

## **Idle Timer Controller - ITC620-A1**

### **2009-2011 Chevrolet Express/GMC Savana**

**4.3L, 4.8L, 5.3L, 6.0L, & 6.6L Engines**

**Contact InterMotive for additional vehicle applications**

### **System Operation**

The ITC620-A1 is an anti-idle module which will shut off gas or diesel engines that are left idling for an extended period of time. The default timer will shut off the engine after 5 minutes of idling if the Park Brake is applied, and 15 minutes if the Park Brake is not applied. This is similar to CARB diesel anti-idling requirements.

### **Installation Instructions**

Be sure the vehicle's batteries are disconnected before proceeding with installation.  
(Note that vehicle may have more than one battery!)



It is the installer's responsibility to route and secure all wiring harnesses where they cannot be damaged by sharp objects, mechanical moving parts such as Park Brake and tilt steering wheel mechanisms and high heat sources. Failure to do so could result in damage to the system or vehicle and create possible safety concerns for the operator and passengers.

Remove the lower dash panel below the steering column and find a suitable location to mount the module. Do not mount the module where it will be exposed to excessive heat. Do not actually mount the module until all wire harnesses are routed and secure. The last step of the installation is to mount the module. It is recommended the module be mounted with two screws, however 2-sided foam tape may also be used. When installing the harnesses, leave several inches of take-out such that the module can be removed if necessary.

### **Data Link Harness (6-Pin Connector)**

- Locate the vehicle OBDII Data Link Connector located below the lower left dash panel.
- Remove the mounting screws for the OBDII connector. Plug the red connector from the ITC620-A1 Data Link T- Harness into the vehicle OBDII connector. Ensure the connection is fully seated and secure with the supplied wire tie.
- Mount the Black connector from the ITC620-A1 Data Link Harness in the former location of the vehicle OBD II connector.
- Secure the harness so that it does not hang below the lower dash panel.
- Plug the 6-pin connector from the Data Link Harness into the 6-Pin connector on the ITC620-A1 module.



### **ITC620-A1 Harness (12-Pin Connector and 4-Pin Connector)**

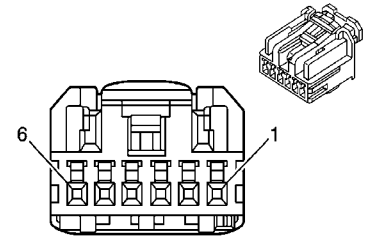
**Note regarding the tapping of Ignition switch wires:** Most OEM Ignition Switch wires are no longer capable of supplying power to aftermarket systems. Some vehicles now provide Ignition Power outputs that are isolated from the actual Ignition switch signals. If the desired isolated Ignition Output is not available, then a relay must be installed to minimize current draw on the Ignition switch wires. The relay must include a kick-back diode to prevent damaging sensitive electronics.

## Ignition Switch Connectors

- Remove the lower steering column trim cover. Locate the ignition switch connector and disconnect it from the switch.
- Locate Pin #4 Red/White wire and Pin #5 Pink wire on the connector.

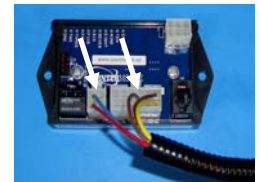
**Confirm that the Pink wire is located between the Red/White wire and the White wire on the connector. There is a second pink wire at Pin #2, do NOT use this wire!**

**Perform only one step at a time, and attach the correct color wire to each white 2-pin connector wire end. These connections must be made by using solder and the supplied heat shrink tubing. The tubing should be cut to 1" lengths for this purpose.**



Front View of Connector

- Find a place on the vehicle Ignition Harness with ample space to install the white 2-pin pigtail connectors. (Supplied with the ITC620-A!.)
- Cut the Ignition Switch Pin #4 Red/White wire and attach the ignition switch side to the female 2-pin connector Pin #1 Red wire.
- Attach the Harness side of the Pin #4 Red/White wire to the male 2-pin connector Pin #1 Blue wire.
- Cut the Ignition Switch Pin #5 Pink wire and attach the ignition side of the Pin #5 wire to the female 2-pin connector Pin #2 (Brown wire).
- Attach the harness side of the Pin #5 Pink wire to the male 2-pin connector Pin #2 (Yellow wire).
- Plug the two 2-pin Ignition connectors into the ITC620-A1 Harness.
- Plug the 12 Pin connector of the ITC620-A1 Harness into the ITC620-A1 Module.
- Plug the 4 Pin connector of the ITC620-A1 Harness into the ITC620-A1 Module.
- Reattach the Ignition Switch Connector to the Ignition Switch.



