



2009-2012 Ford F150
With Navigation

2009-2012 F-150
Without Factory Navigation



VISION series

INSTALLATION MANUAL

Important Notice!

Please read this installation guide carefully before disassembling your vehicle or making any wire connections. Installing this product requires technical expertise, experience and specialized tools.

If you are unsure about performing the installation steps outlined in this manual, we strongly recommend having the product professionally installed by an authorized VINLAND dealer.

Retain Your Factory Features with Vinland Vision (via Maestro RR)

Upgrade without compromise—Vinland Vision, when paired with the Maestro RR module, preserves select OEM features so you can enjoy modern technology while keeping the conveniences you love.

Explore the table below for a complete overview of retainable functions.

Note: Listed features are for reference only. Actual retained functions may vary by vehicle model year, trim, and regional specifications.

Feature	Retention Status
Steering Wheel Controls	Retained
Factory Amplifier	Retained
Advanced Camera Features	Retained
Climate Control	Retained
Gauges	Retained
Park Assist	Retained
Vehicle Info	Retained

Content

Chapter 1 Tools Needed & Packing List.....	1
Chapter 2 Maestro RR Configuration.....	3
Chapter 3 Ports Function Overview	7
Chapter 4 Installation Process	8
1. Ford F150 With Navigation (2009-2012)	8
Cable Harness Connection	10
2. Ford F150 Without Factory Navigation (2009-2012)	12
Cable Harness Connection	14
3. Ford F-150 Without Navigation (2011-2014)	17
Cable Harness Connection	17
Chapter 5 Troubleshooting Table	19
Chapter 4 Troubleshooting Table	19

Chapter 1 Tools Needed & Packing List

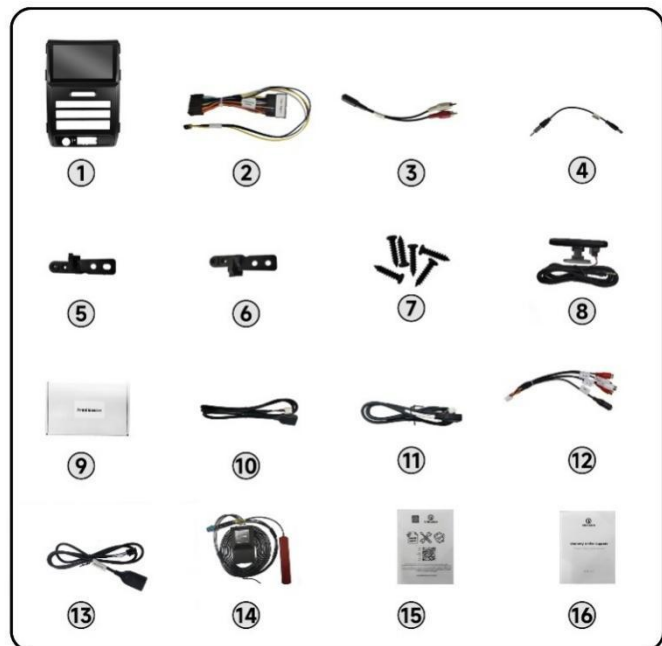
Tools needed for installation: Plastic pry tools, Socket wrench (7mm or 10mm, depending on your stereo), Screwdriver, Electrical tape, Scissor, Wrench, Screw Tray/Box, Cable Ties.

Warning:

- We regularly release system updates that may introduce new features or changes not covered in this manual. Always refer to the latest release notes for comprehensive details.
- Download the latest Installation Manual from our website or contact customer support for assistance.
- We strive for comprehensive documentation. If you have questions or encounter issues with your car stereo not covered in this manual, please get in touch with customer support.

