COBB®

AccessPORT™

User Guide

Subaru Turbo

(North American Models)

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Product Introduction

Congratulations on the purchase of the new AccessPORT hand held programmer. The AccessPORT can:

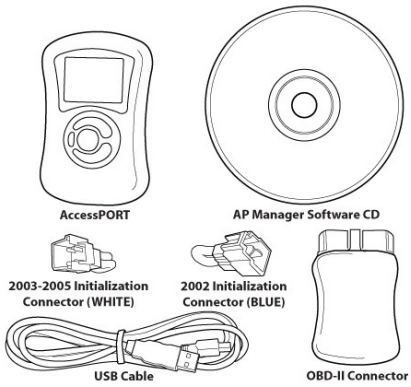
- Reprogram the factory engine control unit (ECU) with improved tuning parameters through the on-board diagnostic (OBD-II) port
- Monitor and log vehicle sensor data using on-screen digital gauges
- Read and clear engine diagnostic trouble codes (DTCs)
- Measure 0-60 and ¼ mile times and dyno plot
- Estimate instantaneous and average fuel economy
- Adjust idle and timing

Supported Vehicle List

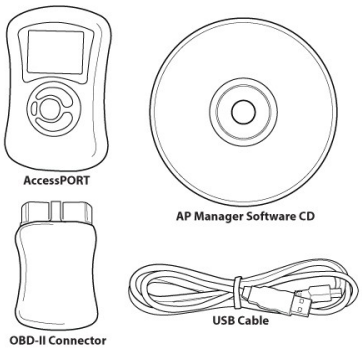
- 2004 – 2013 Subaru Forester XT (MT & AT)**
- 2009 – 2010 Subaru Impreza 2.5GT (AT)**
- 2002 – 2014 Subaru Impreza WRX (MT & AT)**
- 2004 – 2014 Subaru Impreza STI**
- 2005 – 2012 Subaru Legacy GT (MT & AT)**
- 2005 – 2009 Subaru Outback XT (MT & AT)**

***** designed for and sold in North America only***

In-Box Contents



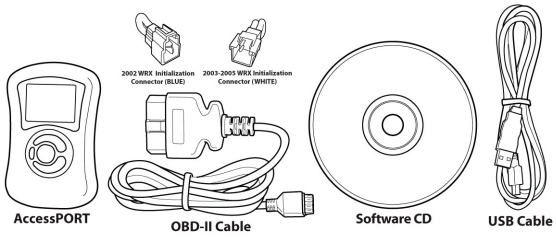
AP-SUB-001



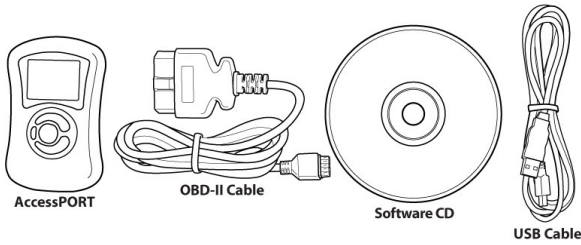
AP-SUB-002 and AP-SUB-003

AccessPORT Version 2

-OR-



AP-SUB-001



AP-SUB-002 and AP-SUB-003

AccessPORT Version 2b

WARNING!

Installation and use of the AccessPORT may void all or a portion of the vehicle manufacturer's standard warranty. There is no guarantee expressed or implied by COBB Tuning or any of its affiliates for the use of the AccessPORT. The user accepts all risks and responsibilities when using the AccessPORT.

WARNING!

Use of the AccessPORT while operating a moving vehicle is strictly prohibited by law. COBB Tuning and its affiliates accept no responsibility for damages or injury caused by misuse of the AccessPORT.

WARNING!

The AccessPORT may not be able to function if the vehicle's wiring has been modified. If problems occur while using the AccessPORT, please verify that all wiring to and from the ECU is correct and functional.

What Is A Map?

The AccessPORT reprograms the tuning parameters inside the factory engine control unit (ECU) using map files, which contain specially written instructions for the AccessPORT to follow during the reprogramming process. A map file can contain information for any number of different modifications or enhancements to a vehicle, ranging from a race map for a heavily modified vehicle to an economy map for a stock vehicle. Through the use of the AccessPORT and different map files the ECU can be reprogrammed to accommodate virtually any vehicle configuration.

