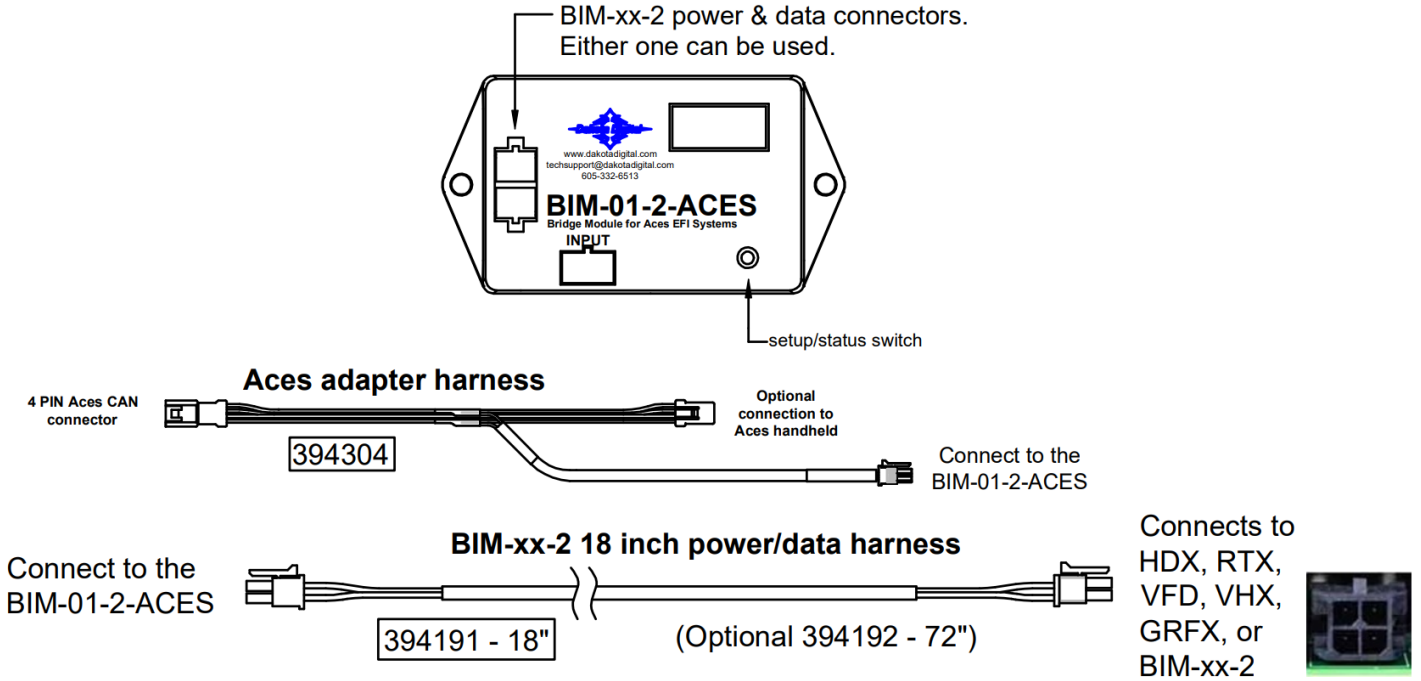




BIM-01-2-ACES

Bridge Module for Aces EFI Systems



This Bus Interface Module is designed to read engine information from the Aces bus. The module is connected to the Aces CAN bus through the 394304 CAN bus adapter harness.

There are two interface (I/O) ports on the BIM-01-2-ACES module. Either one can be connected to the instrument system or to another module, allowing several units to be daisy chained together.

The BIM-01-2-ACES is capable of reading Speed, RPM, MAP/Boost, Intake Air Temp, Engine Coolant Temp, Fuel Pressure, Oil Pressure, Air/Fuel Ratio, and Transmission Fluid Temp from the Aces CAN bus. The availability of each reading depends on the EFI model and attached sensors.

A GPS-50-2 CANNOT be linked (daisy chained) to a BIM-01-2-ACES with a BIM cable. The two units cannot talk to the display control box at the same time.

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Display Setup

VFD and VHX systems will add extra readings to the message displays under the tach.

