# X4 POWER FLASH

## QUICK START GUIDE

SCT™
powered by DERIVE

(407) 774-2447 / www.sctflash.com

# SECTION 1:
## PARTS + CHECKLIST

### X4 DEVICE

### MICRO USB™ CABLE

### HDMI/OBD II CABLE

**TOOLS NEEDED:**

Fuse Puller | Voltage Tester | Battery Charger | Pliers

# SECTION 2:
## PRE-INSTALL CHECKLIST

### BUSINESS HOURS

Technical Support is available Monday – Friday between the hours of 9am and 6pm EST and can be contacted via phone at *(407) 774-2447* or through live chat at *www.sctflash.com*. If you need to contact Tech Support, please be sure to have your device with you before initiating contact.

### INTERNET ACCESS

In the unlikely event that technical support is needed, Internet access may be required to troubleshoot. Our Technical Support team may also need to remotely connect to your computer to fix any issues you may be having.

### ALLOW TIME FOR INITIAL SETUP

Make sure you have at least an hour to complete the initial setup, update, and installation process.

### READ X4 USER MANUAL

SCT highly recommends taking a moment to read through your X4 User's Manual found on our website before installation. There is a lot of in depth but useful information inside the manual that won't be covered in this Quick Start Guide.

This device is not legal for sale or use in California on pollution controlled vehicles.

# SECTION 3:
## IMPORTANT ON-DEVICE INFO.

*From the **Main Menu**, select **Device Info**.*

*Within **Device Info**, you will find :*

### SERIAL NUMBER:
Needed for dealers to create custom tunes for your vehicle and device.

### FIRMWARE VERSION:
This is essentially your device's operating system.

### TUNE REVISION
The version number of your preloaded tunes.

### UNLOCKS LEFT:
Number of unlocks remaining. An unlock is used when the tuned vehicle is returned to stock and a different vehicle is programmed.

### MARRIED STATUS:
Unmarried = Unlocked and ready for vehicle pairing.

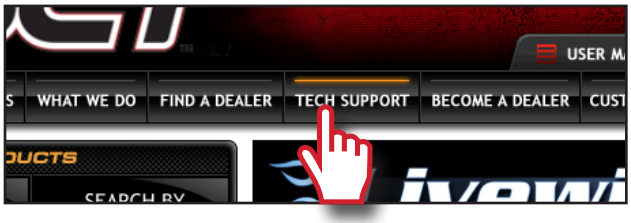
Married = Locked to a vehicle.

# SECTION 4:
# UPDATING YOUR X4 DEVICE

## INSTALLING THE UPDATE SOFTWARE

**NOTE: Make sure the X4 is unplugged from your computer before starting this process.**

1. Go to ***www.sctflash.com***

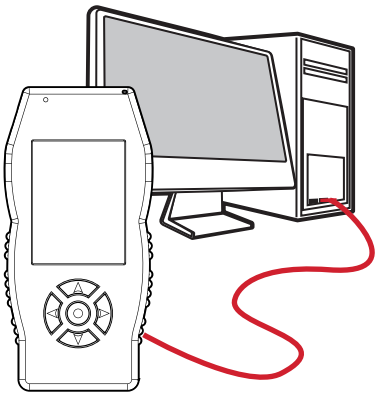



2. Click "***Tech Support***" tab at the top of the page.
3. Click the picture of the ***X4*** (Part Number 7015/7416).
4. Click the ***"Download Now"*** button to the left of the listing that reads "SCT X4 Power Flash Programmer Device Update Software.Wait for that program to download, then double click and "Run" the ***SCTDeviceUpdater.exe*** file if it does not open automatically.

5. Follow the on-screen directions of the ***SCT Device Update Software Installer*** until it allows you to click "Finish".
6. Follow the on-screen directions of the ***SCTDrivers Installer*** until it allows you to click ***"Finish"***.
7. Your SCT Device Update Software and Drivers are now fully installed and ready for use.

## UPDATING YOUR X4 DEVICE

1. Connect your X4 Device to your Windows™ based PC using the ***provided Micro USB™ cable***. Unfortunately, we do not offer support for Apple computers at this time.



2. Double click and open the ***SCT Device Update Software***.
3. Click ***"Automatically Check for Updates"***.
4. Confirm the update by pressing the ***"Update"*** button. The update will now begin.
5. Let the updater run until it says ***"Your device is now up to date!"***
6. You may now unplug your device from your computer and load a tune to your vehicle!

# SECTION 5:
## READING VEHICLE VIN & STRATEGY/OS PART#'S

***From the Main Menu, select Vehicle Info.***

You'll be asked to turn the ***key on***. The VIN and if a Ford vehicle/device, it will give you the Strategy. If using a GM vehicle/device, it will give you the OS Part Numbers.

# SECTION 6:
## CHECKING/CLEARING VEHICLE TROUBLE CODES

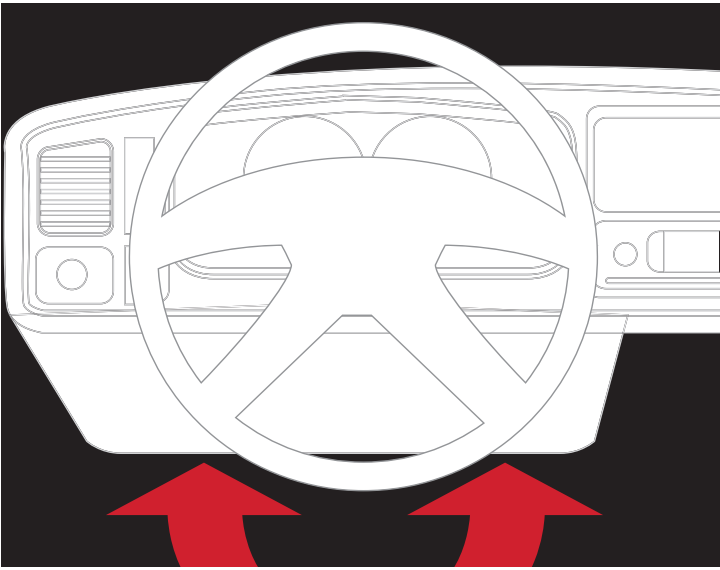
***From the Main Menu, select Vehicle Diagnostics.***

Within this menu, you will be given the option to read or clear DTC codes. Make your selection and follow the on-screen prompts.