AccessPORT Installation

Pre-Installation

The AccessPORT comes with the most up-to-date software and map files available at the time of shipment. However, it is possible that updated software and/or map files have been made available since the time of shipment. Therefore, the recommended procedure is to connect the AccessPORT to the AP Manager software and download the latest software and map files for the target vehicle. Please see AP Manager Software Manual for more information.

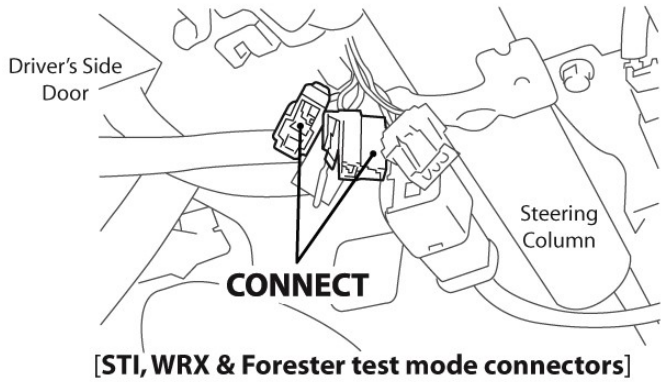
IMPORTANT!

For installation purposes, it is important to ensure that the vehicle's battery has adequate power for both the AccessPORT and the ECU. Because of this, it is recommended that all in-car electronics and vehicle lights are turned off during the installation process to reduce drain on the vehicle's battery. For improved safety during installation, a car battery charger can be connected to the vehicle during the installation process.

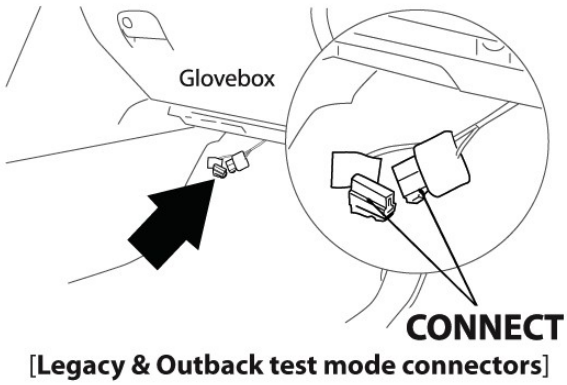
Getting Started

1. Insert the key into the vehicle's ignition and leave it in the OFF position.
2. **(AP-SUB-001 and AP-SUB-002 owners only):**

   Locate the green Test Mode connectors. Impreza and Forester models will have this located under the driver's side dash to the left of the steering column (see left diagram). The Legacy and Outback models will have this located on the passenger side (see right diagram). With the connectors located, enable Test Mode by plugging the two connectors into each other.



[STI, WRX & Forester test mode connectors]



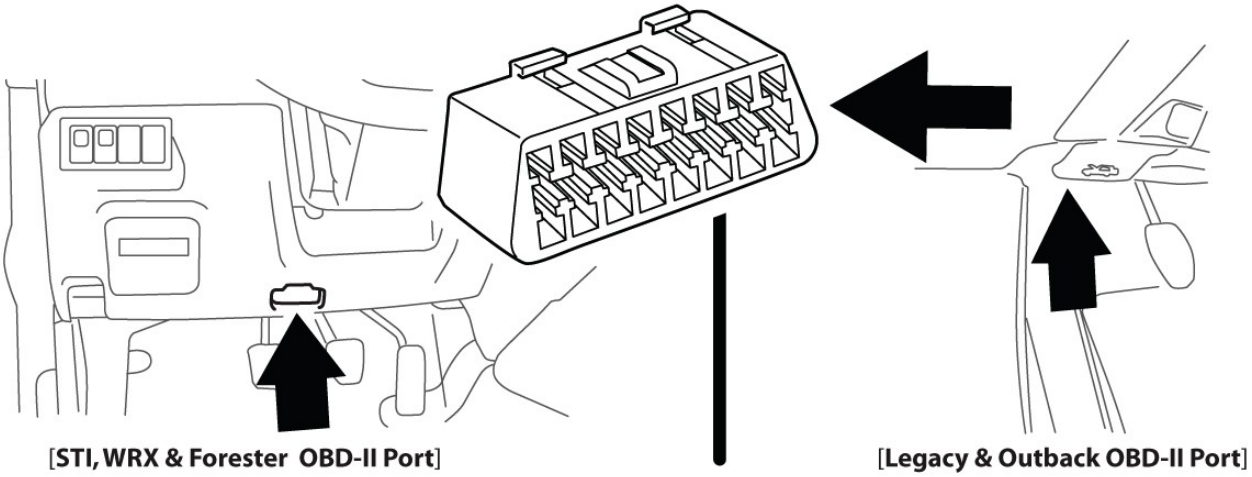
[Legacy & Outback test mode connectors]