HDX and RTX need a group screen configured to show additional information, such as Boost or Intake temp.

GRAFIX systems will show extra readings if they are selected in the SYSTEM>>LAYOUTS>>GAUGES menu.

Setting up the display system will configure the instrument control box to read each input from either the terminals or through the BIM cable from the Bus Interface Module.

The BIM menu of the display will not find the BIM-01-2-ACES, but will find specific channels for Fuel Pressure, Boost and Air/Fuel Ratio.

The following settings are for the basic information to be displayed with data from the BIM module.

Extra data that might be sent such as Intake Air Temp, Air/Fuel Ratio or Boost, can be brought up in the message centers of the VFD3 and VHX system by toggling SW2 in normal operation of the vehicle. Similar data that might be present will not automatically be shown in the HDX and RTX systems. That extra information must be placed in a group screen of your choice, in the HDX and RTX setup. GRAFIX systems may need gauge regions in the current layout adjusted

Display data usage

The following readings can each be used in place of dedicated sending units to the instrument system control box. These are individually selectable in the display system instrument setup menus.

VFD3 / VFD3X Setup:

Entering the VFD3 setup is done by holding SW1 (I) and turning the ignition to “on”, or “acc”.

Once in setup, one can move between SPEED, TACH, VOLT, WATER, etc.... by tapping SW1 (I)

If you are setting multiple items, once done with one section you will automatically move onto the next item.

Obtaining speed from the BIM-01-2-ACES (N/A on Aces systems without Trans. Control)

- Hold the SW1 switch from the instrument system control box while turning the key on.
 - The speed display will show 5E~~E~~ and the message display will show SETUP.
- Release SW1. The displays should show 5E~~E~~ and SPEED, respectively.
- Press and hold SW1 for at least 3 seconds, until 5E~~E~~ changes to “-”. The message display will show SENDER.
- Press and hold SW1 for at least 3 seconds, until 5E~~E~~ changes to “-”. The speed display will show the current setting.
- Tap SW1 until 5E~~E~~ and BUS are displayed.
- Press and hold SW1 until 5E~~E~~ and DONE are displayed.
 - NOTE: The AUTO, auto calibration, is removed.
 - Speed can only be fine-tuned with the ADJUST mode at a standstill.
 - ADJUST now only alters the percentage of speed by +/- 25%.
 - Drive a known speed and calculate how far off the speed is in percentage.
 - GPS speed / displayed speed x 100
 - Sample - [60/50=1.2] [1.2x100 = 120] **120%**
 - Enter setup and go to ADJUST, tap SW1 to increment from 100% up to 125%.
 - After 125% the values will fall back to 75% and increment up again.
 - When the desired percentage is reached, hold SW1 until 5E~~E~~ changes to “-”.
- Tap SW1 until 5E~~E~~ and DONE are displayed.
- Press and hold SW1 until “-” and DONE are displayed.

VFD3 Setup Continued:

Obtaining RPM from the BIM-01-2-ACES

- Hold the SW1 switch from the instrument system control box while turning the key on.
 - The speed display should show 5E£ and the message display should show SETUP.
- Release SW1. Tap SW1 until 5E£ and TACH are displayed.
- Press and hold SW1 for at least 3 seconds, until 5E£ changes to "-". The displays should show 5E£ and T CAL.
- Press and hold SW1 for at least 3 seconds, until 5E£ changes to "-". The speed display will show the current setting.
- Tap SW1 until 5E£ and BUS are displayed.
- Press and hold SW1 until "-" and DONE are displayed.
- Tap SW1 until 5E£ and DONE are displayed.
- Press and hold SW1 until "-" and DONE are displayed.

Obtaining engine temperature from the BIM-01-2-ACES

- Hold the SW1 switch from the instrument system control box while turning the key on.
 - The speed display should show 5E£ and the message display should show SETUP.
- Release SW1. Tap SW1 until 5E£ and WATER are displayed.
- Press and hold SW1 for at least 3 seconds, until 5E£ changes to "-". The displays should show 5E£ and SENDER.
- Press and hold SW1 for at least 3 seconds, until 5E£ changes to "-". The speed display will show the current setting.
- Tap SW1 until 5E£ and BUS F (Fahrenheit) is displayed.
 - Tap SW1 once more for 5E£ and BUS C (Celsius) if desired.
- Press and hold SW1 until "-" and DONE are displayed.
- Tap SW1 until 5E£ and DONE are displayed.
- Press and hold SW1 until "-" and DONE are displayed.

