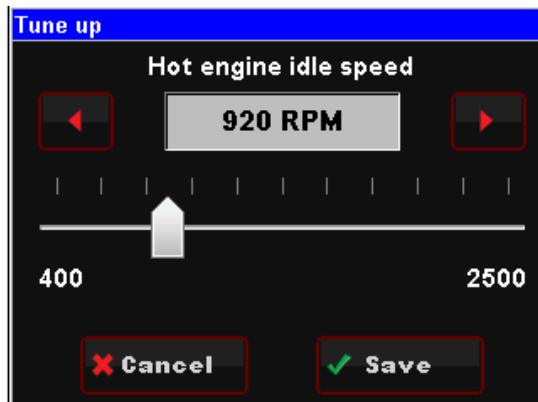
CAN ADAPTER HARNESS

271R1075A CAN ADAPTER HARNESS – used to connect switched +12V ignition power (white wire) and ground (black wire) to the dash, as well as for connecting to the main harness CAN connector.

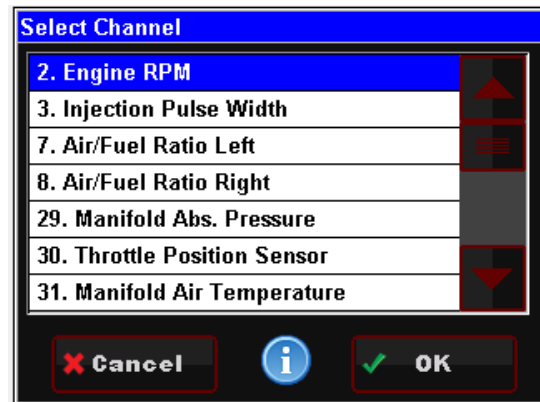


Pin	Function	Color	Description
1	+12V	WHT	Main power in
2	CAN1H	ORG/BLK	CAN _H Holley EFI communications
3	CAN1L	ORG	CAN _L Holley EFI communications
4	GND	BLK	GND

MAKING ADJUSTMENTS



Slider Bar: Slide the bar left or right with the stylus, or use the right and left arrow keys for fine adjustment



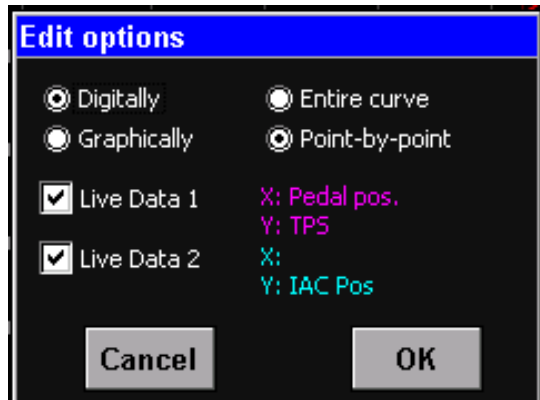
List: Use the scroll bar on the right hand side of the screen to view all list entries. Touch the desired list item and click 'OK' to make a selection.



Radio Button: Touch the desired list item to select it.



On Screen Prompts: Follow the on screen text and use buttons at the bottom of the screen to continue or confirm.



Graph:

Digitally: Selecting this option enables slider bar adjustment of individual data points on the graph or the entire curve.

Graphically: Selecting this option enables single point or whole curve adjustment. A stylus may be used to select and drag data on the graph screen.

Entire Curve: Selecting this will 'lock' all the data points together allowing the entire curve to be shifted up or down

Point by Point: Selecting this will allow point by point curve adjustment for fine tuning.

Live Data 1 & 2: This will enable live telemetry on the graph screen making fine tuning easier.

HOME SCREEN

The Home screen contains icons which will navigate to different functional features of the 3.5 Touch Screen. These features will be discussed in detail throughout this manual.



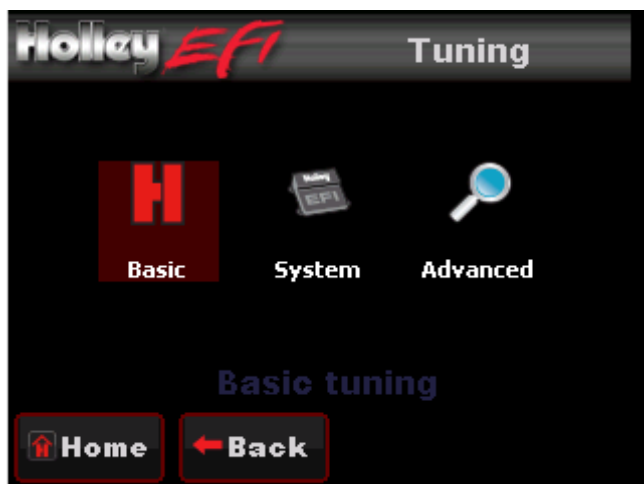
Home Screen

TUNING

The Holley 3.5 Touch Screen LCD facilitates 'laptop-free' tuning changes to help optimize mileage, drivability, and performance. Tuning is categorized by "Basic Tuning", "System Tuning" and "Advanced Tuning".

BASIC TUNING

From the HOME MENU, select TUNING, and BASIC. There are six areas you can modify, BASIC FUEL, FUEL LEARN, BASIC IDLE, SPARK, DRIVE BY WIRE, and TRANSMISSION. These are reviewed below.



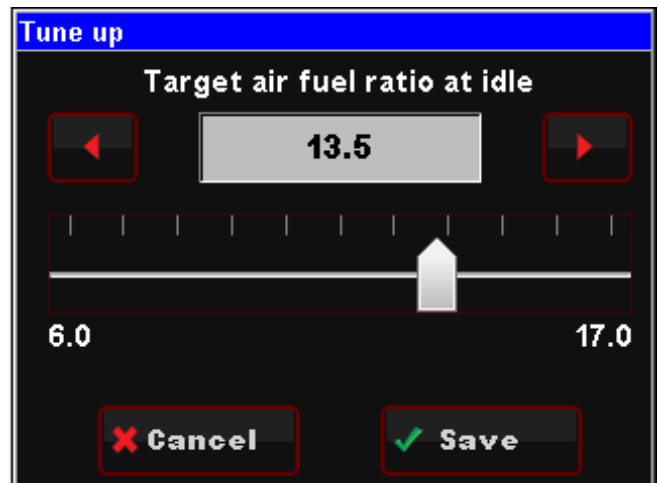
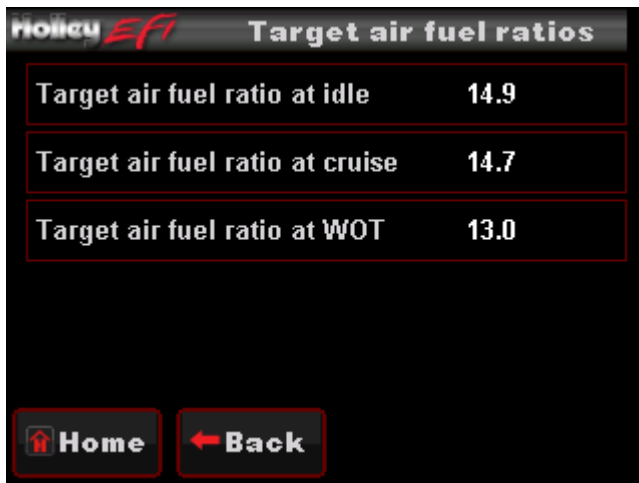
BASIC FUEL

Selecting BASIC FUEL brings up the following menu:



TARGET AFR:

Allows changes to the Target Air/Fuel ratio at idle, cruise, and wide open throttle. The following are typical values and some tuning notes.

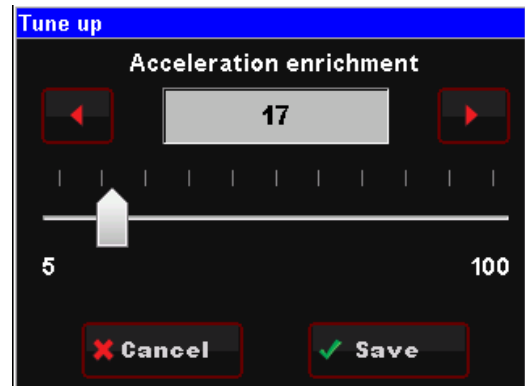


- **Idle Air/Fuel Ratio** – Typically between 13.5 and 15.0. Engines with larger cams may need a richer setting for smoothest idle.
- **Cruise Air/Fuel Ratio** – Typically between 13.5 and 15.5. Engines with larger cams may need a richer setting for smoothest operation.
- **Wide Open Throttle Air/Fuel Ratio (WOT)** – Typically between 12.0 and 13.0. Running richer may reduce power. Running leaner may reduce power or cause potential engine damage.

NOTE: The Target Air/Fuel setting between IDLE, CRUISE, and WOT is blended together automatically. Consequently, the air/fuel you see on the MONITOR screen, may not be exactly what you set for the settings. Changing these settings raises or lowers the “curve” of that specific area.

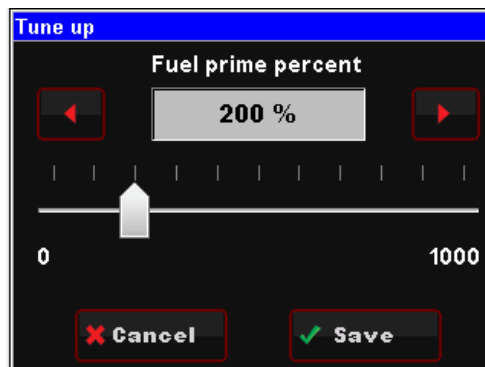
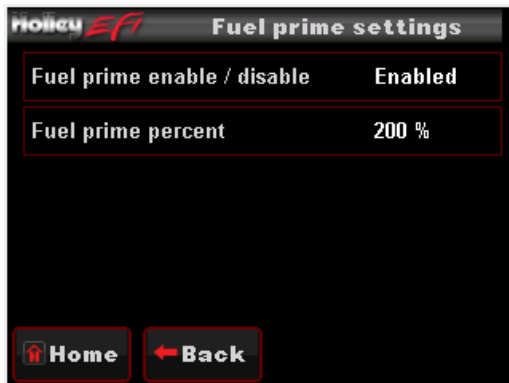
ACCELERATION ENRICHMENT:

Changes the “accelerator pump” function of the fuel injection. Raising the number increases the amount of fuel added when the pedal is pushed. Lowering the number decreases the amount of fuel added when the pedal is pushed. It is highly recommended NOT to change this until the ECU is allowed to perform self-tuning.



FUEL PRIME:

Fuel prime is an option that is enabled by default in all of the base calibrations. The fuel prime function injects a small shot of fuel into the intake manifold when the ignition is turned on, wetting the intake and allowing the engine to start much quicker. The amount of fuel is based on the engine temperature and how long it was since the engine previously ran. This amount of fuel can be increased or decreased by changing the “Percent” value. If the engine seems flooded reduce this value, if the engine seems to want more fuel, increase it. Experiment for best results.



NOTE: This only injects fuel once at key-on, and will not do it again until the engine has run. This fuel prime occurs 1/2 of a second after key-on. If you quickly turn the ignition key without waiting for 1/2 a second, the prime will not occur and it may take longer for the engine to start.

