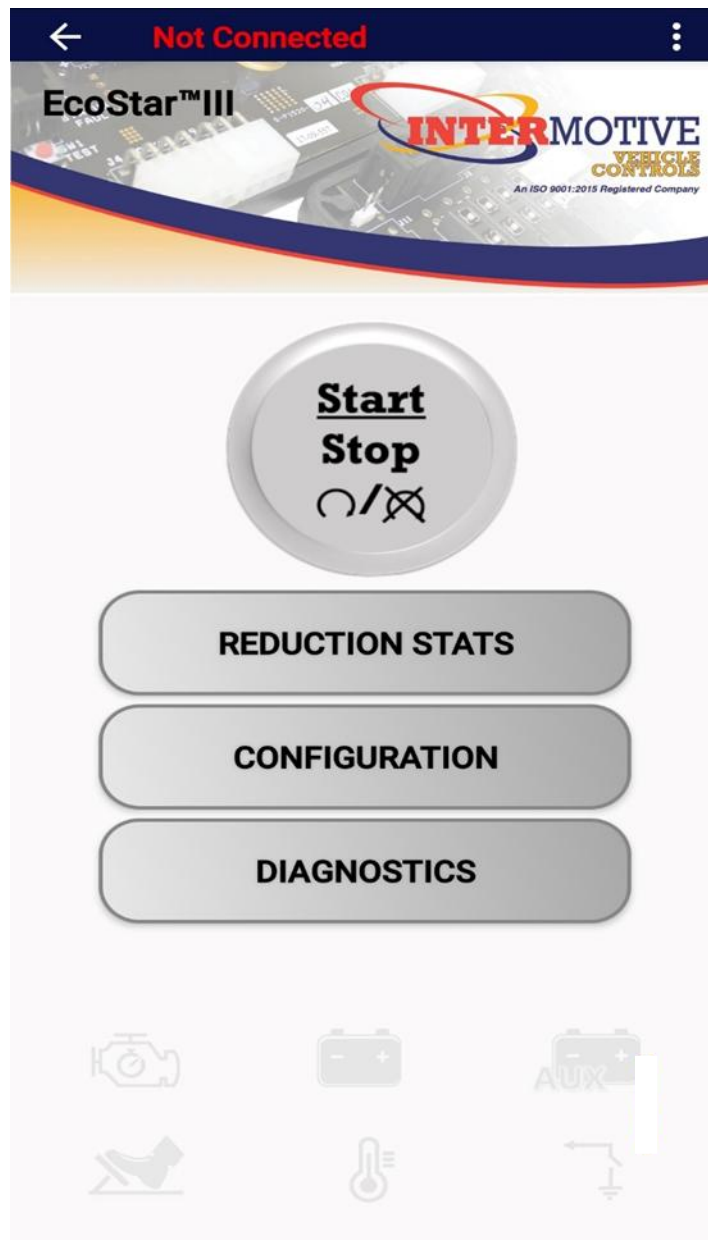**Instructions**

EcoStar™ III App Guide

The ECO3 Mobile App can be downloaded from the Google Play Store (Android) or the Apple Store (IPhone) free of charge. You can find out more about the ECO3 system and the ECO3 app on our website:

www.intermotive.net

Instructions

Setting Up Your System

DEVICES & DOWNLOADS:
Laptop or Tablet
- USB port and RAM/Memory to run executable files as programs
- Example: 11th Gen Intel® Core™ i7-1165G7 @2.80GHz, RAM: 16.0GB, SYSTEM: 64-bit operating system, x64-based processor

Mobile Smart Phone
- Android S20 or IPhone 13 or newer with internet access and Bluetooth

Download
- Drivers for your system (.64 Windows setup.exe)
- IDM Program .EXE (ECO3 Firmware)
- ECO3 Mobile App from Play Store (Android) or Apple Store (IPhone)

NOTE:
For help on downloading the ECO3 App, Firmware, Programs, Configurations, Troubleshooting, Installation and Operating the ECO3 system visit our website:

www.intermotive.net

ECO3 App Login & Bluetooth Pairing:
Connecting your Phone to the installed ECO3 system
1. Select the **3 Dots** in the **Upper Right Corner** to access **MENU**
2. Select **Connect/Disconnect**
3. Select the vehicle **VIN** under **Paired Devices**
4. Select **PAIR** on the **Bluetooth Pairing Request**
5. Enter **PIN 123456** to pair phone to ECO3 system
6. The vehicles VIN# in the top left corner verifies the system is connected
7. Select **DIAGNOSTICS**
8. Select ECOSTAR DATA - Idle Timer, Battery Voltage Re-Start, Hood Switch Position, Thermistor Temp Parameters and configuration data is shown
9. Select **VEHICLE NETWORK DATA** - Live Data being collected from Drivetrain, Transmission Position and other essential information monitored and communicated over the vehicle network

