

### Introduction

The bluePRINT Link<sup>®</sup> module works with the bluePRINT Control System to provide access to a broad range of vehicle data, including speed and real-time status of brakes, doors, transmission, lighting and door locks. Incorporating bluePRINT Link into the vehicle can greatly reduce or even eliminate the need to modify or splice into the vehicle's wiring while providing a broader range of vehicle signal data to the upfit technician.

bluePRINT Link configuration is done using SoundOff Central™ or bluePRINT 3 programming software.

### bluePRINT Link Kit Contents

Quantity	Component	Service Part Number	Page
1	bluePRINT Link Module	ENGLMMD001	2-4
1	Ford Super Duty Harness	ENGLMVH013	5-7
1	bluePRINT Link Data Harness	ENGLNDH001	8
1	8" Black Mini Zip Tie	N/A	3
1	Data Link Sticker	N/A	4
1	RJ-45 Splitter	PNFLBSPLT1	3
1	Installation Instruction sheet	N/A	N/A

## WARNING

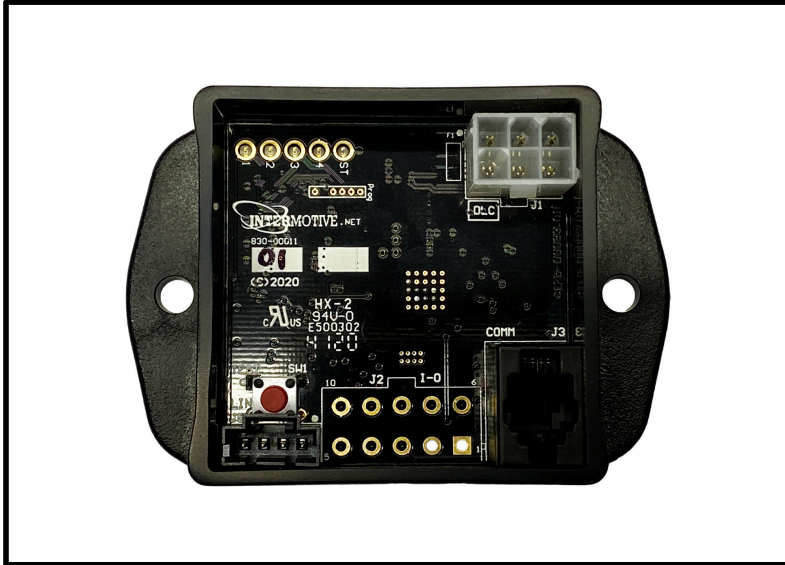
- bluePRINT Link installation requires interfacing with the vehicle CANBUS system. All connections should be double-checked and secured prior to completing installation.
- Refer to vehicle manufacturer's instructions for connection to the CANBUS.
- DO NOT install this product or route any wires in the Air Bag Deployment Zone. Refer to vehicle Owner's Manual or Upfit Guide for deployment zones.
- Do NOT use system to disconnect headlights, brake lights or other safety equipment.
- Unit may become hot to touch during normal operation.
- Failure to properly install connectors, fuses or wiring may cause vehicle failure or fire.
- Installation must only be performed by trained technician. Installer must determine vehicle wiring configuration and proper integration of system
- Install protective grommets when routing wire through firewall or metal.
- Confirm that CANBUS signals are being accurately reported using the diagnostic tool provided in the configuration software.

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### Firmware Requirements for bluePRINT Hardware

The minimum firmware requirements to support bluePRINT Link:

Central Controller	3.01
Remote Control Panel - Push Button	2.16
Remote Control Panel - Handheld	2.14
Remote Control Panel - Rotary	1.08
Remote Node	1.40
SoundOff Central System Version	1.00

### Hardware Requirements

In order to use the bluePRINT Link Module, two connection harnesses are required.

The first harness is the bluePRINT Link Data Harness that connects between the bluePRINT Link<sup>®</sup> module and the bluePRINT Central Controller or bluePRINT 500 Series Control System:

	Service Part Number
bluePRINT Link Data Harness	ENGLNDH001

The second required harness is the bluePRINT Link Vehicle Harness. This harness is vehicle specific and may vary. When connecting the vehicle harness, please follow the specific directions included with the vehicle harness.