NOTE: In the event that the vehicle does not enter Test Mode after plugging in the green connectors, refer to **[TROUBLESHOOTING SECTION]**.

3. **(AP-SUB-001 owners only):**

   Identify the correct Initialization Connector for your vehicle (2002 WRX = BLUE, 2003 - 2005 WRX = WHITE). Attach the Initialization Connector to the corresponding connector under the driver's side dash. This connector will be located near the green Test Mode connectors and will be translucent white in color. Do not proceed until this step is complete.

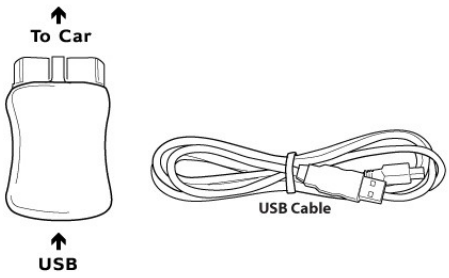
4. Locate the vehicle's OBD-II port. Location of the OBD-II port may vary depending on the vehicle model..



5. Connect device to the OBD-II port.

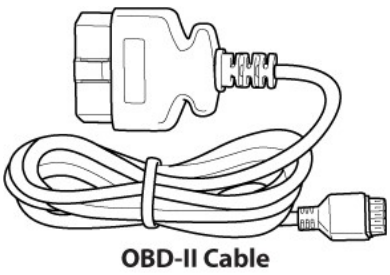
   a) (AccessPORT Version 2 only):

   - Connect the small end of the provided USB cable to the mini-USB port on the back of the OBD connector.
   - Plug the large end of the USB cable into the standard USB port on the underside of your AccessPORT. At this point the AccessPORT will power up and after a few moments present the installation menu.

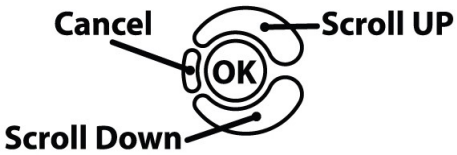


   b) (AccessPORT Version 2b only):

   - Plug the OBD-II cable into the OBD-II port under the dash.
   - Connect the other end of the OBD-II cable to the 10-pin port on the bottom of the AccessPORT. At this point the AccessPORT will power up and after a few moments present the installation menu.



6. Turn the key to the ON position but do not start the vehicle.
7. Select **[Install]** from the AccessPORT menu by pressing the **[OK]** button to proceed with installation. Below is a diagram of the AccessPORT's keypad function.



Vehicle Identification

The AccessPORT will attempt to automatically determine the target vehicle for installation. At this point, turn the key to the ON position and press the **[OK]** button on the AccessPORT to proceed with identification.

If the AccessPORT successfully identifies the vehicle:

Verify that the identified vehicle is correct and press **[OK]** to confirm.

If an error occurs:

Please refer to **[TROUBLESHOOTING SECTION]**.

Map Selection

After the AccessPORT identifies the vehicle, it will present a list of maps. Maps that are not intended for the identified vehicle are displayed in gray. The AccessPORT will reprogram the ECU with the calibration data from the map selected for installation. This will become the base data for the ECU. To ensure the best performance, select the map that most closely matches the modification level of the vehicle. If you are unsure about which map applies to your modification level, please see the map notes and their requirements for the modifications that will best fit your vehicle.

If you are unsure about which map applies to your modification level, please see the map notes and their requirements for the modifications that will best fit your vehicle.