NOTE: To save changes to a configuration you will need to save the file by using the DEFAULT PASSWORD [ALL CAPITAL LETTERS] ES3-_ _ _ _ _ _ [LAST 6 DIGITS OF THE PAIRED VEHICLE VIN#]

Instructions

Changing & Saving Configurations

1. Open the ECO3 app and **PAIR VIA BLUETOOTH**

2. Select **CONFIGURATION**

3. Select **GET MODULE CONFIG**

4. *Immediately* scroll to the bottom of the page on your app and select **SAVE AND EMAIL**

5. Scroll to the top of the page and create a new file name **BEFORE MAKING CHANGES**

6. Carefully begin making changes to your configuration selecting options and changing values where necessary

7. Select **UPDATE MODULE** and a dialog box asking for the **PASSWORD** appears

8. Default Password in **CAPITAL LETTERS** is: ES3-_ _ _ _ _ _ [last 6 digits of the VIN#]

9. After loading your new settings, **SAVE AND EMAIL** a copy of the NEW config file to yourself

NOTE:

- It's important that you do not share the configuration name or password with unauthorized personnel

- Only authorized employees should have the password and access to making changes to the vehicle

- Unless instructed by your Management, drivers are not allowed to access or make changes to the ECO3 system

- You can change the default password once you have a copy of the configuration file for your records

Email a copy of the new configuration files to Intermotive. We can pre-load your new config file on future ECO3 orders eliminating the need for you to make changes.

Instructions

CHANGING & SAVING CONFIGURATIONS

How to load a configuration file to the ECO3 system

1. Pair the ECO3 App with your vehicle via Bluetooth using the vehicle VIN#

2. Select **LOAD CONFIG FILE**

3. Open the configuration file previously saved on your phone

4. Verify the NEW configuration file name and information settings that loaded are correct

5. Select **UPDATE MODULE** and a dialog box asking for the **PASSWORD** appears

6. Default Password **CAPITAL LETTERS: ES3-_ _ _ _ _ _ [last 6 digits of the VIN#]**

7. After loading your new settings, SAVE AND EMAIL a copy of the NEW config file to yourself

8. Validate the changed settings are working by test driving the vehicle and monitor the changes

**ECO3 DIAGNOSTICS & DATA IMAGES**

Main Dashboard

Start/Stop Button - When paired with an installed ECO3 module this button can be used to start or stop the vehicle directly from the app. This can be used when working outside the vehicle for equipment use or other functions.

Trigger Icons - The icons along the bottom of the main dashboard indicate the triggers for starting/stopping the engine. The icons, left to right, represent Engine Idle Timer, Primary Battery, Auxiliary Battery, Service Brake, Thermostat, and Inputs.

