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Introduction

The Harley-Davidson Pro Street Tuner App is designed to function with the Pro Street Tuner Bluetooth Communication Interface (BCI). The BCI connects to the motorcycle and transfers the data between the motorcycle and the App. The App has limited functionality when it is not paired to a BCI.

The new mobile tuner uses a smaller dongle style BCI that plugs directly into the Data Link Connector (DLC) on the motorcycle. Refer to the instruction sheet to determine the location of the DLC on the vehicle. The BCI communicates to an app on the mobile device via Bluetooth, and the app sends data between the motorcycle and the cloud.

<table>
<thead>
<tr>
<th>App Icons</th>
<th>BCI Dongle</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Android:</strong></td>
<td>• Smaller dongle style BCI</td>
</tr>
<tr>
<td>Google Play</td>
<td>• Plugs directly into the DLC</td>
</tr>
<tr>
<td><strong>Apple:</strong></td>
<td>• Communicates via Bluetooth</td>
</tr>
<tr>
<td>App Store</td>
<td></td>
</tr>
</tbody>
</table>

LED Operation

The BCI Light-Emitting Diode (LED) indicator flashes to display the state of the BCI. The indicator is not easily visible on the BCI unless it is illuminated.

The following table explains the various sequences:

<table>
<thead>
<tr>
<th>Condition</th>
<th>LED Operation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Power Up</td>
<td>LED blinks 3 times — on ½ second/off ½ second</td>
</tr>
<tr>
<td>Search for Unpair Sequence</td>
<td>LED is off during the 5 seconds waiting for the Unpair Sequence</td>
</tr>
<tr>
<td>Completion of Unpair Sequence</td>
<td>LED turns on for 2 seconds upon completion of Unpair Sequence</td>
</tr>
<tr>
<td>Waiting for Pairing</td>
<td>LED Blinks — on 1 second/off 1 second</td>
</tr>
<tr>
<td>Paired</td>
<td>LED constant ON</td>
</tr>
<tr>
<td>Programming</td>
<td>LED blinks fast — on ¼ second/off ¼ second</td>
</tr>
<tr>
<td>Error Condition</td>
<td>LED blinks 5 times — on ½ second/off ½ second. Then reboots the dongle and repeats.</td>
</tr>
</tbody>
</table>
BCI Usage Cautionary Notice

**Note:** The BCI is for use on a single vehicle only. When the BCI is first used to program a vehicle, it will be permanently locked to that vehicle, and cannot be used on any other vehicle for programming.

**Caution:** BCIs can ONLY be used with the specific products for which they were purchased. A Pro Street Tuner BCI cannot be used with the older Street Tuner software that requires a Vehicle Communication Interface (VCI).

Safety Precautions

**General Warnings:**

<table>
<thead>
<tr>
<th>Symbol</th>
<th>Instruction</th>
</tr>
</thead>
<tbody>
<tr>
<td>![Exclamation]</td>
<td>Motorcycle batteries contain sulfuric acid and produce explosive gases that can result in serious injury. To prevent ignition of gases, keep lighted cigarettes, sparks, flames, and other ignition sources away from the battery at all times. If using the battery as a power source, connect the RED (+) battery clip to the positive motorcycle battery terminal and connect the BLACK (-) battery clip to a good ground away from the battery.</td>
</tr>
<tr>
<td>![Eye Protection]</td>
<td>Wear an American National Standards Institute (ANSI)-approved eye shield when analyzing or repairing motorcycles. Spinning components (such as the primary drive belt when the housing cover is removed) can propel objects, possibly causing serious injury.</td>
</tr>
<tr>
<td>![Electricity]</td>
<td>To prevent electrical shock, avoid wet floors when plugging any system equipment into an electrical outlet.</td>
</tr>
<tr>
<td>![Exclamation]</td>
<td>Rider and passenger safety depend upon the correct installation of this kit. Use the appropriate service manual procedures. If the procedure is not within the user’s capabilities or the user does not have the correct tools, have a Harley-Davidson dealer perform the installation. Improper installation of this kit could result in death or serious injury. (00333b)</td>
</tr>
</tbody>
</table>