Packing List for 2009-2012 Ford F-150 with Navigation:

- ① Car Stereo with Mounting Frame (with NAV)
- ② Power Adapter
- ③ AUX Adapter
- ④ FO1 Radio Antenna Adapter
- ⑤ Mounting Bracket (Right)
- ⑥ Mounting Bracket (Left)
- ⑦ Mounting Screws
- ⑧ External Microphone
- ⑨ Universal Accessories Box
- ⑩ USB to 4 Pin: USB 1 Phone Link
- ⑪ USB to 6 Pin: USB 2 External Storage
- ⑫ Tri-band Audio with Remote Receiver
- ⑬ 4G SIM Slot Cable
- ⑭ 4-in-1 Antenna (GPS/WIFI/4G-ANT)
- ⑮ Product Manual
- ⑯ Warranty Online Support

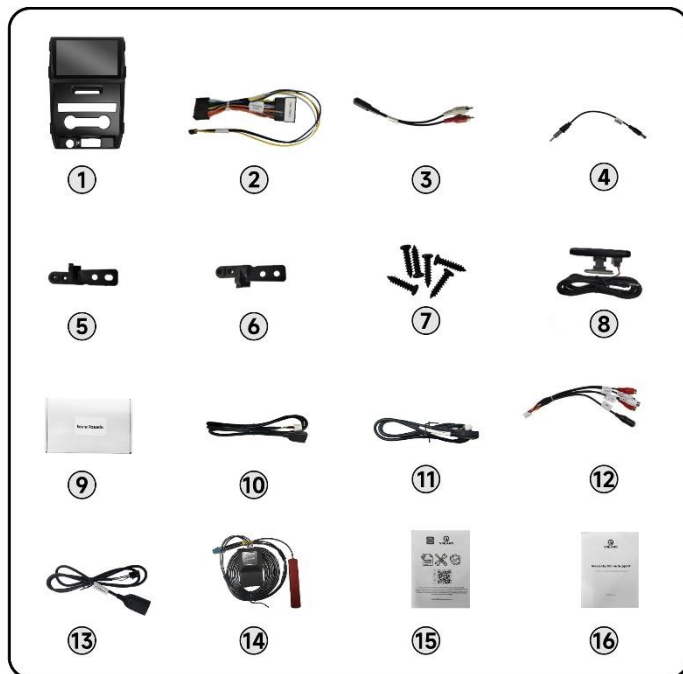


To Retain OEM Features

You'll need the Maestro RR interface and the vehicle-specific T-Harness (sold separately).

Packing List for 2009-2012 Ford F-150 without Navigation:

- ① Car Stereo with Mounting Frame
(without Navigation)
- ② Power Adapter
- ③ AUX Adapter
- ④ FO1 Radio Antenna Adapter
- ⑤ Mounting Bracket (Right)
- ⑥ Mounting Bracket (Left)
- ⑦ Mounting Screws
- ⑧ External Microphone
- ⑨ Universal Accessories Box
- ⑩ USB to 4 Pin: USB 1 Phone Link
- ⑪ USB to 6 Pin: USB 2 External Storage
- ⑫ Tri-band Audio with Remote Receiver
- ⑬ 4G SIM Slot Cable
- ⑭ 4-in-1 Antenna (GPS/WIFI/4G-ANT)
- ⑮ Product Manual
- ⑯ Warranty Online Support

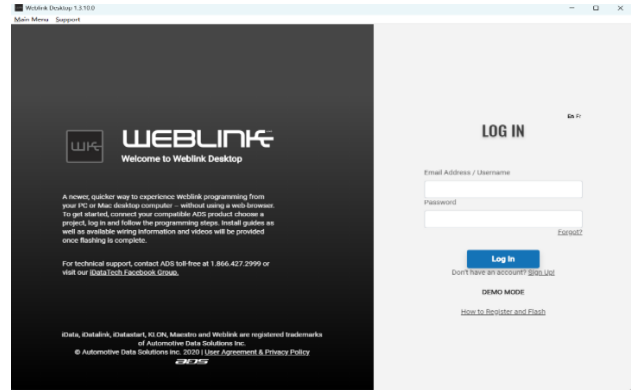
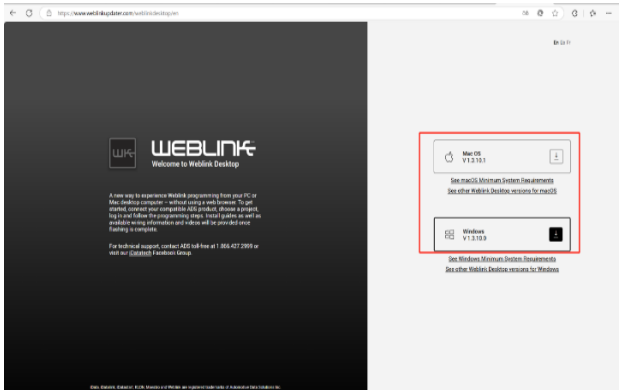


To Retain OEM Features

You'll need the Maestro RR interface and the vehicle-specific T-Harness (sold separately).