The icons are greyed out when the functions are not in use. When an icon turns black, it means that a setting related to that trigger is preventing ECO3 from automatically stopping the engine. The vehicle will continue to run until the configured conditions are met.
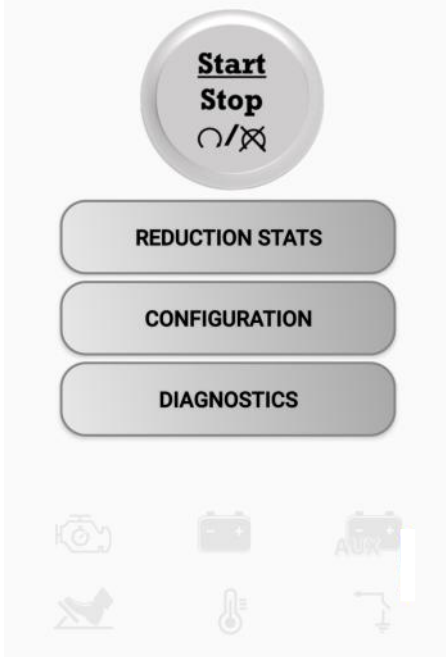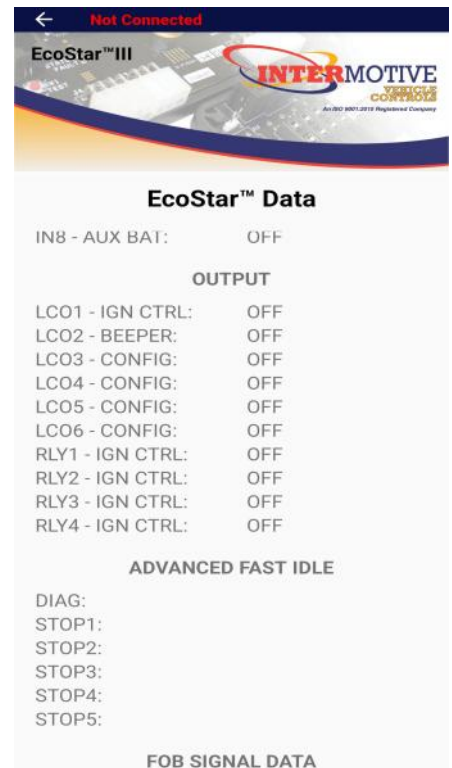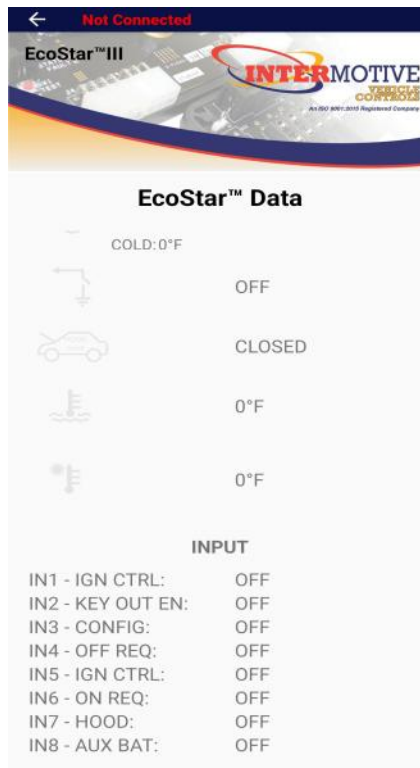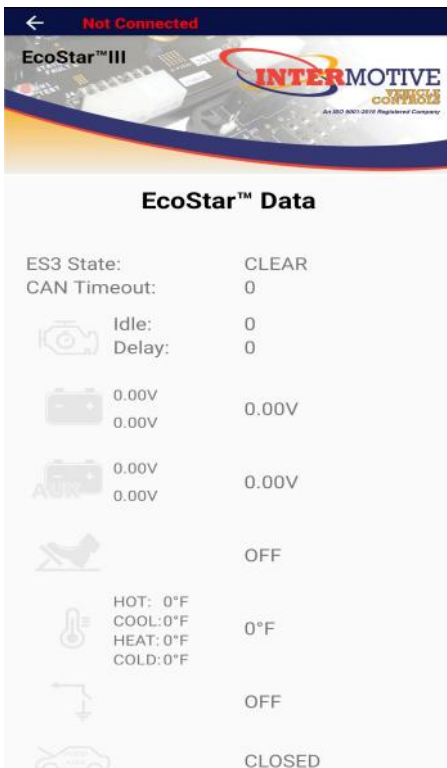
Instructions
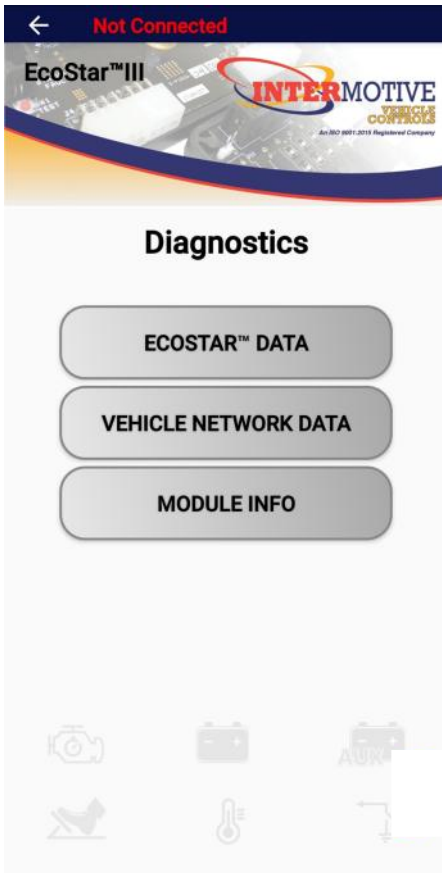
Diagnostics Menu

The Diagnostics Menu screen has 3 options to choose from:

ECOSTAR DATA: Pressing this button will go to a screen that displays live data being monitored by the ECO3 module. For example: start/stop trigger state, engine timer, battery voltages, service brake status, plus more as well as inputs and outputs.

VEHICLE NETWORK DATA: Pressing this button will go to a screen that displays the vehicle VIN as well as specific vehicle data being monitored by the ECO3 module.