Please see the schematic on the following page for connectivity information.

### Warranty Registration

To register your bluePRINT Link Module for extended warranty coverage, visit:

<https://www.soundoffsignal.com/prod-reg>

The Model Number is the Part Number of your purchased kit (examples: ENGLMK001, ENGLMMD001, etc.).

The Serial Number can be found on the label attached to the bottom of each bluePRINT Link module

ENGLMKxxx  
Jxxxxx  
SN: xxxxxxxx



Registering your bluePRINT Link Module online extends the warranty from 1 year of ship date to a total of 3 years from the ship date.

## WARNING

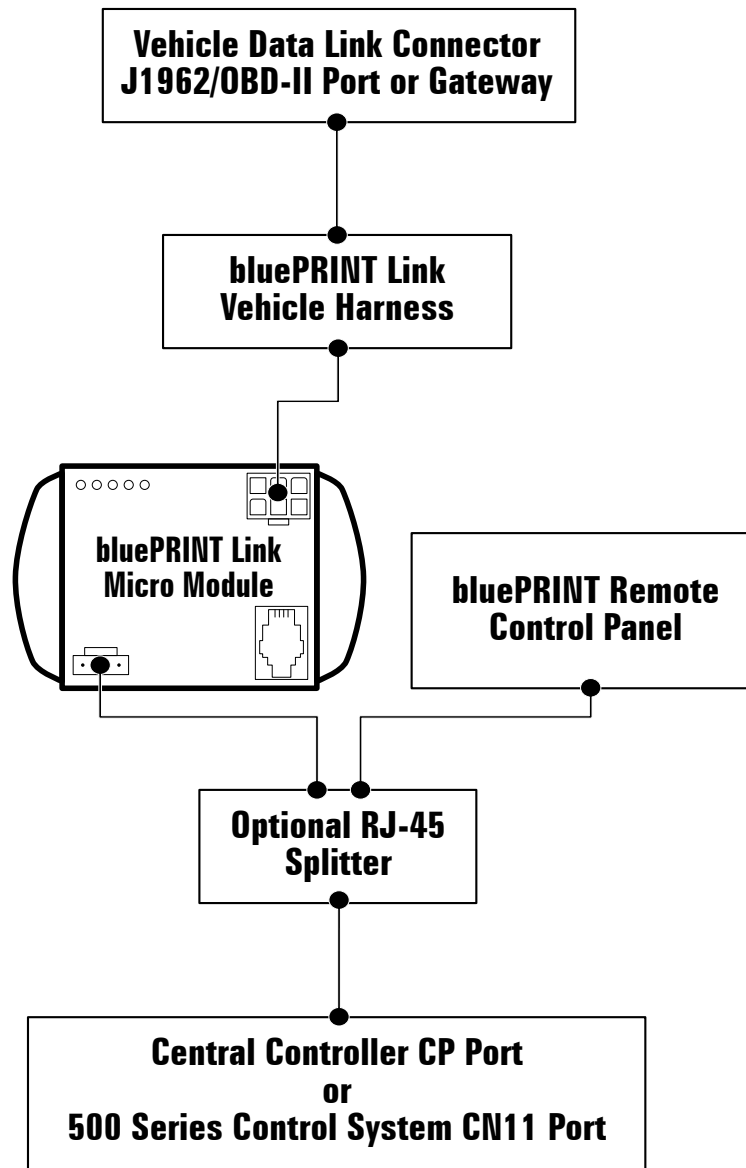
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## Installation Instructions

1. Follow the bluePRINT Link Vehicle Harness instructions for vehicle connection.
2. Connect the vehicle harness to the bluePRINT Link Module using the 6-position connector (white).
3. Connect the bluePRINT Link Data Harness to the bluePRINT Link Module using the 4-pin connector (black).
4. Connect the bluePRINT Link Data Harness to the bluePRINT Control Panel Data Bus. This connection is an RJ-45 socket. On the Central Controller, it is labeled CP. On the 500 Series Control System it is labeled CN11. This may require a parallel RJ-45 splitter, available from SoundOff Signal.
5. Secure the bluePRINT Link module and any excess wiring. Use the included zip-ties or installer-provided screws or Scotch-Lock fastener tape.
6. Post installation testing and basic troubleshooting is detailed on the next page.

