<u>banks</u>

# Owner's Manua With Installation Instructions The standard of the standard of



### 1996 & Later Vehicles with OBDII Diagnostics

THIS MANUAL IS FOR USE WITH KITS 61203, 61204, 61213, 61214

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### Introduction

#### Welcome to the world of Banks iDash

Congratulations on your Banks iDash purchase. You're about to discover that Banks iDash is designed to help you get the most out of your entire driving experience. Besides being fun and easy-to-use, Banks iDash's graphic, intuitive design makes each screen and feature a breeze to navigate. Use this manual to get you started. As Banks iDash develops, we will be updating this manual both in print and online at

### www.bankspower.com/banksiDash.

With your Banks iDash, you now have the most sophisticated and user-friendly way to interact with your vehicle. Choose, select and change gauges in the display, change onscreen safety alerts—all on-the-fly and at the touch of a virtual button.

Ready to see the results of your vehicles performance? Banks iDash clocks your 0-60 mph, ½-mile and ¼-mile performance runs. Performance runs are automatically stored for later retrieval with a time-and-date stamp. With Banks iDash, you can also scan and clear OBD II diagnostic codes. It gives you virtually endless functionality and fits in a mount on your windshield.

The Banks iDash is a standalone vehicle monitoring system that gives you the ability to monitor engine vitals that are not found on your factory dashboard display. Gauge options will

vary from vehicle to vehicle.

Don't forget, we're always working on expansions, upgrades, and new applications that will make your Banks iDash do even more. So be sure to register at **www.bankspower.com/banksiDash** to receive important e-mail alerts regarding updates and upgrades for your Banks iDash device. Or call us with questions at **1-800-GET POWER.** 

#### **iDash Box Contents**

Item Description	Qty
Banks iDash	1
Banks Bridge Module	1
Cable (Mini B to USB)	1
Banks iDash Mounting Clip	1
Windshield Mount	1
Instruction Manual	1
Quick-Start Sheet	1
AC Outlet Wall Charger	1
Cable Ties	3

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DO NOT USE Banks iDash NEAR WATER OR IN AN ELECTRICAL STORM AS THIS COULD LEAD TO AN ELECTRICAL SHOCK.

DO NOT USE Banks iDash NEAR A NATURAL GAS LEAK.

DO NOT DISPOSE OF THE RECHARGEABLE BATTERY IN A FIRE AS IT COULD EXPLODE.



The symbol of the crossed out trash bin indicates that this product (electrical, electronic equipment, and mercury-containing button cell battery) should not be placed in municipal waste. Check local regulations for disposal of electronic products.

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## Section 1 SAFETY PRECAUTIONS

### Always observe safety precautions!

Gale Banks Engineering urges you to always follow safety precautions. These pages include important information intended to prevent personal injury to yourself and/or others, and property damage.

## Always be sure you carefully read and understand each precaution before moving on to the rest of the manual.

#### WARNING

AC Adapter Precautions.

Use only the AC adapter that comes with Banks iDash.

Using another type of AC adapter or car adapter creates the risk of battery overheating, combustion, leaking, or explosion.

#### HANDLING PRECAUTIONS

- Never try to disassemble or modify Banks iDash in any way.
- Never try to change the Banks iDash battery.
- Do not wipe with a wet cloth.

**Do not touch a leaking battery with your bare hands.** Battery
fluid can get into your eyes and cause
impaired vision or blindness. Never rub
your eyes, and immediately flush them
thoroughly with water. Next, consult
your physician. If battery fluid gets
into your skin or clothing, immediately
rinse the affected area with clear
water.

Banks iDash contains combustible and metal parts, so water and foreign substances can cause malfunction and create the risk of overheating due to wiring insulation failure, short circuiting, smoke, fire, combustion, and electric shock.

#### **OUTDOOR PRECAUTIONS**

When outdoors, avoid using Banks iDash anywhere it might get wet with rainwater or other moisture, and/or in dusty conditions. Banks iDash is not water resistant or dust resistant. Water and dust create the risk of fire and smoke, combustion, electric shock, resulting in damage and malfunction.

Never touch Banks iDash or its electronic accessories with wet

hands. This will create the risk of electric shock, short circuiting or insulation failure, fire, smoke and combustion. Also, never allow the AC adapter or Bridge plug to become wet.

Always stand in a safe place while using Banks iDash outdoors. Use of Banks iDash while walking can result in accident and/or personal injury.

**Do not share a power source with other devices.** Using an extension cord to plug in several electric devices can cause the rated current level to be exceeded, resulting in overheating of cord or outlet, fire, and other damage.

Keep micro-SD cards out of the reach of small children as they may be swallowed. If you think this might have happened, Call **911** or consult your local emergency services (police, fire, ambulance) immediately.

Do not touch Banks iDash or its plug or USB cable if there is lightning in your area.

Lightning strikes create the risk of electric shock.

#### **IN-VEHICLE PRECAUTIONS**

Use this unit in 12V/24V DC negative ground vehicles only.

WARNING: Below 32° F (0°C) or above 140° F (60°C), the Banks iDash may be susceptible to damage as a result of extended direct exposure to sunlight, heat, or extreme cold. It is highly recommended that the Banks iDash be removed from its mounting location if the vehicle will be subjected to these conditions for an extended period of time. Gale Banks Engineering is not responsible for damage to Banks iDash resulting from exposure conditions.

Always drive in accordance with traffic rules and regulations. Failure to do so may result in traffic accident and injury to yourself and/or others.

Never take your eyes off the road to adjust Banks iDash settings or change screens while driving vehicle. Doing so can result in a traffic accident. Always stop your vehicle in a safe place before operating the unit.

Only look briefly at Banks iDash screen images while operating your vehicle. Doing otherwise can take your mind off the road and create the risk of a traffic accident and injury to yourself and/or others.

**Do not set volume level too high.**Blocking out the sound of other vehicles and traffic can create the risk of a traffic accident.

**Never use headphones while operating a motor vehicle.** This can create the risk of a traffic accident and may be considered illegal.

Never install Banks iDash in a location where it will interfere with operation of the motor vehicle, block the driver's view, or where it may endanger passengers. Installing the unit near the shift lever, brake pedals or other vehicle controls, or block front, side or rear vision, can create the risk of a traffic accident and cause injury to yourself and/or others.

Never install Banks iDash where it can interfere with airbag operation. Do not install in a location where deployment of the airbag cause Banks iDash or its parts to become projectiles. Also, be sure to check installation precautions for your exact vehicle model and year.

Make sure to install the Banks iDash mount so it does not come off or fall down. Clean off any dirt and wax from the installation location, and install securely. Periodically check the iDash mount and installation

condition of the cradle.