## Optional Shutdown indicators and override inputs.

There are 3 optional signals with "flying lead" wires provided for connecting to external equipment or devices as described below. These three signal are located on the ITC620-A1 modules 12 pin connector.

- Warning beeper, lamp or LED output - Orange wire, Pin #2. This signal provides 12V when active. The maximum allowed draw on this circuit is 1/2 amp. If an LED is used, it must have either an integral resistor or one wired in series. (A typical value would be  $13V/0.02A = 650$  ohms. 620 & 680 are standard values. Use 1/2Watt resistor). Attach this Orange wire to the positive input for the LED or beeper. Attach a ground wire to the negative side of the circuit. This output pulses repeatedly during the final 30 seconds of Shutdown.
- Override High input - Green wire, pin #4. Applying 12V to this input will prevent engine shut down, and can be connected to equipment such as a PTO, pumps, compressors, etc.
- Override Low input - Blue wire, pin #5. Applying ground to this input will prevent engine shut down, and can be connected to equipment such as a PTO, pumps, compressors, etc.

Ensure that unused flying leads will never make electrical contact with anything by taping, cutting, or extracting the wires (pin extraction requires Molex tool).

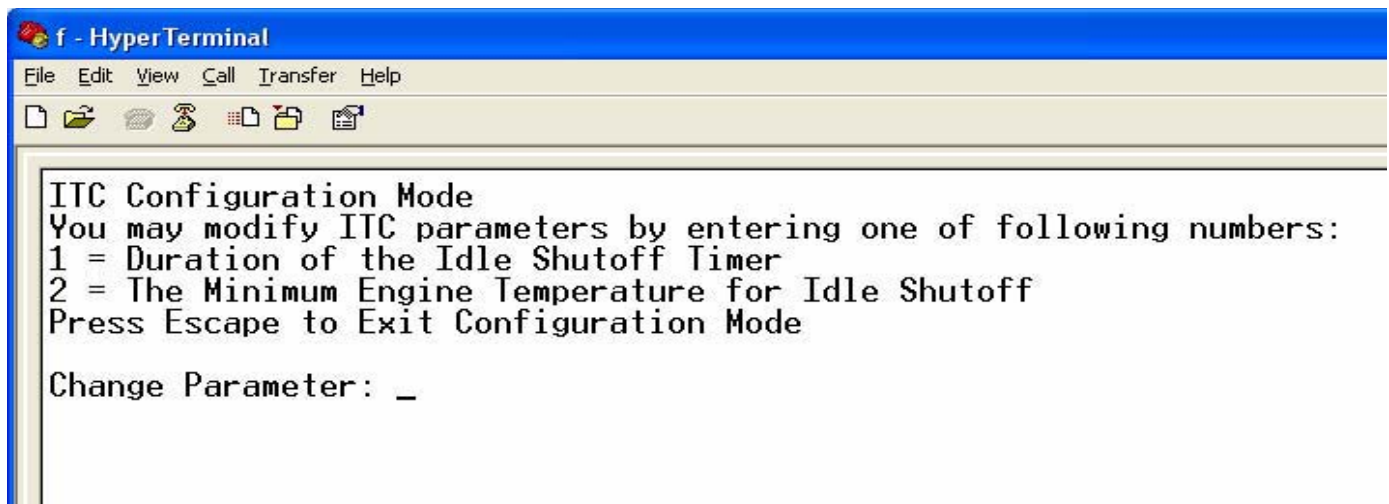
**Reconnect the vehicle's battery.** If you are not planning on changing the module's factory default settings as described below, proceed to the Post Installation Check List section