### Module Initial Power-Up & Post Installation Testing

When the bluePRINT Link module is first plugged in, it attempts to acquire the vehicles' VIN so it can accurately interpret vehicle data on the CAN network. The key must be in the run position for CAN network traffic to be present (engine off is OK.)

Ensure the ignition is on and the CAN bus is awake. With most vehicles, the CAN bus will go to sleep (stop sending data) if the engine is off and there is no state change in any of the CAN parameters after several minutes. The amount of time before the CAN bus goes to sleep varies by vehicle manufacturer. If the bluePRINT Link module is unresponsive, ensure the CAN bus is awake by tapping the brake pedal or cycling the ignition off then on.

The bluePRINT Link module has a configuration that will show the state of certain vehicle parameters. These parameters are mapped to LEDs 1 – 4 on the bluePRINT Link Micro module. Parameters are mapped to the LEDs as indicated in the chart below

LED #	Function
1	Service Brake
2	Driver Front Door
3	Passenger Front Door
4	Park

*EXAMPLE: Press the service brake, LED1 will go on, release the service brake, LED1 will go off. Open the driver's front door, LED2 will go on, close the door, LED2 will go off. If these and the remaining parameters are responding, the bluePRINT Link module is able to decode the CAN parameters for the associated vehicle.*

### Data Link Sticker

The bluePRINT Link Module comes with a warning sticker for user application. This sticker reads as follows:

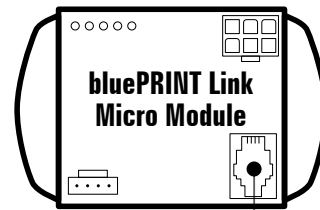
This vehicle is equipped  
With a DATA LINK "T" harness.  
Only disconnect for scan tool  
Use if unable to communicate  
Reconnect when diagnostics  
Are completed

It is the user's responsibility to apply this sticker to the vehicle, but can also be omitted at their discretion.

### bluePRINT Link Firmware Updates

bluePRINT Link firmware is updated frequently to provide support for newer vehicle chassis. We recommend updating firmware any time there is a vehicle connectivity problem (as described in the table below).

Firmware must be updated directly to the bluePRINT Link module through the RJ9 programming port using specific software. Firmware updates cannot be done using bluePRINT or SoundOff Central™ Programming Software. In addition, a proprietary programming cable is required. The part number for the programming cable is ENGLNDH002. For more information, please contact your local SoundOff Signal Territory representative, or SoundOff Signal Technical Support.



Contact SoundOff Signal to purchase the required cable for programming.