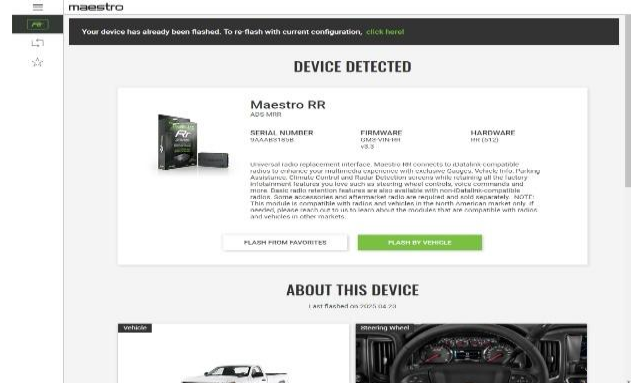
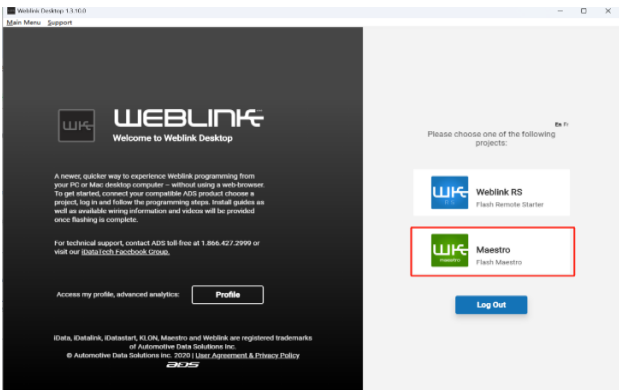
Chapter 2 Maestro RR Configuration

To ensure proper functionality and seamless integration with your vehicle, Weblink Desktop must be installed before setting up the Maestro RR. This software is required for device configuration, firmware updates, data synchronization, and remote management.



1. Go to <https://www.weblinkupdater.com/weblinkdesktop/en> and download the Weblink Desktop software.

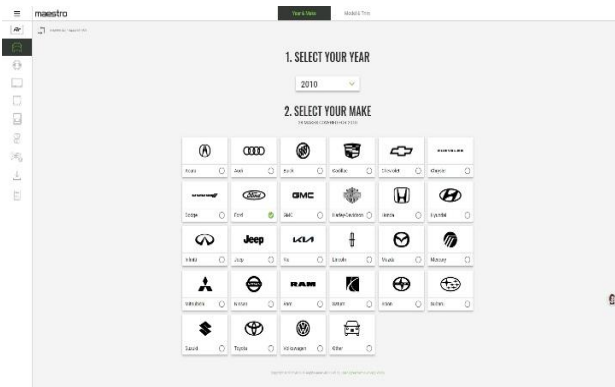
2. Initiate a new Weblink account or sign in to an existing one.



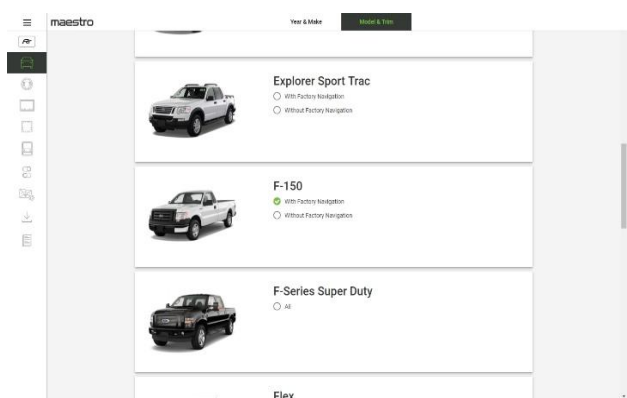
3. Establish a connection between the Maestro RR module and your computer via the USB cable included in the package, then proceed by selecting the “Maestro Flash Maestro” option.