### PRECAUTIONS FOR USE IN VEHICLE

Use only the items that come with this unit and the Banks products it was designed to interface with. Use of non-specified items can damage the vehicle interior or result in a poor fit, creating the risk of accident, malfunction, or fire.

Install Banks iDash where it is out of the reach of small children. Failure to do so can cause an injury to the child or others due to mishandling of Banks iDash.

Do not install Banks iDash in a location where it will be splashed by water or subjected to large amounts of humidity, dust, or oil smoke. This can increase the risk of smoke, combustion, electric shock, and accident.

#### PRECAUTIONS DURING USE

#### LiDashuid Crystal Display (LCD)

- The LCD scratches easily, so be sure to use only your finger or the stylus to perform touch operations.
- Do not use commercially available LCD protection film. This can result in poor touch panel operation.
- To protect the LCD, avoid exposure to direct sunlight while not in use. Using a car sunshade or other means to block the sun is recommended.
- Excessively low temperatures may cause failure of video images to appear or respond slowly. It also can

cause strange video image movement and deterioration.

- Do not clean Banks iDash while power is turned on. When wiping the LCD, use a dry soft, micro-fiber cleaning cloth.
- Do not use a paper towel to clean the screen.
- When transporting Banks iDash, make sure that the LCD screen does not come in contact with any foreign objects.

#### **CARRYING THE UNIT**

- Never pick up the unit while holding the LCD.
- Never put excessive pressure on Banks iDash by sitting with it in your pocket, putting a heavy object on it, etc.
- Turn off power and put Banks iDash into a bag or other holder when carrying it.

NOTE: While you can store Banks iDash in 'Sleep Mode', switching the device off will lengthen the battery's charge.

When Not in Use. Store Banks iDash in a place where it is not subject to extremely high or low temperatures. Room temperature is best.

**Precautions during Use Inside a Motor Vehicle.** Always be sure to use Banks iDash in accordance with local rules and regulations.

-END, SECTION 1-

### Section 2

#### MOUNTING AND CONNECTING THE BANKS IDASH

- **1.** Locate the Window Mount Assembly in your kit.
- **2.** Assemble the Banks iDash mounting plate to the window mount by inserting and sliding the window mount tabs into the mounting plate grooves. Hand tighten the nut behind the mounting plate to hold the mounting plate in place.
- **3.** Attach the window mount to your Banks iDash. See **Figure 3**. Align and place the two (2) lower tabs on the window mount to the corresponding slots on the bottom of the iDash first then snap the top of the iDash into place.
- **4.** Find a suitable place on the windshield for ease of access and viewing of Banks iDash. Use location shown in **Figure 4** as a reference for mounting Banks iDash in your vehicle. Loosen the knob and move the swivel suction plate to achieve desired viewing angle of the Banks iDash screen. Do a test fit and note the angle necessary to achieve the correct viewing angle.
- **5.** Make sure the suction cup and the mounting area on the windshield are clean and dry. With the suction lever in the up position, ensure the suction cup is flat against the windshield, and then push the suction lever down to secure in place.

#### **Connecting Banks iDash**

- **6.** Locate the OBD II connection port in your vehicle. The OBD II connection port is located under the dash panel and can be located on either side of the steering wheel.
- 7. Locate the Banks Com-link communication Bridge and connect the Banks OBD II connector to the vehicles

OBD II connector. See Figure 5.

NOTE: For some vehicle models the OBD II connection port may need to be disconnected from its mounting location. Unclip or remove factory screws/bolts to relocate the OBD II connection port and allow the Banks OBD II connector to plug into the vehicles OBD II connector without bending or putting stress on the iDash Bridge Module harness. Secure the OBD II connection port under the dash.

**8.** Route the Banks iDash USB interface cable on the bridge to reach the Banks iDash. **Do not connect to the iDash at this time. Refer to steps 11 and 12.** 

NOTE: You may need to loosen or remove dash panel or covers to install the interface cable between dash crevice or behind dash panels.

WARNING: THE CHARGING CABLE CONNECTED TO THE BANKS **IDASH IS DESIGNED TO SUPPLY A CONSTANT LOW-VOLTAGE POWER SOURCE (+5VDC) TO THE BANKS iDash AND IS "LIVE" AS LONG AS** THE SYSTEM'S OBD II INTERFACE CABLE OR BANKS WIRING HARNESS IS COMPLETELY INSTALLED AND THE USB CABLE CONNECTOR IS PLUGGED INTO BANKS iDash. ALTHOUGH THIS CHARGING CABLE CIRCUITRY IS FUSE-PROTECTED. THE USER IS EXPECTED TO TAKE APPROPRIATE MEASURES TO PREVENT SMALL CHILDREN AND/ OR PETS FROM CONTACT WITH ANY PART OF THIS SYSTEM.

**9.** Secure Banks iDash Bridge Module under the dash to any dash frame support using the supplied cable ties. Use the cable tie support loops on the side of the Bridge Module to securely

Figure 1 Banks iDash



Figure 2 Left Side Edge

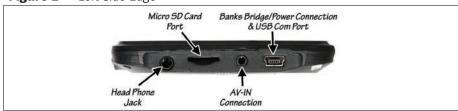


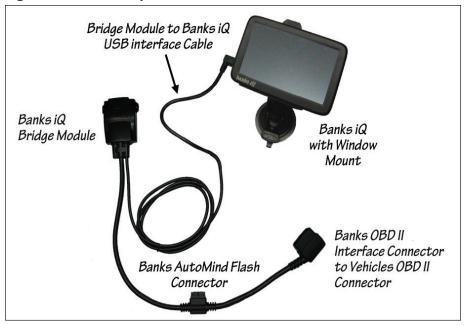
Figure 3 Attaching Banks iDash to window mount



Figure 4 Suggested Mounting location for Banks iDash, Chevy LMM Shown



Figure 5 Banks iDash System



fasten it under the dash.

- **10.** Route all wiring away from any pedals or other moving components. Using the cable ties supplied, secure the wiring under the dash.
- **11.** With the bridge module connected to the OBD II port, turn the key to the 'ON' position and wait for 30 seconds

CAUTION: The USB interface cable that connects the iDash to the Bridge should be handled with

## care. Be careful not to strain/pull the cable while connected to the iDash.

**12.** Plug the USB interface cable into the iDash. The iDash will wake up and the initial boot screen will display for approximately 10 seconds, followed by on screen instructions for completing the initialization process.

NOTE: The connection process should be complete within about 10 second.

-END, SECTION 2-

## Section 3 SOFTWARE INTRODUCTION

Figure 6 Start up



NOTE: Remember, you can upgrade your Banks iDash as new software is developed and learn more about other Banks iDash applications anytime. Register at

www.bankspower.com/banksiDash to receive important e-mail alerts regarding updates and upgrades for your Banks iDash device. Or call us with questions at 1-800-GET-POWER.