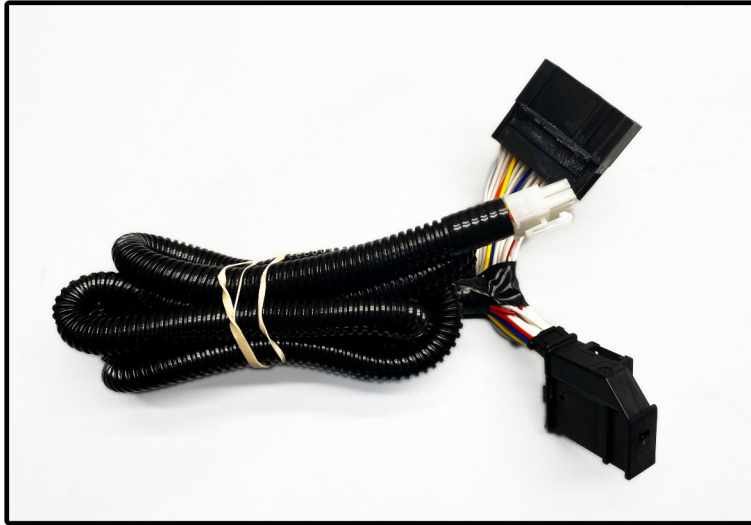
**RJ9 Programming Port**

### Troubleshooting

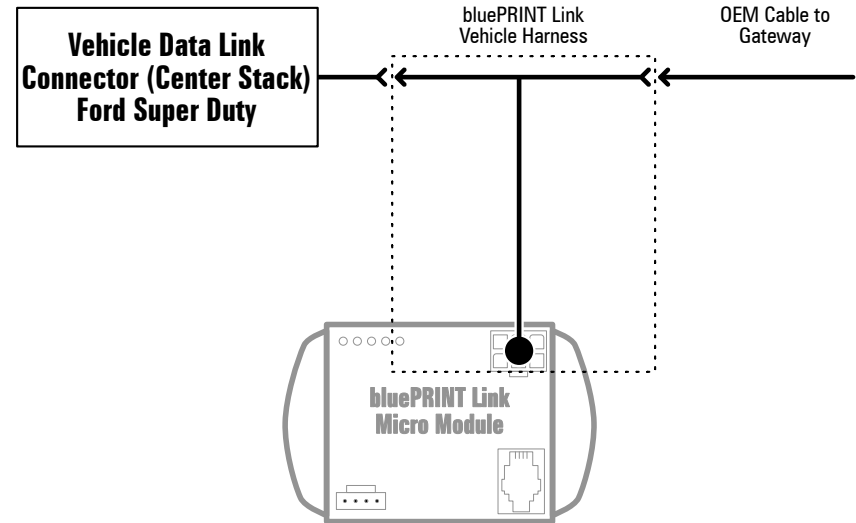
The below table covers basic troubleshooting for bluePRINT Link. If additional assistance is required, please contact SoundOff Signal Technical Support at (800) 338-7337, extension 4.

Troubleshooting* Table		
bluePRINT Link Module LEDs "scroll" from 1-Status	bluePRINT Link has not recognized the vehicle VIN.	Ensure the vehicle harness installed is correct for the year, make, and model. Ensure all connectors are fully seated Firmware may be out of date.
LED4 turns on steady when the vehicle is in park.	The module is communicating properly. Additional LED indicator lights may be on steady at the same time.	No failure.

\*This table covers basic troubleshooting for bluePRINT Link. If additional Assistance is required, please contact SoundOff Signal Technical Support at (800) 338-7337. Extension 4.



### Connectivity Schematics



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### Vehicle Installation Instructions

Detailed instructions start on the next page.