# SECTION 7:
# PROGRAMMING THE VEHICLE

## POWERING ON THE X4

To power up your device, using the provided ***HDMI to OBDII cable***, connect to the vehicle's OBDII port. The OBDII port is most commonly found within 24" of the steering column under the driver's side dash.



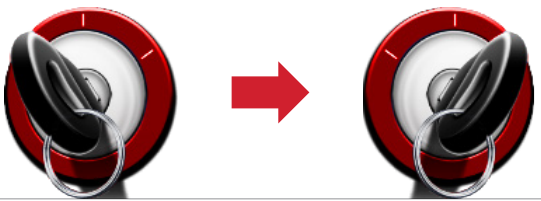
# BEGIN PROGRAMMING

1. From the ***Main Menu***, select ***Program Vehicle***.

2. At this point, the key should be in the ignition, but in the ***OFF*** position until prompted to turn key ***ON***.

**Within *Program Vehicle*, there are 2-3 selections depending on the state of the vehicle.**

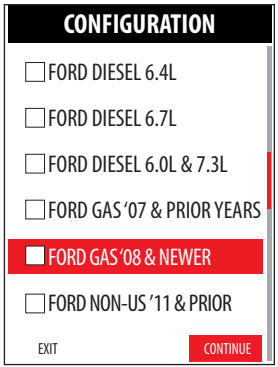
| MAIN MENU |
| --- |
| PROGRAM VEHICLE |
| GAUGES / DATALOG |
| VEHICLE DIAGNOSTICS |
| VEHICLE INFO |
| DEVICE INFO |
| DEVICE SETTINGS |



- Pre-Loaded Tune Files = Preloaded SCT tunes for use on stock vehicles only.
- Custom Tune = Custom Tuning Dealer files, if there are any on the device.
- Return to Stock = Restore original factory file to vehicle.

## USING PRE-LOADED TUNE FILES

Once you follow the first ***"Key On"*** prompt, the device will show you a selection of vehicles and engine sizes. Select yours here. This will take you to Adjustable Options where you will be able to adjust to different performance levels, vehicle characteristics, and options including, but not limited to, speed limiters, axle ratio and tire size. (Adjustable Options are vehicle specific. For more information on Adjustable Options, please see the ***Adjustable Options Explained*** section of this guide.)




## USING CUSTOM TUNES

To install Custom Tunes, select Program Vehicle, and scroll down to the Custom Tunes section. If your device contains any custom tunes for your vehicle, this is where they will be listed. Once you've found your desired tune select it by pressing on it and follow the on-screen instructions to load the tune to your vehicle.

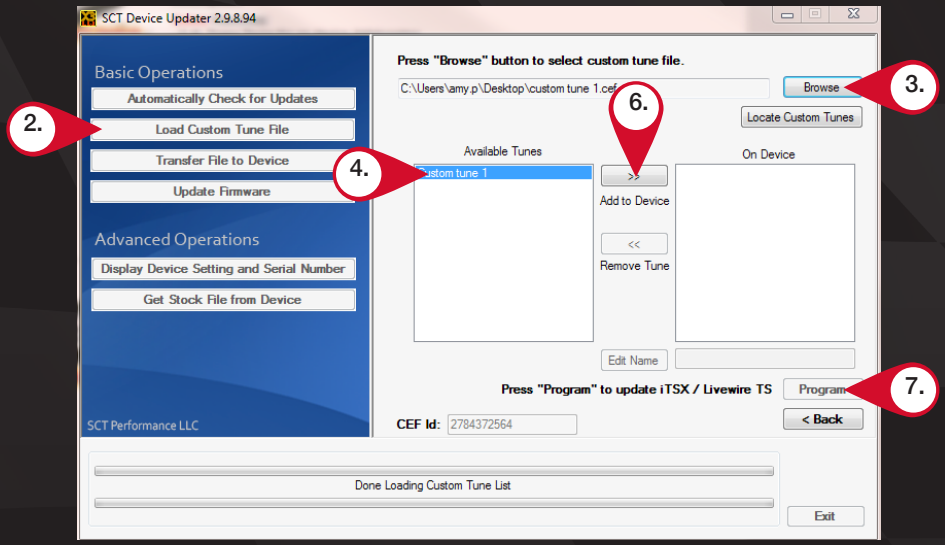
NOTE: Custom Tunes are built by SCT's network of Custom Tuning Dealers and any questions related to them need to be directed toward the tuning dealer.

## RETURNING TO STOCK

With SCT devices, your stock file is stored during the initial programming. The stock file stays on the programmer until returned to stock. From Program Vehicle, select Return to Stock and follow the on-screen instructions to advance through the programming process.

# SECTION 8:
## LOADING CUSTOM TUNES

Download and install the ***SCT Device Updater*** software and Drivers from ***:***
***http://sctflash.com/software/SCTDeviceUpdater.exe***




1. From your e-mail, ***save your custom tunes*** (.cef files) to your computer's Desktop.
2. Open the ***SCT Device Updater*** software and click the ***Load Custom Tune File button***.
3. Click Browse and locate your custom tunes on your Desktop. Alternatively, click ***Locate Custom Tunes***.
4. Select the Tune you wish to load.
5. The tune you selected should move to the ***Available Tunes section***.
6. Select the listed tune in the Available Tunes section, then click the >> button to ***move the selected tune*** to the ***On Device section***.

NOTE: To edit the name of the file as it appears on your device, you must select the file while it's in the On Device section, type in the desired name in the box below, and click Save.

7. Once you have gotten all the tunes you'd like to program under the On Device section and they're named to your liking, just click ***Program***, and the Device Updater will load the tunes to your device.

# SECTION 9:
## ON–DEVICE DATA LOGGING

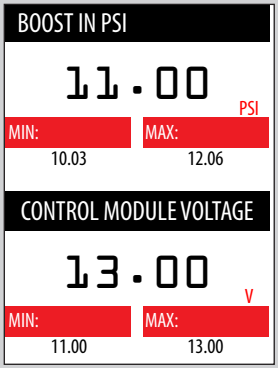
NOTE: If you can't display a specific value from the preloaded config files, you can download Livelink software for free from the SCT website

1. Connect the X4 to the OBDII port.

2. From the ***Main Menu***, scroll to ***Gauges/Datalog*** and press the center button on the X4.

3. On ***initial setup***, you will need to move to ***Configuration***, press the ***center button***, and ***select your vehicle*** from a list of data log files. In the future, you can continue without going through the vehicle selection.