MODULE INFO: Pressing this button will go to a screen that displays information specific to the ECO3 module. The "Application" field displays the current firmware version installed on the ECO3 module.

Instructions

EcoStar™ Data

FOB SIGNAL DATA

Fob 1 RSSI (dBm):

-00

Fob 2 RSSI (dBm):

-00

Fob 3 RSSI (dBm):

-00

Vehicle Network Data

VIN:	
TR:	PARK
SB:	OFF
KEY:	OFF
PB:	OFF
VSS:	0 MPH
RPM:	0 RPM
ECT:	0 °F
TFT:	0 °F
AAT:	0 °F
FL:	0 %
AC:	OFF
APP:	0 %
HOOD:	CLOSED
LOCKS:	UNKNOWN

Module Info

Product ID:

Hardware ID:

Product Number:

Feature Set:

Bootloader:

Application:

Instructions

Configuration Menu:
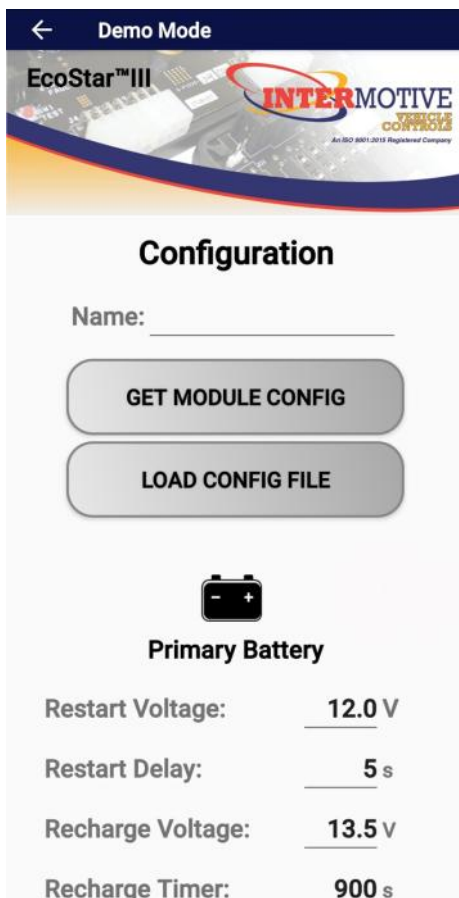
This screen allows the user to retrieve the current configuration, modify the configuration, upload the configuration to the module, or save and email the configuration. The steps for retrieving, loading, and modifying the configuration are detailed on pages 2 & 3.

GET MODULE CONFIG: Pressing this button will retrieve the current configuration from the module
LOAD CONFIG FILE: Pressing this button will open a dialog box to choose the desired .IMS configuration file to load to the module.
UPDATE MODULE: Pressing this button will open a dialog box asking for the module password. This will send the configuration details currently set on the screen to the module.
SAVE AND EMAIL CONFIG: Pressing this button will save the configuration settings currently on the screen to an .IMS file and a .PDF file and will allow the user to open a program to email or text the files.

Primary Battery:

Restart Voltage: This determines the battery voltage that will trigger an auto-start of the engine.

Restart Delay: This determines the time between the low battery voltage trigger occurs and when the engine auto-start engages

Recharge Voltage: This determines the voltage at which the ECO3 will consider the battery charged.

Recharge Timer: This determines how long the engine will continue to run after reaching the Recharge Voltage point and then auto-stop.

Instructions

Configuration

Name: _____

Auxiliary Battery

Restart Voltage:	0 V
Restart Delay:	5 s
Recharge Voltage:	0 V
Recharge Timer:	900 s

Engine Idle Timer

Key In Enable:	✓
Key In Duration:	15 s
Key Out Enable:	✓
Key Out Duration:	2 s

Auxiliary Battery:

Restart Voltage: This determines the battery voltage that will trigger an auto-start of the engine.

Restart Delay: This determines the time between the low battery voltage trigger occurs and when the engine auto-start engages

Recharge Voltage: This determines the voltage at which the ECO3 will consider the battery charged.

Recharge Timer: This determines how long the engine will continue to run after reaching the Recharge Voltage point and then auto-stop.

Engine Idle Timer:

Key In Enable: This turns on/off Engine Idle Timer for Key In operation

Key In Duration: This determines the time the engine will idle while in the Key In state as long as an Engine On trigger is not active

Key Out Enable: This turns on/off Engine Idle Timer for Key Out operation

Key Out Duration: This determines the time the engine will idle while in the Key Out state as long as an Engine On trigger is not active

Instructions

Not Connected

tar™III

Configuration

Name: _____

👞

Service Brake Function

○ Inhibit Off Request

○ Restart Engine

◉ Inhibit and Restart

○ Only Reset Idle Timer

○ No Function

Service Brake:

Inhibit Off Request: This setting causes the Service Brake to prevent auto-stop requests via the Engine Off Request wire while the brake is pressed

Restart Engine: This setting will cause the engine to restart with a press of the service brake if the engine was stopped automatically by ECO3

Inhibit and Restart: This combines both the inhibit and restart functions

Only Reset Idle Timer: This setting causes the Service Brake to reset the Idle Timer only.