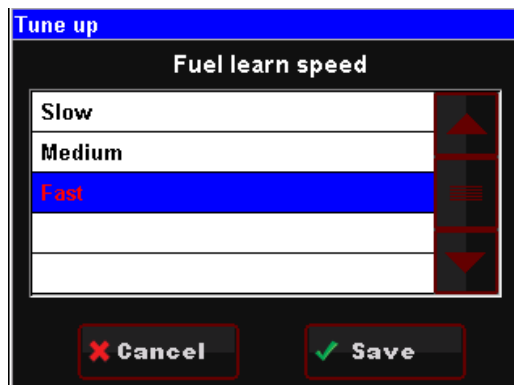
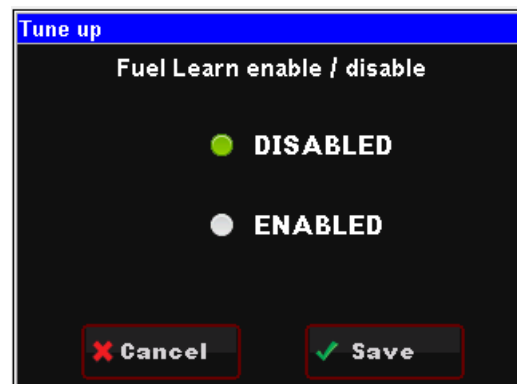
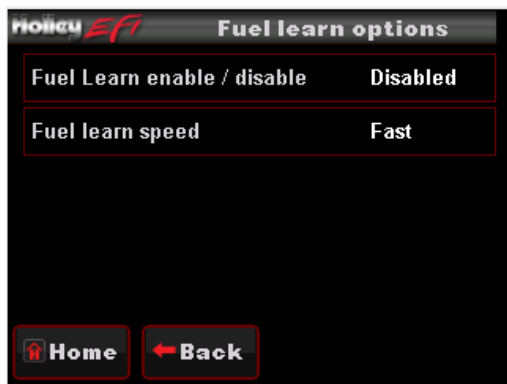
FUEL LEARN

LEARN ENABLE / DISABLE:

The LEARN Enable / Disable menu turns the Self Tuning “On” and “Off”. If enabled, self-tuning is performed. Learning should be enabled when an engine is just started and the tuning process is occurring. After the vehicle is driven under various operating conditions, and is running well, it is advised to disable learning, OR slow the Learn Speed to “Slow”.

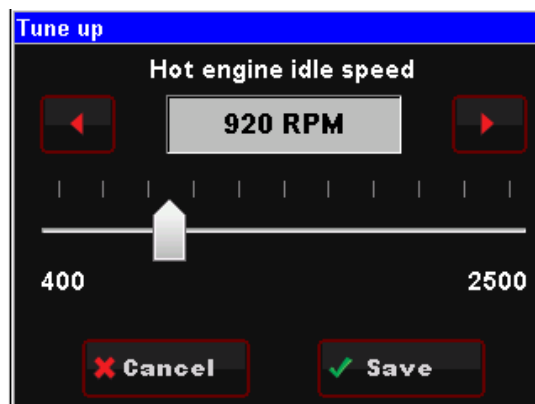
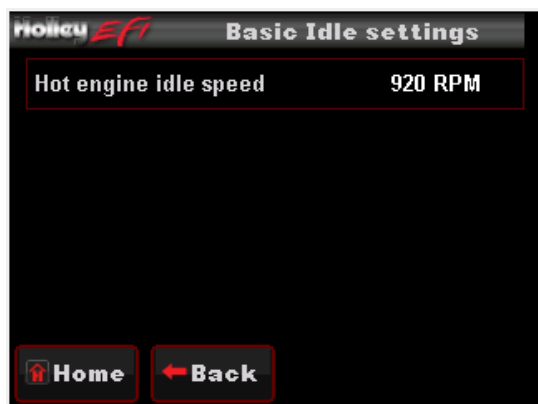
LEARN SPEED:

This parameter adjusts how fast the learning process occurs. In the beginning with a new tune it should be set to “Fast”. After the vehicle is driven under various operating conditions, and is running well, it is advised to disable learning, OR slow the Learn Speed to “Slow”.

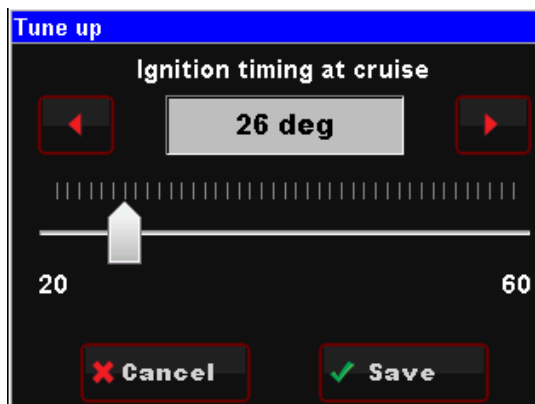


BASIC IDLE

Selecting BASIC IDLE allows you to change the Target Hot Engine Idle Speed. This should be adjusted to your desired idle RPM. Values between 650-800 rpm are typical. Larger camshafts or aftermarket torque converters may require a slightly higher value to maintain proper idle quality while in gear.



SPARK



All Holley base tunes contain timing curves that will provide adequate engine operation, however the ignition timing at idle, cruise, and wide open throttle can be adjusted independently from each other to compensate for geographical and climate extremes.

The following are typical values for each:

- **Idle Timing** – 18-34 degrees is typically used at idle. The larger the camshaft, the more timing is usually used.
- **Cruise Timing** – 32-48 degrees is typically used when cruising for optimal fuel economy.
- **Wide Open Throttle Timing (WOT)** – WOT timing is typically between 26-38 degrees.

NOTE: Too much timing can cause pre-ignition that can damage an engine. Be cautious when tuning.

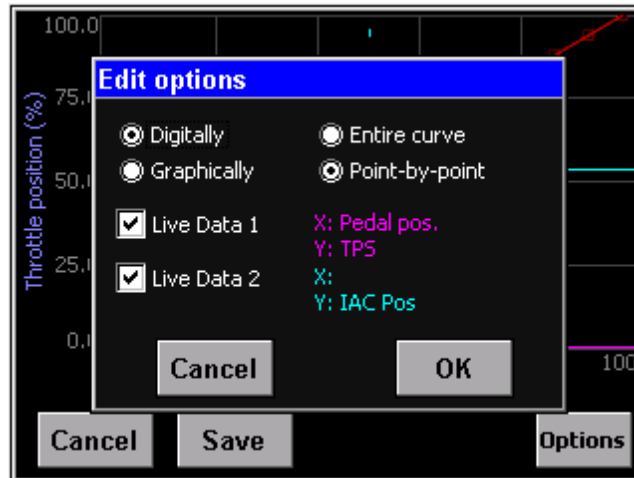
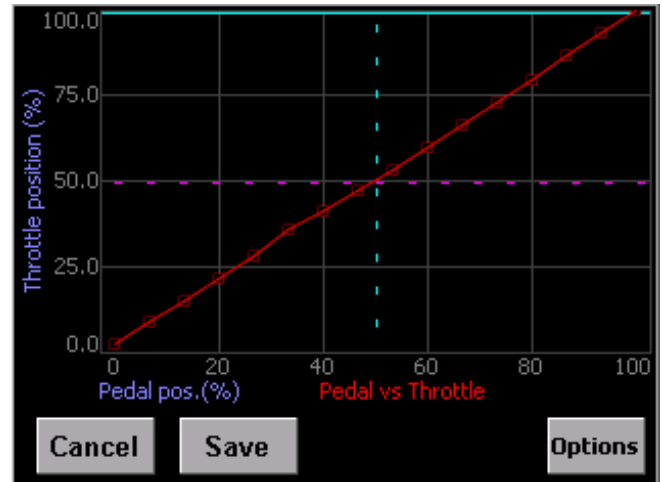
NOTE: The actual timing between IDLE, CRUISE, and WOT is blended together automatically. Consequently, the timing you see on the MONITOR screen, may not be exactly what you set for these settings. Changing these settings raises or lowers the “curve” of that specific area.

DRIVE BY WIRE

Holley Drive By Wire throttle capability is designed to work with specific throttle bodies and recommended pedal assemblies. If using the 3.5 Touch Screen in conjunction with a Holley Terminator EFI kit, be sure to read and follow all instructions regarding Drive By Wire throttle body operation in your kit's installation manual.

PEDAL VS THROTTLE:

The Pedal vs. Throttle Position table is the primary method of “tuning” a Drive By Wire throttle body system. The “Pedal Position” represents the position of the accelerator pedal. The user can adjust the “Throttle Position” to change based on the pedal position. This allows the user to increase or decrease throttle body position (engine airflow) to tailor the “responsiveness” of the engine. It can allow for an overly-large throttle body to have good driving manners or a small throttle body to be very responsive.

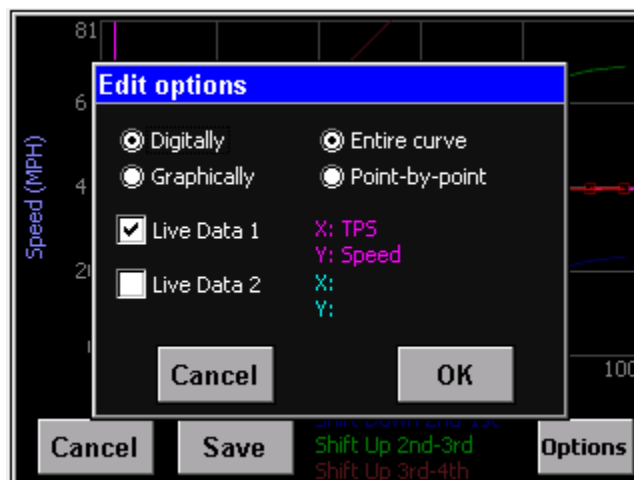
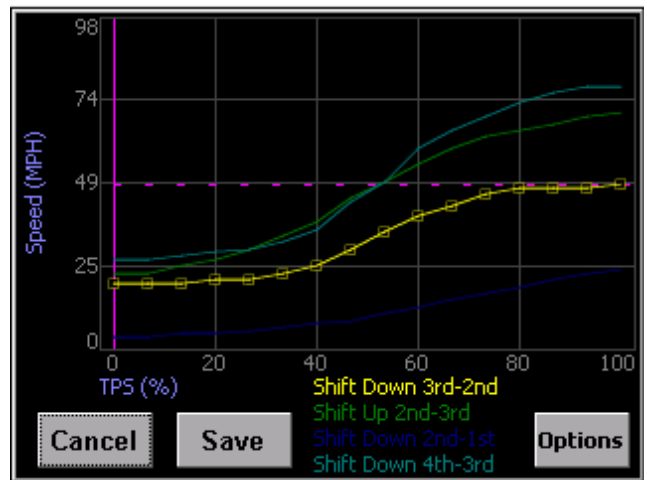
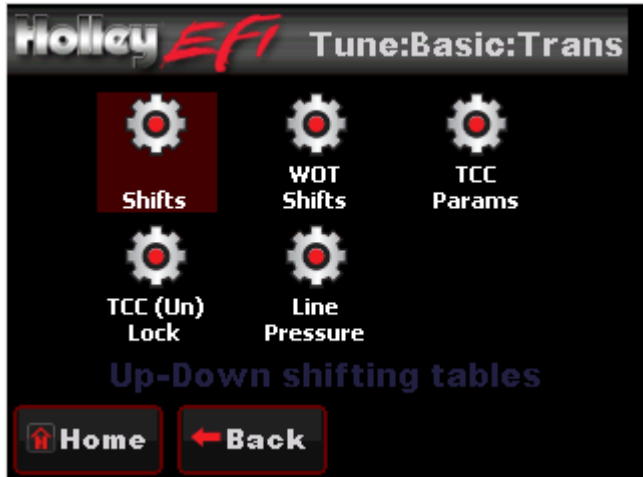


TRANSMISSION

Selecting TRANSMISSION brings up the following menu. There are five areas you can modify; SHIFTS, WOT SHIFTS, TCC PARAMS, TCC (UN)LOCK, and LINE PRESSURE. These are reviewed below.