4. Once you select your vehicle, ***default gauges*** will show up and you can now monitor these gauges.




5. The items being monitored can be adjusted by pressing up or down on the device to highlight and then pressing the center button on the X4 to select which reading you'd like to change. Within this menu, you can change the item you're monitoring, and the units in which it will be displaying.

6. To start or stop data logging, ***press the center button*** on the X4 while monitoring the gauges.

7. While monitoring, ***press right or left on the device*** to go to the Gauges/Datalog menu. From this menu, you may start recording, select a data log file with which to log, change the gauge layout, and reset the min/max values on the monitor.

# SECTION 10:

## ADJUSTABLE OPTIONS EXPLAINED

### DIESEL VEHICLE SPECIFIC OPTIONS

**Performance**
The most aggressive preloaded diesel tune. Good for everyday use, racing, or economy but not recommended for any type of towing.

**Street**
Less power than Performance. Moderate gain over stock, safe for light towing, under 5,000 lbs.

**Towing**
Should be used when towing any significant load. Shifting is towing centered.

**Trans Only**
For Heavy Loads. Engine and boost left stock. Trans Only tune.

**Jake Brake**
Exhaust brake to increase engine braking while coasting. Lowers brake temps.

**Locked at CT**
Keeps the torque converter locked during deceleration to aid in engine braking.

**Lock In 1-2-3**
Locks the torque converter in 1st, 2nd and 3rd gear.

**Agg. Tow Haul**
More aggressive shift schedule keeping the engine in its power band longer.

NOTE: Adjustable Options vary for each vehicle and are not available on all vehicles

# DIESEL & GAS VEHICLE OPTIONS:

## EGR Delete

Removes the check engine light from deleting EGR mechanically.

## Axle Ratio

Sets axle ratio to correct shift patterns/speedo. (Not available on all vehicles)

## Tire Size

Sets tire size to correct shift patterns/speedo. (Not available on all vehicles)

## Idle Speed

Sets idle speed in RPM.

## Traction Control

On/Off setting disables traction control without using the TCS button.

## WOT Shift

Increase or Decrease the WOT Shift points of each gear individually by MPH.

## Shift Pressure

% change in transmission pressure during shifts.
(+ = Firmer, - = Softer)

# GAS VEHICLE SPECIFIC OPTIONS:

## Tune Type

Performance levels vary by the octane you select. Higher octane will provide higher performance increase.
93 octane would be the highest increase.

## Towing Tune

Adjusts the octane based tunes to focus more on towing over performance.

## Economy Tune

Adjusts the octane based tunes to focus more on economy over performance.

## Rear O2s

Disables the rear O2s and eliminated the CEL caused by rear O2 removal.

## Global Spark

Add or remove timing advance to the entire RPM range.

## Spark by RPM

Add or remove timing by RPM range. (0-2000) (2000-4000) (4000-8000)

## WOT Fuel

Add or remove fuel at wide open throttle. (WOT)

## Fuel Injectors

Allows you to adjust for different sized injectors. (Not available on all vehicles)

## GAS VEHICLE SPECIFIC OPTIONS:

### CMCV Deletes
Updates tune to handle the CMCV/IMRC delete plates modification.

### Fan Control
Lowers the temperature at which the fan turns on.

### Rev Limiter Drive
Sets rev limit in RPM while in drive.

### Rev Limiter Neutral
Sets rev limit in RPM while in neutral.

### Speed Limit
remove, increase, or decrease the vehicle speed limiter. (AKA Governor)

# USER MANUAL

X4 POWER FLASH

## Part Numbers:

**Ford 7015**
**GM 7416**
**Chrysler 7215**

*This product is not legal for sale or use in California on pollution controlled motor vehicles

# IMPORTANT NOTES

It is always a good idea to turn-off any vehicle systems that may become active during the tuning process such as cooling fans, fuel pumps, etc. to avoid draining the vehicle's battery. To disable these functions, consult your vehicle's owner's manual and remove the fuse for each of these systems. Also be sure to turn-off the vehicle's stereo and HVAC system. Make sure the ignition key is turned OFF before you connect your device to the vehicle.

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Plug the device into the OBD-II port and wait for the main menu screen to appear. The default menu screen is "Program Vehicle". If you are using the device for custom tuning, you will need to read the vehicle strategy first through the "Vehicle Info" main menu screen and send that information to your custom tuning dealer. (See Section 4.1)

SCT does not recommend using this device with any other tuning module or device that modifies the vehicle PCM parameters, increases horsepower, torque or modifies transmission characteristics.

Before taking your vehicle to the dealer service department for any type of service or warranty work, you should first return the vehicle back to the stock configuration. Check engine warning lights can be reset by simply unplugging the battery cables from the battery for 5-10 minutes. Diagnostic trouble codes can also be read and cleared through the "Vehicle Info" menu.

## IMMEDIATE CONSUMER ACTION REQUIRED!

YOU MUST REGISTER YOUR X4 DEVICE WITHIN 30 DAYS OF PURCHASE TO VALIDATE YOUR 1 YEAR LIMITED WARRANTY. YOU CAN REGISTER YOUR DEVICE FROM OUR HOMEPAGE AT WWW.SCTFLASH.COM

# USER'S MANUAL

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# 1. GENERAL INFORMATION

## 1.1 SCT Performance, LLC Limited Warranty for X4

**What Does This Warranty Cover?**
This warranty covers any defects or malfunctions in your SCT tuning product within the warranty period set forth below, subject to the following conditions and limitations.

**How Long Does The Coverage Last?**
This warranty lasts for a period of one (1) year following the date of sale by SCT of the product to the original SCT dealer/distributor; *provided, however,* the duration of this warranty will be extended to one (1) year from the date of original purchase by the consumer from the SCT dealer/distributor so long as the consumer submits the required online registration information within thirty (30) days of purchase, as provided below. *All implied warranties, including warranties of merchantability and fitness for a particular purpose are limited to the warranty period set forth above.*

**What Will SCT Do?**
SCT will, at its option and as its sole obligation under this warranty, replace, repair or refund the purchase price of any SCT product that has a defect(s) in manufacturing, material and/or workmanship provided that SCT is notified of the claim within the warranty period provided herein. SCT will not be liable for, nor will it reimburse the consumer for any fees, charges or expenses for shipping and/or handling costs associated with the return to SCT of any defective products sent in for replacement or repair.