## Optional - Reconfiguring the minimum engine shut down temperature and shut down times

- This requires the use of InterMotive's Download Cable, part# s-h37a1 (not part of ITC620 kit). You may be required to download and install the proper USB driver the first time you use this cable. All driver files are located online at: <http://www.ftdichip.com/Drivers/VCP.htm>
- Find the correct drivers for your PC and follow the steps to download the latest version (located under the "Driver Version" heading). If unsure about the installation process, contact InterMotive for further assistance.
- Plug one end of the cable into your PC's USB port, and with the vehicles key off, plug the other end into the ITC620-A1 module's COM port.
- Open the Microsoft communication application HyperTerminal. This program can be found under: Start > All Programs > Accessories > Communications > HyperTerminal.
- You will be prompted to give this connection setup a name. We suggest something meaningful such as "ITC Config", which you may reuse in the future.
- The next window will prompt you to select the "COM port" to use for communicating with the module. Even though this download cable plugs into a USB port, it is treated like a serial COM port by HyperTerminal. Typically, the highest numbered COM port will be the InterMotive Communication cable.
- **Note:** The COM port number can be confirmed in Windows XP by right-clicking on 'My Computer' and selecting 'Properties.' From this window select the 'Hardware' tab and click on 'Device Manager.' In the Device Manager window, expand the 'Ports' menu and the download cable connection will be displayed as 'USB Serial Port.'

## Reconfiguring the Minimum Engine Shut Down Temperature and Shut Down Times (Continued)

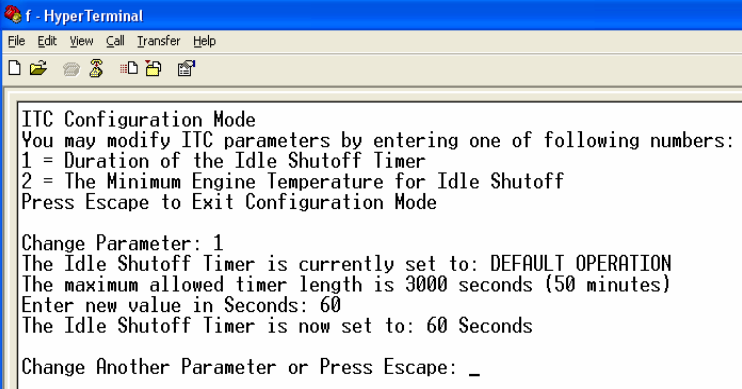
- In the next HyperTerminal window, you will need to change several of the default parameter for the Port Settings as follows:
  - Bits per second: **57600**
  - Data bits: **8**
  - Parity: **None**
  - Stop bits: **1**
  - Flow control: **None.**
- HyperTerminal setup is now complete. The above setup information will be stored under your connection name (earlier step) so you will not need to do this again in HyperTerminal.
- Turn the vehicle key to the ON position. The ITC620-A1 module should wakeup and text should display on the open HyperTerminal window.
- If nothing appears, unplug the 6 pin Data Link connector going into the ITC620-A1 module, wait several seconds and plug the connector back in.
- If still nothing appears, go to File > New Connection and try re-configuring the HyperTerminal as described above. If unsuccessful, contact InterMotive for further assistance.
- Once communication is established, type in the words "config" (followed by the enter key) and the screen should look like Screen Shot 1.



Screen Shot 1

## Reconfiguring the Minimum Engine Shut Down Temperature and Shut Down Times (Continued)

- Enter the Parameter to be changed: 1 or 2.
- If 1 is selected, the screen will look like Screen Shot 2. At this point, you may key in a new Idle Shutdown Time in seconds. Note that this new shut down time will be used regardless of Park Brake on or off. Restoring the default 5/15 minute timing can be done by setting this time to 10,000.



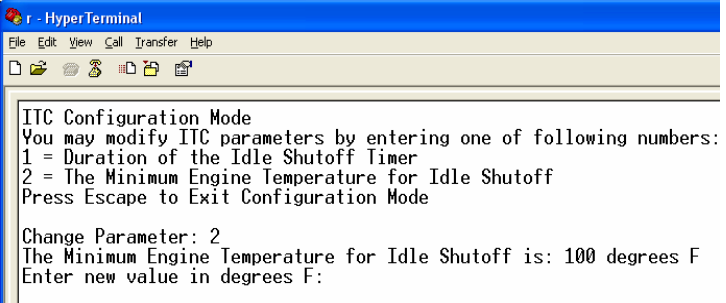
```
f - HyperTerminal
File Edit View Call Transfer Help
ITC Configuration Mode
You may modify ITC parameters by entering one of following numbers:
1 = Duration of the Idle Shutoff Timer
2 = The Minimum Engine Temperature for Idle Shutoff
Press Escape to Exit Configuration Mode

Change Parameter: 1
The Idle Shutoff Timer is currently set to: DEFAULT OPERATION
The maximum allowed timer length is 3000 seconds (50 minutes)
Enter new value in Seconds: 60
The Idle Shutoff Timer is now set to: 60 Seconds

Change Another Parameter or Press Escape: _
```