No Function: This setting causes the Service Brake to have no impact on ECO3 functions

Instructions

Temperature Preconditions:

Min AAT: This setting is the minimum Ambient Air Temp boundary that the auto start/stop feature will operate within

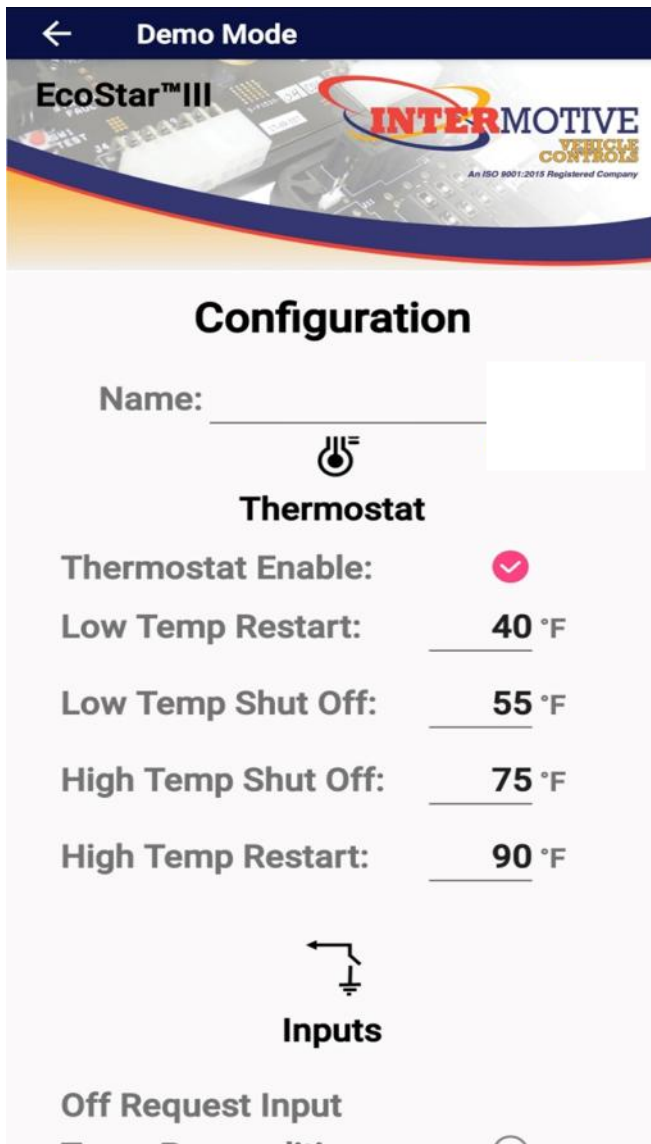**Max AAT:** This setting is the maximum Ambient Ait Temp boundary that the auto start/stop feature will operate within

Gas Min ECT: This setting is the minimum Engine Coolant Temp boundary that the auto start/stop feature will operate within for GAS engines

Diesel Min ECT: This setting is the minimum Engine Coolant Temp boundary that the auto start/stop feature will operate within for DIESEL engines

Max ECT: This setting is the maximum Engine Coolant Temp boundary that the auto start/stop feature will operate within for EITHER engine type

Instructions

Demo Mode

EcoStar™ III

Configuration

Name: _____

Thermostat

Thermostat Enable:	✓	
Low Temp Restart:	40	°F
Low Temp Shut Off:	55	°F
High Temp Shut Off:	75	°F
High Temp Restart:	90	°F

Inputs

Off Request Input

Thermostat:

Thermostat Enable: This setting turns on/off the ability use a thermistor to monitor cabin temperatures. This feature can auto start/stop the engine based on cabin temperature.
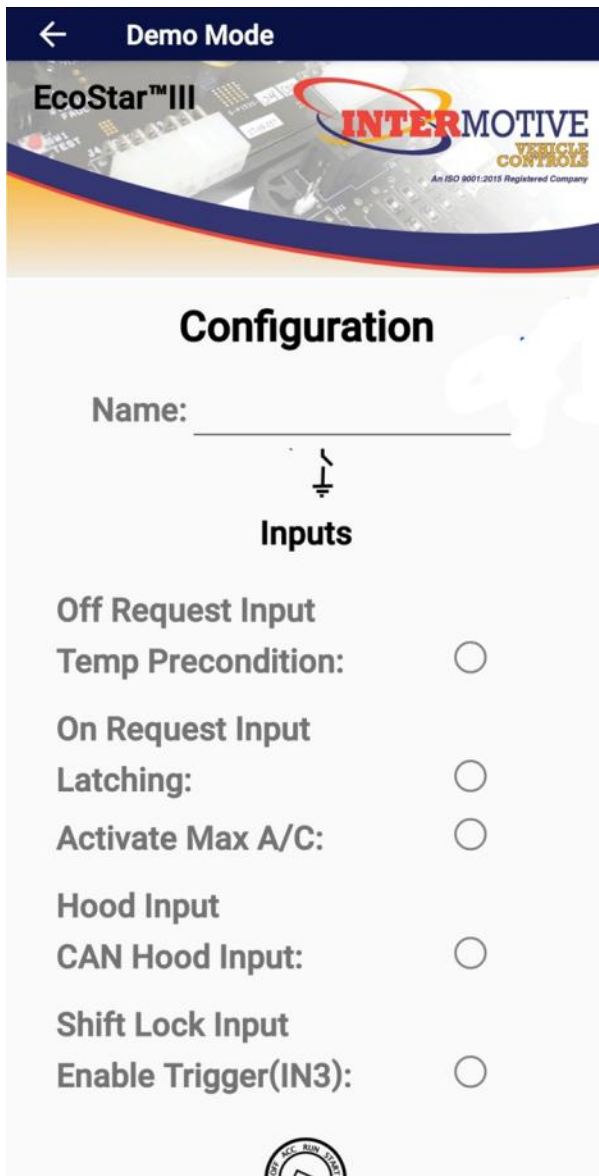
Low Temp Restart: This setting lower boundary temperature that will cause the engine to restart

Low Temp Shut Off: This setting is the cabin temperature that the engine will shut off once reached IF the engine was auto started by the Low Temp Restart trigger

High Temp Shut Off: This setting is the cabin temperature that the engine will shut off once reached IF the engine was auto started by the High Temp Restart trigger

High Temp Restart: This setting is the maximum cabin temperature that will cause the engine to restart.

Instructions

Inputs:

Off Request Input Temp Precondition: Turning on this setting will ignore temperature settings outside of AAT and ECT when processing an Engine Off Request

On Request Input Latching: This setting will enable the Engine On request to stay on until the key state or transmission is cycled. One use case could be needing to keep the engine running while using a wheelchair lift.

Activate Max A/C: This setting will activate Max A/C when an auto restart event occurs

Hood Input CAN Hood Input: This setting determines if the ECO3 will look for hood status over the vehicle CAN network if will use a discrete input

Shift Lock Input Enable Trigger (IN3): This setting determines if Input 3 is used for Shift Lock or Fast Idle

Instructions

Simulated Ignition Power Modes:

Ignition Off: This setting determines the simulated ignition state when ECO3 auto stops the engine and is not awaiting a restart. Choices are OFF or ACC

Wait Restart: This setting sets the simulated key position while the engine has been auto shut down and ECO3 is awaiting a restart of the engine. Choices are OFF, ACC, RUN

Key Out Sim Off: This turns off key out ignition state simulation

Outputs:

Outputs 1-4: A number of options are available as triggers to enable the outputs. These options are:
- Run/Start
- Alarm
- AFIS Trigger
- Door Lock/Unlock
- Engine On
- Key Out
- Equipment Enable
- Lock

Outputs Delay: This sets the time delay between the trigger and the output turning on

Configuration

Name: _____

🔒
Security

Key Out Operation

Enable Delay: 3 s

Secure Mode

Enable: ○

Activation Period: 5 s

Sleep Disable Delay: 30 m

Theft Alarm

Flash Lights: ○

Sound Horn: ○

Activate Output: ○

← **Not Connected**

EcoStar™III

Configuration

Name: _____

Theft Alarm

Flash Lights: ○

Sound Horn: ○

Activate Output: ○

Alarm Duration: 20 s

Cabin Temp Alarm

Flash Lights: ○

Sound Horn: ○

Activate Output: ○

Alarm Duration: 20 s

Security:

Key Out Operation Enable Delay: This setting determines the time between Key Out mode starting and Secure Mode activating

Secure Mode:
- Enable On/Off will determine if Secure Mode is available
- Activation Period sets the time period to remove the key from the ignition after engaging auto mode.
- Sleep Disable Delay will prevent the module from entering Sleep for the listed time period