**What Does This Warranty Not Cover?**
Any damage and/or other problem(s) caused by abuse, misuse, neglect, vandalism, accident, act of God (e.g., flood, fire, lightning), or other cause beyond the reasonable control of SCT is/are not covered. Also, any damage or problem resulting from faulty or improper installation is not covered and shall be the responsibility of the installer. SCT IS NOT LIABLE FOR AND HEREBY EXCLUDES ANY AND ALL INCIDENTAL, SPECIAL OR CONSEQUENTIAL DAMAGES RELATING TO THE PRODUCTS COVERED BY THIS WARRANTY. *This is the consumer's exclusive warranty and is in lieu of all other warranties, express or implied, except as may be required by applicable law. Without limiting the generality of the foregoing, SCT shall not be liable for any breach of any other written or oral warranties given to the consumer by any third party(ies) such as those (if any) given to the consumer by dealers or distributors of the products.*

**How Do You Get Service?**
In order to be eligible for service under this warranty you **SHOULD** complete the online registration information within thirty (30) days of purchase. To register your SCT product, please log on to www.sctflash.com, click on "Register Products" and follow the simple steps provided on the website. If you do not have internet access, or encounter difficulties with the online registration process, please contact SCT at **407-774-2447.** To initiate a claim under this warranty, you can call **407-774-2447** and instructions will be provided. While preregistration of your SCT product is not mandatory, it will expedite the warranty claims process.

**Can This Warranty Be Transferred?**
This warranty is not transferable and applies only to the consumer who originally purchased the SCT product.

**How Does State Law Apply?**
This warranty gives you specific legal rights, and you may also have other rights which may vary from state to state. Some states do not allow the exclusion or limitation of incidental or consequential damages so the above limitation or exclusion may not apply to you. Some states do not allow limitations on how long an implied warranty lasts, so the above limitation may not apply to you.

For questions regarding SCT's products or warranties please contact SCT at 407.774.2447.

# DISCLAIMER OF LIABILITY

THIS IS A HIGH PERFORMANCE PRODUCT. USE AT YOUR OWN RISK. Do not use the X4 product (the "Product") until you (the "Buyer") have carefully read this Disclaimer of Liability (this "Disclaimer"). The installation and use of this Product indicates that you have read and understand, and accept all of the following terms of, this Disclaimer:

SCT Performance, LLC (the "Seller"), shall not be responsible for the Product's proper installation, use and service. If you choose to install and use the Product without a dealer's assistance, you assume full responsibility for the proper installation and application of the Product. If the Product was installed and/or programmed by a dealer, the Buyer shall look solely to the dealer who installed the Product and/or programmed the vehicle with respect to any responsibility for the installation or application of the Product, the programming of the vehicle, and any service and support needed by the Buyer with respect thereto, as well as any damage that may be done to vehicle components as a result of modifications made by the dealer.

The Buyer is responsible to fully understand the capability and limitations of his/her vehicle according to manufacturer specifications, warnings and instructions and agrees to hold the Seller harmless from any damage or injury resulting from failure to adhere to such specifications, warnings and/or instructions. The Buyer is also responsible to obey all applicable federal, state, and local laws, statutes, and ordinances when operating his/her vehicle, and the Buyer agrees to hold Seller harmless from any violation thereof.

The Seller's Limited Warranty for this Product is the Buyer's exclusive warranty and is in lieu of all other warranties, express or implied, except as may be required by applicable law. Without limiting the generality of the foregoing, the Seller shall not be liable for any breach of any other written or oral warranties given to the Buyer by any third party(ies) such as those (if any) given to the Buyer by dealers or distributors of the Product.

Consult your vehicle warranty before using this Product. Under no circumstances will the Seller be liable for the voidance of the Buyer's vehicle warranty. Rather, the Buyer assumes all risk and responsibility if an automotive manufacturer and/or dealer voids the Buyer's vehicle warranty due to use of this Product.

Operate your vehicle at all times in a safe manner. Regardless of any capability, feature or function of the Seller's Products, the Buyer understands and acknowledges that it is the Buyer's sole responsibility to ensure that (A) the motor vehicle is operated in a safe and legal manner, (B) the motor vehicle is not driven faster than the lower of the speed limit or the speed rating of the tires on the vehicle in which the Seller's product is installed, and (C) the maximum RPM or speed rating of the engine is not exceeded while operating the motor vehicle. In no case will the Seller be held liable, and the Buyer assumes all risk and responsibility, for any property damage, personal injury and/or death that may occur in the event the Buyer operates the vehicle in an unsafe manner, violates the law or exceeds the above mentioned limits.

Please check your local, state and federal laws to determine if you are within your rights to modify your vehicle's controller. The Seller makes no representation or warranty, express or implied, that the use of its Products will comply with local, state, or Federal emission levels, noise levels or safety standards. The Buyer assumes all responsibility for such use and compliance.

The Seller recommends that the Buyer temporarily remove this product from his/her vehicle when having the vehicle serviced by a dealership or other service facility. Failure to do so may cause erroneous diagnostic readings or misdiagnosis of vehicle problems. The Seller assumes no liability for failure to do so.

Without limiting the foregoing, should the Buyer decide to conduct any performance tests in connection with the use of Seller's Products (including but not limited to tests in conjunction with the performance screens of any such Products), such performance tests should (A) only be conducted by a passenger in the vehicle (to avoid distracting the driver) and on a closed course and (B) never be conducted on streets, highways or other public ways.

The Buyer acknowledges that he/she is not relying on the Seller's skill or judgment to select or furnish goods suitable for any particular purpose, and the Buyer hereby waives all remedies or liabilities, expressed or implied, arising by law or otherwise, or whether or not occasioned by the Seller's negligence.

THE BUYER HEREBY WAIVES ALL LIABILITY CLAIMS AGAINST THE SELLER OF ANY KIND OR NATURE, INCLUDING LIABILITY FOR PROPERTY DAMAGE, PERSONAL INJURY OR DEATH, TO THE FULLEST EXTENT PERMITTED BY LAW. ADDITIONALLY, BUYER ACKNOWLEDGES AND AGREES THAT SELLER IS NOT LIABLE FOR AND HEREBY EXCLUDES ANY AND ALL INDIRECT, INCIDENTAL, SPECIAL OR CONSEQUENTIAL DAMAGES RELATING TO THE PRODUCTS COVERED BY THIS DISCLAIMER.