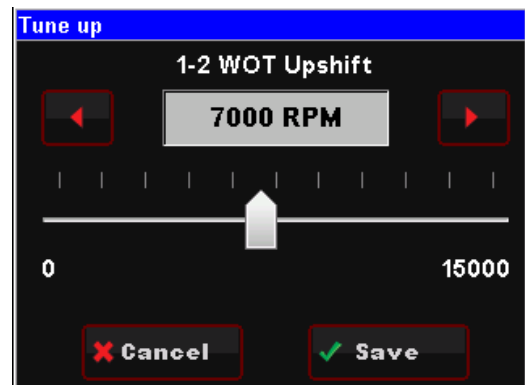
SHIFTS

Each Up-shift and Down-shift can be completely configured by selecting 'Shifts' from the transmission menu. Refer to the 'Making Adjustments' section of this document for instructions on how to modify these curves.



WIDE OPEN THROTTLE SHIFTS (WOT)

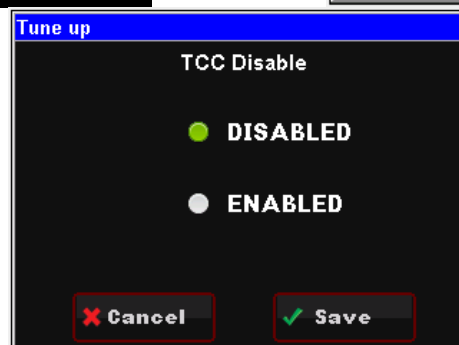
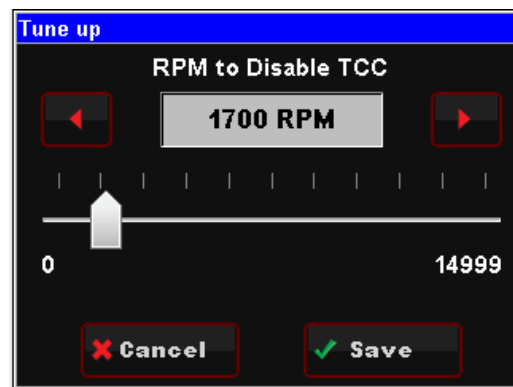
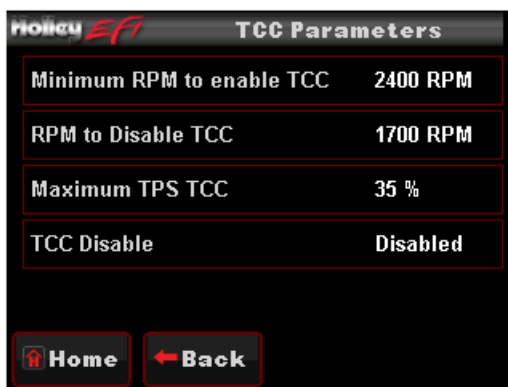
Use this menu to choose the RPM at which the transmission will upshift at WOT. Each gear change may be adjusted independent of the others.



TORQUE CONVERTER CLUTCH (TCC) PARAMETERS

Contains parameters that tune TCC activation and deactivation.

- **Minimum RPM to Enable TCC** - Minimum engine speed at which the TCC will apply. This value can be adjusted so that engines with large camshafts do not hesitate surge if the TCC is applied at too low of an engine speed.
- **RPM to Disable TCC** - Used to unlock the TCC once it is locked. The Lock and Unlock values should not be too close together, or they will continuously lock and unlock. Applications with high stall torque converters will typically need 400-700 RPM or more between these values.
- **Maximum TPS TCC** - Throttle position value when the TCC will unlock. Most lockup torque converters do not have a clutch designed to lock up when higher power is being applied. It is best to unlock the converter under moderate to hard acceleration. Typically TPS values should be between 25-50%.
- **TCC Disable** - When enabled, the TCC will never lock up.



TCC (UN)LOCK

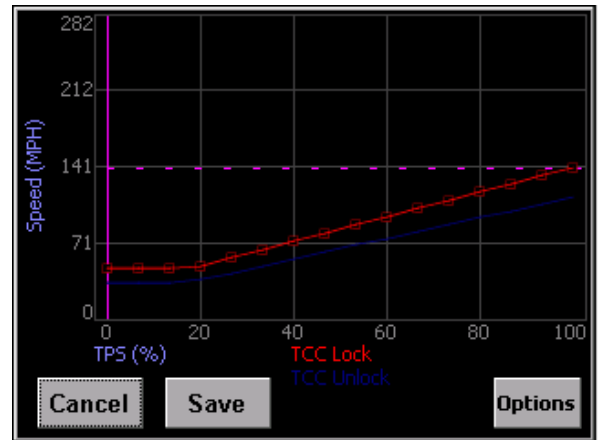
These parameters work in addition to the TCC Parameters by offering additional tuning based on vehicle speed. This keeps the TCC from locking up during 'around-town' driving if it is not desired. The Lock values should always be higher than the Unlock values. Adjustments to these can be done by using the graph.

NOTE: See instructions for changing data in the GRAPH screen in the 'Making Adjustments' section.

Holley EFI TCC Lock-Unlock

TCC Lock	49~141 MPH
TCC Unlock	35~114 MPH

Home **Back**



Edit options

☒ Digitally	☒ Entire curve
☐ Graphically	☐ Point-by-point
☒ Live Data 1	X: TPS
☐ Live Data 2	Y: Speed
	X: Speed
	Y: TPS

Cancel **OK**

Cancel **Save** **Options**

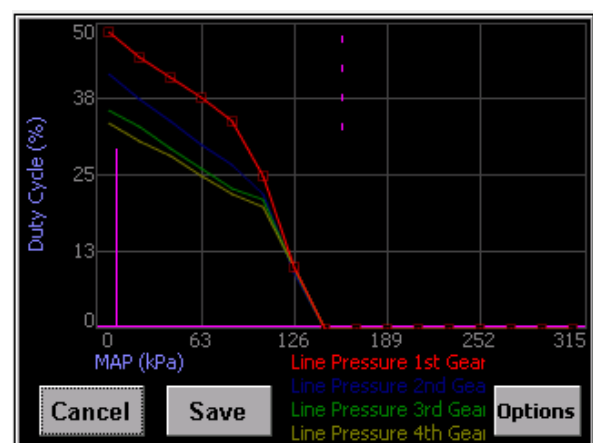
LINE PRESSURE

Tune the line pressure vs. TPS or MAP for each gear. A lower duty cycle (moving towards 0%) increases line pressure with 0% providing maximum line pressure applied. Values above 60% typically result in a line pressure too low for any throttle position.

Holley EFI Line Pressure

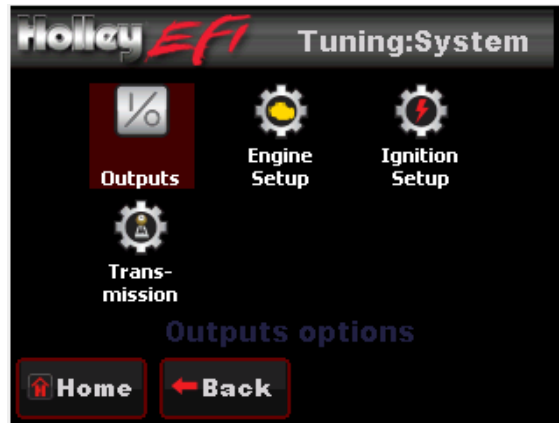
Line Pressure 1st Gear	49~0 %
Line Pressure 2nd Gear	42~0 %
Line Pressure 3rd Gear	36~0 %
Line Pressure 4th Gear	34~0 %

Home **Back**



SYSTEM TUNING

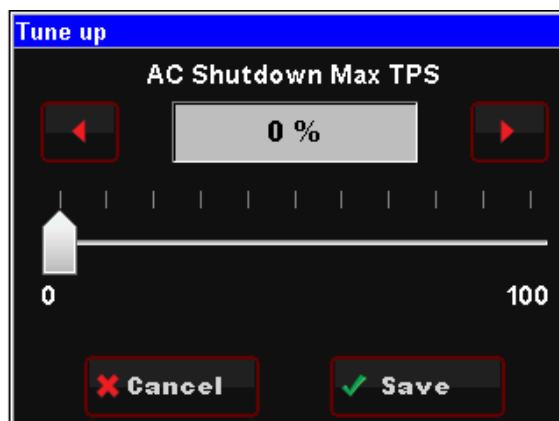
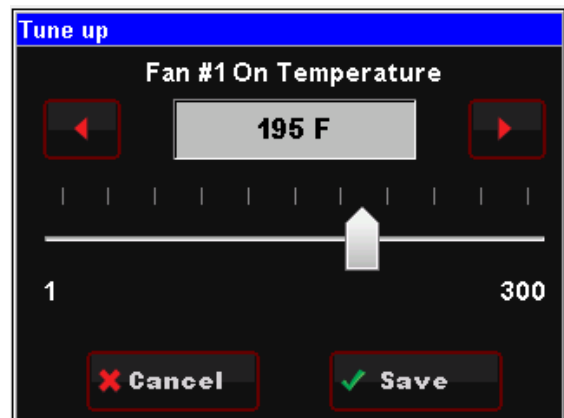
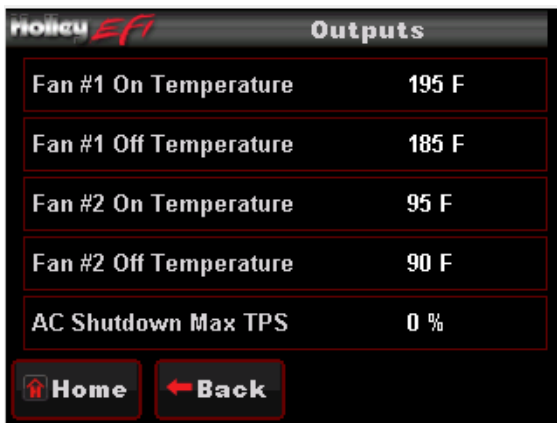
From the HOME MENU, select TUNING, and SYSTEM. There are four areas you can modify; OUTPUTS, ENGINE SETUP, IGNITION SETUP, AND TRANSMISSION.