Select a map and press **[OK]** to view detailed information about that map. After confirming that the selected map is correct, press **[OK]** again to proceed, or press **[CANCEL]** to return to the map selection list.

Save Stock ECU Program Data

After confirming the map to be installed, the AccessPORT will download the current stock ECU program data from the vehicle. This AccessPORT saves this data for use during the uninstall process to ensure that the vehicle is completely returned to stock.

WARNING!

If a previous installation of an AccessPORT is detected, you will be given the option to overwrite it with a new installation. Be aware that the previous installation will be permanently lost and unrecoverable. This detection may occur prior to saving the stock ECU program data, in which case the ECU program data will not be saved. In the case of a previous install, a stock ECU program supplied on the AccessPORT will be used when you uninstall.

Install AccessPORT Programming

With the stock ECU data saved, the AccessPORT will proceed with installation to the vehicle. At this point the AccessPORT reprograms the vehicle's ECU with new program data and calibration parameters from the installation map file. This process will take several minutes to complete.

WARNING!

Do not disturb the AccessPORT, and the USB cable and the OBD connector (Version 2) or the OBD-II cable (Version 2b) while installation is taking place. Failure to do so may result in incomplete ECU reprogramming which will render the vehicle inoperable.

Installation Complete

The AccessPORT is now fully installed and ready for use. Turn the key to the OFF position and unplug the OBD connector (Version 2) or the OBD-II cable (Version 2b) from the vehicle. If applicable, disconnect the Test Mode connectors (green) you connected in Step 2 and the Initialization Connector you connected in Step 3. These connectors MUST be disconnected before operating the vehicle.

The vehicle's ECU is now programmed with new calibration data. The AccessPORT does not need to be plugged into the vehicle for the calibration to be in effect, however, there are other features of the device that may be used at any time.

Please note that the AccessPORT is designed to work with only one vehicle at a time. **Once the AccessPORT is installed, it cannot be used with another vehicle until it is uninstalled from the original vehicle.**

AccessPORT Features & Functionality

Monitor

Live Data

The AccessPORT can read sensor data from the factory ECU and display it as an on-screen gauge. This feature allows the AccessPORT to function as an auxiliary gauge displaying boost, RPM, temperature, or any number of other parameters.

To change which monitor is currently being displayed in Live Data, select the monitor using the up/down buttons and press the OK button to activate the monitor.

Use 'Set Live Data List' in the 'Monitor' sub-menu to set which monitors are available for selecting in Live Data.

> **NOTE:** The AccessPORT is only capable of displaying live data while the ignition is turned to the “ON” position. The AccessPORT will display an error message if it cannot communicate with the vehicle.

Data Log

The AccessPORT can record sensor data from the factory ECU while you drive. With the ability to store multiple sessions, the AccessPORT can function as a complete engine datalogger and diagnostic tool. To begin datalogging, press the OK button while in Live Data mode. An on screen prompt will notify you when the AccessPORT is recording data. To view the results of your datalog sessions, simply connect the AccessPORT to your PC and retrieve the results using the AP Manager software. Data Log recordings are stored in a .csv (Comma Separated Values) format and are easily viewed using any spreadsheet application. Click here for step-by-step instruction.

Use 'Set Data Log List' in the 'Monitor' sub-menu to set which monitors are logged.

NOTE: The AccessPORT is only capable of datalogging while the ignition is turned to the “ON” position. The AccessPORT will display an error message if it cannot communicate with the vehicle.

NOTE: Up to 10 log files can be stored on the AccessPORT. Use AP Manager to delete unneeded logs. If datalogging is started when there are already 10 log files on the AccessPORT, the log file with the lowest numerical value will be automatically overwritten.

NOTE: The 10 log files can be a combined length of 2+ hours long.

Fuel Economy

The AccessPORT can estimate your vehicle's fuel economy. Use the up/down arrows to select instantaneous, session average, or accumulated average fuel usage.

The session average will display the average fuel economy since the Fuel Economy display was started. The accumulated average will display the average fuel economy since the usage data was last reset.

Use 'Reset Fuel Econ.' in the 'Monitor' sub-menu to reset the accumulated average fuel usage data.