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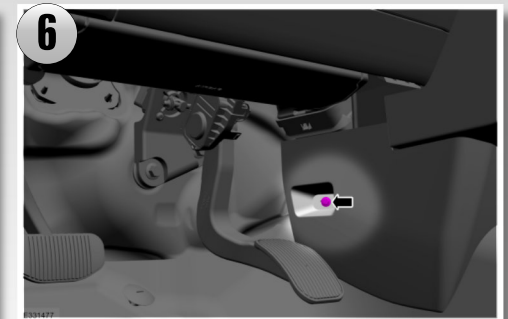
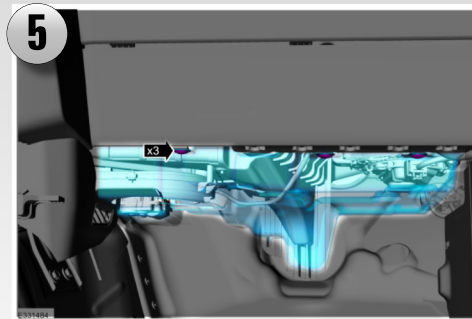
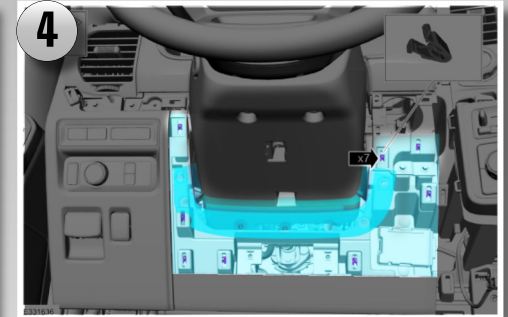
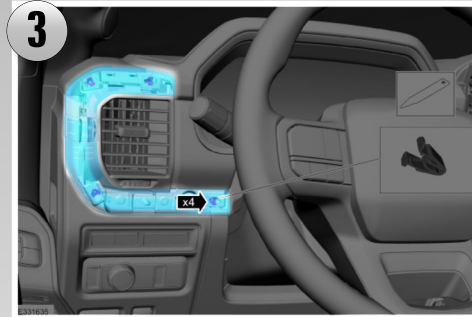
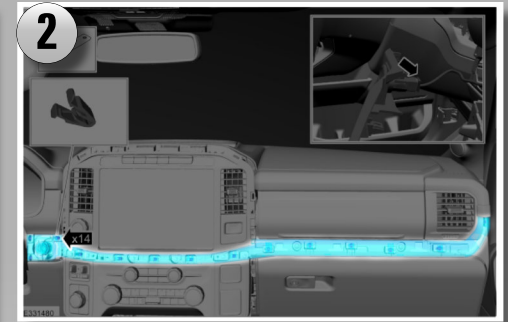
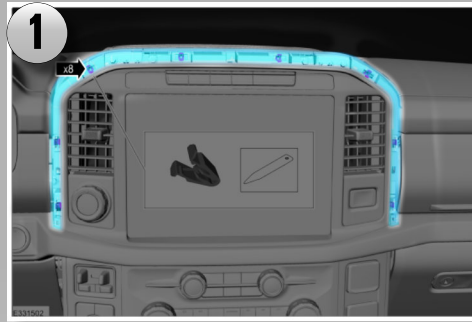
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## Vehicle Installation Instructions

1. **Disconnect the vehicle's battery**, starting with the ground.
2. For most panel removal, we recommend using a plastic trim removal tool.
3. Remove the center stack bezel by releasing the eight clips as shown in image 1.
4. Remove the righthand instrument center trim panel by releasing the 14 clips as shown in image 2. If the vehicle is equipped with push to start, disconnect the electrical connector (shown in the top right of image 2).
5. Remove the left hand instrument center trim panel by releasing the four clips as shown in image 3.
6. Remove the lower steering column panel by releasing the seven clips as shown in image 4. Moving the steering column to the uppermost position may aid in the removal process.
7. Image 5 shows how to remove the the right hand lower dash panel. There are three push pin type retainers holding this panel in place. This step is specific to vehicles without a floor console. Vehicles that have a floor console are not covered in this installation guide.
8. Remove the bolt holding the lowermost trim panel in place as shown in image 6. This hexbolt requires a 7mm socket to remove.