**Note:**

A service manual for the year and model motorcycle is required for this installation and is available from:

- A Harley-Davidson dealer.
- H-D Service Information Portal, a subscription-based access available for most 2001 and newer models. For more information, see frequently asked questions about subscriptions.
Introduction to Harley-Davidson Electronic Fuel Injection (EFI) Systems

How it works
Before discussing how the Screamin’ Eagle Pro Street Tuner software works, it is important to understand how the EFI system functions. It is assumed that the user of this product has a thorough understanding of internal combustion engine operation.

Overview of How the Harley-Davidson ESPFI Functions
The front and rear cylinder Volumetric Efficiency (VE) Look-up tables, which are programmed into the Electronic Control Mode (ECM), tell the ECM how much air, (volume) is flowing into the engine at different engine Revolutions Per Minute (RPM) and throttle positions.

The ECM also monitors the intake air temperature and manifold absolute pressure, which provide it with an indication of air density, or the amount of oxygen contained in a volume of air.

The Air Fuel Ratio (AFR) table, which is programmed into the ECM, tells the ECM what AFR the engine should require under specific engine loads, (engine load is determined by monitoring manifold absolute pressure and engine RPM) to produce the performance that’s desired.

The front and rear Spark Advance tables, which are programmed into the ECM, tell the ECM the spark advance desired for specific engine loads to produce the performance that’s desired.

When the engine is running the series of events typically follows the process below:

- The ECM monitors the Crankshaft Position (CKP), Throttle Position (TP), and Temperature Manifold Absolute Pressure (TMAP) sensors telling it engine RPM, throttle position, intake air temperature and manifold absolute pressure.
- The ECM looks at throttle position and engine RPM when it refers to the VE Look-up tables. From this information the ECM knows the volume of air that should be entering each cylinder at this moment, under these present conditions.
- At the same time the ECM looks at intake air temperature and manifold absolute pressure to calculate the density of the air entering the engine. Air density tells the ECM how much oxygen is in the air entering the engine.
- Now the ECM knows exactly how much oxygen is entering each cylinder and it refers to the AFR Look-up table for the AFR that’s desired. It then sends the appropriate output signals to the fuel injectors to achieve the AFR it has been programmed to deliver for the current engine RPM and engine load.
- The ECM also refers to the Spark Advance Look-up tables for the desired spark advance for each cylinder according to the current engine RPM and engine load. The ECM then sends output signals to the front and rear ignition coils to deliver the desired timing of the spark for each cylinder.
Electronic Sequential Port Fuel Injection (ESPFI) System Operation

When the engine is experiencing a temporary condition such as when the bike is being started on a cold morning, it uses additional Look-up tables that are also programmed into the ECM. For example, a cold engine that’s being cranked to start rotates at a very low RPM and needs additional fuel. The ECM reads the Engine Temperature (ET) and CKP sensors, which tell it the engine is cold, and that it’s rotating at cranking speed. The ECM then refers to a Cranking Fuel look-up table and directs the fuel injectors to remain open longer, (increasing their pulse width) which delivers a richer air/fuel mixture for starting. When the engine starts to run the ECM sees the higher RPM and then refers to a Warm-up Enrichment look-up table that it uses to add the additional fuel needed while the engine is still cold. The table is designed to diminish its affect, (referred to as “decay value”) to zero as the engine comes up to operating temperature.