OUTPUTS

The OUTPUT screen allows for the Fan #1 and Fan #2 ON and OFF temperatures to be adjusted. The ON temp needs to always be a higher value than the OFF temp. Use a difference of at least 5 degrees so they aren't cycling excessively. In Terminator Kits these are ground outputs that should be wired to trigger the fan relays. NEVER wire them directly to the fans! The AC Disable value is a TPS value above which a 12 volt output is sent out to deactivate the air conditioning compressor at wide open throttle.

Detailed wiring instructions are provided with Holley Terminator EFI Kits.



ENGINE SETUP

Holley <i>EFI</i> Engine configuration	
Fuel injector flow	83 lb/hr
Actual system fuel pressure	46 PSI
Wide band O2 sensor type	NTK
Progressive TBI enable/disable	Disabled
TBI secondary blend	0 %

Home Back

Fuel Injector Flow: Adjust fuel flow injector ratings to match what is installed on the engine

Actual System Fuel Pressure: Enter the actual fuel system pressure for accurate fuel map & logging data.

Wide Band O2 Sensor Type: Selects the type of wide band oxygen sensor used. If the software selection does not match the sensor being used damage to the WBO2 sensor will occur.

Progressive TBI Enable/Disable: This should be for all single blade style throttle bodies.

TBI Secondary Blend: This should be set to 0% on all single blade style throttle bodies.

Tune up

Fuel injector flow

83 lb/hr

1 700

Cancel Save

Tune up

Wide band O2 sensor type

NTK

BOSCH

Cancel Save

Tune up

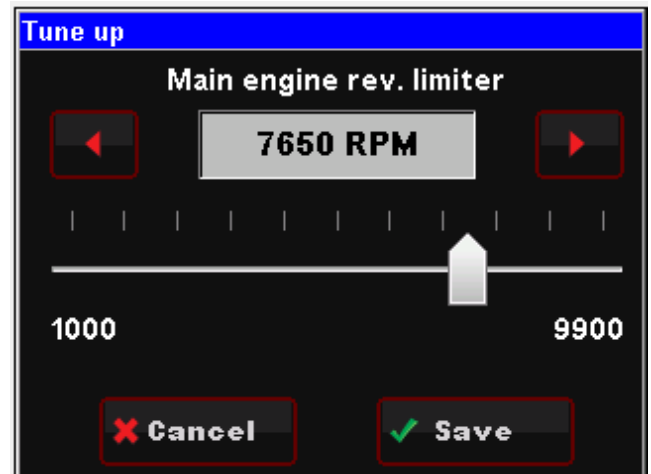
Progressive TBI enable/disable

☒ DISABLED

☐ ENABLED

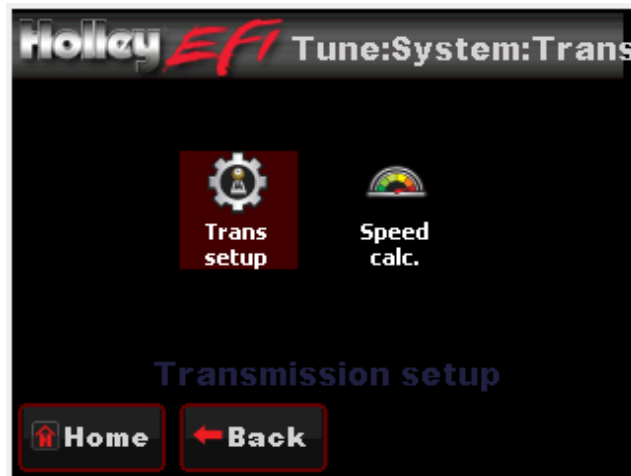
Cancel Save

IGNITION SETUP



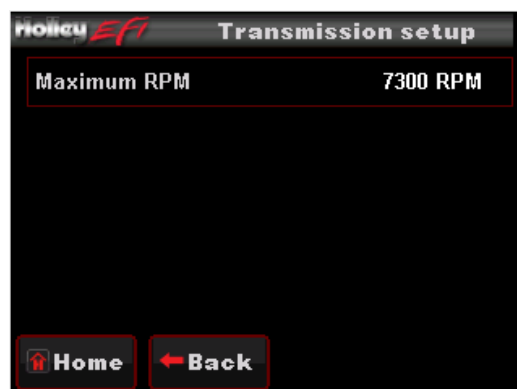
TRANSMISSION

Selecting TRANSMISSION brings up the following menu. There are two areas you can modify; TRANS SETUP and SPEED CALC. These are reviewed below.



TRANS SETUP

Transmission RPM: If this RPM is exceeded when in manual shift mode, the transmission will upshift automatically. If a manual downshift is performed, and this RPM will be exceeded, the downshift will not be allowed. This value should be slightly higher than the WOT shift points.



SPEED CALC

Four pieces of information will need to be entered via the 3.5 handheld to attain proper speedometer calibration when using Holley transmission control

- **Tire Diameter** – From 10.0 to 70.0 inches (Example 26.4)
- **Rear Gear Ratio** – From 0.50 to 9.99 (Example 3.73)
- **Speedometer Output** – Enabled or Disabled
- **Pulses Per Rotation (PPM)** – Typically this value is '1' on GM overdrive transmissions

Holley EFI Tran.Speed calc.

Tire Diameter	26.0 inch
Rear Gear Ratio	3.73
Speedometer Output	Disabled
Pulses Per Mile	1 ppm

Home **Back**

Tune up

Tire Diameter

26.0 inch

10.0 70.0

Cancel **Save**

Tune up

Speedometer Output

☒ **DISABLED**

☐ **ENABLED**

Cancel **Save**

Tune up

Pulses Per Mile

1 ppm

1 9999

Cancel **Save**

ADVANCED TUNING

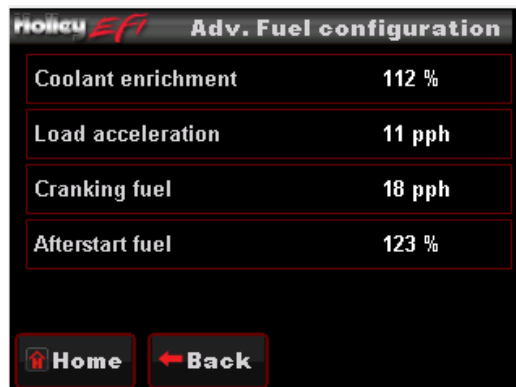
From the HOME MENU, select TUNING, and ADVANCED. There are four areas you can modify; ADV FUEL, CLOSED LOOP, ADV. LEARN, AND ADV. IDLE. These are reviewed below.

The Advanced Tuning areas typically won't ever be needed to be changed. However, after getting used to the TERMINATOR™ EFI system, there may be some fine tuning of various parameters that you'd like to perform.



ADVANCED FUEL

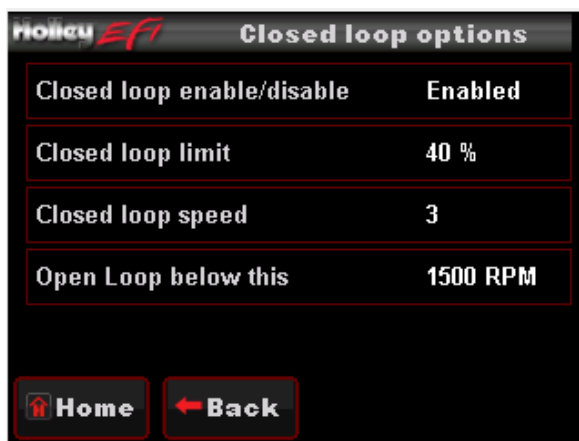
- **Coolant Enrichment:** Coolant enrichment is similar to the choke on a carburetor. Adjustments are made as a percentage of the base map from 100% to 150%. 100% would mean no additional fuel is being added by the Coolant Enrichment, 110% would mean that an additional 10% of fuel is being added to the base fuel map which will decay back to 100% in relation to actual engine coolant temperature.
- **Load Based Acceleration Enrichment:** This parameter provides another way of adding fuel when the accelerator is depressed. It adds fuel depending on how fast the MAP sensor reading changes (detects a change in engine load). There is typically no need to adjust this parameter except possibly under some extreme conditions of vehicles that are heavy and under-powered. Adjustment values are in pounds of fuel per hour (pph) and should initially be adjusted in increments of 5-10 pph
- **Cranking Fuel:** This dictates how much fuel is injected when the engine is cranking and is dependent on coolant temperature. Changing this value offsets the entire curve at all temperatures. Adjustment values are in pounds of fuel per hour (pph) and should initially be adjusted in increments of 5 pph.
- **Afterstart Fuel:** The afterstart parameter is fuel that is added for a short time immediately after an engine starts. This value varies depending on engine temperature. Changing this value offsets the entire curve at all temperatures. Adjustments are made as a percentage of the base map from 75% to 200%, 100% would mean no additional fuel is being added, 110% would mean that an additional 10% of fuel is being added to the base fuel map, and 85% would mean that 15% of fuel is being taken away from the base map. All selections will decay back to 100% over a predetermined amount of time.



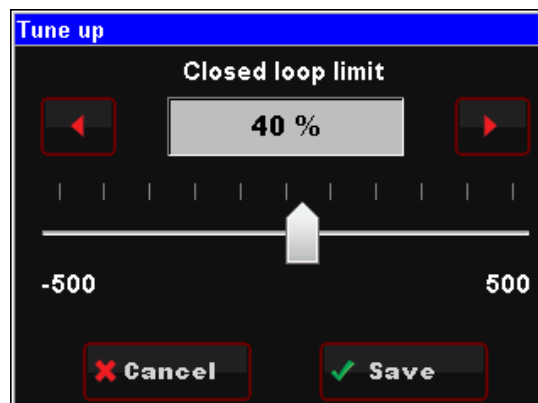
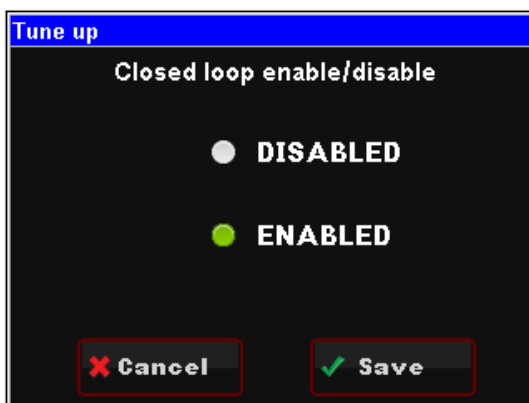
CLOSED LOOP

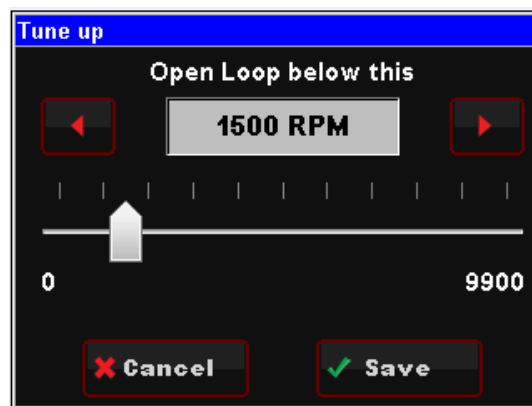
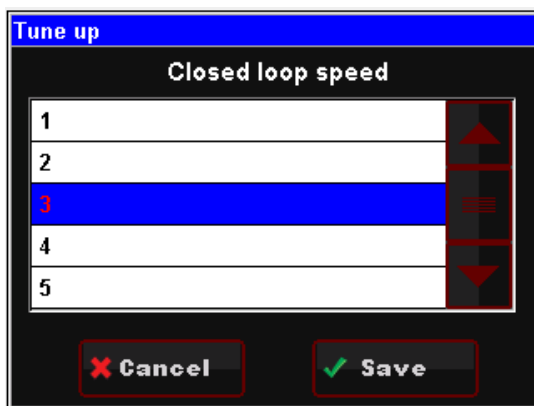
CLOSED LOOP OPERATION relies on WBO2 sensor readings. The Holley EFI system uses these readings to analyze 'real time' running conditions. The data obtained by the ECU is then used trim fuel flow to achieve the targeted air fuel ratio (AFR).