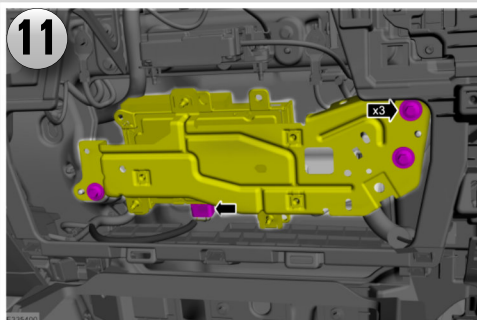
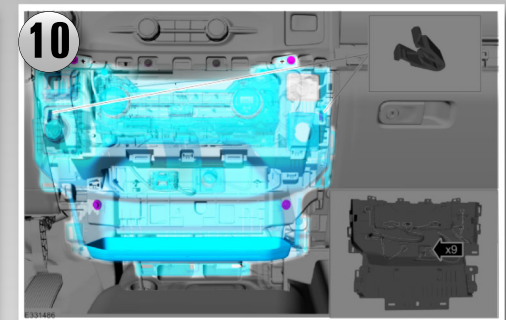
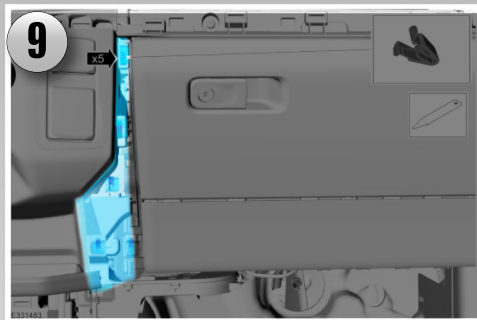
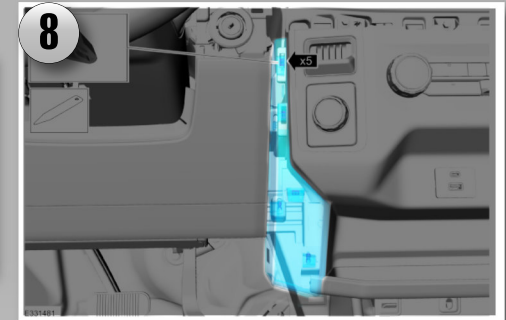
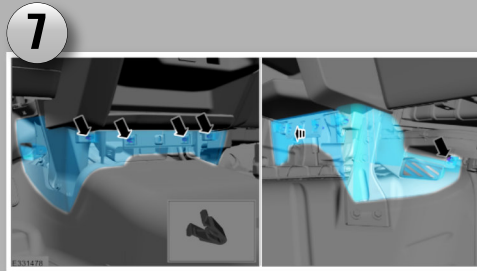
Continued on next page...





## Vehicle Installation Instructions

9. Images 7 shows the clip placement for the lower trim panel from the previous step. Using a panel tool, remove this panel by releasing the 6 clips.
10. Remove the left and right lowerhand center stack bezels as shown on images 8 and 9. They each have 5 clips that need to be released.
11. Remove the lower centerstack panel with the air conditioning controls. Six 7mm screws hold this panel in place as shown in image 10. Disconnecting the electrical connectors is not necessary for installation, unless extra access is required. There is enough slack on the vehicle harness for this panel to be moved down out of the way for the following step.
12. Remove the three 7mm screws holding the sync module plate below the radio as shown in image 11. The gateway is located on the back side of this plate. Disconnecting some or all of the connectors on the sync module will make access to the gateway module easier. Image 11 shows the location of the three screws to remove. Please Note: The sync module is removed in the CAD image.
13. Flip the plate over to access the gateway on the back side. Image 12 details the gateway plug. Proceed to the next section, CAN Connections. After making all connections, reverse this procedure to re-install all equipment. Unless noted, all 7mm hex bolt are to be torqued to 22 in/lbs.
14. Locate the 26 pin connector shown in image 12.
15. Disconnect the 26 pin connector from the gateway.
16. Insert the bluePRINT Link T-Harness into the gateway, and reconnect the original harness into bluePRINT Link.
17. Re-install any zip tie strain relief.
18. Follow the remaining instructions for the bluePRINT Link Module, starting from step 3.
19. Reverse all steps to put the center stack back together.
20. Reconnect the vehicle's battery.





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### Data Harness Installation Instructions

1. Connect the bluePRINT Link Data Harness to the the bluePRINT Link Module using the 4 pin connector (black).
2. Route the data cable to the Central Controller or 500 Series Control System. *Note:* The data harness may require the use of a parallel splitter (not included) when more than one device utilize the Control Panel Data port on either the Central Controller or CN11 on the 500 Series Control Panel.
3. Connect the bluePRINT Link Data harness to the bluePRINT Control Panel Data Bus. This connection is an RJ-45 socket. On the Central Controller, it is labeled CP. On the 500 Series Control System it is labeled CN11. *Note:* Connections can be made at either the port at the system controller, or the port at the control panel itself. When available, certain control panels have two RJ-45 data ports. bluePRINT Link can be directly connected to either one of these, as they are internally parallel.
4. Follow the remaining instructions for the bluePRINT Link Module, starting from step 4.