NOTE: The AccessPORT is only capable of displaying fuel economy while the ignition is turned to the “ON” position. The AccessPORT will display an error mess

Set Rev Warning

Use this function to set the desired RPM value for Shift Light. The Shift Light function is available while viewing Live Data. While the actual engine RPM exceeds the desired RPM limit, the AccessPORT screen will flash, indicating an over-rev condition.

Set Live Data List

This list allows the user to enable and disable items for viewing in Live Data. Only monitors with a checkbox will be in the list of available monitors to view while in Live Data. Highlight a monitor and press the OK button to activate/deactivate it for logging.

Use 'Live Data' in the 'Monitor' sub-menu to view monitor data.

Set Data Log List

This list allows the user to enable and disable items for logging. Only monitors with a checkbox will be recorded while using the Data Log feature. Highlight a monitor and press the OK button to activate/deactivate it for logging.

Use 'Data Log' in the 'Monitor' sub-menu to start and stop logging.

> **NOTE:** Datalogging performance is reduced as the number of items selected to datalog increases.

Reset Live List

Reset to default monitor list for viewing in Live Data. This item is grayed out and not selectable if the default monitor list is already selected.

Reset Log List

Reset to default monitor list for logging in Data Log. This item is grayed out and not selectable if the default monitor list is already selected.

Reset Fuel Econ.

Reset the accumulated fuel usage data. This item is grayed out and not selectable if there is no accumulated fuel usage data to reset.

Performance

The AccessPORT can calculate several performance measurements.

> **NOTE:** The AccessPORT is only capable of calculating performance test results while the ignition is turned to the “ON” position. The AccessPORT will display an error message if it cannot communicate with the vehicle.

0-60 MPH

To record the 0-60 MPH performance, select this menu option and follow instructions. A time slip showing the performance results will be displayed at the end of the performance test.

¼ Mile

To record the ¼ Mile performance, select this menu option and follow instructions. A time slip showing the performance results will be displayed at the end of the performance test.

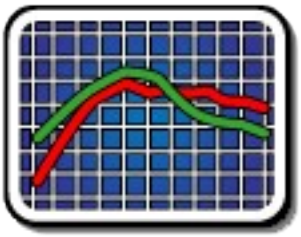
Dynamometer

Use this feature to estimate your vehicle's wheel horsepower and torque. This can be used to see the actual performance gains of part upgrades.

> **NOTE:** You will be prompted to enter a vehicle weight, test gear, and RPM range for the test. This data will be stored for future use. If you want to revert to the default data, select 'Reset Dyno' in the 'Performance' sub-menu.

Reset Dyno

Reset to default for dynamometer test parameters.



Tune

Enhance the performance of your car.

Change Map

To change the mapping on your ECU, select this menu option and follow the instructions. The ignition must be turned to the “ON” position during the Change Map operation. You will be prompted to select a pre-loaded map. The same warning that apply to the installation process apply here as well (battery charge level, turn accessories off, etc.)

- **Realtime**: The AccessPORT can upload a calibration for immediate use. The calibration will remain in the ECU until the ECU loses power or is reset.
- **Reflash**: Permanent reflash of the calibration onto the ECU. The AccessPORT will request for the vehicle to be placed in ECU reprogramming mode. Follow the on-screen prompts to complete this step.

  NOTE: There is a storage limit of 100 maps on the AccessPORT.

Adjustments

- **Adjust Idle**: The AccessPORT allows users to adjust the idle RPM up to +/- 300 RPM. There are different settings for use with A/C on and A/C off.
- **Adjust Timing**: The AccessPORT allows for global timing adjustment that can retard timing up to 5 degrees.
- *** Launch Control:** The AccessPORT allows for setting a specific RPM threshold for launching.
- *** Flat-Foot Shift (Not available for the 2002-2005 WRX due to hardware limitations):** The AccessPORT allows for setting a specific RPM threshold for flat-foot

shifting.

- *** Reset LC/FFS:** Resets the Launch Control and Flat-foot Shift RPM values to the defaults in the current map as flashed onto the vehicle.