Obtaining oil pressure from the BIM-01-2-ACES

- Hold the SW1 switch from the instrument system control box while turning the key on.
 - The speed display should show 5E£ and the message display should show SETUP.
- Release SW1. Tap SW1 until 5E£ and OIL are displayed.
- Press and hold SW1 for at least 3 seconds, until 5E£ changes to "-". The displays should show 5E£ and SENDER.
- Press and hold SW1 for at least 3 seconds, until 5E£ changes to "-". The speed display will show the current setting.
- Tap SW1 until 5E£ and BUS are displayed.
- Press and hold SW1 until "-" and DONE are displayed.
- Tap SW1 until 5E£ and DONE are displayed.
- Press and hold SW1 until "-" and DONE are displayed.

***Intake/manifold air temp, air fuel ratio, trans fluid temp, boost, and fuel pressure will be displayed in the message center if activated through the display menu setup.

VHX Setup:

Entering the VHX setup is done by holding SW1 (I) and turning the ignition to “on”, or “acc”.

Once in setup, one can move between **SPEED**, **TACH**, **VOLT**, **WATER**, etc.... by tapping SW1 (I)

If you are setting multiple items, once done with one section you will automatically move onto the next item.

Obtaining speed from the BIM-01-2-ACES (N/A on Aces systems without Trans. Control)

- Hold the SW1 (I) switch from the instrument system control box while turning the key on.
 - The message display should show **SETUP**.
- Release SW1 (I) - LCD1 should show **SETUP SPEED**.
- Press and hold SW1 (I) for at least 3 seconds until **SPEED SENDER** is displayed.
- Press and hold SW1 (I) for at least 3 seconds until **SENDER** is displayed.
- Release the switch and **SENDER NORMAL** will be displayed.
- Tap SW1 (I) until **SENDER BUS** is displayed.
- Press and hold SW1 (I) until **DONE** is displayed.
 - NOTE: The **AUTO**, auto calibration, is removed.
 - Speed can only be fine-tuned with the **ADJUST** mode at a standstill.
 - **ADJUST** now only alters the percentage of speed by +/- 25%.
 - Drive a known speed and calculate how far off the speed is in percentage.
 - $\text{GPS speed} / \text{displayed speed} \times 100$
 - Sample - $[60/50=1.2]$ $[1.2 \times 100 = 120]$ **120%**
 - Enter setup and go to **ADJUST**, tap SW1 (I) to increment from 100% up to 125%.
 - After 125% the values will fall back to 75% and increment up again.
 - When the desired percentage is reached, hold SW1 (I) until **DONE** is displayed
- Tap SW1 (I) until **SPEED DONE** is displayed.
- Press and hold SW1 (I) until a big **DONE** is displayed.

Obtaining RPM from the BIM-01-2-ACES

- Hold the SW1 (I) switch from the instrument system control box while turning the key on.
 - The message display should show **SETUP**.
- Release SW1 (I) - LCD1 should show **SETUP SPEED**.
- Tap SW1 (I) until **SETUP TACH** is displayed.
- Press and hold SW1 (I) for at least 3 seconds until **TACH ENGINE** is displayed.
- Press and hold SW1 (I) for at least 3 seconds until **ENGINE** is displayed.
- Release the switch and **ENGINE 8** will be displayed.
- Tap SW1 (I) until **ENGINE BUS** is displayed.
- Press and hold SW1 (I) until **DONE** is displayed.
- Tap SW1 (I) until **TACH DONE** is displayed.
- Press and hold SW1 (I) until a big **DONE** is displayed.