The Seller's Limited Warranty for this Product gives you specific legal rights, and you may also have other rights which may vary from state to state. Pertinent state law shall control for what period of time following the sale a consumer may seek a remedy under the implied warranty of merchantability or fitness for a particular purpose. Some states do not allow the exclusion or limitation of incidental or consequential damages so the above limitations or exclusions may not apply to you.

THIS DISCLAIMER IS A MATERIAL CONDITION OF SELLER'S WILLINGNESS TO SELL THE PRODUCT TO BUYER. IN THE EVENT THAT THE BUYER DOES NOT AGREE WITH THIS DISCLAIMER, THE BUYER MAY PROMPTLY RETURN THIS PRODUCT, IN A NEW AND UNUSED CONDITION, WITH A DATED PROOF OF PURCHASE, TO THE PLACE OF PURCHASE WITHIN FOURTEEN (14) DAYS FROM DATE OF PURCHASE FOR A FULL REFUND.

## 1.2 Device Firmware & Tune Revision Updates

From time to time, you may wish to update your device to the latest version of firmware or tune revision. For step by step instructions on how to update your SCT device, visit www.SCTFLASH.com and click on the Tech Support link. Make sure you have returned your vehicle back to stock before updating your unit.

*NOTE: If viewing this document online you can click on the following link to download the SCT Device Updater:* SCT Device Updater

## 1.3 About your SCT Device

Available Gasoline Tunes: 93, 91, 87 octane and economy as applicable.
Available Diesel Tunes: Performance, Street, Towing.

**Note:** Not all options are available for all vehicles.

- X4 VIN locks (marries) to a single vehicle. You cannot use the device to tune a new or different vehicle, until you have returned the original vehicle back to stock, which will unlock the device. You can only change vehicles 5 times before the unit is permanently locked. To reset the Changes or Unlock the device you will need to contact SCT. Service charges do apply.

- Standard pre-programmed tuning files are designed for vehicles with minor performance modifications such as; cold air kits, high-flow exhaust systems, and other basic modifications. Vehicles that have aftermarket superchargers or turbochargers will require custom tuning, which can be purchased only through authorized SCT Custom Tuning Dealers. To locate a dealer near you, use the dealer locator on the SCT website at www.sctflash.com.

- If you later add a blower, turbo or nitrous to your vehicle or add a more 'wild' naturally aspirated combination of parts, you will need to obtain a custom tune from an SCT dealer. The X4 programmer is flexible enough so that your original investment will not be lost – it can be loaded with a custom tune from the SCT dealer.

- Read your vehicle's warranty carefully before installing or using this Product. You are solely responsible for determining whether use or installation of this Product will negate or diminish any applicable warranty coverage. Under no circumstances will the Seller be liable for the voidance of all or any part of the Buyer's vehicle warranty. Rather, the Buyer assumes all risk and responsibility if an automotive manufacturer and/or dealer voids the Buyer's vehicle warranty in whole or in part due to use or installation of this product.

- The stock file is stored during initial programming. The stock file stays on the programmer until returned to stock. You should always return your vehicle back to stock before taking your vehicle in to any auto service facility or before updating your device.

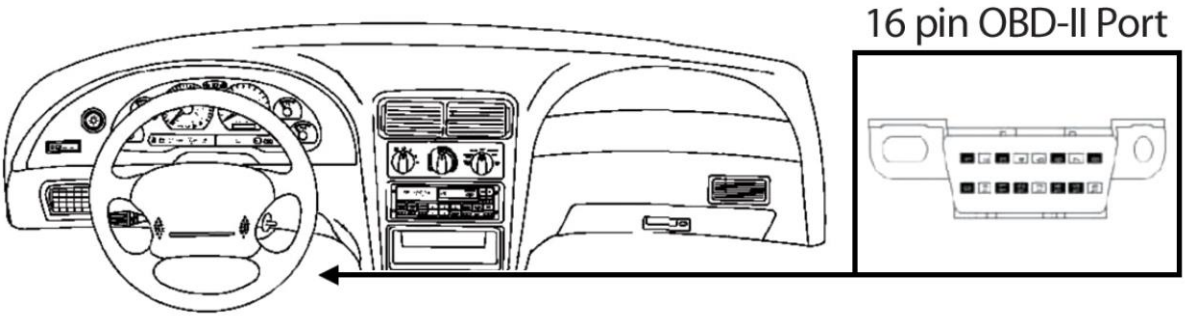
The X4 is NOT legal for sale or use in California on pollution controlled motor vehicles

# 2. GETTING STARTED

## 2.1 Powering on the X4

There two ways to power on the device. If you'd like to flash your vehicle, you will need to use the **Vehicle** instructions below. If you are looking to update or load custom tunes onto your device, you will use the **Computer** instructions below.

- **Using the Vehicle**
  - Locate the vehicle's OBDII Diagnostic port. This connector is usually located under the vehicle's dash board on the driver's side. The port may be covered with a cap or compartment door labeled "OBDII Diagnostic Port".
  - If the connector pins are covered or the port is located behind a compartment door, remove the cap or open the compartment door.
  - Connect the OBDII connector from the X4 to the vehicle's OBDII Diagnostic port.




- **Using the Computer**
  - Install SCT Device Updater before connecting your unit via USB (Updater Download)
  - Locate the computer's USB port. This port can be found on the front or the back of the computer. If using a laptop, the ports will usually be on either side of the laptop.
  - Using the micro USB cable provided, connect the USB end of the cable to the PC and the other to the top of the X4

## 2.2 Loading Email Custom Tunes to the X4

1. Before connecting your X4 to your PC, go to www.sctflash.com and click on the Tech Support tab on the top of the page. Select the image of your device, then download and completely install the SCT Device Updater.
2. Using the provided USB cable, connect your device to the back of your computer. (Allow roughly 30 seconds for the drivers to install)
3. Save your custom tunes from your email to your desktop.
4. Using the shortcut icon on your desktop, open the SCT Device Updater software that you just installed.
5. Now select "Load Custom Tune File" from the Basic Operations menu followed by clicking on "Locate Custom Tunes."
6. Select the desired tune from the list of tunes.
7. Your tune will appear under "Available Tunes" on the left window within the Updater. You will need to transfer it to the X4 by using the arrow button in the middle of the SCT Updater.
8. Press "Program" when ready to transfer the custom tune to the X4.
9. Repeat steps 5-7 if you wish to load more than one custom tune file.