Choosing CLOSED LOOP from the ADVANCED TUNING menu will allow you to modify four areas of the CLOSED LOOP operation.



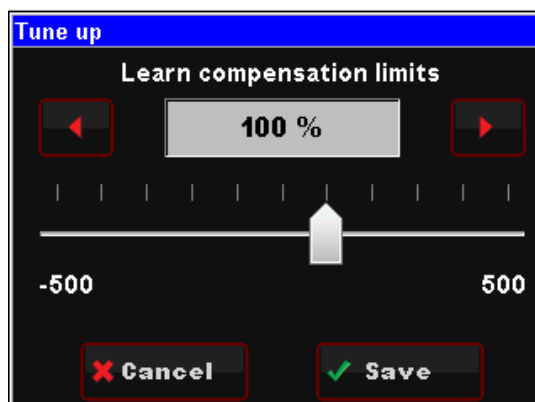
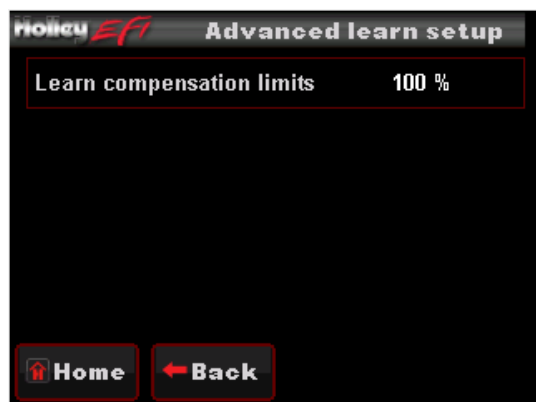
- **Closed Loop Enable/Disable:** This menu enables or disables closed loop operation. There is typically no reason to turn off closed loop operation unless you suspect an oxygen sensor problem and want to disable the sensor. **Note:** Self-Tuning requires closed loop operation to function.
- **Closed Loop Limit:** The maximum percentage the ECU is allowed to deviate (+/-) from the base fuel calibration in order to maintain the commanded target air fuel ratio. This is set to 100% by default and under most circumstances should not need to be changed.
- **Closed Loop Speed:** This is the “speed” (gain) at which closed loop operation occurs. This can be set to five levels, 1, 2, 3, 4, or 5. 3 is the base setting and should be good for most applications. 4 or 5 is typically not used as the closed loop speed may be too excessive for certain applications. If the oxygen sensor is installed far back in the exhaust (more than 1 foot back from the collector in long tube headers), a value of 1 or 2 may be needed.
- **Open Loop Below This:** This setting is usually zero. If an extremely large camshaft is used (specs only typically found on race camshafts), the overlap sometimes causes a “false lean” reading at low RPM. In these cases, it may be required to put in a value of 1500-2000 RPM so the system operates open loop below this RPM setting.





ADV. LEARN

Choosing ADVANCED LEARN will allow you to modify the LEARN COMPENSATION LIMITS. This value is set to 100% by default, and should remain there until ample driving time and tuning has occurred. The LEARN COMPENSATION LIMIT is a parameter that ECU is allowed to work within when making changes to the fuel map based upon CLOSED LOOP operation. Unlike the CLOSED LOOP LIMIT which is a set parameter for commanded changes to actual fuel flow based upon the O2 sensor reading, LEARN COMPENSATION LIMITS are the percentage of change that is allowed to actually be saved as a modifier to the fuel map.



ADV. IDLE

The ADVANCED IDLE parameters adjust specific characteristics of how the idle air control motor functions on engine decel and startup.

Selecting ADVANCED IDLE brings up the following menu:

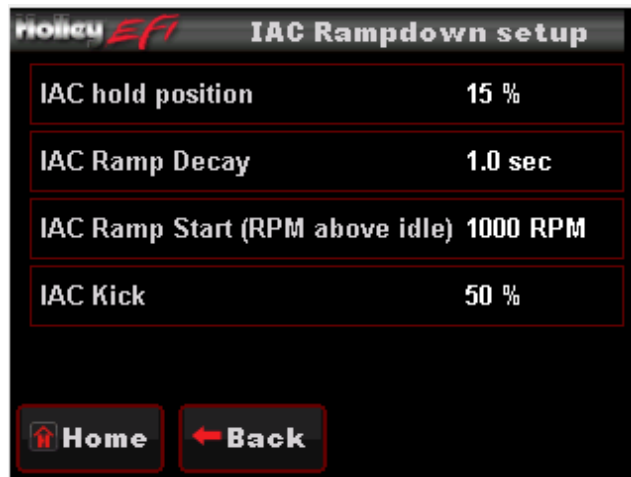


IAC RAMPDOWN

The Idle Air Control (IAC) motor is a stepper motor located in the throttle body that controls the idle speed of the engine by metering air. It also operates during engine cranking and when the engine returns back to idle. The following settings can adjust how that functions. The IAC moves from a position of 0% (fully closed, no air added) to 100% (fully open, maximum air flow).

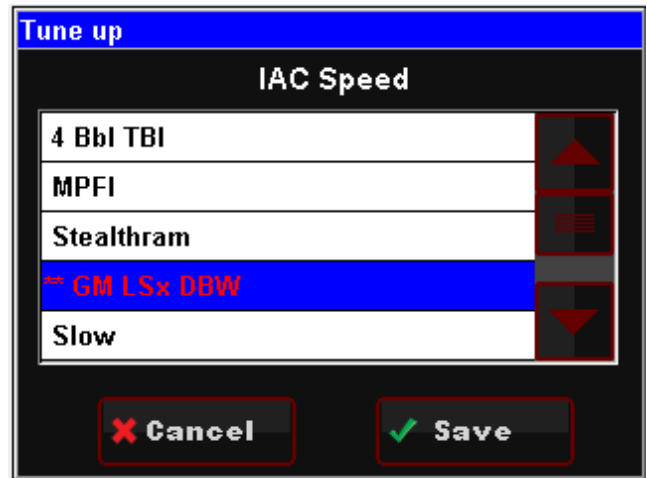
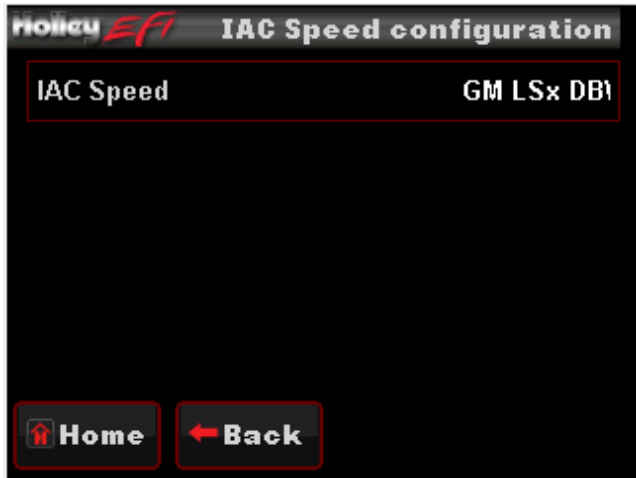
Selecting IAC RAMPDOWN brings up the following menu with four choices, IAC HOLD POSITION, IAC RAMP DECAY, IAC RAMP START, and IAC KICK. These are reviewed below:

- **IAC Hold Position:** This is the position the IAC motor will “hold” or “freeze” at when the TPS moves above idle (when TPS becomes greater than 0%). If it is too high, the engine RPM will “hang” and not return to idle.
- **IAC Ramp Decay:** This is the time (in seconds) it takes for the IAC to decay from the “IAC Hold Position” back to a “0%” position. It is a linear decay.
- **IAC Ramp Start (RPM above idle):** This value is the RPM added to the target idle speed that the IAC will automatically start to ramp back down to idle. If this is too low, the engine RPM will “hang” and not return to idle.
- **IAC Kick:** The IAC Kick provides a temporary increase in IAC position to keep engine the RPM from dropping. Typically this is used in conjunction with an A/C system keep the engine speed from ‘dipping’ as the compressor cycles on and off.



IAC SPEED

This menu is used to select the type of IAC motor application that is being used. This selection drives the background parameters that control the IAC motor. These parameters have been fine tuned for each of these applications, eliminating the need for the user to perform further modifications



IAC STARTUP

These parameters control the position of the IAC when the engine is cranking and immediately after it starts.

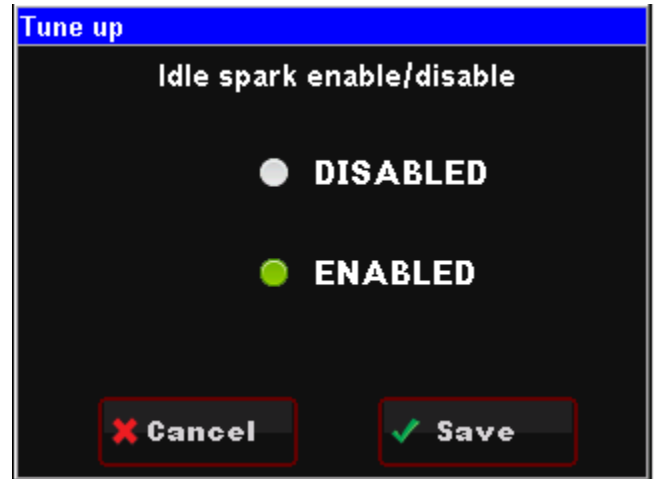
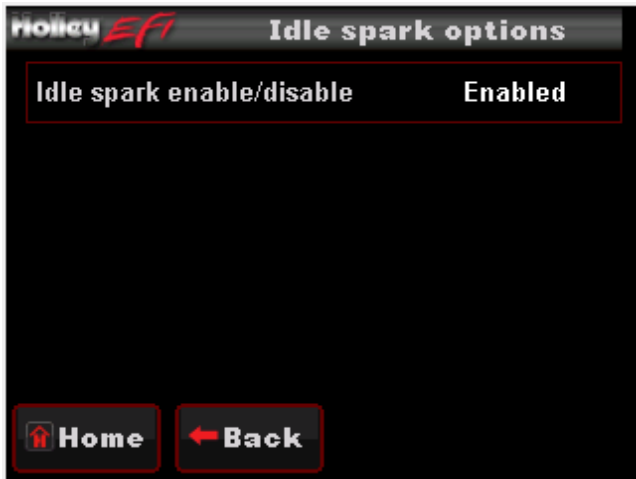
Selecting IAC STARTUP brings up the following menu with three choices, IAC PARKED POSITION (CRANKING), IAC STARTUP HOLD TIME, and IAC STARTUP DECAY TIME.