Once the iDash is properly connected to the vehicle (sections 2 & 3) it will wake up and be ready for use when the vehicle key is turned on. If you are using the iDash outside of your vehicle, you may either wake up or power on the iDash by pressing the power button (see **Figure 1**). After initial start-up, Banks iDash will either display the 'Mode Select' menu or a previously selected mode, to return to the 'Mode Select' menu, press the home icon in the lower left corner of the screen. See **Figure 7**, **8 & 9**. To navigate through the menu press the left or the right arrows. The Banks iDash will display the options available for your vehicle.

After a selection has been made, the Banks iDash will start in the selected Mode Screen. To access other applications, press the 'Home' icon at any time in the lower left hand side to return to the Mode Select Menu. See **Figure 9**.

#### **Sleep Mode**

When Banks iDash is connected to your vehicle it will go into 'Sleep Mode' whenever the vehicle is turned off.

There is no need to exit the Banks iDash application or to turn the iDash off. Banks iDash will automatically 'Wake Up' when the vehicle ignition is turned on or the 'Power' button is pressed.

When Banks iDash is disconnected from the vehicle or power supply, the iDash will go into 'Sleep Mode' if no activity is detected within an allotted time. The time for the iDash to go into 'Sleep Mode' can be changed by pressing on the 'Battery Management' button in the 'Adjustments' menu. Refer to **Section 16** to change settings.

The iDash may be turned off or put into sleep mode manually at any time by pressing and holding the 'Power' button. Then select the 'Sleep', 'Off', 'Return' or 'Restart' button on the screen.

NOTE: When the iDash senses that the vehicle is in motion some features will be inaccessible. The feature icons will be grayed out during that time.

-END, SECTION 3-

## Section 4 MONITORING MODE

Press the 'Monitoring' button in the Mode SELECT screen to access the Information monitoring screen.

Monitoring following: five userselectable Gauges and Status Indicator. See **Figure 7**.

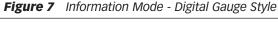
Press the Wrench icon to see the 'Adjustments' menu.

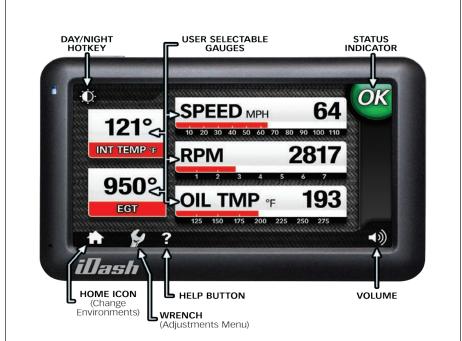
Select any five gauges that you want to show on your display. To change a gauge, simply press on it and you will be taken to the 'Gauge Placement' screen featuring the gauge you selected. Refer to **Section 5** for instruction on how to change each gauge. The gauges can also be changed to display in U.S. or metric units. Refer to **Section 17** for instruction on how to change units.

The Status Indicator in the upper righthand corner of the screen displays the communication status between the Banks iDash and your vehicle. In the event that an on-screen alert malfunction is triggered, a status alert will appear in the upper right-hand corner of the screen. See **Figure 13 on page 21**. Press on the status alert for more information about the alert condition.

On the lower left hand corner of the screen is the 'Home' icon, which will direct you back to the 'Mode Select' menu, and the 'Wrench' icon that will direct you to the 'Adjustments' menu. For more description of the 'Adjustments' menu, please see **Section 6**.

-END, SECTION 4-





## Section 5 GAUGE PLACEMENT

NOTE: To quickly change any gauge in your Banks iDash display, press on the gauge you want to change and you will be taken to the 'Gauge Placement' screen. See **Figure 8**.

Press the 'Wrench' icon to move to the 'Adjustments' menu. Press 'Gauge Placement', which allows you to change the gauges on view in the display.

- **1.** Press the gauge you want to move or change on the right-hand side. A list of gauges to choose from appears on the left. See **Figure 8**.
- **2.** Scroll Up or Down through the optional parameters available on the left hand side of the screen.
- **3.** Highlight the desired parameter on the left side of the screen.
- 4. Repeat Step 1 through 3 to change all

desired gauges.

**5.** To save changes, press on the 'home' icon to return to the current mode screen or the 'Return' icon to return to the 'Adjustments' menu.

### \*NOTE: Gauge options vary by gauge placement

#### **Reset to Default**

- **6.** To reset to default gauges navigate through the 'Adjustments' menu.
- 7. In the Gauge Placement screen, press on the 'Reset to Default' button to return all gauges to the default setting.
- **8.** Press the 'Banks iDash' icon to return to the current mode screen or the 'Return' icon to return to the 'Adjustments' menu.
- -END, SECTION 5-

## Section 6 ADJUSTMENTS MENU

Press the 'Wrench' icon next to the 'Banks iQ Home' icon in the lower left corner of the current mode screen to move to the 'Adjustments' menu.

Press the Left or the Right arrow to

navigate through the 'Adjustments' menu. Further discussion of each adjustment option will be covered in the following sections. See **Figure 9**.

-END, SECTION 6-

## Section 7 GAUGE STYLE

Press the 'Wrench' icon to move to the 'Adjustments' menu screen.

Press 'Gauge Style', which allows you to change the style of the gauges in your display.

**1.** Scroll Right or Left to view all available gauge style choices. Stop when you see the style you want for

your gauge display. See **Figure 10**.

- **2.** Press the 'home' icon to save your gauge style and return to the current mode where you can see it in action.
- **3.** Press the 'Return' icon to return to the 'Adjustments' menu.
- -END, SECTION 7-

Figure 8 Gauge Placement



Figure 9 'Adjustments' Menu for Power Tuner shown



Figure 10 Analog Gauge Style



### Section 8 GAUGE COLOR

Press the 'Wrench' icon to move to the 'Adjustments' menu screen.

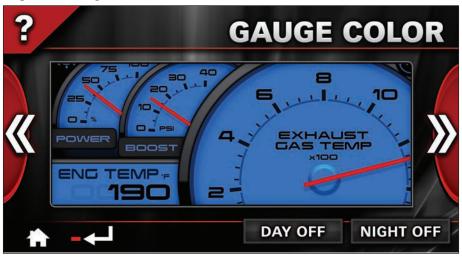
Press 'Gauge Color', which allows you to change the color of the gauges in your display.

- **1.** Scroll Right or Left to view the spectrum of color choices. Stop when you see the color you want for your gauge display. See **Figure 11**.
- **2.** Use the 'Day On/Off' button to determine if you want the color you've chosen displayed during the day time Screen Backlight hours you selected in

'Initial Set-up'. For more information on Screen Backlight, see **Section 17**.