Obtaining engine temperature from the BIM-01-2-ACES

- Hold the SW1 (I) switch from the instrument system control box while turning the key on.
 - The message display should show **SETUP**.
- Release SW1 (I) - LCD1 should show **SETUP SPEED**.
- Tap SW1 (I) until **SETUP WATER** is displayed.
- Press and hold SW1 (I) for at least 3 seconds until **WATER SENDER** is displayed.
- Press and hold SW1 (I) for at least 3 seconds until **SENDER DD F** is displayed.
- Release the switch and **SENDER DD F** will be displayed.
- Tap SW1 (I) until **SENDER BUS F** (Fahrenheit) is displayed.
 - Tap SW1 (I) once more for **SENDER BUS C** (Celsius) if desired.
- Press and hold SW1 until **DONE** is displayed.
- Tap SW1 (I) until **WATER DONE** is displayed.
- Press and hold SW1 (I) until a big **DONE** is displayed.

Obtaining oil pressure from the BIM-01-2-ACES

- Hold the SW1 (I) switch from the instrument system control box while turning the key on.
 - The message display should show **SETUP**.
- Release SW1 (I) - LCD1 should show **SETUP SPEED**.
- Tap SW1 until **SETUP OIL** is displayed.
- Press and hold SW1 (I) for at least 3 seconds until **OIL SENDER** is displayed.
- Press and hold SW1 (I) for at least 3 seconds until **SENDER NORMAL** is displayed.
- Release the switch and **SENDER NORMAL** will be displayed.
- Tap SW1 (I) until **SENDER BUS** is displayed.
- Press and hold SW1 (I) until **DONE** is displayed.
- Tap SW1 (I) until **OIL DONE** is displayed.
- Press and hold SW1 (I) until a big **DONE** is displayed.

***Intake/manifold air temp, air fuel ratio, trans fluid temp, boost, and fuel pressure will be displayed in the message center if activated through the display menu setup.

HDX and RTX setup:

****HDX/RTX systems can be configured with the Dakota Digital app for Apple and Android devices****

HDX and RTX Operations

- **HDX:** With the ignition key already on, press and hold both switches to enter SETUP, release when instructed.
 - If using the external rocker switch, hold SW2 (II) while turning the ignition on.
 - Release the switch when SETUP is shown.
 - Left switch on display is SW1, and right switch on display is SW2
- **RTX:** With the ignition off, press hold SW2 (II) while turning the ignition key on to enter SETUP
 - Release the switch when SETUP is shown.
- **BOTH:** When holding for an option, release the button when the screen says “**RELEASE**”
- **BOTH:** You may skip to whichever reading you'd like to configure below; they do not need to be done in order.
- **BOTH:** After making a selection, tap a switch and select **BACK** to save and return to the main menu, then select **EXIT SETUP** to return to normal operation.
- **BOTH:** SWI (left) moves up ↑ the menu list, SWII (right) moves down ↓ the menu list

Obtaining speed from the BIM-01-2-ACES (N/A on Aces systems without Trans. Control)

- Tap SWII (right) switch until **SPEED** is selected. Press and hold SWII (right) switch to enter **SPEED** menu.
- Tap SWII (right) switch until **INPUT** is displayed. Press and hold SWII (right) switch to enter **INPUT** menu.
- **SIGNAL** will be displayed. Press and hold SWII (right) switch to enter **SIGNAL** menu.
- Tap right switch until **BIM** is displayed. Press and hold SWII (right) switch to select **BIM**.
- When **SIGNAL** is displayed again, tap switch until **BACK** is displayed, then hold to return to **INPUT**.
- When **INPUT** is displayed again, tap switch until **BACK** is displayed, then hold the switch to exit.
 - **NOTE:** The **AUTO CAL**, auto calibration, is not accessible.
 - **ADJUST** now only alters the percentage of speed by +/- 25%.
 - After the engine is running, enter setup and go to **ADJUST**.
 - While driving a known speed, SWI and SWII (left/right) can adjust speed.
 - *Percentage can also be adjusted without driving.*
 - Tap SWII (right) to increment up to 125%.
 - Tap SW1 (left) to decrement down to 75%.
 - The speed will be displayed in the LCD along with the percent chosen.
 - Once the speed is correct, hold either switch until **RELEASE** is displayed.
 - You may now continue to exit the setup menu.
 - The Dakota Digital Automotive app can also be used either while driving or not driving.