- **IAC Parked Position (Cranking):** This is the position the IAC motor will be at during cranking and immediately after the engine starts. If it is too high, the engine will be at too high of an RPM once it starts. Too low and poor starting will result. Note that this is a temperature based table. The percentage value changed in the handheld offsets this entire curve.
- **IAC Startup Hold Time:** This is the amount of time that the IAC will remain at the "IAC Parked Position".
- **IAC Startup Decay Time:** This is the amount of time for the IAC to decay from the "IAC Parked Position" back to its "Target Idle" position. It is a linear decay.



IDLE SPARK

Idle spark is a feature active only when the ECU is controlling timing. When enabled, the ECU modifies commanded timing at idle to help maintain the target idle speed.



NOTE: This feature should be disabled when checking base timing with a timing light!

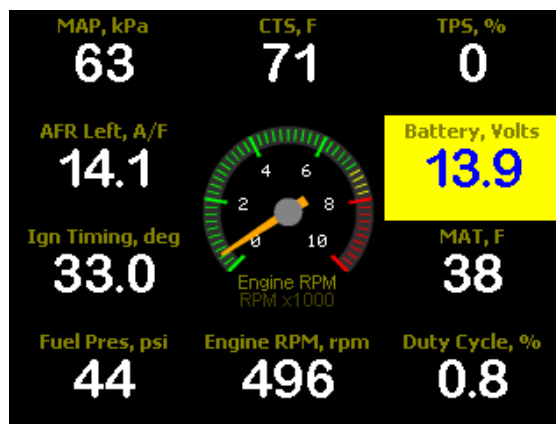
MONITOR

Choose MONITOR from the HOME screen to access live telemetry and customizable gauge screen options.



MULTI-GAUGE

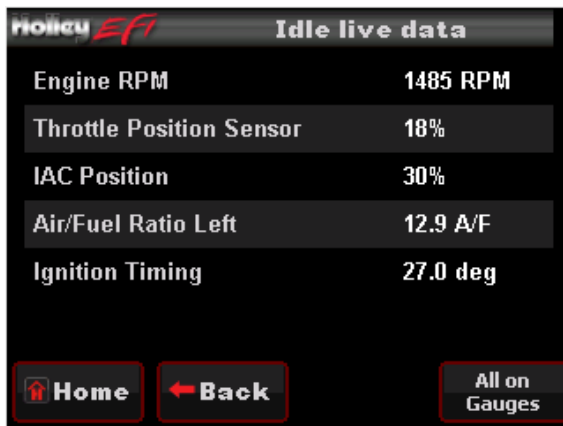
- **Sensors:** Manifold Absolute Pressure (MAP), Coolant Temperature (CTS), Throttle Position (TPS), AFR Left, Engine RPM (analog), Battery Voltage, Ignition Timing, Manifold Air Temperature (MAT), Fuel Pressure, Engine RPM (digital), and Fuel Injector Duty Cycle.
- **Air/Fuel Ratio:** AFR Left, Target AFR, AFR Right, Closed Loop Compensation, Fuel Learn, Closed Loop Status, Engine RPM (analog), Learn Status, Fuel Injector Pulse Width, Engine RPM (digital), and Oil Pressure.
- **Outputs:** Fan #1, Fan#2, AC Shutdown, CTS, Engine RPM (analog), IAC Position, AFR Left, Battery Voltage, Fuel Pressure, Engine RPM (digital), Oil Pressure.
- **Drive by Wire:** TPS, Pedal Position, TB Position, TB TPS #1, Engine RPM (analog), Pedal TPS1, TB TPS #2, Pedal TPS2, Brake Pedal, Engine RPM (digital), MAP.
- **Transmission:** Gear, Engine RPM (digital), Line Pressure, TCC Duty, Engine RPM (analog), TCC Lockup, Line Temp, Input Shaft Speed, TPS, Speed, Fuel Economy.
- **Dash 1, 2, & 3:** See the 'Dash Setup' section



Sample Multi-Gauge Screen

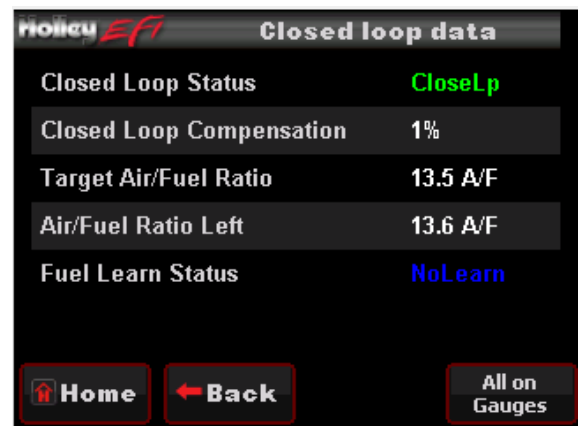
MONITORS

- **Idle:** Engine RPM, TPS, IAC Position, AFR Left, Ignition Timing
- **Learn:** Fuel Learn Status, Fuel Learn Percent, Closed Loop Compensation, Target AFR, AFR Left
- **Closed Loop:** Closed Loop Status, Closed Loop Compensation, Target AFR, AFR Left, Fuel Learn Status
- **Sensors:** MAP, TPS, MAT, CTS, Battery Voltage
- **Fuel:** Engine RPM, AFR Left, Injector Pulse Width, CL Comp, Injector Duty Cycle
- **Misc:** Oil Pressure, Fuel Pressure, Fan #1 Status, Fan #2 Status, AC Shutdown Status
- **Drive by Wire:** Gas Pedal Position, TB TPS #1, TB TPS #2, Pedal TPS #1, Pedal TPS #2, TB Position, Brake Pedal Position
- **Transmission:** Gear, Speed, Line Pressure, Line Temperature, TCC Duty Cycle, TCC Lockup Status, Input Shaft Speed



This screenshot shows the 'Idle live data' screen from the Holley EFI software. It displays five engine parameters in a list format. At the bottom, there are three buttons: 'Home' (with a house icon), 'Back' (with a left arrow icon), and 'All on Gauges'.

Holley EFI Idle live data	
Engine RPM	1485 RPM
Throttle Position Sensor	18%
IAC Position	30%
Air/Fuel Ratio Left	12.9 A/F
Ignition Timing	27.0 deg



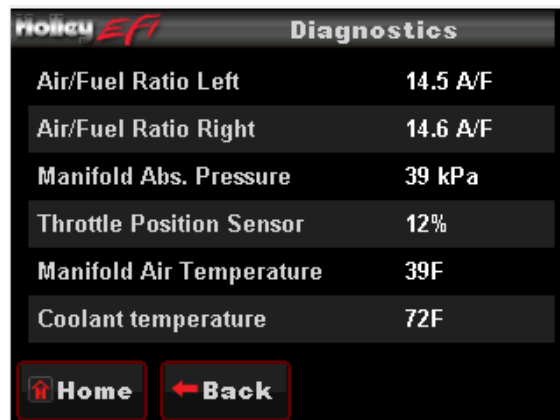
This screenshot shows the 'Closed loop data' screen from the Holley EFI software. It displays five fuel system parameters. The 'Closed Loop Status' is highlighted in green as 'CloseLp', and the 'Fuel Learn Status' is highlighted in blue as 'NoLearn'. At the bottom, there are three buttons: 'Home' (with a house icon), 'Back' (with a left arrow icon), and 'All on Gauges'.

Holley EFI Closed loop data	
Closed Loop Status	CloseLp
Closed Loop Compensation	1%
Target Air/Fuel Ratio	13.5 A/F
Air/Fuel Ratio Left	13.6 A/F
Fuel Learn Status	NoLearn

Sample Monitor Screens

DIAGNOSTICS

Channels displayed are: AFR Left, AFR Right, MAP, TPS, MAT, CTS



This screenshot shows the 'Diagnostics' screen from the Holley EFI software. It displays six diagnostic channels in a list format. At the bottom, there are two buttons: 'Home' (with a house icon) and 'Back' (with a left arrow icon).

Holley EFI Diagnostics	
Air/Fuel Ratio Left	14.5 A/F
Air/Fuel Ratio Right	14.6 A/F
Manifold Abs. Pressure	39 kPa
Throttle Position Sensor	12%
Manifold Air Temperature	39F
Coolant temperature	72F

Sample Diagnostics Screen

DASH SETUP

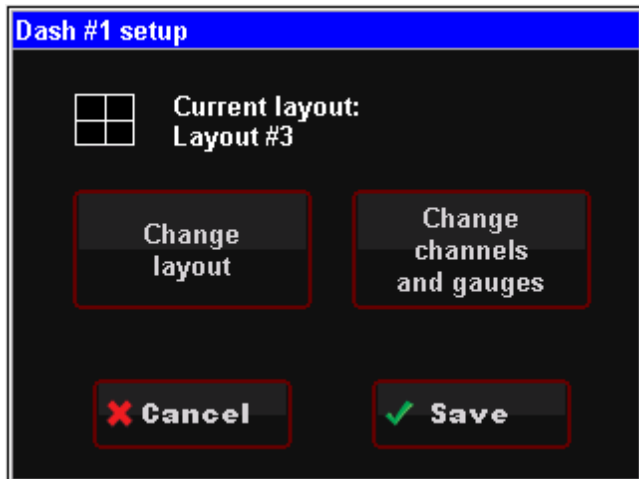
Up to three (3) Custom gauge layouts can be created on the 3.5 Touch Screen. Follow these steps to configure:



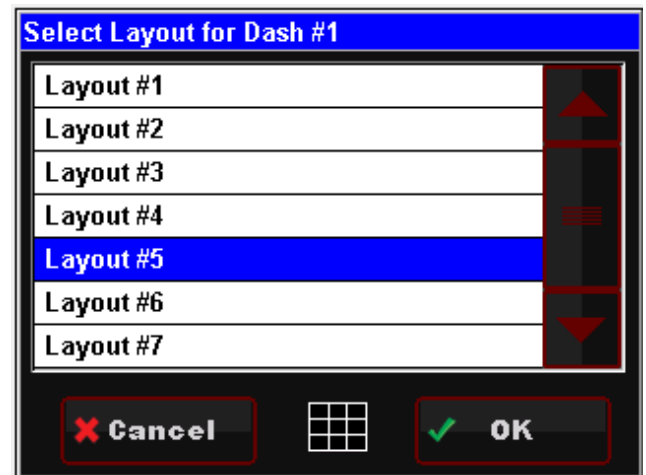
Step 1: Choose 'Dash Setup' from the Multi-Gauge screen