<table>
<thead>
<tr>
<th>ECM Refers to:</th>
<th>When:</th>
<th>Other Factor:</th>
<th>Purpose:</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cranking Fuel Table</td>
<td>Engine is being started</td>
<td>Engine Temperature</td>
<td>To increase fuel injector pulse width and deliver more fuel for starting</td>
</tr>
<tr>
<td>Warm-up Enrichment Table</td>
<td>Engine is colder than operating temperature</td>
<td></td>
<td>To richen AFR for cold engine and diminish effect as engine warms up</td>
</tr>
<tr>
<td>Idle RPM Table</td>
<td>Throttle is closed</td>
<td>Engine Temperature</td>
<td>To keep idle RPM at desired speed as engine warms up</td>
</tr>
<tr>
<td>Intake Air Control Table</td>
<td>Throttle is closed</td>
<td>Engine Temperature</td>
<td>To allow enough air into the engine for cold engine idle</td>
</tr>
</tbody>
</table>

Heat Management System

The ESPFI systems also incorporates a sophisticated heat management system that operates in three-phases to keep things cool in extreme conditions.

Phase I: If the ECM detects engine temperature above approximately 300° F while moving or stationary it reduces the idle speed. A lower idle speed produces fewer combustion events per minute and that reduces engine heat.

Phase II: If the ECM detects an engine temperature that’s still drifting higher while moving or stationary it richens the AFR. An increased amount of fuel in the air/fuel mixture has a cooling effect on the engine.

Phase III: If the ECM detects an engine temperature that’s still drifting higher while moving or stationary it directs the fuel injectors to skip, (only when the bike is stationary) and not deliver fuel on every intake stroke. This limits the number of combustion events taking place, which produces less heat.

The three phases just described function seamlessly, and the rider may not notice the transition from one phase to the next.
ESPFI Closed Loop Operation

Background
In closed loop operation the ECM uses the oxygen sensors as a feedback loop in order to adjust the fuel mixture. This gives the name ‘closed loop’ from the closed feedback loop. The ECM does not run in a closed feedback loop all the time, so ‘open loop’ is used to describe the operation of the ECM when the mixture is not being adjusted in this way (usually when the engine is cold or when running under high load).

In closed loop operation the ECM uses the oxygen sensors to tell if the fuel mixture is rich or lean. However, due to the characteristics of the oxygen sensor it can’t tell exactly how rich or lean, it only knows that the mixture is richer or leaner than optimum. The ECM will enrich the mixture if the oxygen sensor shows that the mixture is lean, and lean the mixture if it looks rich. The result of this is that the mixture will swing back and forward around the stoichiometric point or the set point of that particular O2 sensor.

Harley-Davidson Motor Company started using O2 sensors with the 2006 EFI Dyna models and today all Harley’s use O2 sensors and can operate in ‘Closed Loop’ mode. Harley uses what is called a narrow band or switching sensor which controls over a very narrow range that is near stoichiometric (14.6 AFR).

Tuning with Closed-Loop
If a large part of the original calibration’s AFR table reads 14.6 AFR (the numbers in the cells will be in bold font) then that calibration is indeed closed loop. The AFR table controls the operating conditions in which the ECM will enable closed-loop. The AFR cell must equal 14.6 for the ECM to enable closed-loop operation. This allows the user to control if and when the bike is in closed-loop using the AFR table.

Lambda based calibrations will be in closed loop for lambda values between .976 and 1.000.
Opening the Application

When the app launches on the mobile device, an opening screen appears. This screen allows the user to swipe left or right to see some of the featured functions of the application or to choose Skip at the bottom of the screen to launch the app.

Connecting the BCI

As stated earlier, many features of the app require a BCI connection before they are accessible. When the user enters one of those areas, a pop-up menu appears to connect to the BCI. If for some reason the BCI connection is not wanted at that time, pressing CANCEL will take the user back to the main menu.

The mobile device will search for Bluetooth devices and list them on the screen. Compare the MobileScan numbers on the screen to the serial number on the tag on the BCI. The last five digits of the serial number should match the numbers of the device on the screen. Verify you connect to the correct BCI.

Important: Bluetooth signals have a limited range. Do not move the mobile device more than 20 feet away from the motorcycle at any time when connected through Bluetooth. This could cause the app to lose connection.