## 2.3 Menu Navigation

**Program Vehicle**

- Engine Preloaded Tunes
- Custom Tunes
- Return to Stock

**Gauges / Datalog**

- Configuration
- Monitor

**Diagnostics**

- Read DTC
- Clear DTC

**Vehicle Info**

- VIN
- COMM
- ECU Strategy

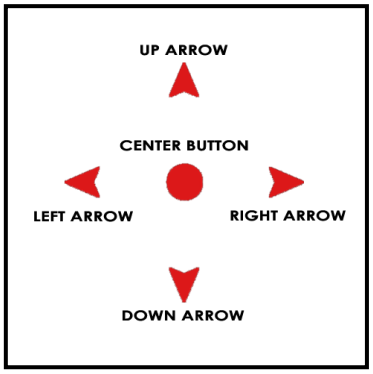
**Device Info**

- Device Name
- Device Part #
- Serial Number
- Firmware Version
- Preloaded Tuning
- Custom Tuning
- Tune Revision
- Market by Country
- Unlocks Left
- Married Status
- Total Flashes
- Support Info
- Vehicle Batt (Battery Voltage)
- Vehicle Board FW
- Wi-Fi Version
- Misc

**Device Settings**

- Check Updates
- WIFI
- Display Brightness (Day)
- Display Brightness (Night)
- Display Orientation
- Theme
- Light Sensor
- Audio
- Startup Function
- Demo Mode
- Factory Reset

## 2.4 Using the Key Pad




## 2.5 Reading Vehicle Strategy

Ford will often times update the computer in your vehicle. The new update ID (calibration ID) that is loaded into your computer is called a strategy. Many times your SCT dealer will ask you to read your vehicle's strategy for many reasons which includes creating custom tunes.

1. Once the device is powered on using the OBDII cable provided.
2. Scroll down and select "VEHICLE INFO". You will be prompted to turn the key to the ON position.
3. Make sure you turn the key forward to the position just before the crank position. Your dashboard should be lit with indicator lights. Select "Continue"
4. Once the X4 has detected you turned the key on, it will proceed to display your VIN, COMM and ECU Strategy.

## 2.6 Reading/Clearing Vehicle DTCs

If you are experiencing a check engine light on your dashboard, you will be able to retrieve the code and read the cause of the code using your X4. You will also have the ability to clear these codes if you have fixed the problem that was causing the check engine light.

1. Once the device is powered on using the OBDII cable provided, scroll down to highlight "Vehicle Diagnostics". Press the center button on the X4 keypad to select.
2. Use the up or down arrow button to choose "Read" or "Clear" DTC Codes.

    a. **READ DTC**: Turn the vehicle key to the ON position and select continue. The device will automatically detect and display any codes that may be present. You will be able to read the definition of the code by scrolling and selecting the code being displayed. To go back to the list of DTC's, highlight and select the back button.
    b. **CLEAR DTC:** Turn the vehicle key to the ON position and select "Continue". Device will display "Clear Codes Complete, Turn Key Off". Your DTC codes have now been cleared. Select Exit, and Exit again to get back to the Main Menu.

# 3.0 *Programming your vehicle*

## 3.1 Installing a Preloaded Tune File

1. Connect the X4 to your vehicle's OBD II service port using the OBDII cable provided in the packaging.
2. With the unit powered on and connected to the vehicle, highlight and select the "Program Vehicle" option.
3. Next you will be prompted with a "Street Use Notice" which you must agree to. If you approve and agree, press the center button on the keypad to select "Continue" to proceed.
4. You may be prompted to "Turn Key On". If so, please turn the ignition key to the "On" position but do not start the vehicle. Highlight and select "Continue"
5. A screen will appear asking you to select your vehicle. Using the Down arrow key, highlight and select the appropriate vehicle model from the list of vehicles provided.
6. Next you will be prompted to adjust options. These options are items available from SCT to make minor adjustments to the calibration being loaded. It is not necessary to make adjustments in this area. If you wish to make an adjustment, simply press the option you would like to change and the screen will change to display the available values for that option. When you are satisfied with the values of these options or if you do not wish to change them, simply press the right arrow to highlight "Approve".
7. You will now be prompted with a screen to review your vehicle and options (if any selected). Press "Continue".
8. The next screen, possibly two, will differ between vehicles. You will be prompted to "Turn key Off" and/or "Turn Key On". It's important here to follow the prompts from the device.
9. X4 will now download the current file that is in your vehicle, referred to as the "Stock File", and will proceed to upload the new calibration you have selected, with all options applied if you have selected any, to your vehicle.
10. After this is complete, the device will display a "Download Complete" screen. You can now turn the key to the off position and select "Done".
11. For GM vehicles you may see a "Power Down ECU" screen while the vehicle completes some power down procedures.
12. You have now successfully tuned your vehicle!

**Which tune file do I choose?**

**Gasoline Engine:** Tunes are based on Octane, make sure you choose the correct octane rating based on the octane you are running in your vehicle.

- 87 Octane
- 91 Octane
- 93 Octane

**Diesel Engine:** We offer a few tunes based on what you're going to be doing with your truck.

- **Street:** Less power than Performance. Moderate gain over stock, safe for light towing, under 5k lbs.
- **Performance**: The most aggressive preloaded diesel tune. Good for everyday use, racing, or economy but not recommended for any type of towing.
- **Tow**: Should be used when towing any significant load. Shifting is towing centered

**How do I know what the Options do?**

In section **3.4** there is a list of options. The options and their functions and are also explained. For suggestions on using any of these options, refer to a custom tuning dealer.