Step 2: Choose the Dash number to be configured



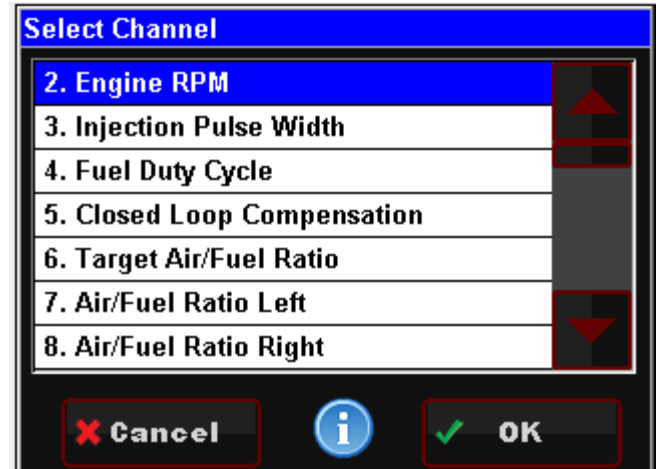
Step 3: Select 'Change Layout'



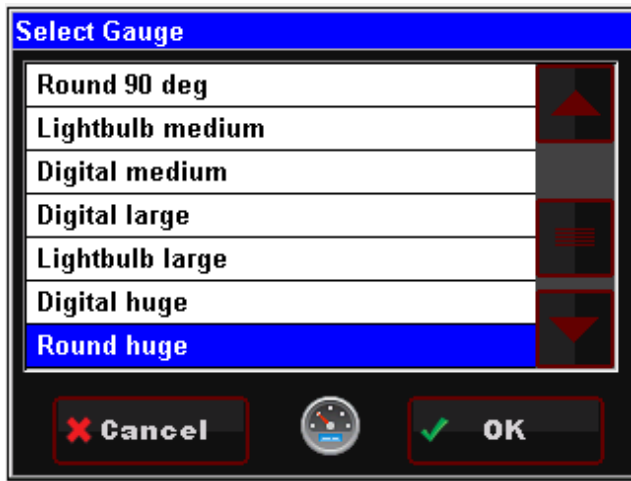
Step 4: Choose the desired layout
*Previews of the layout are shown at the bottom of the screen – in this example Layout #5 has nine gauges



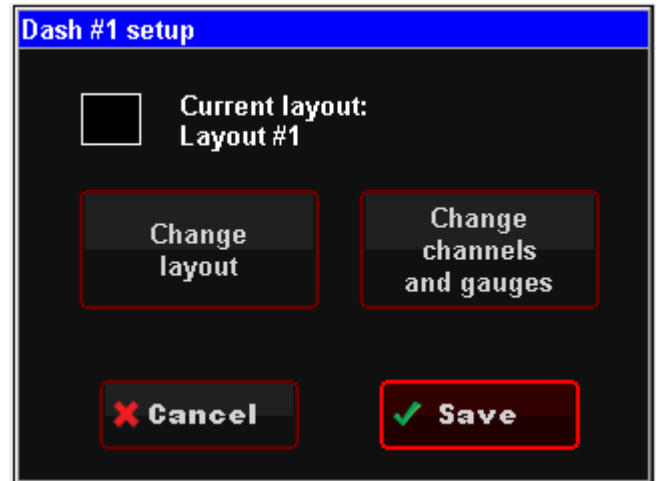
Step 5: Select the individual gauge to be configured



Step 6: Select the Channel to be displayed



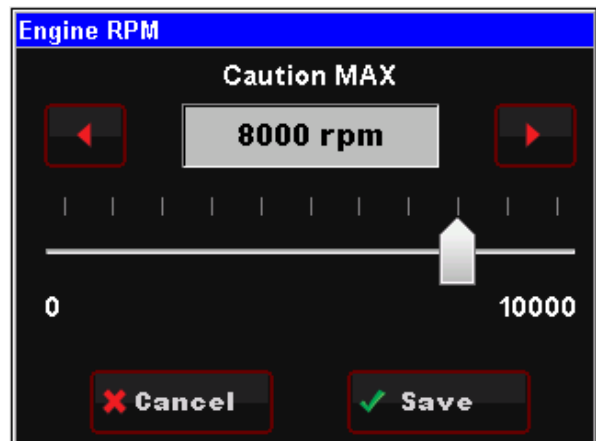
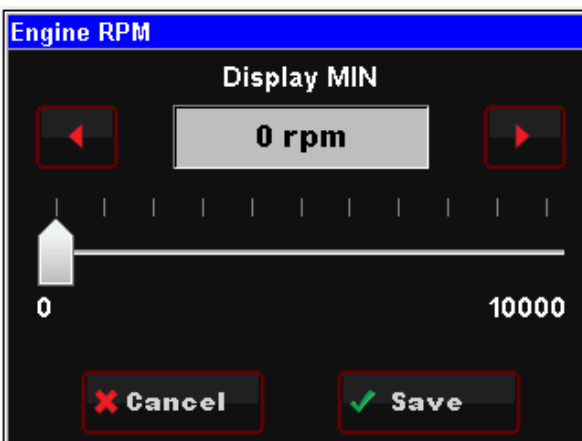
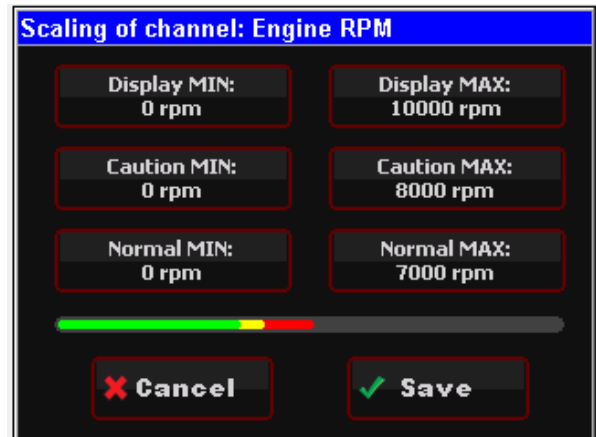
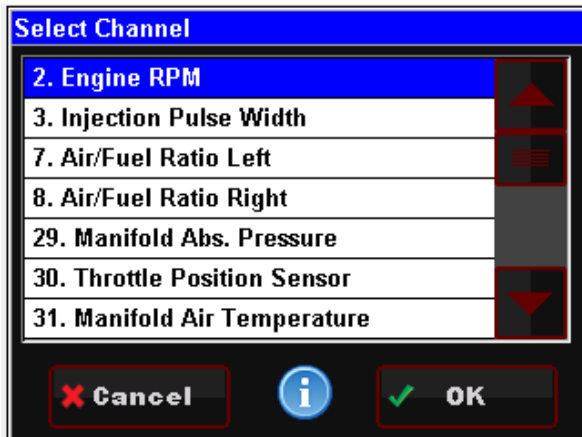
Step 7: Select the gauge style



Step 8: Save your configuration

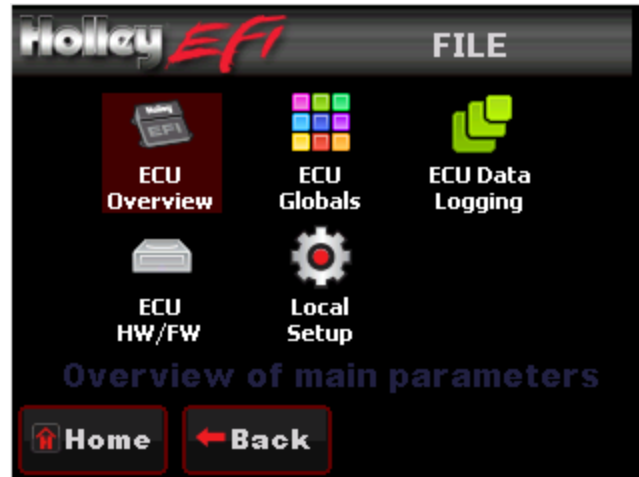
CHANNELS SCALING

Each HEFI channel displayed by the 3.5 Touch Screen can be configured to have caution and warning indicators. To do this, choose 'Channel Scaling' from the MONITOR menu. Cautions will display as Yellow and Warnings will display as RED when using the Multi-Gauge screens.



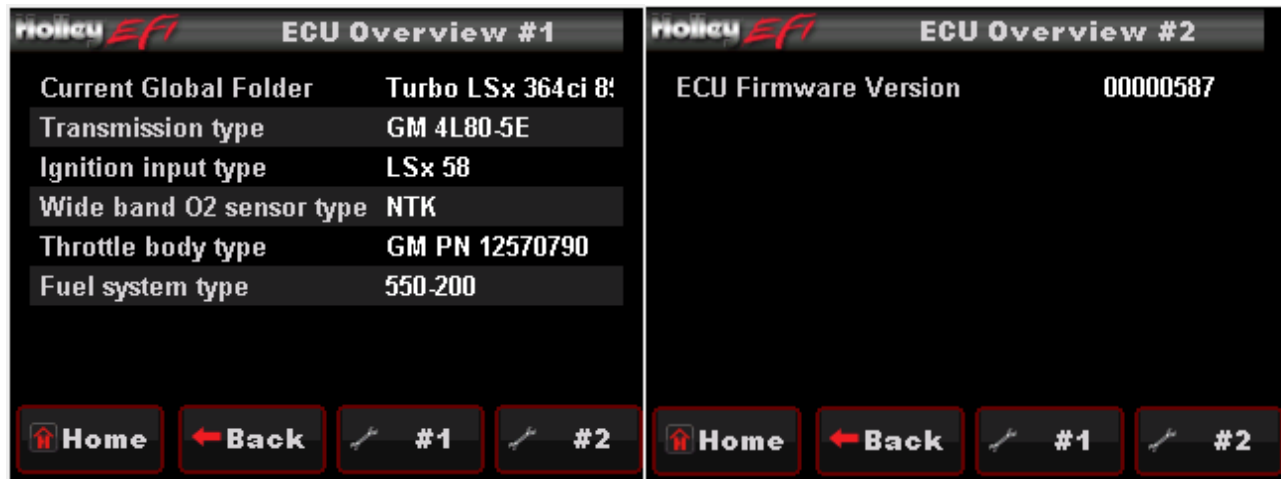
FILE

Choose FILE from the HOME screen to access ECU and 3.5 touch screen information. This is also where ECU logging and Global Folder transfer menus are located.



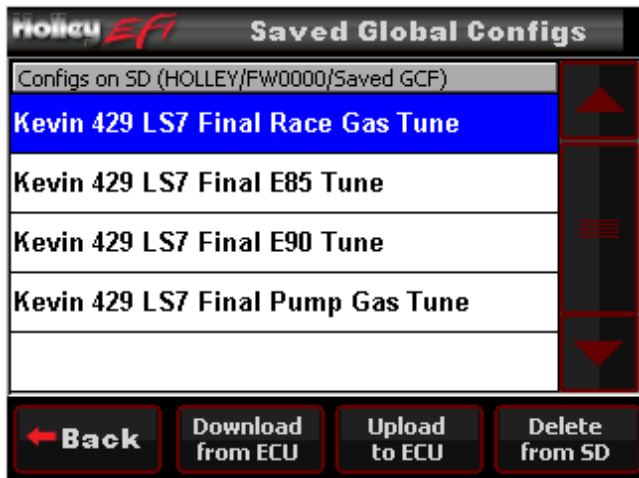
ECU OVERVIEW:

Information specific to the engine and ECU configuration is shown here, these include the name of the current global folder, transmission type, ignition input type, WBO2 type, throttle body type, fuel system type, and ECU firmware version. Note that this menu is view only – no information can be changed. Any changes to engine or transmission setup must be done through the TUNING or WIZARDS menu.