The pairing is complete when the next button text turns from gray to black. Press NEXT to continue.
The **BLUETOOTH SETTINGS** screen displays a serial number in the **BLUETOOTH CONNECTION INTERFACE** section and the VIN number of the motorcycle it is connected to in the **BLUETOOTH PAIRING** section.

The user can then proceed by choosing one of the three icons at the bottom of the screen (see main menu section), or by hitting the back arrow in the top left corner to go to the settings menu (see page 19).

Unpair the BCI by pressing the **UNPAIR** button. To unpair the motorcycle, turn the ignition off for 30 seconds. Turn the ignition on with the engine off, then turn the throttle to wide-open and back to fully closed until the LED performs a series of quick flashes. After that, the LED will begin to flash at 1 second intervals indicating the BCI is waiting to be paired.

**BCI On/Off Indicator**

An indicator located at the upper left corner of the screen shows red when not connected to a BCI via Bluetooth and green when connected.

**Main Menu**

When the app is launched from the opening screen, the main menu lists the four core sections of the Pro Street Tuner.

- **TUNE**
- **TOOLBOX**
- **SETTINGS**
- **RECORDINGS**

Three of the sections can also be accessed by the icons along the bottom of the screen.

In addition, the user accesses the help menu from here by selecting the question mark icon in the upper right hand corner.

The help menu takes the user to **WHAT’S NEW**, **CHECK FOR UPDATES**, **TRAINING**, **TUTORIALS**, and **USER MANUALS**.

Hit the back arrow in the upper left-hand corner of the screen to return to the main menu.
Tune

The first core feature and primary purpose of the app is to tune the motorcycle. When the user selects **TUNE** from the main menu, the following screen shows the calibrations available for the motorcycle based on the VIN. To the right, select **RECORDINGS** to view the saved recordings that have been created by the user for any of the listed calibrations. They are sorted by the base calibration and the current VIN.

The user chooses a calibration from the list to begin tuning. This screen also has selections for standard or wide band. These selections pull up the specific calibrations for either a standard or wide band O2 sensor setup. Only use the calibrations designed for the O2 setup on the motorcycle.

Choosing a calibration lists the components typically installed on the motorcycle that are supported by the selected calibration. The bottom portion of the screen offers a menu with the functions of **VIEW**, **PROGRAM WITH THIS CALIBRATION**, and **PERFORM SMART TUNE** for the selected calibration.

View

The view function shows the various values for the calibration. Use the drop down menu to select the table of values to view.

One example is the Air Fuel Ratio.

Program With This Calibration

*Note: It is recommended the bike is connected to a battery tender prior to starting the calibration process to ensure the battery voltage does not fall below the threshold.*

Selecting the **PROGRAM WITH THIS CALIBRATION** function allows the user to proceed with programming the calibration to the motorcycle without any further customization.
Important: An information screen will appear explaining the necessity to keep the phone within close proximity of the motorcycle.

Tap OK to continue after reading the information.

A warning pop-up appears asking to verify that this is the correct calibration for the set-up.

A screen appears indicating the calibration is being retrieved from the cloud. Once the calibration is retrieved, the “Retrieving calibration from Cloud” text will go away.

The red text will disappear, and the “Program Motorcycle” text will turn black.

Click PROGRAM MOTORCYCLE to proceed with the final calibration, or Cancel to exit.
A **PROGRAMMING IN PROGRESS** Screen appears after **PROGRAM MOTORCYCLE** is selected. There are two stages to the programming process.

First, the strategy (if required), calibration, and utility files are downloaded from the cloud or the mobile device to the BCI.

Second, the files are then programmed from the BCI to the motorcycle.

The following progress messages will appear near the bottom of the screen to indicate what part of the programming process is happening:

- **Calibrating Vehicle…..**
- **Downloading Utility from phone to BCI**
- **Downloading Calibration from phone to BCI**
- **Programming ECM Utility from BCI**
- **Programming ECM Calibration from BCI**

A **PROGRAMMING COMPLETE** screen will display when the calibration is successful.