*NOTE: Adjustable Options vary for each vehicle and are not available on all vehicles*

## 3.2 Installing a Custom Tune File

1. Connect the X4 to your vehicle's OBD II service port using the OBDII cable provided in the packaging.
2. With the unit powered on and connected to the vehicle, highlight and select the "Program Vehicle" option.
3. Next you will be prompted with a "Street Use Notice" which you must agree to. If you approve and agree, press the center button on the keypad to select "Continue" to proceed.
4. You may be prompted to "Turn Key On". If so, please turn the ignition key to the "On" position but do not start the vehicle. Highlight and select "Continue"
5. A screen will appear asking you to select your vehicle. Using the Down arrow key, scroll to the section labeled "Custom Tune(s)". Highlight and select the desired custom tune to transfer to the vehicle.
6. Next you will be prompted to adjust options if any are available within the custom tune. These options are parameters available from SCT Dealer to make minor adjustments to the calibration being loaded. It is not necessary to make adjustments in this area. If you wish to make an adjustment, simply press the option you would like to change and the screen will change to display the available values for that option. When you are satisfied with the values of these options or if you do not wish to change them, simply press "Approve".
7. You will now be prompted with a screen to review your vehicle and options (if any selected). Press "Continue".
8. The next screen, possibly two, will differ between vehicles. You will be prompted to "Turn Key Off" and/or "Turn Key On". It's important here to follow the prompts from the device.
9. X4 will now download the current file that is in your vehicle, referred to as the "Stock File", and will proceed to upload the new calibration you have selected, with all options applied if you have selected any, to your vehicle.
10. After this is complete the device will display a "Download Complete" screen. You can now turn the key to the off position and select "Done".
11. For GM vehicles you may see a "Power Down ECU" screen while the vehicle completes some power down procedures.
12. You have now successfully tuned your vehicle!

Custom tunes are built by SCT's network of Custom tuning Dealers and any questions related to them need to be directed toward the tuning dealer.

## 3.3 Returning your Vehicle to Stock

1. Connect the X4 to your vehicle's OBD II service port using the OBDII cable provided in the packaging.
2. With the unit powered on and connected to the vehicle, highlight and select the "Program Vehicle" option.
3. You will next see the "Street Use Notice" disclaimer, here you will be able to highlight and select "Return to Stock" at the bottom of the screen. (use the left arrow button to highlight)
4. Depending on your device settings you may be prompted to "Turn Key On". If so, please turn the ignition key to the "On" position but do not start the vehicle, Select "Continue".
5. Select "Continue" again to confirm you would like to return the vehicle back to stock.
6. The next screen, possibly two, will differ between vehicles. You will be prompted to "Turn Key Off" and/or "Turn Key On". It's important here to follow the prompts from the device.
7. X4 will now upload the original file saved from when you tuned the vehicle ("Stock File") back into the vehicle.
8. After this is complete the device will display a "Download Complete" screen. You can now turn the key to the off position. For GM vehicles you may see a "Power Down ECU" screen while the vehicle completes some power down procedures.
9. You have now successfully returned your vehicle to Stock.

## 3.4 User Adjustable Options Explained

User Adjustable Options are contained within the pre-loaded tuning files. You will be prompted to Adjust Options during the tuning process. The Adjust Options menu will appear and you will navigate through the options using the key pad. To enter the option or select the option, use the approve button. To cancel the option or go back to the previous screen, press the cancel button.

The user adjustable options allow you to adjust common vehicle parameters such as the list provided below. The available user adjustable options for your vehicle will appear in the on-screen list. Use the arrow up & down keys to scroll through the options list and use the select key to enter and modify any option. Once you have selected each option to change, you will be prompted to save all adjustments. Once the adjustments have been saved, you will be prompted to continue the upload process.

***NOTE:*** *Adjustable Options vary for each vehicle and are not available on all vehicles*

### DIESEL VEHICLES SPECIFIC OPTIONS:

| | |
|---|---|
| **PERFORMANCE** | The most aggressive preloaded diesel tune. Good for everyday use, racing, or economy but not recommended for any type of towing. |
| **STREET** | Less power than Performance. Moderate gain over stock, safe for light towing, under 5k lbs. |
| **TOWING** | Should be used when towing any significant load. Shifting is towing centered. |
| **TRANS ONLY** | For Heavy Loads. Engine and Boost left stock. Trans Only tune. |
| **JAKE BRAKE** | Exhaust brake to increase engine braking while coasting. Lowers brake temps. |
| **LOCKED AT CT** | Keeps the torque converter locked during decel to aid in engine braking. |
| **LOCK IN 1-2-3** | Locks the torque converter in 1st, 2nd and 3rd gear. |
| **AGG. TOW HAUL** | More aggressive shift schedule keeping the engine in its power band longer. |

## DIESEL AND GAS SHARED OPTIONS:

| | |
|---|---|
| **EGR DELETE** | Removes the check engine light caused by deleting EGR mechanically. |
| **AXLE RATIO** | Set axle ratio to correct shift patterns/speedometer. (Not available on all vehicles) |
| **TIRE SIZE** | Set tire size to correct shift patterns/speedometer. (Not available on all vehicles) |
| **IDLE SPEED** | Sets Idle speed in RPM. |
| **TRACTION CONTROL** | On/Off setting disables traction control without using the tcs button. |
| **WOT SHIFT** | Increase or Decrease the WOT Shift points of each gear individually by mph. |
| **SHIFT PRESSURE** | % change in transmission pressure during shifts. (+ = firmer) (- = softer) |

## GAS VEHICLES SPECIFIC OPTIONS:

| | |
|---|---|
| **TUNE TYPE** | Gas Vehicle preloaded tunes vary Performance levels by Octane. Premium fuel will provide the best performance increase. |
| **TOWING TUNE** | Adjusts the Octane based tunes to focus more on towing over performance. |
| **ECONOMY TUNE** | Adjusts the Octane based tunes to focus on economy over performance. |
| **REAR O2'S** | Disables the Rear O2s and eliminates CEL caused by rear O2 removal. |
| **GLOBAL SPARK** | Add or Remove Timing Advance to the entire RPM range. |
| **SPARK BY RPM** | Add or Remove Timing by RPM Range. (0-2000)(2000-4000)(4000-8000) |
| **WOT FUEL** | Add or Remove Fuel at Wide Open Throttle. (WOT) |
| **FUEL INJECTORS** | Allows you to adjust for different sized injectors. (Not available on all vehicles) |
| **CMCV DELETES** | Updates tune to handle the CMCV/IMRC delete plate's modification. |
| **FAN CONTROL** | Lowers the Temperature at which the Fan turns on. |
| **REV LIMITER DRIVE** | Sets Rev Limit in RPM while in Drive |
| **REV LIMITER NEUTRAL** | Sets Rev Limit in RPM while in Neutral |
| **SPEED LIMIT** | Remove, Increase or Decrease the vehicle speed limiter. (Aka governor) |

# 4. USING DEVICE FEATURES

## 4.1 On-Device Data Logging and Monitoring

This menu accesses the Monitoring and Data Logging feature. This menu is also used when collecting data from the analog input on the device.