- **3.** Use the 'Night On/Off' to determine if you want the color you've chosen displayed during the night time Screen Backlight hours you selected in 'Initial Set-up'. For more information on Screen Backlight, see **Section 17**.
- **4.** Press the 'home' icon to save and return to the current mode screen or the 'Return' icon to return to the 'Adjustments' menu.
- -END, SECTION 8-

Figure 11 Gauge Color



### Section 9

#### **GAUGE DESCRIPTIONS**

#### **Receive Update Notices**

Banks iDash is constantly evolving and new gauges in addition to the ones described below may be available. We invite you to register at

www.bankspower.com/banksiDash to receive important emails regarding updates and upgrades for your Banks iDash device.

Following is a list of the gauges you can choose to be in your Banks iDash display and what they measure.

NOTE: Not all gauges are accessible in all Modes. Gauge options vary by vehicle application.

\$ PER DAY: Displays the calculated operational cost per day. Must enter cost of fuel at fill up to get accurate display.

\$ PER TRIP: Displays the calculated operational cost per trip. Must enter cost of fuel at fill up to get accurate display.

AIR FLOW: Displays the intake air flow in lbs/min or g/sec.

AMB TEMP: Measures the temperature of the air outside the vehicle in your choice of degrees Fahrenheit or Centigrade (F or C).

AVG ECON: Displays the average fuel economy in miles per gallon (MPG) or liters per 100 kilometers (L/100K) since the last trip reset.

AVG SPD MOV: Calculates the average speed while the vehicle is moving since last reset.

AVG SPD TTL: Calculates the average speed from trip beginning since the last trip reset.

*BARO:* Measures the barometric (atmospheric) pressure outside your vehicle in inches of mercury (inHg).

CAT TMP 1F/2F: Displays the temperature of the exhaust gas at the inlet of the catalytic converter in your choice of degrees fahrenheit or centigrade (F or C).

CAT TMP 1R/2R: Displays the temperature of the exhaust gas at the outlet of the catalytic converter in your choice of degrees Fahrenheit or centigrade (F or C).

DIRECTION: Display your current direction. NORTH (N), NORTHEAST (NE), EAST (E), SOUTHEAST (SE), SOUTH (S), SOUTHWEST (SW), WEST (W), AND NORTHWEST (NW).

ELEVATION: Measures the elevation you are driving at in your choice of Feet or Meters above sea level (FT or M).

NOTE: Elevation should be accurate within +/- 50 feet or 15 meters 95% of the time. On rare occasions, you may experience a variance greater than +/- 15 meters or 50 feet. This is considered normal for devices of this type.

ENG HOURS: Displays the amount of engine on time since trip reset.

ENG LOAD: Displays calculated engine load. This value indicates the amount of available power at the current RPM That is being used.

ENG TEMP: Measures the temperature of vehicle's engine coolant in your choice of degrees Fahrenheit or Centigrade (F or C).

EGR: Displays the position of the EGR valve in percentage; 0% = fully closed, 100% = fully open.

FUEL>>EMPTY: Displays the amount of fuel left before empty in your choice of gallons or liters.

FUEL LEVEL: Measures the current fuel level of your vehicle.

FUEL PRESS: Displays the vehicles engine fuel pressure in PSI or KPa.

FUEL USED: Displays the amount of fuel used since last trip reset.

GPS SPEED: Displays the current speed in miles per hour (MPH) or kilometers per hour (KPH) as determined by the GPS signal.

HEADING: Displays the direction of travel in compass degrees.

IMAN PRESS: Displays the vehicles absolute intake manifold pressure in PSI or KPa.

INST ECON: Displays the instant fuel economy of the vehicle in MPG or L/100k.

INT TEMP: Measures the vehicle intake air temperature in your choice of degrees Fahrenheit or Centigrade (F or C).

LATITUDE: Displays the current latitudinal position in the decimal degree format.

LIFE ECON: Display the average fuel economy of the vehicle since installation of the iDash.

LONGITUDE: Displays the current longitudinal position in the decimal degree format.

*ODOMETER:* Displays the vehicles distances traveled since installation of the iDash.

RANGE: Displays the distance left

before fuel tank is empty in miles or kilometers.

RPM5K & 8K: Measures how fast your engine's crankshaft is spinning in revolutions per minute (RPM). Displays RPM scaled for 0-5000RPM or 0-8000RPM.

RUN TIME: Displays the amount of time engine has been running.

SPARK ADV: Measures the timing of the ignition event in relation to Top Dead Center (TDC) Positive values are before TDC and negative valves are after TDC.

SPEED1 & 2: Measures how fast your vehicle is going in your choice of miles per hour or kilometers per hour (MPH or KM). Display Speed limit 0-140 MPH (0-220 KM) or 0-220 MPH (0-360 KM). Corrected value will be displayed if the GPS Speed Calibration is Active (See Section 17).

TIME AM/PM & 24HR: Display the current time in 12 hour standard time or 24 hour military time.

TIME>>EMPTY: Displays the amount of time left before fuel tank is empty.

TRIP ODO: Displays the current trip distance in miles or kilometer.

TRIP TIME: Displays the engine on time for the current trip.

*VOLTS:* Displays the vehicles battery(s) voltage.

-END, SECTION 9-

## Section 10 ON SCREEN ALERTS

- **1.** Select the 'Wrench' icon to go to the 'Adjustments' menu. Press the 'On Screen Alerts' button.
- **2.** Scroll Up or Down through the optional Alert Parameters available on the left hand side of the screen. See **Figure 12**.
- **3.** Highlight the desired parameter on the left side of the screen.
- **4.** Press the plus (+) or minus (-) symbols to increase or decrease the selected parameter Alert Set Point. The display shows the adjusted value.

NOTE: The limit for each parameter Alert Set Point is displayed right above the adjusted value Set Point.

**5.** To set the volume sound level for the alerts, Press the plus (+) or minus (-) symbol below the 'Reset' button to increase or decrease the sound level.

Three (3) volume levels plus a silent mode are available.

- **6.** Repeat steps 2 through 5 to adjust all the desired parameters.
- **7.** Once all parameter have been adjusted and to save changes, press the 'home' icon to return to the current mode screen or the 'Return' icon to return to the 'Adjustments' Menu.

NOTE: In the event an alert set point is reached an audible alarm will sound and the Status Indicator will display an icon relative to the associated alert. See **Figure 13** and the alert descriptions. The alarm will turn off once the associated parameter is below its alert set-point. The Status Indicator will then return to 'OK'.