Read and follow the instructions on the screen, and then press **CLOSE** to end the calibration session.

**Perform Smart Tune**

**Important:** An information screen will appear explaining the necessity to keep the phone within close proximity of the motorcycle.

Tap **OK** to continue after reading the information.
A warning pop-up appears asking to verify that this is the correct calibration for the set-up.

The perform smart tune function allows precise customization to the calibration.

To begin, follow the instructions in red to cycle the ignition off and on. After doing so the red text will disappear, and the “Program Motorcycle” text will turn black.

An information screen will load explaining smart tune. After reading the information, select PROGRAM MOTORCYCLE. This programs the initial tune on the motorcycle as a starting point for the smart tune.

Hitting CANCEL exits the smart tune function.

The following progress messages will appear near the bottom of the screen to indicate what part of the programming process is happening:

- Calibrating Vehicle....
- Downloading Utility from phone to BCI
- Downloading Calibration from phone to BCI
- Programming ECM Utility from BCI
- Programming ECM Calibration from BCI
A **PROGRAMMING COMPLETE** screen will display if the calibration is successful.

Read and follow the instructions as presented on the screen, and then press **CLOSE** to end the calibration session.

Your motorcycle’s calibration has been updated to allow you to gather data

Your motorcycle now has your custom calibration installed. You can repeat this process as many times as you would like to refine your calibration.

Before continuing you must:

1. Turn OFF the vehicle ignition switch and RUN/STOP switch
2. Wait 20 seconds then turn ON the ignition switch and RUN/STOP switch

Perform all necessary steps to verify there are not current OTC codes and to clear any historic codes. Enjoy your ride!

A screen saying **IT’S TIME TO MAKE RECORDINGS** will appear. While the motorcycle is turned off, the continue button text is gray and can not be selected. When ready to ride, the user restarts the motorcycle and can now select **CONTINUE** to proceed.

A **LOADING TABLE** screen displays.

When done loading, a screen with a blank table appears.

Press the play button to start the recording. Once the motorcycle is warm and in closed loop the program will start to gather data. This is indicated by the O2 and engine temp displays at the bottom of the screen turning green.

As data is gathered for a certain cell, the cell will change to a darker shade of the color. Only when the cells have reached the darkest shade has enough data been collected for that cell.

When data for the desired cells has been collected, press the stop button.
A **SAVE RECORDING** dialog box appears.

The user can either choose **SAVE RECORDING** or **DELETE RECORDING**.

When saving a recording, tap in the description box. The keyboard pop-up will appear.

Another Recording? dialog box will display each time. As many recordings can be done as needed by selecting “Yes” and repeating the steps to collect the required data. Select “No” to proceed to the next step.

A **TURN OFF THE ENGINE** pop-up displays. Follow the instructions then tap **CONTINUE**.
The user can then select which recordings to include in the custom calibration.

**CREATE CALIBRATION**

Press CREATE CALIBRATION. The data will load from the recordings.

**SAVE CALIBRATION**

If applied by selecting Yes, a SAVE CALIBRATION dialog box appears. Press SAVE AND PROGRAM BIKE.

**PROGRAMMING MOTORCYCLE WITH FINAL CALIBRATION**

A PROGRAMMING MOTORCYCLE WITH FINAL CALIBRATION dialog box appears.

Follow the instructions in red to cycle the ignition off and on.

The red text will disappear, and the “Program Motorcycle” text will turn black.

Click PROGRAM MOTORCYCLE to proceed with the final calibration, or Cancel to exit.

**REVIEW AND APPLY RECORDINGS**

Once loaded, the user can review and apply the data from the recordings by selecting YES, or choose Cancel.
When programming, another PROGRAMMING IN PROGRESS screen displays. The following progress messages will appear near the bottom of the screen to indicate what part of the programming process is happening:

- Calibrating Vehicle
- Downloading Utility from phone to BCI
- Downloading Calibration from phone to BCI
- Programming ECM Utility from BCI
- Programming ECM Calibration from BCI

A PROGRAMMING COMPLETE screen will display if the calibration is successful.