Obtaining RPM from the BIM-01-2-ACES

- Tap SWII (right) switch until **TACH** is selected. Press and hold SWII (right) switch to enter **TACH** menu.
- Tap SWII (right) switch until **INPUT** is displayed. Press and hold SWII (right) switch to enter **INPUT** menu.
- Tap SWII (right) switch until **CYLINDER** is displayed. Press and hold SWII (right) switch to select **CYLINDER**.
- Tap SWI (**left**) switch until **BIM** is displayed. Press and hold SWII (right) switch to select **BIM**.
- When **INPUT** is displayed again, tap until **BACK** is displayed, then hold the switch to exit.

Obtaining engine temperature from the BIM-01-2-ACES

- Tap SWII (right) switch until **WATER** is selected. Press and hold SWII (right) switch to enter **WATER** menu.
- Tap SWII (right) switch until **INPUT** is displayed. Press and hold SWII (right) switch to enter **INPUT** menu.
- Tap SWII (right) switch until **BIM** is displayed. Press and hold SWII (right) switch to select **BIM**.
- When **INPUT** is displayed again, tap until **BACK** is displayed, then hold the switch to exit.

Obtaining oil pressure from the BIM-01-2-ACES

- Tap SWII (right) switch until **OIL** is selected. Press and hold SWII (right) switch to enter **OIL** menu.
- Tap SWII (right) switch until **INPUT** is displayed. Press and hold SWII (right) switch to enter **INPUT** menu.
- Tap SWII (right) switch until **BIM** is displayed. Press and hold SWII (right) switch to select **BIM**.
- When **INPUT** is displayed again, tap until **BACK** is displayed, then hold the switch to exit.

HDX/RTX TIP: Intake/manifold air temp, air fuel ratio, trans fluid temp, boost, and fuel pressure will be displayed in the group screens if activated through the displays>>group set menu setup.

GRAFIX setup:

****GRAFIX systems can be configured with the Dakota Digital app for Apple and Android devices****

GRAFIX Operations

- With the vehicle stopped, tap the Control Knob to enter the Main Menu
 - The Main menu can be entered with the vehicle moving, but only the speedometer ADJUST menu will be available in the SETUP menu
- Twist the Control Knob clockwise until SETUP is highlighted. Tap the knob to enter the SETUP menu.
- You may skip to whichever reading you'd like to configure below; they do not need to be done in order.
- After making a selection, select BACK to save and return to the main menu, then select EXIT to return to normal operation.
- Twisting the Control Knob clockwise moves up ↑ the menu list, twisting counterclockwise moves down ↓ the menu list.

Obtaining speed from the BIM-01-2-ACES (N/A on Aces systems without Trans. Control)

- Twist the Control Knob clockwise until SPEED is highlighted. Tap the knob to enter SPEED menu.
- Twist the Control Knob clockwise until INPUT is highlighted. Tap the knob to enter INPUT menu.
- SIGNAL will be displayed. Tap the Control Knob to enter SIGNAL menu.
- Twist the Control Knob clockwise until BIM is highlighted. Tap the knob to select BIM.
- When SIGNAL is displayed again, twist the Control Knob until BACK is displayed, then tap to return to INPUT.
- When INPUT is displayed again, twist the Control Knob until BACK is displayed, then tap to return to SPEED.
- When SPEED is displayed again, twist the Control Knob until BACK is displayed, then tap to return to SETUP.
- When SETUP is displayed again, twist the Control Knob until EXIT is displayed, then tap to exit.
 - **NOTE:** The AUTO CAL, auto calibration, is not accessible.
 - To adjust speed, enter SETUP, enter SPEED, then enter the ADJUST menu.
 - While driving a known speed, twisting the Control knob clockwise/counterclockwise can adjust speed.
 - *Percentage can also be adjusted without driving.*
 - Twist the Control Knob clockwise to increment up to 125%.
 - Twist the Control Knob counterclockwise to decrement down to 75%.
 - Once the speed is correct, twist the Control Knob until BACK is displayed, then tap the knob.
 - You may now continue to exit the setup menu.
 - The Dakota Digital Automotive app can also be used either while driving or not driving.