**8.** You can return Banks iDash to its default alert settings at any time by pressing the 'Reset To Default' button.

Figure 12 Alert Screen

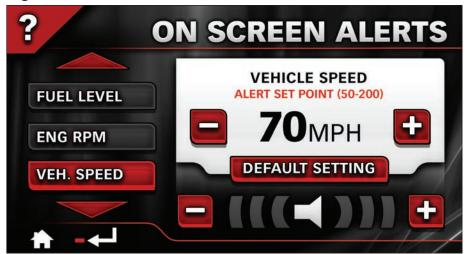


Figure 13 Alert indicator icons



#### **Alert indicator Description**

SEARCHING- A searching icon will indicate a communication error between the Banks iDash, Bridge, Tuner, Brake, and/or the vehicle. Go over all wiring and make sure they are proper connected. See section 19

VEHICLE SPEED- The vehicle speed icon will indicate the vehicle speed is above the user alert set point. Lower your speed below the set speed to clear the alert.

OIL TEMP- The vehicle engine oil temperature is over the user set alert

point. Safely stop the vehicle and check the engine oil.

RPM- The vehicle RPM is over the user set alert point. Reduce speed to lower RPM. If alert continues, safely stop the vehicle and check your engine.

ENG TEMP- The enigne temperature is over the user set alert point. Safely stop the vehicle and check the engine.

Go to the begin of this section to adjust the user alert set point for any alert.

-END, SECTION 10-

## Section 11 MAX VALUES

Max Values allow you to observe the maximum values that have been achieved for the parameters available for your vehicle since the last Reset cycle. See **Figure 14**.

- **1.** To view Max Values, in the 'Adjustments' menu press the Max value button.
- **2.** After viewing your Max Values you can reset to clear the current values. Press the 'Reset' button in the lower

right hand corner. A pop-up screen will appear to confirm reset. Press 'yes' to confirm reset value, press 'no' to cancel reset.

**3.** After viewing your Max Values, press the 'home' icon to return to the current mode screen or the 'Return' icon to return to the 'Adjustments' menu.

-END, SECTION 11-

Figure 14

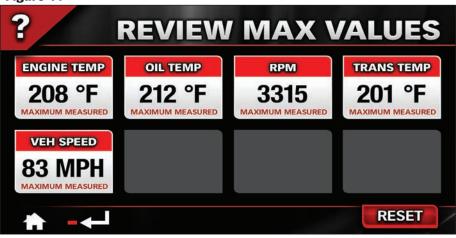


Figure 15

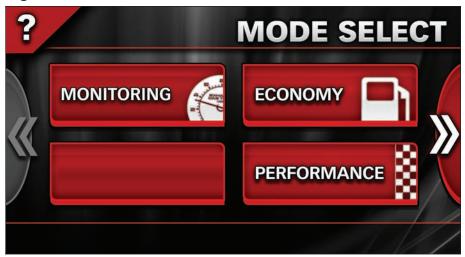


Figure 16

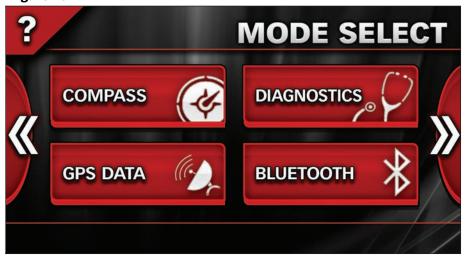


Figure 17



## Section 12 ECONOMY MODE

The Economy Mode will provide you with the most up-to-date status on your vehicles fuel economy.

From the Mode SELECT menu, press on the 'Economy' button. When first initiating the Economy Mode a message will be displayed to set your 'Fuel Cost'.

"In order to accurately calculate certain parameters, you must enter the current cost of fuel & tank size."

Press 'Yes' to set the fuel cost and the tank capacity of your vehicle or press 'No' to continue.

NOTE: Some gauges will be unavailable if fuel cost is not set.

#### **Setting Fuel Cost & Tank Capacity**

If you press 'Yes' the iDash will take you to the 'Options' menu. Press on the 'Fuel Cost' tab to set the fuel cost. In the 'Fuel Cost' screen you will be able to enter the dollar amount that was paid per gallon/liter. See **Figure 18**. You may choose to enter the fraction of a cent cost per gallon/liter or press the '9/10' in the upper right hand corner. Once the dollar amount has been entered, press 'Done' to return to the 'Options' menu.

In order to maintain the accuracy of cost calculations, it is important to enter the fuel cost every time you refill the tank. Press on the 'wrench' icon to open the 'Options' menu and then press the 'Fuel Cost' tab or press the '\$' icon in the lower part of the Economy Mode screen to enter the Fuel Cost.

Set the 'Tank Capacity' for your vehicle. Press the 'Tank Capacity' tab in the 'Options' menu. In the Tank Capacity screen enter the Vehicles fuel tank capacity. See **Figure 19**. Refer to your vehicles Owner's Manual to enter the correct Tank Capacity to the nearest whole gallon or liter. Once the Tank Capacity has been entered, press 'Done' to return to the 'Options' menu. Press the iDash icon to return to the Economy Mode.

NOTE: For vehicles with more than one tank, enter the main tank capacity only. Do not add the reserve tank capacity.

#### **Engine Displacement**

In some cases, Fuel Economy may not display correctly if the engine displacement is not properly entered. In the 'Adjustment' Menu, Select the





Figure 19



Figure 20 Honda Motor CO. Emission Label Shown

VEHICLE EMISSION CONTROL INFO	ORMATION
CONFORMS TO REGULATIONS: 2009MY	
U.S. EPA: T2B5 LDT3 OBD: CA OBD II FUEL: GASOLINE ARB: LEV II ULEV LDT2 OBD: CA OBD II FUEL: GASOLINE	9HNXT 03. 5. 79 9HNXP 1622EA
2WU-TWC, TWC, 2A/F SENSOR, 2HO2S, EGR, SFI	
LOADED I/M TESTING OF THIS VEHICLE MUST BE CONDUCTED ON A FOUR-WHEEL DYNAMOMETER. OTHERWISE, A NON-LOADED TEST PROCEDURE MUST BE PERFORMED.	DRIVE SPEED STACHRONIZED

'Engine Displacement' screen to enter an accurate displacement for your engine. Engine displacement can be found on the Under Hood Emissions Label. See

#### Figure 20.

#### Fuel Offset

Each vehicle may have some variation in the calculated fuel usage. A fine tuning adjustment may be applied using the Fuel Offset utility. This value may be determined by comparing actual fuel used during a drive cycle to the value that the iDash reports for fuel used. Enter the 'Fuel Offset' screen and tap on the 'ACTUAL Fuel Used' box on the left side of the screen. See **Figure**21. Use the keypad on the right side of the screen to input a value. Press

'DONE' when your entry is complete. Alternatively, you may calculate a percentage offset yourself and input the value in the percentage offset box on the right side of the screen. Tap the 'Percentage Offset' box on the right side and use the keypad to enter a value.