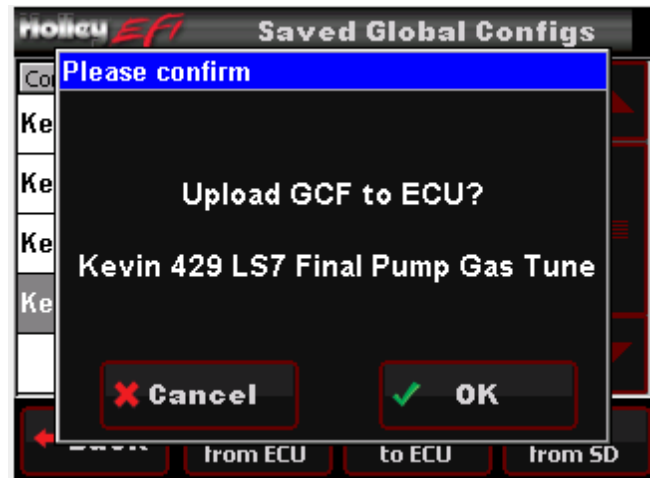


ECU GLOBALS:

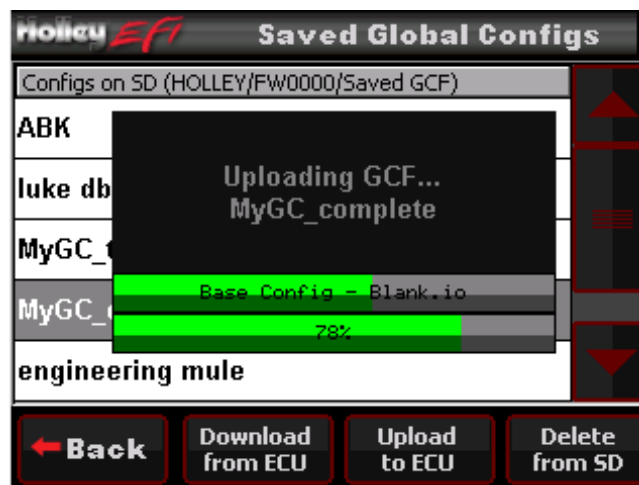
This menu will list any global folders that have been saved to the SD card. It will also allow you to download a global folder from the ECU to the SD card so that it may be opened on any Windows based PC with free Holley EFI software installed.



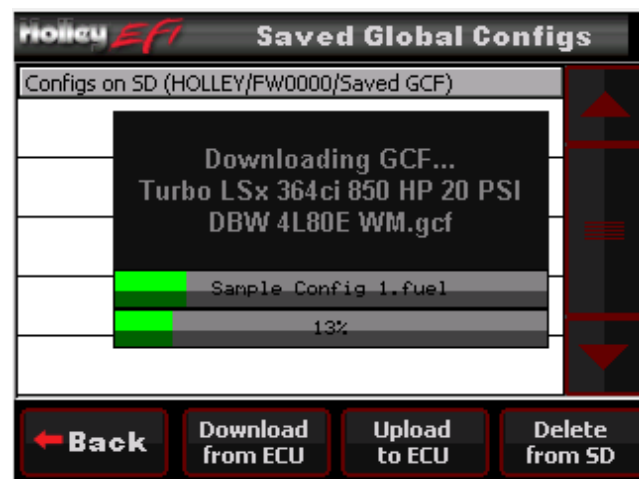
Global Folders List



Global Folder Upload to ECU from SD Card



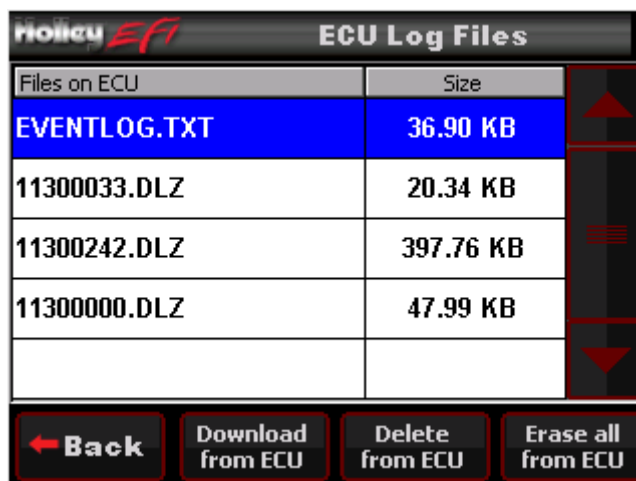
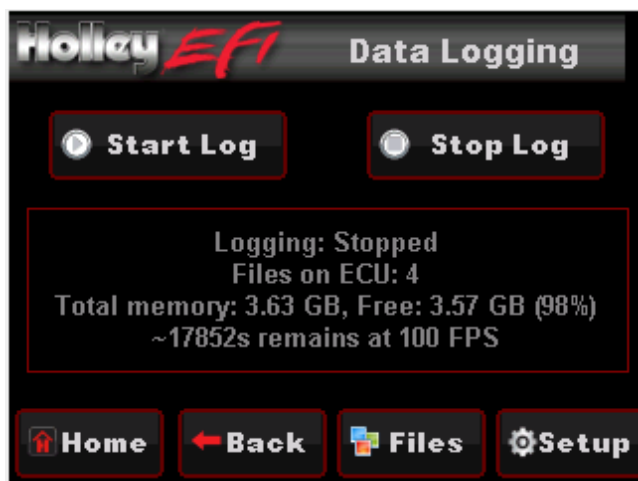
Upload Status Screen



Global Folder Download to SD Card Status Screen

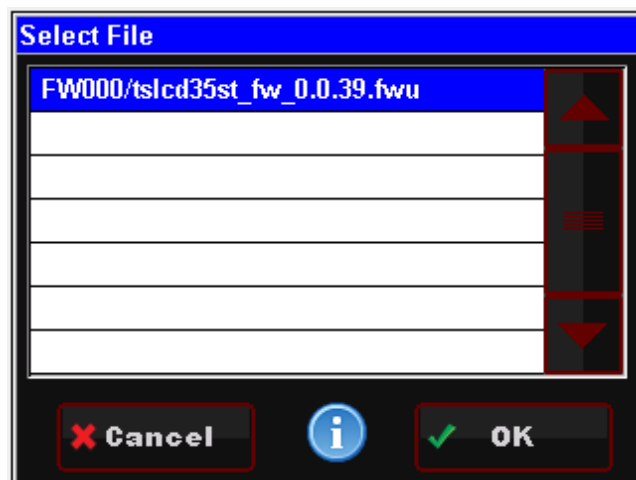
ECU DATA LOGGING:

Holley HP and Dominator systems come standard with powerful data logging capabilities. Logging can be stopped and started via the 3.5 Handheld. The sampling rate is adjustable from 1 to 100 samples per second and can be changed by selecting 'Setup'. Typically a high sampling rate is used for drag racing and a lower rate may be used for something such as road racing. Choosing 'Files' in the DATA LOGGING menu will display all logs contained within the ECU's memory, from here any file may be saved to the SD card and viewed through the Holley EFI PC software.



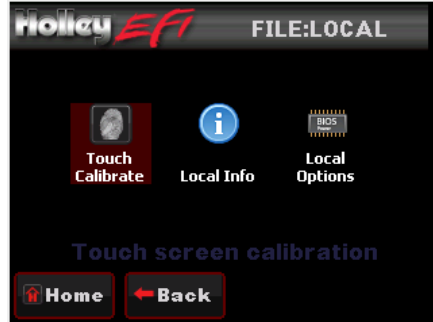
ECU HARDWARE/FIRMWARE (HW/FW):

Use this menu to update ECU Firmware. Also includes ECU data including serial number, date code, firmware version, and profile number.



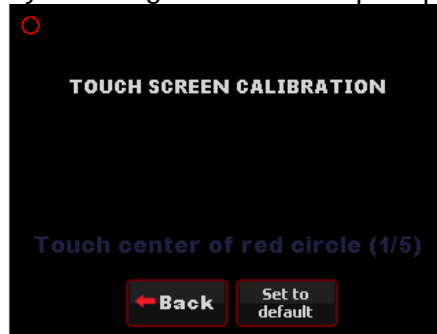
LOCAL SETUP:

Contains calibration options for the 3.5 Handheld



TOUCH CALIBRATE

The touch screen may be recalibrated by following the on screen prompts.



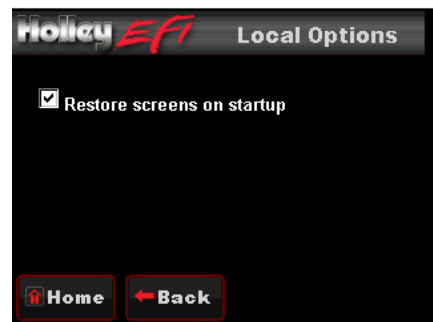
LOCAL INFO

Displays device and firmware information for the 3.5 Handheld.



LOCAL OPTIONS

By selecting 'Restore screens on startup' the 3.5 Handheld will revert to the last screen used prior to powering off.



V3 FIRMWARE

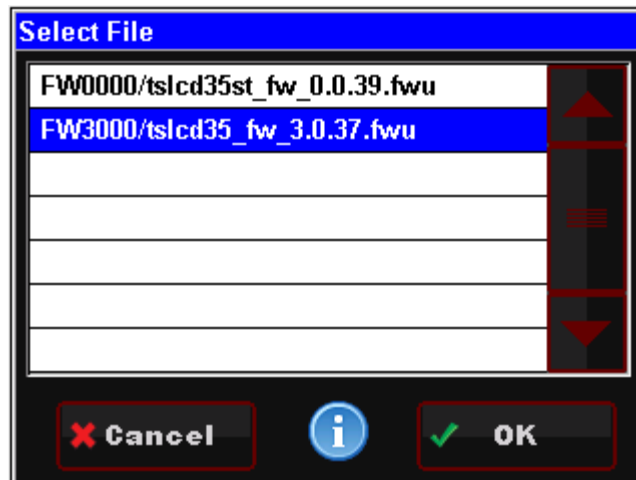
If you are using V3 Holley software, the firmware within the 3.5 touch screen must be updated for proper functionality.



If this warning screen is displayed, choose 'Upgrade device FW'



To upgrade from the Local Info Screen – Choose 'Upgrade device FW'



V3 Firmware is preloaded in the 'FW3000' Directory – Select the firmware and select 'OK' to update the 3.5

NOTE: 3.5 FUNCTIONALITY WILL BE LOCKED IF THE ECU AND TOUCH SCREEN FIRMWARE DO NOT MATCH. UNLESS YOUR 3.5 TOUCH SCREEN IS LOCKED AND SHOWING THE WARNING MESSAGE ABOVE, PLEASE DISREGARD THE V3 FIRMWARE SECTION OF THIS INSTRUCTION MANUAL!

WIZARDS

GCF WIZARD

The GCF Wizard is a base calibration selection tool used with Holley Terminator EFI kits. This function is not active with the 553-108 touch screen.

TPS WIZARD

A TPS Autaset may be performed via the 3.5 – eliminating the need to use the HEFI software.



Step 1: Select TPS Autaset



Step 2



Step 3



Step 4: Select 'Done'