Obtaining RPM from the BIM-01-2-ACES

- Twist the Control Knob clockwise until TACH is highlighted. Tap the knob to enter TACH menu.
- INPUT will be displayed. Tap the Control Knob to enter INPUT menu.
- CYLINDER will be displayed. Tap the Control Knob to enter CYLINDER menu.
- Twist the Control Knob counterclockwise until BIM is highlighted. Tap the knob to select BIM.
- When INPUT is displayed again, twist the Control Knob until BACK is displayed, then tap to return to TACH.
- When TACH is displayed again, twist the Control Knob until BACK is displayed, then tap to return to SETUP.
- When SETUP is displayed again, twist the Control Knob until EXIT is displayed, then tap to exit.

Obtaining engine temperature from the BIM-01-2-ACES

- Twist the Control Knob clockwise until WATER is highlighted. Tap the knob to enter WATER menu.
- INPUT will be displayed. Tap the Control Knob to enter INPUT menu.
- Twist the Control Knob counterclockwise until BIM is highlighted. Tap the knob to select BIM.
- When INPUT is displayed again, twist the Control Knob until BACK is displayed, then tap to return to WATER.
- When WATER is displayed again, twist the Control Knob until BACK is displayed, then tap to return to SETUP.
- When SETUP is displayed again, twist the Control Knob until EXIT is displayed, then tap to exit.

Obtaining oil pressure from the BIM-01-2-ACES

- Twist the Control Knob clockwise until OIL is highlighted. Tap the knob to enter OIL menu.
- INPUT will be displayed. Tap the Control Knob to enter INPUT menu.
- Twist the Control Knob clockwise until BIM is highlighted. Tap the knob to select BIM.
- When INPUT is displayed again, twist the Control Knob until BACK is displayed, then tap to return to OIL.
- When OIL is displayed again, twist the Control Knob until BACK is displayed, then tap to return to SETUP.
- When SETUP is displayed again, twist the Control Knob until EXIT is displayed, then tap to exit.

TIP: Intake/manifold air temp, air fuel ratio, trans fluid temp, boost, and fuel pressure will be displayed if selected in the SYSTEM>>LAYOUTS>>GAUGES menu

BIM Setup:

BIM menu table:

Menu	Options	Default	Notes
<i>SPd</i>	<i>SP 1</i>	<i>SP 1</i>	Change the speed mode (see pg. 10)
	<i>SP 2</i>		
<i>A-F</i>	<i>On</i>	<i>On</i>	Enable air fuel ratio reading
	<i>OFF</i>		
<i>FPr</i>	<i>On</i>	<i>On</i>	Enable fuel pressure reading
	<i>OFF</i>		
<i>bSt</i>	<i>On</i>	<i>OFF</i>	Enable boost reading (<i>OFF</i> will display vacuum in inHg, <i>On</i> will display boost in psi)
	<i>OFF</i>		
<i>LCh</i>			View the current BIM ID numbers
<i>RCh</i>			Automatically set bus ID numbers
<i>End</i>			Exit Setup

Changing Speed Mode:

The BIM-01-2-ACES has an option to change speed processing modes (see pg. 10)

- Hold the switch on the BIM-01-2-ACES case while turning the key on. The BIM display will show the current revision code while this is held.
- Release the switch.
- Tap the switch until the display shows *SPd* (Speed). Press and hold to enter this menu.
- When you see --- on the display release the switch.
- The display will show the current speed mode, *SP 1* (speed mode 1) or *SP 2* (speed mode 2).
- Tap the switch to change the mode setting.
- To save the setting press and hold the switch until you see --- on the display, then release the switch.
- The display will display the next available menu. Press and hold the switch to enter that menu or tap the switch to select another menu.
- To exit, tap the switch until the display shows *End* then press and hold the switch until you see --- on the display.

Enabling Air Fuel Ratio:

The BIM-01-2-ACES has an option to monitor Air Fuel Ratio.