#### **Gauges**

There are five (5) gauges displayed in the Economy Mode. See **Figure 22**. The three (3) to the left of the screen can be changed to display the data from a list of available parameters. The two (2) on the right, Instant MPG and Average MPG, can be changed only to increase or decrease the scale display. Refer to 'Gauge Placement' in **section 5** to change the Gauges displayed.

Figure 21



Figure 22



#### <u>Trip</u>

The Trip feature will keep track of your vehicles Average Speed, Trip Distance, Trip Time, Engine On Time, Cost per Trip, Fuel Used, MPH, Instant MPG, & Average MPG. You can switch between two (2) Trip recordings, 'Trip A' and 'Trip B', by pressing the letter on the lower right corner of the Economy Mode screen. See Figure 22. You can view all this information by pressing on the wrench icon in the lower left corner of your screen. In the 'Options' menu press on the Trip information you wish to view. Once you have viewed the information. press the return icon to return to the Options menu or press the iDash icon to return to the Economy Mode.

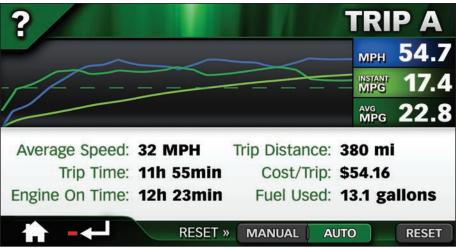
#### **Reset Trip Information**

The Trip information data can be reset by pressing and holding the letter of the trip you wish to clear for 5 seconds on the lower right corner of the Economy Mode screen. You may also reset the trip information by going to the trip data screen for each screen and press the 'Reset' button on the lower right corner. See **Figure 23**.

Trip A has the option to reset automatically. All the data captured will be reset to zero after the engine has been off for more than two (2) hours. To enable this option press on the wrench icon in the lower left hand side of the screen of the Economy Mode screen. In the 'Options' menu press on the 'Trip A' tab. In the lower part of the Trip A screen press 'Auto' to have the iDash automatically reset the trip information or press 'Manual' to manually reset the information. See Figure 23. Press the 'Return' icon to return to the 'Options' menu or press the 'iDash' icon to return to the Economy Mode.

-END, SECTION 12-

Figure 23



## Section 13 PERFORMANCE MODE

Banks iDash performance testing allows the user to run a  $\frac{1}{8}$  mile,  $\frac{1}{4}$  mile, or a 0-60 MPH test run.

#### **Setting up for Performance Testing**

- **1.** Press the 'Performance' button in the 'Mode Select' menu. The Performance Screen will appear. See **Figure 24**.
- 2. Banks iDash lets you change any of the gauges on view in the Performance display. Changing the displayed gauges does not affect the measurements actually being recorded during the test. If you would like to change these gauges, simply press the gauge you want to change and you will be taken to the Gauge Placement menu. See Section 5.
- **3.** Select the performance test you want to run: '0-60 MPH', '1/8 Mile', '1/4 Mile'.
- **4.** Press the 'Start Test' button. See **Figure 25**.

NOTE: To ensure accuracy, the vehicle must be completely stopped when pressing the 'Start Test' button. After pressing the 'Start Test' button, the Banks iDash will immediately arm itself and wait for vehicle motion to begin recording.

- **5.** The "Christmas Tree" Yellow Light will flash.
- **6.** Test begins when Green Light flashes on and accelerator pedal is pushed.

NOTE: You can begin the test any time after the 'Start Test' button is pressed by pushing on accelerator pedal or making the wheels roll.

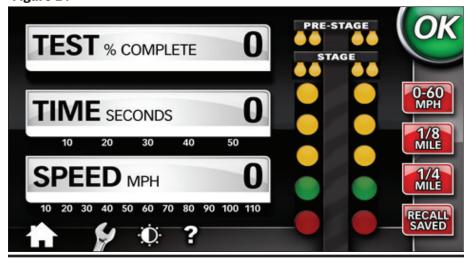
Recommended Performance Test Procedure:

- **A.** Foot firmly on brake, vehicle at rest, select drive gear.
- **B.** Select the desired 'Performance Test'.
- **C.** Press 'Start Test'. Wait for green light.
- **D.** Test begins once vehicle motion is detected.

Figure 25 Start Test Button



Figure 24



**7.** When the performance test is finished, Banks iDash immediately displays a results screen showing elapsed time/speed/distance measurements along with default gauge readings for the run. See **Figure 26**. Each completed Performance Test is saved for future analysis. Exit the result screen and return to the Performance Mode by pressing the 'X' in the upper right-hand corner.

#### **Viewing Saved Performance Tests**

- **8.** To view a previously completed Performance Test touch the button labeled 'Recall Sayed'
- **9.** Use the Up and Down arrow buttons to highlight the Performance Test you want to review.

NOTE: All tests are date and time stamped to conveniently help search for the desired Test run.

**10.** Touch the button labeled 'Review Test' to view in detail the results of the saved Performance Test.

Use the 'Left' and 'Right' arrow buttons to move the cursor one frame at a time in the displayed graph area. Moving between the frames will automatically

update the displayed parameter values.

NOTE: Use of this feature will be suspended while the vehicle is in motion. Only when the Banks iDash senses that the vehicle's speed is zero can you review your saved tests.

#### **Deleting Saved Performance Tests**

- **11.** To delete a previously saved Performance Test, highlight the saved test you wish to delete and Press the 'Delete' Button
- **12.** A pop up window labeled 'Confirm Delete' will ask you to confirm the deletion of the test.
- **13.** Press the button labeled 'Yes' to confirm or 'No' to decline.
- **14.** Press the Banks Home iDash icon to return to the 'Mode Select' menu.

-END, SECTION 13-



## Section 14 DIAGNOSTICS MODE

### Receive Diagnostics Update Notices

Banks iDash is constantly evolving and new diagnostics updates may be available. We invite you to register at **www.bankspower.com/banksiDash** to receive important emails regarding updates and upgrades for your Banks iDash device.

#### **Vehicle Diagnostics**

Diagnostic Trouble Codes (DTC) are error codes that are generated when there is a problem with your vehicle. If vour vehicle dashboard displays a check engine light, DTC(s) will be available to assist in diagnosing the problem. You can use the Banks iDash to run a vehicle system check and display these DTC(s). A code will be given along with a brief description of the problem, a full description of the code will display below the code list when the code is highlighted. You may call your vehicle dealer or reference your vehicle service manual for description and possible corrective action to fix the problem. Once the problem has been repaired

you can clear the code to turn the check engine light off.