4. Weblink Desktop will automatically recognize the connected Maestro RR module and present its corresponding details (e.g., serial number and current firmware version). Subsequently, select “FLASH BY VEHICLE” to proceed with the configuration process.

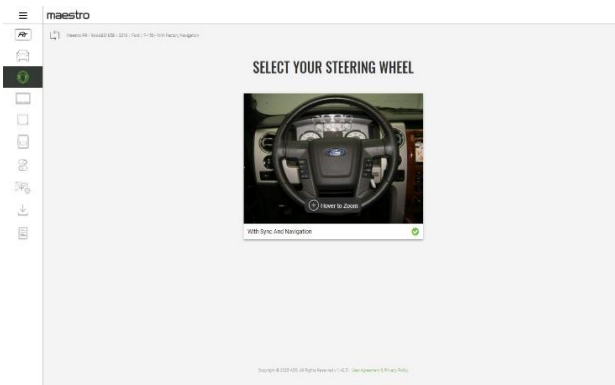
5. Specify the vehicle and car stereo information by entering the required details in the sequence outlined below:



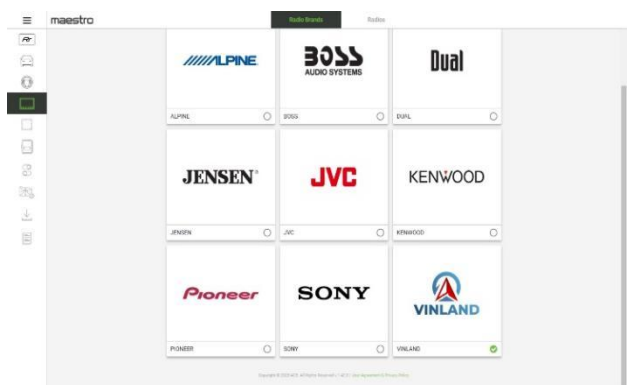
① Select the vehicle's production year and corresponding brand.



② Select the appropriate vehicle model and configuration parameters.



③ Select the appropriate steering wheel type for your vehicle.

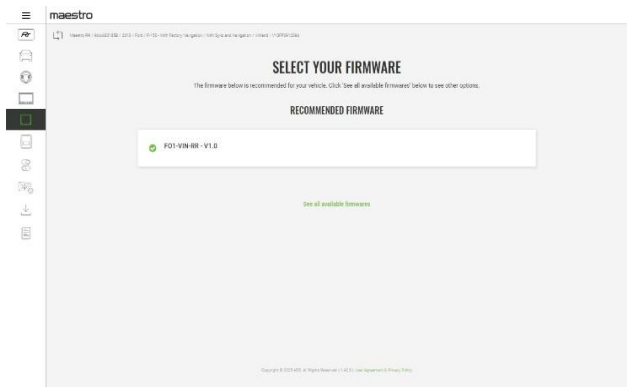


④ Choose VINLAND as the designated brand of the car stereo.



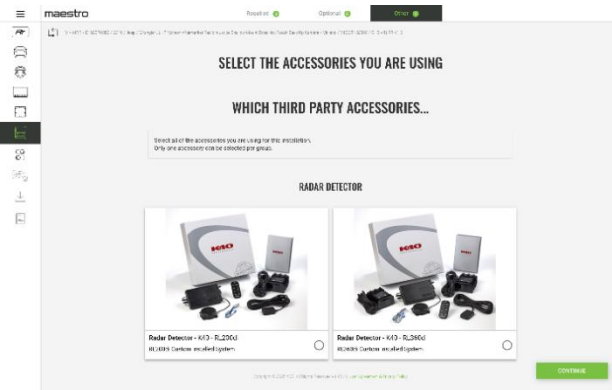
- ⑤ Select the exact model corresponding to the car stereo you have purchased.