- Hold the switch on the BIM-01-2-ACES case while turning the key on. The BIM display will show the current revision code while this is held.
- Release the switch.
- Tap the switch until the display shows *A-F* (Air Fuel). Press and hold to enter this menu.
- When you see --- on the display release the switch.
- The display will show the current Air Fuel state, *OFF* (disable) or *On* (enable).
- Tap the switch to change the state.
- To save the setting press and hold the switch until you see --- on the display, then release the switch.
- The display will display the next available menu. Press and hold the switch to enter that menu or tap the switch to select another menu.
- To exit, tap the switch until the display shows *End* then press and hold the switch until you see --- on the display.

Enabling Fuel Pressure:

The BIM-01-2-ACES has an option to monitor fuel pressure.

- Hold the switch on the BIM-01-2-ACES case while turning the key on. The BIM display will show the current revision code while this is held.
- Release the switch.

- Tap the switch until the display shows *FP_r* (Fuel Pressure). Press and hold to enter this menu.
- When you see --- on the display release the switch.
- The display will show the current Fuel Pressure state, *aFF* (disable) or *On* (enable).
- Tap the switch to change the state.
- To save the setting press and hold the switch until you see --- on the display, then release the switch.
- The display will display the next available menu. Press and hold the switch to enter that menu or tap the switch to select another menu.
- To exit, tap the switch until the display shows *End* then press and hold the switch until you see --- on the display.

Enabling Boost:

The BIM-01-2-ACES has an option to enable boost readings if the car has a turbocharger.

- Hold the switch on the BIM-01-2-ACES case while turning the key on. The BIM display will show the current revision code while this is held.
- Release the switch.
- Tap the switch until the display shows *b5t* (boost). Press and hold to enter this menu.
- When you see --- on the display release the switch.
- The display will show the current boost state, *aFF* (disable) or *On* (enable).
- Tap the switch to change the state.
- To save the setting press and hold the switch until you see --- on the display, then release the switch.
- The display will display the next available menu. Press and hold the switch to enter that menu or tap the switch to select another menu.
- To exit, tap the switch until the display shows *End* then press and hold the switch until you see --- on the display.

To view the current bus ID numbers:

- Hold the switch on the BIM-01-2-ACES case while turning the key on. The BIM display will show the current revision code while this is held.
- Tap the switch until the display shows *LCh* (LIN channels).
- Press and hold to enter this menu. When you see --- on the display, release the switch.
- The display will show *L* followed by the current ID of an additional reading (for example: *L 4*). Tapping the switch will cycle through the readings displaying the currently assigned IDs to each reading.
- To exit this menu, tap the switch until *dNE* is displayed. Then press and hold the switch until --- is displayed.
- The display will show the next available menu. Press and hold the switch to enter that menu or tap the switch to select another menu.
- To exit, tap the switch until the display shows *End* then press and hold the switch until you see --- on the display.

To automatically set bus ID numbers:

- Hold the switch on the BIM-01-2-ACES case while turning the key on. The BIM display will show the current revision code while this is held.
- Press and release the switch until the display shows *ALh* (auto channel).
- Press and hold to enter this menu. When you see --- on the display, release the switch.
- The display will display - , - , then - as the BIM automatically determines the best ID to assign for the additional readings (if enabled).
- The display will show *End*. Press and hold the switch to exit setup or press and release to choose another menu option.

Quick tips:

If the Aces handheld is connected to the bus, viewing live data or sensor values will cause the Aces ECU to stop transmitting certain readings (Coolant Temp, Fuel Pressure, Oil Pressure, and Air/Fuel Ratio) to the BIM. To resolve, disconnect the Aces handheld or navigate to a menu without live data.

Starting with firmware version 2.37, Aces has improved the accuracy of their speedometer data. Please note that this change is only applied after performing an ECU upgrade. To take advantage of this improvement, the BIM's speed mode must be set to "SP2" in the BIM setup menu. Aces firmware versions 2.36 and below require the speed mode to be set to "SP1". Setting the incorrect speed mode for your ECU's firmware may result in speed displaying too high or too low.

While the BIM is operating, the dot in the upper left corner of the display will indicate the status:

- On steady indicates it is powered up but not receiving any BIM bus activity.
- Flashing indicates it is communicating on the BIM bus.
- If the display shows “BUS”, then it is scanning to try and communicate with the vehicle bus but cannot get an answer.