Screen Shot 2

- If 2 is selected, the screen will look like Screen Shot 3. Key in a new minimum warm up temp in degrees F. ITC620 will not shut the engine off until this temperature is reached.
- Press escape when parameters are set correctly.
- When finished, key off and disconnect the Communication cable.



```
f - HyperTerminal
File Edit View Call Transfer Help
ITC Configuration Mode
You may modify ITC parameters by entering one of following numbers:
1 = Duration of the Idle Shutoff Timer
2 = The Minimum Engine Temperature for Idle Shutoff
Press Escape to Exit Configuration Mode

Change Parameter: 2
The Minimum Engine Temperature for Idle Shutoff is: 100 degrees F
Enter new value in degrees F:
```

Screen Shot 3

## Post Installation Check List

### Putting the module into Test Mode.

Start the engine. Test mode can be entered by pushing and holding the Service Brake while setting and releasing the Park Brake 4 times within 10 seconds. If successful, LED10 on the ITC620-A1 module will be lit. Now release the Service Brake. When this mode is active, the shut off timer is reduced to 15 seconds. LED 9 will come on for 1 second at the start of the shut off timer. A Park Brake, Service Brake, or Accelerator Pedal input will reset the timer. LED 9 will light to verify each input. Also verify function of any lamp or buzzer connected to the optional indicator output. During the final 5 seconds the indicator should flash or sound multiple times until the engine is shut off. Confirm LED10 goes off when engine is shut off. Turn off the ignition. Status LED will light briefly.

**If the ITC620-A1 fails any step in the Post Installation Check List, review the installation instructions and check all connections.**

**Reinstall the column trim cover and under dash panel.**

**If necessary, call  
InterMotive technical support @ (530) 823-1048.**



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## Idle Timer Controller - ITC620-A1

2009-2011 Chevrolet Express/Savana

Contact InterMotive for additional vehicle applications

### System Operating Instructions (leave in vehicle)

#### ITC620-A1 Overview

- The ITC620-A1 is an anti-idle engine shut off system. It automatically shuts off the engine if the vehicle is left idling for an extended period of time without operator input.
- **Default operation:** with the Park Brake disengaged the engine will shut off after 15 minutes of idling. If the Park Brake is set, the idle time is 5 minutes before shut off.
- **Custom operation:** A custom timer length may have been set by the final stage vehicle manufacturer. If this is the case, the engine will shut off after this time limit expires, regardless of the Park Brake being set, or not.