Transferring Files

Calibration files that have been applied to the motorcycle are stored in the cloud. The application will show all calibrations that have been applied to the motorcycle using Pro Street Tuner. Any mobile device or computer using the pro street tuner software will show these calibrations when connected to the BCI and communicating with the motorcycle.

Recording files can be shared directly from the application simply by swiping right on the recording and selecting share. This allows the user to use the typical share features on their mobile device such as email or some other file sharing program to move the files to a different device.

Different mobile devices store files in different locations. For example, connecting an Android mobile device to a personal computer (PC) allows the user to navigate through the folders. Below is a sample location of where the recordings are stored.

```
Internal storage\Android\data\com.harley_davidson.mobiletuner
```

On an Apple device, navigating using the files app on the mobile device will display a Pro Street Tuner folder. Selecting it will display a folder called recordings. Here it is possible to use the sharing functions of the mobile device to share the files with other devices.
Creating a Calibration on a PC with Mobile Recordings

1. Once the files are transferred to the PC, open Street Tuner on the PC.
2. Go to the tuning tree in the upper left of the screen and select VE Front.
3. Open the VE Front table.
4. Do the same process for the VE Rear table.
5. Select working VE Front table and open it.
6. Do the same process for the working VE Rear table.
7. There are now four windows open on the workspace in tuner.
8. On the Smart Tune VE Front table click add new.
9. Locate the recording on the PC and click open. Do this for each recording you want to add.

**Note:** The recording will show up in the front and rear VE tables. Scroll down to see the tables.

10. Click the generate button on the Smart Tune table and click OK.
11. Click the interpolate button.
12. Click the update button.
13. Do this on the front and rear Smart Tune tables.
14. Click Save As and when popup screen appears click Save.
15. Select Programs Motorcycle. The Record and Review buttons will be grayed out.

Toolbox

The second section in the main menu is the **TOOLBOX**. The Toolbox accesses the functions of the tuner separate from the actual tuning. These functions include reading DTCs, viewing data, and configuring the gauge widget to view various gauges on the mobile device. Most of the screens can only be accessed when the motorcycle is not moving. However, the created gauge groups can be viewed while riding.

The user can choose from:

- SEE GAUGES
- CONFIGURE GAUGES
- SEE DATA
- ERROR CODES
- SYSTEM INFO
See Gauges

Selecting **SEE GAUGES** shows the user the gauge groups that are created.

If none have been created, the screen will show the **CONFIGURE GAUGES** button. See the Configure Gauges section below for how to add gauges.

The back arrow at the top left of the screen returns the user to the toolbox menu.

Configure Gauges

Hitting the **CONFIGURE GAUGES** button on either the **TOOLBOX** or the **SEE GAUGES** screen takes the user to the configure gauges section of the app.

**Note:** Entering from the toolbox screen allows the user to set up gauges without being connected to a BCI.

To add gauges, tap one of the circles with a + sign.

A list of gauges will appear. The user chooses the gauge to be placed in the selected position.

**Note:** When selecting the speedometer or tachometer in the center position, the option for a digital or analog gauge will be offered. Select one and press **ADD TO GROUP**.

Press the **ADD NEW GROUP** button to add another group.

Create up to 5 groups. Each group can have up to 5 gauges that can be displayed as you ride.

**Note:** Entering from the toolbox screen allows the user to set up gauges without being connected to a BCI.
The user can create up to five unique gauge groups with up to five gauges per group.

When editing a group, gauges can be removed by dragging them to the trash icon. Gauges can also be moved by dragging them to another spot in the group.

Press DELETE THIS GROUP to remove the whole group.

Hit the back arrow at the top left of the screen to save and exit the configure gauges screen.