Theft Alarm:
- Flash Lights will cause the lights to flash when the theft alarm is triggered
- Sound Horn will sound the horn when the theft alarm is triggered
- Active Output will turn on the output when the theft alarm triggers and can be connected to auxiliary visual or audible alarm equipment

Cabin Alarm:
- Flash Lights will cause the vehicle lights to flash when the cabin temp alarm is triggered
- Sound Horn will sound the horn when the cabin temp alarm is triggered
- Active Output will turn on the output when the cabin temp alarm triggers and can be connected to auxiliary visual or audible alarm equipment

Instructions

Configuration

Name: _____

AutoSense™

Note: Distance is estimated based on signal strength from fob which is installation dependent. These settings will need to be determined by observation after EcoStar™III has been installed on a specific application.

Lock Distance: 3

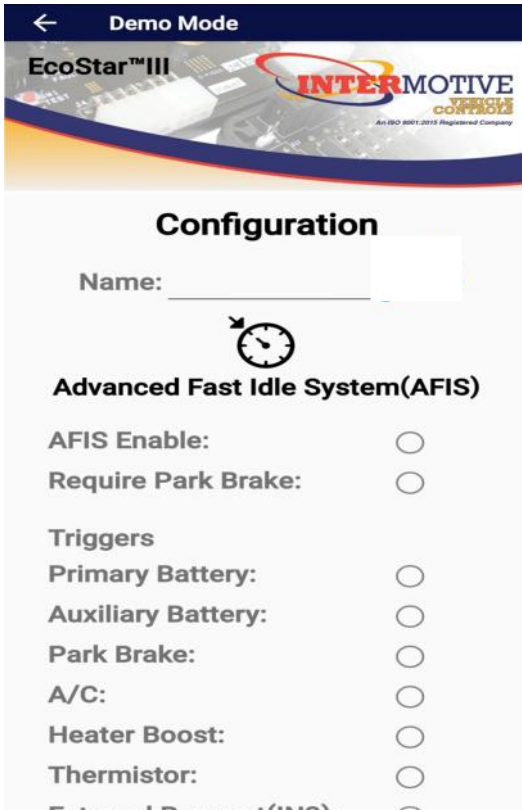Unlock Distance: 3

AutoSense:

Lock/Unlock Distance: These settings determine the distance the key fob can be from the vehicle to lock/unlock the doors.

For the auto lock function to activate, the driver must enter key-out mode by pressing the enable button and removing the key from the ignition. The driver can then exit the vehicle with the fob and key and EcoStar III will automatically lock the doors. When the driver returns to the vehicle the doors will automatically unlock.

NOTE: The settings scale is not a measurement in feet, but distance estimated by signal strength from the fob.

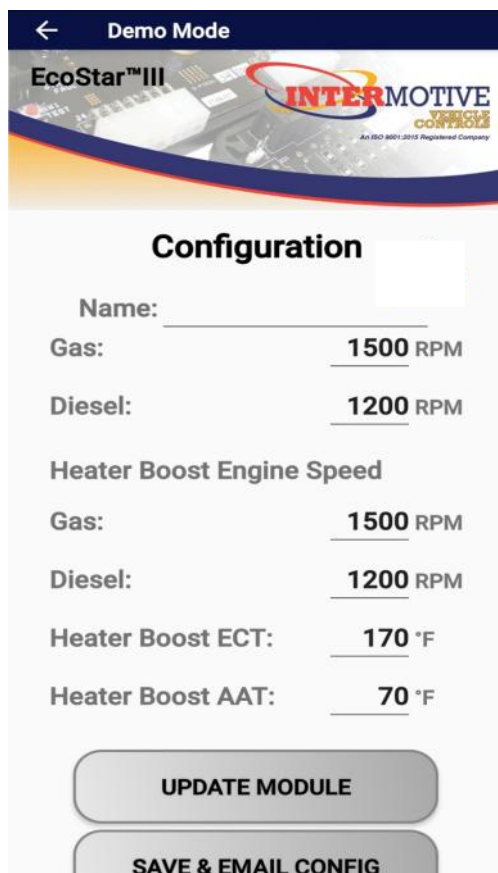# Instructions

Advanced Fast Idle System (AFIS)

AFIS Enable: This turns on/off the AFIS feature

Require Park Brake: Enabling this will add Park Brake to the list of triggers necessary to engage AFIS

Triggers: Turns on/off various triggers for engaging AFIS. The Fast Idle RPM can be set for both Gas and Diesel Engines. The Fast Idle RPM can be set for when the heater is being used, as well as AAT and ECT temperature settings

Instructions

Reduction Stats:

This screen allows the user to retrieve the current information regarding trip data and reduction stats for trip, fuel, emissions, and engine idle wear.