1. With your key out of the ignition, connect your device to the OBDII port to power on your X4. Using the down arrow, highlight "Gauges/Datalog" and select it by pressing the center button on the keypad.
2. Turn the key to the ON position, and use the left arrow to select "Configuration" at the bottom of the screen.
3. Select your vehicle type from the list of Datalog Files provided using the down arrow key and selecting "Continue".
4. See "Editing a Gauge" and "Editing Gauge Layout" to configure your display.
5. Once you have your layout and gauges selected, start your vehicle.
6. To record, press the center button on the keypad.
7. To stop/end your datalog, press the left or right button and select "Stop Datalog".

**Editing a Gauge**

To edit a gauge you will use the up or down arrows to highlight the gauge/parameter you would like to change, then press the center button on your keypad.

a. **Item:** Here you will find a list of parameters that are preloaded on your device. You can find the Analog Inputs at the bottom of this list.
b. **Unit:** Based on the item you have chosen from the list, the unit will change to the corresponding unit of measure. If you are choosing an Analog Input, you will need to select the appropriate preset equation based on your analog source.
c. **Available Equations:** We have preset the most common equations as a list to choose from
    - V (this would be Voltage)
    - SCT EGT ˚ F
    - PLX EGT ˚ F
    - AEM X-WIFI EGT ˚ F
    - SensorConnection EGT ˚F
    - ExhaustGasTech EGT ˚F
    - LM1
    - TW 2A0
    - PLX
    - LC1
    - AEM
    - AFM1000
    - G100
    - Dyno Jet WBC
    - GM 1Bar MAP

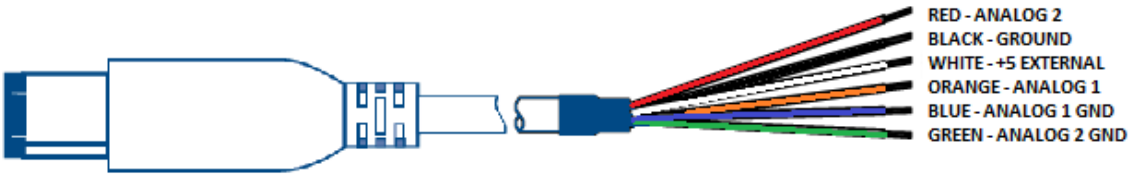
**Editing Gauge Layout**

If you need to monitor more than two gauges at a time then you will need to change your layout. You may only monitor a maximum of 8 parameters at a time.

1. From the Main Gauge display, press the left or right arrow button once.
2. Scroll down to highlight "Select Gauge Layout" and select it.
3. Highlight the layout you want to view and press the center button.
4. To edit the new layout use the instruction under "Editing a Gauge" above.

## 4.2 Connecting External Analog Inputs

Using the wiring specifications that came with your analog sensor, connect to the proper pins using the diagram below. You will need to follow the on-device data logging instructions above to properly display the input.




YOU WILL ONLY BE USING THE RED AND BLACK WIRES - CONFIGURE AS ANALOG 7 IN YOUR X4

*NOTE: Do not connect any device that exceeds 5 volts to the analog port or permanent damage to the adapter can occur.*

## 4.3 Device Settings

Within the Device Settings menu, we have given the options to customize your device for your exact needs. Below is an outline of all options and their functions.

**-CHECK FOR UDPATES**: If connected to a wireless network, your device will automatically check to see if it has the latest updates on it. If it does not, it will automatically download and bring your device up to date.
**-WIFI**: Allows you to connect your device to a wireless network.
**-DISPLAY BRIGHTNESS (DAY)**: Allows you to modify the brightness of the screen in the day time.
**-DISPLAY BRIGHTNESS (NIGHT)**: Allows you to modify the brightness of the screen at night time.
**-DISPLAY ORIENTATION**: You may choose from Portrait or Landscape to change the screen layout.
**-THEME**: You may change the appearance of the menu screens with a Red (Default), Blue or Dark theme.
**-LIGHT SENSOR**: This feature allows the device to adjust brightness of the screen automatically. You may turn this feature on or off.
**-AUDIO**: If ON, your keypad will beep when a key is pressed.
**-STARTUP FUNCTION**: You may choose your start up screen to either be the Main Menu or Gauges/Datalog screen.
**-DEMO MODE**: Simulates the functions of the programmer such as Programming and Monitoring Gauges. *NOTE: Disable DEMO Mode before attempting to program your vehicle*.
**-FACTORY RESET**: This will DELETE all custom tunes and restore preloaded tunes.

# 5. COMMON QUESTIONS

**When I connect the tuner to the vehicle, it doesn't power on.**

- Check for blown fuses for OBDII/Cigarette Lighter.

**Does the tuner have to stay plugged in to keep the vehicle tune?**

- No. After tuning, you can disconnect the programmer.

**Can I stack/combine the SCT programmer with another chip or tuning module?**

- All Chips/Tuning Products must be removed before tuning with SCT.

**Can I tune more than one vehicle with this programmer?**

- One vehicle tuned at a time. You may return to stock and tune another vehicle up to 5 times.

**Can the vehicle be tuned while the engine is running?**

- No. This can cause severe damage to the vehicle and PCM.

**Should I return to stock before taking my vehicle to the dealer?**

- Yes. This prevents the tuner from becoming locked if the dealer updates the PCM.

**Can I use a lower octane fuel than the tune file lists?**

- No. You must use the same octane fuel that the vehicle is tuned for. Failure to use the proper octane can result in severe engine damage.

**I have a supercharger / nitrous oxide on my vehicle; can I use a pre-loaded tune?**

- No. The pre-loaded tune files within the X4 are designed for minor performance modifications such as cold air kits, high flow exhaust systems and other basic modifications. For high horsepower modifications such as superchargers, nitrous oxide or turbo systems, you will need to have your vehicle tuned by an SCT Custom Tuning dealer.

# 6. CONTACTING SCT PERFORMANCE

- **SCT Support Options**

Your first option for support is your SCT Dealer. SCT also offers several support options after you have purchased your X4. You can contact us via phone, Fax, Chat or US postal service.

- **Phone Support –** 1.866.297.6298 (Mon-Fri, 9am-10pm Eastern)
- **Email Support :** support@sctflash.com
- **Live On-Line Chat Support** (available at www.sctflash.com)

To initiate a claim under this warranty, you can call 407-774-2447 and instructions will be provided.

**4150 Church Street - Suite 1024**
**Sanford, Florida 32771**
**www.SCTFLASH.com**