  * **Notes:**

  - Launch Control and Flat-Foot Shift are only available for turbocharged vehicles with manual transmissions.
  - Launch Control and Flat-Foot Shift features are only available in firmware version 1.6.4.0-1645 or higher. Users also need to use map version 3.0 or above to be able to access these features. ***For more information on what these features do and how to use them, please refer to the Launch Control and Flat-Foot Shift FAQ document.***
  - Flat-Foot Shift is not available for the 2002-2005 WRX due to hardware limitations in these vehicles.
  - **WARNING: Launch Control and Flat-Foot Shift (LC/FFS) are abusive to the engine, clutch, transmission, axles, and differentials. The user must accept all risks and responsibilities for using these features.**

Show Current Map

To see the last map that was flashed to your car, select this menu option. You can press the OK button to see a detailed description of the map.

- **Realtime**: Last map loaded via “Realtime” option during Change Map.
- **Reflash**: Last map loaded via “Reflash” option during Change Map.

•

Troubleshooting

Use the AccessPORT as a diagnostic tool.

> **NOTE:** The AccessPORT is only capable displaying live data while the ignition is turned to the “ON” position. The AccessPORT will display an error message if it cannot communicate with the vehicle.

Reset ECU

Use this function to reset all the trouble codes.

Read Codes

Use this function to read trouble codes from the engine computer. Stored codes indicate a mechanical or electrical fault. Use the up/down buttons to highlight a code and display a short description of the trouble code (if available).

Memory Snapshot

Use this function to save a snapshot of the current ECU memory state. This function is mainly for use by Tech Support for troubleshooting purposes.

AccessPORT

About

Displays information about the AccessPORT firmware version, serial number, status (installed or uninstalled) and vendor.

Settings

Change AccessPORT settings:

Language: Choose from an array of various languages. (Note that not all menu entries are translated.)

Units: Choose from Standard, Metric, and Metric with AFR.

Uninstall

Selecting this item will remove the AccessPORT programming from the vehicle on which it is installed and return the ECU back to a stock state.

AccessPORT Troubleshooting

Symptom	*Troubleshooting Steps*
AccessPORT will not communicate with vehicle.	1. Check USB cable connection on both the AccessPORT and the OBD connector (Version 2) or the OBD-II cable (Version 2b). 2. Ensure that the OBD connector (Version 2) or the OBD-II cable (Version 2b) is making good contact inside the vehicle's OBD-II port. 3. Verify that the vehicle's ignition is turned to the “ON” position.
AccessPORT cannot reflash ECU.	1. Follow all steps for “AccessPORT will not communicate with vehicle.” 2. Verify that all steps required for ECU reprogramming mode were properly followed.
AccessPORT cannot identify vehicle during installation.	1. Ensure that the AccessPORT is running the most recent version of firmware. For more information, please visit the COBB Forums. 2. If the AccessPORT is up to date and still cannot identify the vehicle, please contact tech support.

Support Contact Information

Web	http://www.cobbtuning.com/ http://www.cobbforums.com/
E-Mail	support@cobbtuning.com
Phone	866-922-3059

Environmental Information

Operating and Storage Temperatures

The AccessPORT is designed to be operated at temperatures between 32° and 95° F (0° and 35° C) and with a relative humidity below 90%. Using the AccessPORT outside of these recommendations may result in damage.

When storing the AccessPORT, do so in a place where temperature is always between 0° and 115° F (-20° and 45° C) and with a relative humidity below 90%.

Never store your AccessPORT in an area that receives direct sunlight.

Do Not Get Wet

Take care to prevent any liquids from coming in contact with the AccessPORT or any associated equipment.

In the event your AccessPORT, or associated equipment, gets wet you may need to send it in for service. Please contact technical support BEFORE attempting to use the AccessPORT.

Handling and Storage

Your AccessPORT may be damaged by improper storage or handling. Be careful not to drop your AccessPORT or any associated parts.

Never store your AccessPORT in an area that experiences any noticeable levels of vibration, static electricity, heat shock, or excessive swings in relative humidity.

Do Not Attempt Repairs Yourself

Never attempt to open your AccessPORT or any associated equipment. Doing so puts the components at risk of damage from, but not limited to, static shock. No user-serviceable parts are inside. At no time will ANY authorized representative of COBB Tuning, Inc. ask you to open or mechanically/electronically alter the AccessPORT.

Opening the AccessPORT will void any and all warranties for the device and its operation.