To see the sensor and channel status on the BIM display, press and hold the switch to cycle through the screens. The first screen will show the bus type (*EFB* - Aces), and the following screens will display the data that is available:

“*ECT*” – Engine Coolant Temp

“*EOP*” – Engine Oil Pressure

“*IAT*” - Intake Air Temp

“*A-F*” – Air/Fuel Ratio

“*b5t*” - Boost/Vacuum

“*TRC*” - RPM/Tachometer

“*FPR*” – Fuel Pressure

If you do not see any number of these listed, the data may not be transmitted for the BIM-01-2-ACES to read.

Troubleshooting guide:

Problem	Possible cause	Solution
No BIM data on instrument readout; BIM does not light up.	PWR wire does not have power. GND wire is not properly grounded. Power/data harness is damaged. Module is damaged.	Connect to a location that has +12V key-on power. Connect to a different ground location. Inspect harness. Repair or replace any damaged areas. Return for service. (see instructions)
No BIM data on instrument readout; BIM display is scanning “BUS”	CAN Interface cable is not connected	Connect the supplied CAN interface cable between the BIM unit and the ECU’s CAN output.
No BIM data on instrument readout; BIM has a steady dot lit.	Interface cable is not connected. Interface cable is loose. On VHX systems, the BIM display for this channel is disabled.	Connect the supplied harness between the BIM unit and the instrument system control box. Ensure both ends of the cable are seated securely. Follow instructions in VHX manual to enable the BIM display screen.
BIM display shows “BB:B”	Data cable is damaged or connected improperly. Another module on the bus is damaged.	Inspect and replace harness or power/data harness. Inspect other modules on the data bus.
Speedometer displays too high or too low	SPD mode set incorrectly	In the BIM-01-2-ACES setup menu, enter the “SPD” menu and change the mode (see page 9).
Certain readings are missing (Coolant Temp, Oil Pressure, Fuel Pressure, etc.), while others are present (RPM, MAP, IAT, etc.)	Live data is being viewed on the Aces handheld	Change to a menu that does not show live data. Unplug the Aces handheld.

SERVICE AND REPAIR

DAKOTA DIGITAL offers complete service and repair of its product line. In addition, technical support is available to help you work through any questions or problems you may be having installing one of our products. Please read through the Troubleshooting Guide. There, you will find the solution to most problems.

For additional support, please visit www.dakotadigital.com. A “**Product Support**” link will be found at the bottom of the home page.

Should you ever need to send the unit back for repairs, please call our technical support line, (605) 332-6513, to request a Return Merchandise Authorization number.

- Package the product in a good quality box along with plenty of packing material.
- Ship the product by a common carrier with tracking abilities.
- Be sure to include the RMA number on the package.
- Include a complete description of the problem, with RMA number, your full name and address (street address preferred), and a telephone number where you can be reached during the day.
- Any returns for warranty work must include a copy of the dated sales receipt from your place of purchase.
- Send no money. We will contact you for payment.

Dakota Digital Limited Lifetime Warranty

DAKOTA DIGITAL warrants to the ORIGINAL PURCHASER of this product that should it, under normal use and condition, be proven defective in material or workmanship for the lifetime of the original vehicle it was installed in, such defect(s) will be repaired or replaced at Dakota Digital's option.

This warranty does not cover nor extend to damage to the vehicle's systems, and does not cover diagnosis, removal or reinstallation of the product.

This Warranty does not apply to any product or part thereof which in the opinion of the Company has been damaged through alteration, improper installation, mishandling, misuse, neglect, or accident.

Dakota Digital assumes no responsibility for loss of time, vehicle use, owner inconvenience nor related expenses. Dakota Digital will cover the return standard freight once the product has been evaluated for warranty consideration, however the incoming transportation is to be covered by the owner.

This Warranty is in lieu of all other expressed warranties or liabilities. Any implied warranties, including any implied warranty of merchantability, shall be limited to the duration of this written warranty. No person or representative is authorized to assume, for Dakota Digital, any liability other than expressed herein in connection with the sale of this product.

⚠ WARNING: This product can expose you to chemicals including lead, which is known to the State of California to cause cancer and birth defects or other reproductive harm. For more information go to www.P65Warnings.ca.gov



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