#### Ignition Power Restore and Restart

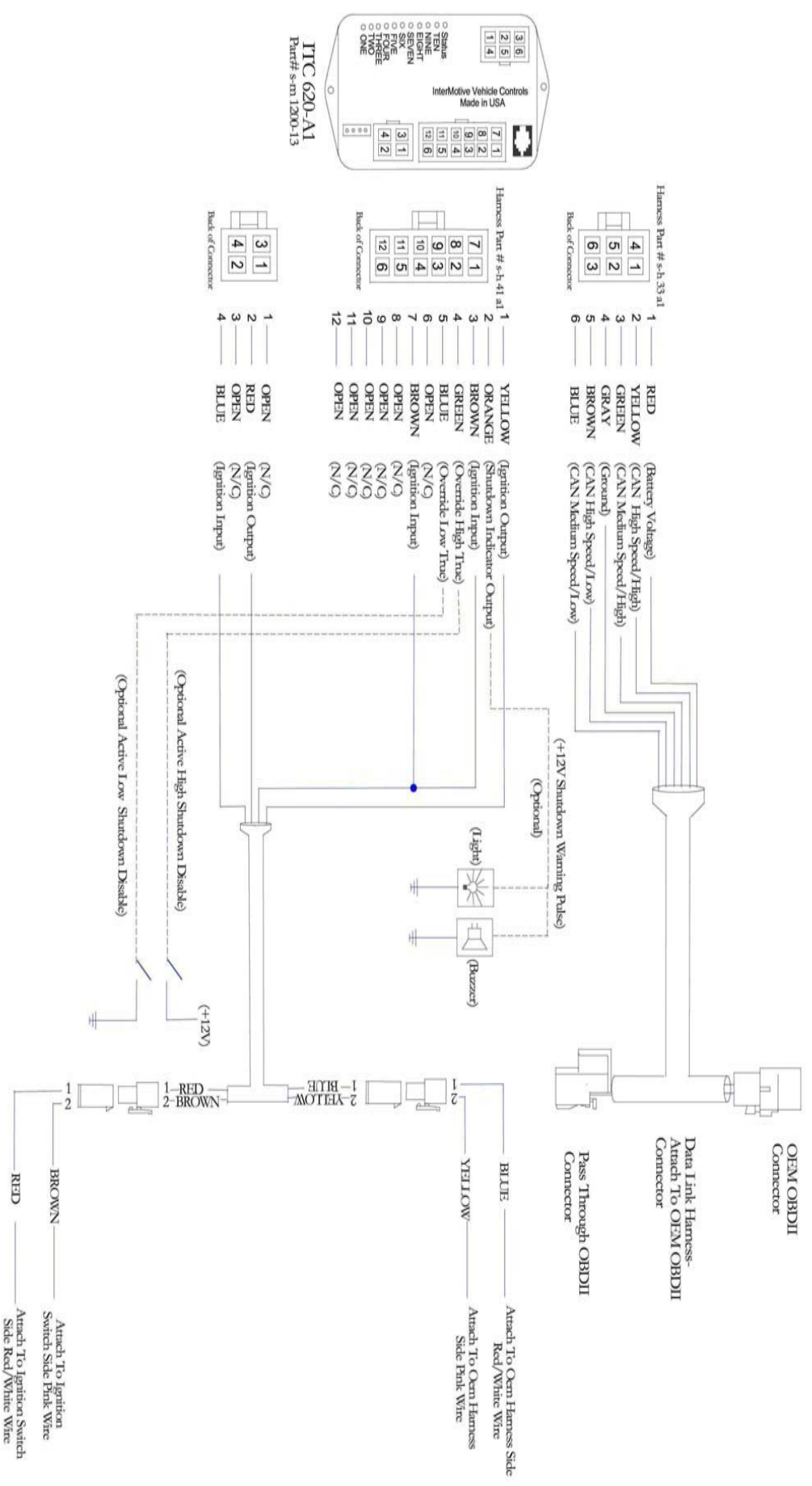
- After an auto-shut off, the ignition key must be cycled off, then back on, before ignition power will be restored. At which point, you may restart the vehicle.
- Even when ITC620-A1 has switched off Ignition power, there is still a small power draw from the batteries. This draw could potentially drain the batteries if the key is left ON and in the vehicle for several days. For this reason, as well as to prevent theft, the key should always be removed from the Ignition once the operator has finished with the vehicle.

#### Optional Shutdown Indicators

- The vehicle's final stage manufacturer may have installed an optional indicator lamp or buzzer which ITC620-A1 will use to warn of impending engine shut down. If installed, it will flash or sound repeatedly during the final 30 seconds prior to Shut Off.
- Applying Service Brake, Accelerator pedal or Park Brake will reset the shut down timer.

#### Timer Override Inputs

- The ITC620-A1 provides Timer Override inputs which the vehicle manufacturer may have wired to other equipment (PTO, AC, etc....). This allows certain equipment on the vehicle to prevent engine shut down as necessary.
- Once the optional equipment is switched off the ITC620-A1 will resume Idle Timer shut down operation.



**Submit product registration at [www.intermotive.net](http://www.intermotive.net)**

If the ITC620-A1 fails any step in the Post Installation Check List, review the installation instructions and check all connections. If necessary, call

**InterMotive Technical Support @ (530) 823-1048.**

ITC620-A1-04-CAD