Every car stereo carries a unique serial number—please locate and reference the one found on your car stereo.

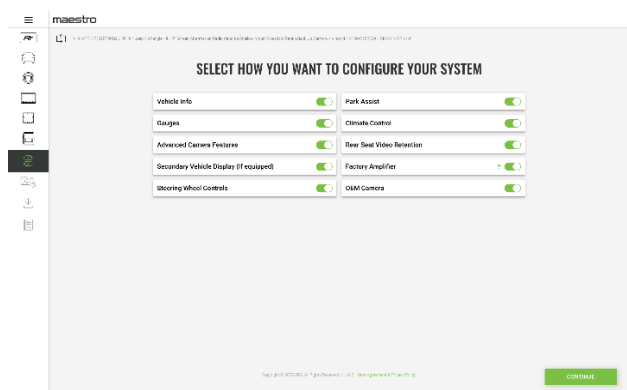


- ⑥ Enter the 8-digit serial number located on the rear of the car stereo. Please locate this number and input it as prompted.

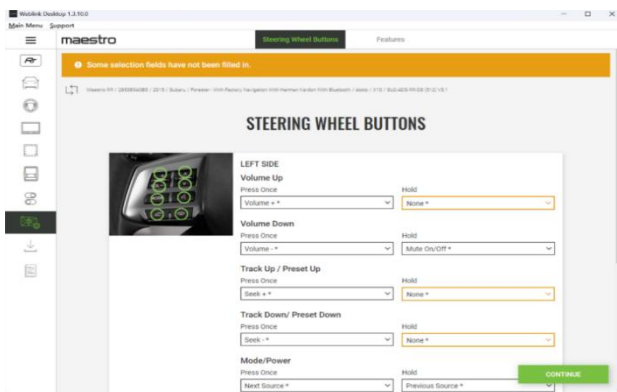
- ⑦ Select the correct firmware version from the available options.



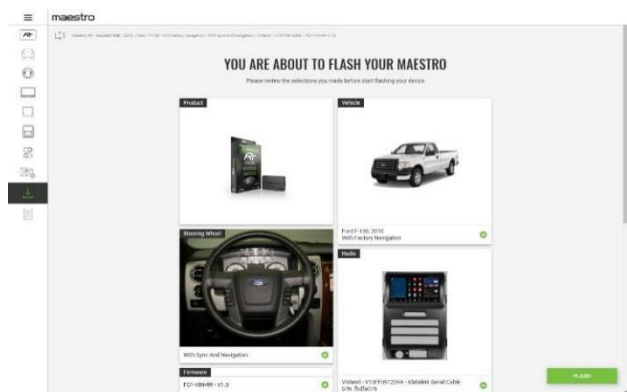
6. Select the accessories currently in use.



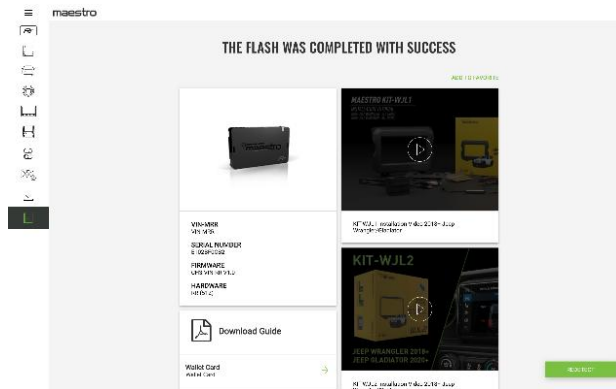
7. The system will automatically apply the recommended settings. If no adjustments are required, simply click “CONTINUE” to proceed to the next step.



8. The default steering wheel button functions will be displayed on the interface. If needed, adjust the button assignments according to user preferences and save the settings.