NOTE: Keep a written record of the DTC code(s) that display on your Banks iDash for future reference before clearing them

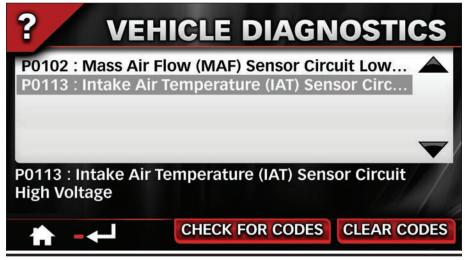
#### Check for OBD II DTC(s)

If any vehicle DTC(s) are present, troubleshoot/repair the cause. Once the cause is properly remedied, touch 'Clear Codes' and then 'Check for Codes' again to verify the problem is fixed (the OBD II code should not re-appear). You may need to complete a driving cycle for the code to not re-appear.

- **1.** In the Mode Select menu press on the 'Diagnostics' button.
- **2.** With the ignition in the on/run position or with the engine running, press on the 'Check for Codes' button. See **Figure 27**.

NOTE: On certain vehicles, the ignition key must be in the On/Run position, but the engine must NOT be running. If the engine is running, Banks iDash will display a pop-up message instructing

Figure 27 Vehicle Diagnostics Screen



you to confirm that the ignition key is in the ON position.

NOTE: The Banks iDash will check for vehicle diagnostic codes and display either the code with a brief description or the message "No codes found". For a full description of the code, highlight the code and the description will appear below the code list box.

**3.** To return to the Diagnostics Mode screen, press the 'Banks iDash' icon. Press the 'Banks iDash Home' icon again to return to the Mode Select menu.

#### Clearing OBD II DTC(s)

- **4.** After checking for and reviewing any diagnostic code, touch 'Clear Codes' to erase them from the vehicle's ECU. If multiple codes are present, they will all be cleared.
- **5.** If diagnostic codes reoccur on your vehicle, you should investigate the underlying problem to correct it by calling your vehicle dealer or referring to your vehicle owner's manual.

-END, SECTION 14-

## Section 15 COMPASS MODE

#### **Compass**

Press on the 'Compass' button in the 'Mode Select' menu. The Compass screen will display four (4) changeable gauges and a compass. See **Figure**28. Refer to **Section 5** to change the gauges displayed from a list of available parameters.

The Compass can be adjusted to have the vehicle pointer in the center spin around the compass settings or have the compass spin around the vehicle pointer to show the current heading. To adjust the compass method of direction pointing, press on the 'Wrench' icon to go to the 'Options' menu. Press on the 'Direction' tab in the 'Options' menu. In the Direction menu press 'North up' to have the vehicle pointer rotate around the compass or press 'Direction up' to have the compass rotate around the vehicle pointer. After setting the compass, press the 'home' icon to return to the 'Mode Select' menu screen.

-END, SECTION 15-

Figure 28



## Section 16 GPS DATA MODE

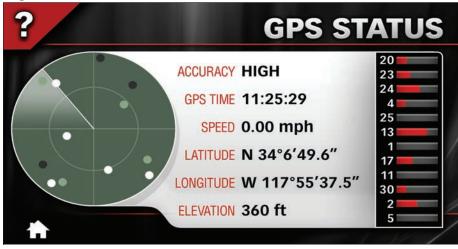
#### **GPS Data**

The GPS Data Mode provides the current status of the GPS in the Banks iDash. In the Mode selection menu press on the 'GPS Data' button. The Data displays the accuracy of the system depending on signal, the GPS Time, the Speed the

GPS is traveling, Latitude, Longitude, and the GPS Elevation. See **Figure 29**. After reviewing the data, press the 'home' icon to return to the Mode select menu.

-END, SECTION 16-

Figure 29



### **Section 17**

**SET-UP** 

To change the Banks iDash's settings and alerts, press the 'Wrench' icon to open the 'Adjustments' Menu. See **Figure 9**. These settings include Screen Backlight, Touch Screen Calibration, GPS Speed Calibration, Units (units of measurement), Battery Management, (battery life indicator and sleep settings), Version Info (details about the Banks iDash, Tuner, and SpeedBrake system) and Tuner/ SpeedBrake Update (upgrade, update device firmware).

#### **Screen Backlight**

The Banks iDash can automatically dim the system monitor LCD brightness for nighttime operation. You can set the 'Screen Backlight' value that will be used, along with the daytime operating hours. When operating outside these hours the screen will dim to the value you specify.

NOTE: Values are saved as they are changed.

You can manually override your 'Screen Backlight' at any time by pressing on the Day/Night Switch icon on the upper left corner of your Banks iDash screen in the Information or Economy Modes. See **Figure 30**.

Figure 30



Day/Night Switch Icon

- **1.** Press the 'Wrench' icon in the Information or Economy Modes.
- **2.** Press the 'Screen Backlight' button in the 'Adjustments' menu. See **Figure 9**.

- **3.** See **Figure 31**. In the 'LCD Properties' screen, press 'Enable' to activate or press 'Disable' to deactivate the Auto Dimming feature. The active selection will be highlighted red.
- **4.** Touch the 'Left' or 'Right' arrow buttons to adjust LCD brightness to the desired level for daytime and nighttime operation. Your brightness selection will preview automatically as changes are made.
- **5.** Set the transition time for auto dimming by pressing the 'Hour' and the 'Min' (minute) buttons below the day and night time.
- **6.** Press the 'home' icon on the lower left hand corner to return to the Current Mode screen. Press the 'Return' icon to go back to the 'Adjustments' menu.

#### **Touch Screen Calibration**

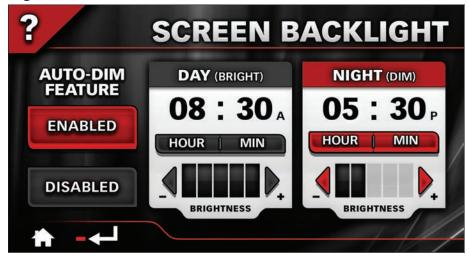
- **1.** Press the 'Touch Screen Calibration' button in the 'Adjustments' menu.
- **2.** Follow the on-screen instructions and press the targets as they appear on the display screen.
- **3.** Press the 'home' icon on the lower left hand corner to return to the 'Adjustments' menu.

#### **GPS Speed Correction**

The Banks iDash speedometer uses GPS Speed Correction to deliver improved accuracy over your vehicle's stock unit. It even corrects for non-stock wheels and tires. Calibration is simple and there is no need to use a pace vehicle or manually input tire size.