See Data

Next, the SEE DATA option shows the user the various data items read from the motorcycle. The user also has the ability to record and save data. Press the play button to start a recording and the stop button to stop and save recording. There is also a pause button to pause a recording. Selecting the PDF button allows the data in the table to be saved as a PDF, and selecting the data recordings button brings up a list of all the recordings in the mobile device. From here the user can either swipe right or left.

Swiping left gives the option to delete the recording.

Note: There is no warning to ask if the user wants to delete before the recording is deleted.

Hit the back arrow when done to return to the toolbox menu.
Swiping right on a recording gives the user the option to rename or share the recording. The share feature uses the mobile device’s operating system to share the files.

**Data Recordings**

<table>
<thead>
<tr>
<th>Rename</th>
<th>Share</th>
<th>Date/Time</th>
</tr>
</thead>
<tbody>
<tr>
<td>DataSnapshot; 9/12/2022 1:1</td>
<td></td>
<td></td>
</tr>
<tr>
<td>DataSnapshot20220912011152....</td>
<td>9/12/2022 1:11:52</td>
<td></td>
</tr>
<tr>
<td>Error Reading VIN Error Readin...</td>
<td>9/12/2022 11:56:20</td>
<td></td>
</tr>
<tr>
<td>B410009498-20220912071836.p...</td>
<td>9/12/2022 7:18:36</td>
<td></td>
</tr>
</tbody>
</table>

**Note:** Refer to Creating a Calibration on a PC with Mobile Recordings section on page 14 for instructions to get files to the PC tuner application.

**Error Codes**

The **ERROR CODES** option will show the user if there are any current or historic ECM error codes when the mobile device is connected to the motorcycle.

Pressing the **CLEAR ALL CODES** button will clear all error codes. The current codes will return if they are still relevant.

A dialog box appears acknowledging that all codes have been cleared. Tap **OK** to continue.

The next screen will show the user that there are no error codes to display.

The user can now hit the back arrow to return to the toolbox menu.
System Info

Finally, the **SYSTEM INFO** option displays a screen with all the available information about the motorcycle.

The **PRINT SYSTEM INFO** button at the bottom of the screen allows the user to create a PDF document of the system info screen.

The user can now hit the back arrow to return to the toolbox Menu.

Settings

The third section of the app is Settings. Pressing **SETTINGS** from the main menu will bring up another menu of options.

The user can choose from:

- LANGUAGE SETTINGS
- UNITS OF MEASURE
- TABLE DISPLAY COLORS
- SOFTWARE INFO
- RESET GAUGES
- BLUETOOTH SETTINGS
Language Settings

**LANGUAGE SETTINGS** allows the user to pick the preferred language for both the screens and generated reports.

When done, hit the back arrow to return to the settings menu.

Table Display Colors

The **TABLE DISPLAY COLORS** setting offers the user a variety of different colors to choose when filling in the cells during a smart tune.

Press **CHANGE TABLE COLORS** to choose a different color, or **RESTORE TO DEFAULTS** to reset to the app default colors.

When done tap the X to close the box and hit the back arrow to return to the settings menu.

Units of Measure

**UNITS OF MEASURE** sets the app to be either All English or All Metric at the top, or the user can individually pick the units of measurement for each category.

When done, hit the back arrow to return to the settings menu.
Software Info

SOFTWARE INFO displays the current software and firmware version.

When done, hit the back arrow to return to the settings menu.

Bluetooth Settings

The Final setting is BLUETOOTH SETTINGS.

Press PAIR to connect the mobile device to the motorcycle.

Select UNPAIR so the phone will not automatically repair to the BCI.

Follow the instructions at the top of the screen then press NEXT. See section on connecting the BCI on page 7.

Reset Gauges

Pressing RESET GAUGES will reset any changes made in the configure gauges part of the app. All the previous gauge configurations will be reset to the original app configuration.
Recordings

The last section of the app is **Recordings**. When selected from the main menu, it allows the user to rename, share, and delete recordings without being connected to the BCI.

Refer to pages 12-14 and 18-19 on how to access and use the various recording functions.