INITIAL INSTALL: Click on **CLEAR TIMERS** to reset the timers to 0 and set the initial trip date. *DO NOT* clear the timers on future trip resets or lifetime data will be lost.

SET TRIP: This will reset the current trip date and cycle
CALCULATE SAVINGS: This will populate the fields on the screen with current trip and savings data.
EMAIL REPORT: This will allow the user to email/text the generated report file. This should be done AFTER pressing **CALCULATE SAVINGS**

Instructions

ECO3 VEHICLE DATA REPORTS

Using the ECO3 vehicle reporting feature to:

- Calculate your ECO3 Data Savings

- Set Trip for specific data collection events

- Lifetime Savings Data

- Annual Average Savings Data

- Export your report to an Excel file

SETTING UP A REPORT TO CALCULATE DATA

Post Installation Process on ECO3
Before releasing the vehicle to the field, pair the ECO3 app to the vehicle and verify and set the following information:
Verify the VIN# and Configuration settings:
        Save the settings with the correct file name and email a copy to yourself

Enter the following information on the day you install the ECO3 system:

Cost of Fuel:	**$3.00**/gal	Required info must change every few times vehicle is refueled
Fuel Burn Rate:	**0.X** gal/idle hr	Suggested value is **0.8gal/idle hr** for data accuracy
Emission Rate:	19 lbs CO2/gal	Fixed Data for calculations
Engine Wear Rate:	33 mi/idle hr	Fixed Data for calculations
Trip Savings	**Start Date:**	SET TRIP DATE

WARNING: IF THE TRIP DATE IS NOT SET UPON INITIAL INSTALLATION AND PRIOR TO PUTTING VEHICLE INTO SERVICE, THE DATA WILL NOT CALCULATE PROPERLY AND NEGATIVE(—) VALUES WILL APPEAR

Instructions

INTERMOTIVE
VEHICLE CONTROLS
An ISO 9001:2015 Registered Company

ECO3 DATA REPORTING FEATURE

How to run an ECO3 DATA REPORT after collecting field data:

1. Connect the ECO3 App on your phone to the vehicle VIA Bluetooth

2. Select **REDUCTION STATS**

3. Select **CALCULATE SAVINGS**

4. Scroll down to the bottom of the page and select **EMAIL REPORT**

How to setup the report for the next data collection trip:

1. On the main page of the ECO3 app select **REDUCTION STATS**
2. Select **SET TRIP**
3. Verify the current date populates in the **TRIP START DATE field (DO NOT CLEAR TIMERS)**
4. Put vehicle into normal use to collect data
5. When ready to run the report, repeat steps 1-4 in the previous section

NOTE:

- If asked to provide a password when emailing reports, the default password is ECO3-_ _ _ _ _ _ [ALL CAPITAL LETTERS] LAST 6 OF VIN# OF PAIRED VEHICLE
- **It is imperative that the TRIP DATE is properly set in order to calculate data**
- Do not share the configuration name or password with non-authorized personnel

Instructions

VIN: XXXXXXXXXXXXXXXX   EXAMPLE REPORT   DATE: XX-XX-XXXX

Information required before data collection reporting begins

- Cost of fuel/gal

- Burn rate per hour

- Set Trip Date [First Trip (ONLY)=Clear Timers]

Trip Savings   **Start Date: XX-XX-XXXX   *SET TRIP DATE***

1. Idle Time Actual: 397.630 hrs   Saved: 373.260 hrs   Without ESIII: 770.890 hrs

2. Fuel Saved: 224 gal   Fuel Expense Saved: $671.87

3. Emissions CO_2 Reduction: 4,255 lbs

4. Engine Idle Wear: 13,122 mi   Saved: 12,318 mi   Without ESIII: 25,439 mi

Lifetime Savings   **Start Date: XX-XX-XXXX DATE ESIII WAS INSTALLED**

1. Idle Time Actual: 2,385.765 hrs Saved: 2,239.530 hrs   Without ESIII: 4,625.295 hrs

2. Fuel Saved: 1,344 gal   Fuel Expense Saved: $4,031.15

3. Emissions CO_2 Reduction: 25,531 lbs

4. Engine Idle Wear: 78,730 mi   Saved: 73,904 mi   Without ESIII: 152,635 mi

Average Annual Savings

1. Idle Time: 1,135.317 hrs

2. Fuel Saved: 681 gal   Fuel Expense Saved: $2,043.57

3. Emissions: 12,943 lbs   Engine Idle Wear: 37,465 mi