**1.** Find an open, uncrowded stretch of road.

Figure 31

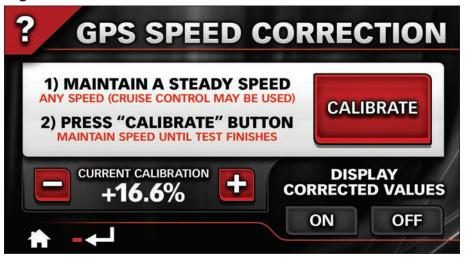


- **2.** Press the 'GPS Speed Correction' button.
- **3.** Maintain a steady speed. Any speed is acceptable. Cruise control maybe used.
- **4.** While maintaining a steady speed, press 'Calibrate'. During the calibration process. The GPS speed and the vehicle speed will be displayed. When the onscreen progress bar disappears from view, Speed Calibration is complete. See

Figure 32.

- **5.** The calibrated speed can be adjusted manual. Press the plus (+) or minus (-) symbol to increase or decrease the speed calibration.
- **6.** Use the 'On' and 'Off' buttons to display the corrected speed in the various modes on your Banks iDash.
- **7.** Press the 'home' icon on the lower left hand corner to return to the current

Figure 32



mode screen. Press the 'Return' icon to go back to the 'Adjustments' menu.

#### **Units**

- **1.** To change the unit of the displayed gauges, press the 'U.S./Metric' button in the 'Adjustments' menu.
- **2.** Press the desired unit to be displayed on the gauges. Choose between U.S. units or Metric units.
- **3.** Press the 'home' icon on the lower left hand corner to return to the current mode screen. Press the 'Return' icon to go back to the 'Adjustments' menu. See **Figure 33**.

#### **Battery Management**

- **1.** To change the sleep setting for the Banks iDash, press the 'Battery Mgmt' button in the 'Adjustments' menu. See **Figure 34**.
- **2.** Adjust the 'Display Sleep' time by pressing the left or right arrows.

NOTE: If the display turns off, turn it back on by pressing once anywhere on the screen.

**3.** Adjust the 'iDash Sleep' time by

pressing the 'Left' or 'Right' arrows. iDash sleep will begin to count down after the display has entered into 'Display Sleep' mode.

NOTE: 'iDash Sleep' will occur after 'Display Sleep' has been activated. To manually enter or exit 'Sleep' mode, press the MENU button on top of the device.

**4.** Press the 'home' icon on the lower left hand corner to return to the current mode screen. Press the 'Return' icon to go back to the 'Adjustments' menu.

#### **Master Volume**

- **1.** To change the Volume Level for the iDash, press the 'Volume' button in the 'Adjustments' menu.
- 2. To adjust the volume level, press the plus (+) or minus (-) button to increase or decrease the volume level. See **Figure** 35.
- **3.** Press the 'Banks iDash' icon on the lower left hand corner to return to the current mode screen. Press the 'Return' icon to go back to the 'Adjustments' menu.

Figure 33



Figure 34

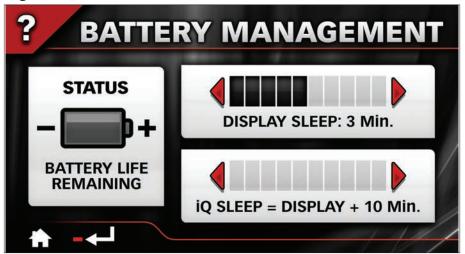


Figure 35



-END, SECTION 17-

## Section 18 **VERSION INFO**

The current version of the Banks iDash can be checked and compared to the current version available on the Banks website.

- **1.** In the 'Adjustments' menu press the 'Version Info' button.
- **2.** The version Info screen will display the current firmware version, as well as various other system configuration information. See **Figure 36**.
- **3.** Press the arrows to scroll through the 'Version Info' screen. All available device information will be displayed.
- **4.** Press the 'Return' icon to return to the 'Adjustments' Menu or press the 'home' icon to return to the current mode screen.

#### To update Banks iDash Software

**1.** For Windows XP users, make sure that Microsoft ActiveSync is installed on your computer and that you have an active internet connection

For Windows 7, 8, 10, and Vista users, make sure that Microsoft Mobile Device is installed on your computer.

NOTE: If you do not have Microsoft ActiveSync or Mobile Device visit www.microsoft.com/windowsmobile or visit Banks website for direct links and detail update instruction at www.bankspower.com/iDashupdate

- **2.** Install the Banks iDash Update Utility on your computer by visiting www.BanksPower.com/Downloads.
- **3.** Turn the Banks iDash on and allow it to complete its booting process (about a minute). In the 'Mode Select' menu press on the 'Productivity' Mode. Then press on 'Desktop' tab to open the Windows desktop. From the startup menu select 'suspend'. Then plug the Banks iDash into your PC using the supplied USB cable.

CAUTION: The iDash must be in the the Windows desktop before connecting the iDash to a PC. The iDash will either ignore the connection or register an error if the iDash is not in the 'Desktop' mode.

Figure 36

### 7

### **VERSION INFO**

Banks iDash® Version: 3.15

System: Microsoft® Windows® CE Version 6.0

Processor: MStar Semiconductor MSB2531 Cortex-A7

Program Memory Total: 99.20 MB Program Memory Used: 32.42 MB Program Memory Free: 66.78 MB Storage Memory Total: 3502.54 MB Storage Memory Free: 3380.31 MB





**4.** Start the Banks iDash Update Utility and follow the on-screen directions on your PC to update your Bank iDash with the latest software updates.

For more detail instruction to update your Banks iDash please go to www. bankspower.com/hupdate.

-END, SECTION 18-

## Section 19 TROUBLESHOOTING

#### **Banks Bridge**

The Banks Bridge Module transports information back and forth between your vehicle and Banks iDash. Note that there are two green lights on this Module. With the ignition off and the Banks Bridge viewed with the "banks" logo reading properly, the right hand light will pulse on and off. With the engine running and Banks iDash connected, both lights will switch back and forth to tell you that Banks iDash is communicating with your vehicle. Should Banks iDash become disconnected, the left light will pulse on and off to tell you that communication has been interrupted.

### Loss of communication between Banks iDash and vehicle.

A magnifying glass icon will appear in the upper right-hand corner of Banks iDash display. See **Figure 37.** 

**1.** Make sure the vehicle ignition key is *Figure 37* 



in the ON position.

- **2.** Make sure the Banks iDash is properly connected to vehicle as described in **Section 2**.
- **3.** Check the connection at the OBD II diagnostic port (under the driver's side dash area). Check for any damage to the ODB II connector "hood", such as if it has become dislodged from the connector housing.
- **4.** Check the USB connection at the Banks iDash.
- **5.** Turn the iDash Power OFF and back on. some situation can be resolved simply by resetting the iDash in this manner.
- **6.** If cycling the power on the iDash is ineffective, a hard reset may be helpful. With the vehicle running, use the stylus pen to press the RESET button on the back side of the iDash, then unplug the OBD II connector and wait 5 seconds then recconnect the OBD II plug. The reset is complete.

-END, SECTION 19-

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