Firmware Update

**Note:** The entry/exit from the popup screen is dependent on where the user is when the popup is displayed. This can happen any time when the BCI connects to the mobile device. Automatic reconnection could happen during any screen.

Tap **Yes** to begin the update. Choosing **No** returns the user to the previous screen.

When proceeding with the firmware update, a **WARNING** screen displays. Read and follow the instructions on the screen, then select **CONTINUE** or **CANCEL**.

Continuing will see an **ENABLING PROGRAM MODE** before the update starts.

Firmware begins updating.

A screen will display indicating the firmware update is complete. Pressing **DONE** will remove the screen and let the user continue in the application.
**Trouble Shooting**

It is important to verify that Bluetooth and location services are turned on. The location services are used to locate Bluetooth devices in the area. These features should be enabled for both the phone and the Street Tuner application in your device’s settings.

The Street Tuner application uses a cloud-based database and therefore requires an internet connection to retrieve data specific to the motorcycle. Poor internet connections may cause data to be lost or corrupted during transfer.

The application may display error codes if a failure in certain areas of the functionality is recognized. The below chart is a list of the error codes and likely solutions.

<table>
<thead>
<tr>
<th>Value</th>
<th>Name</th>
<th>Meaning</th>
<th>Solutions</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>CalDataRecordsNull</td>
<td>Calibration data records are null.</td>
<td>Note calibration ID and see dealer.</td>
</tr>
<tr>
<td>2</td>
<td>UtilitFileReflashFail</td>
<td>Utility File reflash is failed.</td>
<td>Make sure phone is within 20 feet with line-of-sight to the Tuner, cycle key on the bike, and retry.</td>
</tr>
<tr>
<td>3</td>
<td>ErrorUnlocking</td>
<td>Error in unlocking the ECM for programming mode.</td>
<td>Verify strength of internet connection and retry.</td>
</tr>
<tr>
<td>5</td>
<td>ErrorDownloadingFilesToBCI</td>
<td>Error downloading the files to BCI.</td>
<td>Bluetooth Connection Error. Make sure phone is within 20 feet with line-of-sight to the Tuner and retry.</td>
</tr>
<tr>
<td>6</td>
<td>ErrorWritingTunedBit</td>
<td>Error writing the Tuned bit.</td>
<td>Verify strength of internet connection and retry.</td>
</tr>
<tr>
<td>7</td>
<td>ErrorSendingPayload</td>
<td>Error sending the Payload file.</td>
<td>Make sure phone is in within 20 feet with line-of-sight to the Tuner, cycle key on the bike, and retry.</td>
</tr>
<tr>
<td>8</td>
<td>ErrorReflashingUtility</td>
<td>Error while reflashing the Utility file.</td>
<td>Make sure phone is in within 20 feet with line-of-sight to the Tuner, cycle key on the bike, and retry.</td>
</tr>
<tr>
<td>10</td>
<td>ErrorReadingDOUT</td>
<td>Error in reading the DOut information.</td>
<td>Verify strength of internet connection, confirm bluetooth is connected, and retry.</td>
</tr>
<tr>
<td>11</td>
<td>ErrorWritingDOut</td>
<td>Error writing the DOut information.</td>
<td>Verify strength of internet connection, and retry.</td>
</tr>
<tr>
<td>12</td>
<td>LowBatteryVoltage</td>
<td>Vehicle Battery Voltage low after file transfer to BCI.</td>
<td>Charge battery and retry.</td>
</tr>
<tr>
<td>13</td>
<td>HighBatteryVoltage</td>
<td>Vehicle Battery Voltage high after file transfer to BCI.</td>
<td>Identify and fix source of high voltage and retry. Voltage must be below 14.5V.</td>
</tr>
<tr>
<td>14</td>
<td>ErrorTurningOffHeadlamp</td>
<td>An error occurred turning off the headlamp.</td>
<td>Retry flashing calibration to bike.</td>
</tr>
</tbody>
</table>