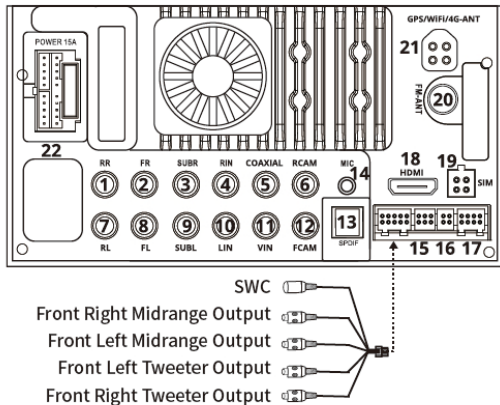


9. Verify the firmware version, user-defined settings, and vehicle or car stereo information. To begin updating the Maestro RR module, click “FLASH”. Ensure that neither the module nor the USB connection is interrupted during the process.



10. Once the firmware update is complete and the “Flash Successful” message appears, download the module’s installation guide and follow the remaining steps to complete the in-vehicle installation.

Chapter 3 Ports Function Overview



1. Rear Right Audio Output
2. Front Right Audio Output
3. Subwoofer Output Right
4. Right Channel Auxiliary Audio Input
5. Coaxial Output
6. Rear Camera Input
7. Rear Left Audio Out
8. Front Left Audio Out
9. Subwoofer Output Left
10. Left Channel Audio Input
11. Video Input
12. Front Camera Input
13. Optical SPDIF Output
14. Microphone Input
15. USB2 External Storage
16. USB1 Recording Storage
17. Rear Recording Camera Input
18. Front Recording Camera Input
19. HDMI Input
20. 4G LTE Adapter Interface
21. F-M-ANT-Radio Antenna input
22. 4-in-1 Antenna-4G/WiFi/GPS
22. Car Stereo Fuse

Chapter 4 Installation Process

1. Ford F150 With Navigation (2009-2012)

This part provides a brief overview of the procedures required to remove the factory stereo and install the new car stereo. The instructions are specifically designed for 2009-2012 Ford F-150 with navigation models and are intended to guide you through the process safely, accurately, and efficiently.

Part One Disassembly



Step 1

Switch off the vehicle's ignition.



Step 2

Remove the two 7mm screws located beneath the rubber mat at the top of the radio bezel.



Step 3

At the bottom of the bezel, carefully pry out the AUX/USB port, then remove the 7mm screw.



Step 4

Using a pry tool, carefully detach both the left and right side panels.



Step 5

Using a panel tool, carefully pry off the factory bezel. Once the bezel is loosened, disconnect the electrical connectors and remove the bezel from the dashboard.



Step 6

Remove the eight screws securing the factory CD player and screen on the both sides. Carefully pull out the CD player and display screen, then disconnect the wiring harness and remove them.

Part Two Cable Harness Connection

Refer to the detailed wiring connection steps provided below for different configurations of the Ford F-150 (2009-2012) with navigation.

Part Three Assembly



Step 1

Secure the two included plastic mounting brackets to the new trim bezel of the new car stereo.



Step 2

Install the Vision car stereo assembly into the dashboard of vehicle.

Note:



When installing an aftermarket head unit in 2009–2012 Ford F-150 models, the rear RCA output ports may be obstructed by the factory plastic mounting bracket. To provide sufficient clearance, the edge of the bracket must be trimmed. Professional installation is recommended.

Cable Harness Connection

Follow the wiring instructions that match your vehicle's configuration for installation.

Step 1

① Connect the **Main Harness** of the **HRR-FO1** T-harness directly to the car stereo.

OR

② Connect the **HRR-FO1** harness to the **Power Adapter**. Then connect the other end of the **Power Adapter** to the aftermarket car stereo.

Step 2

- Ensure the black 8-pin connectors are securely connected. Then, connect the T-harness to the factory radio harness.

Step 3

- Plug the (C) OBDII connector into the OBDII of

the vehicle.

Step 4

- Plug the factory radio harnesses into the aftermarket car stereo.
- Plug the **FO1 Radio Antenna Adapter** into the car stereo's **FM-ANT** port, and connect the other end to the vehicle.
- Connect the **AUX Cable** as follows:
Two RCA connectors → Plug into the car stereo's **RIN** and **LIN** ports.
- Other end → Insert the audio jack from the **Audio Cable**

Step 5

- Plug the **ADS Data Cable** of the **Power Adapter** into the Maestro RR module.

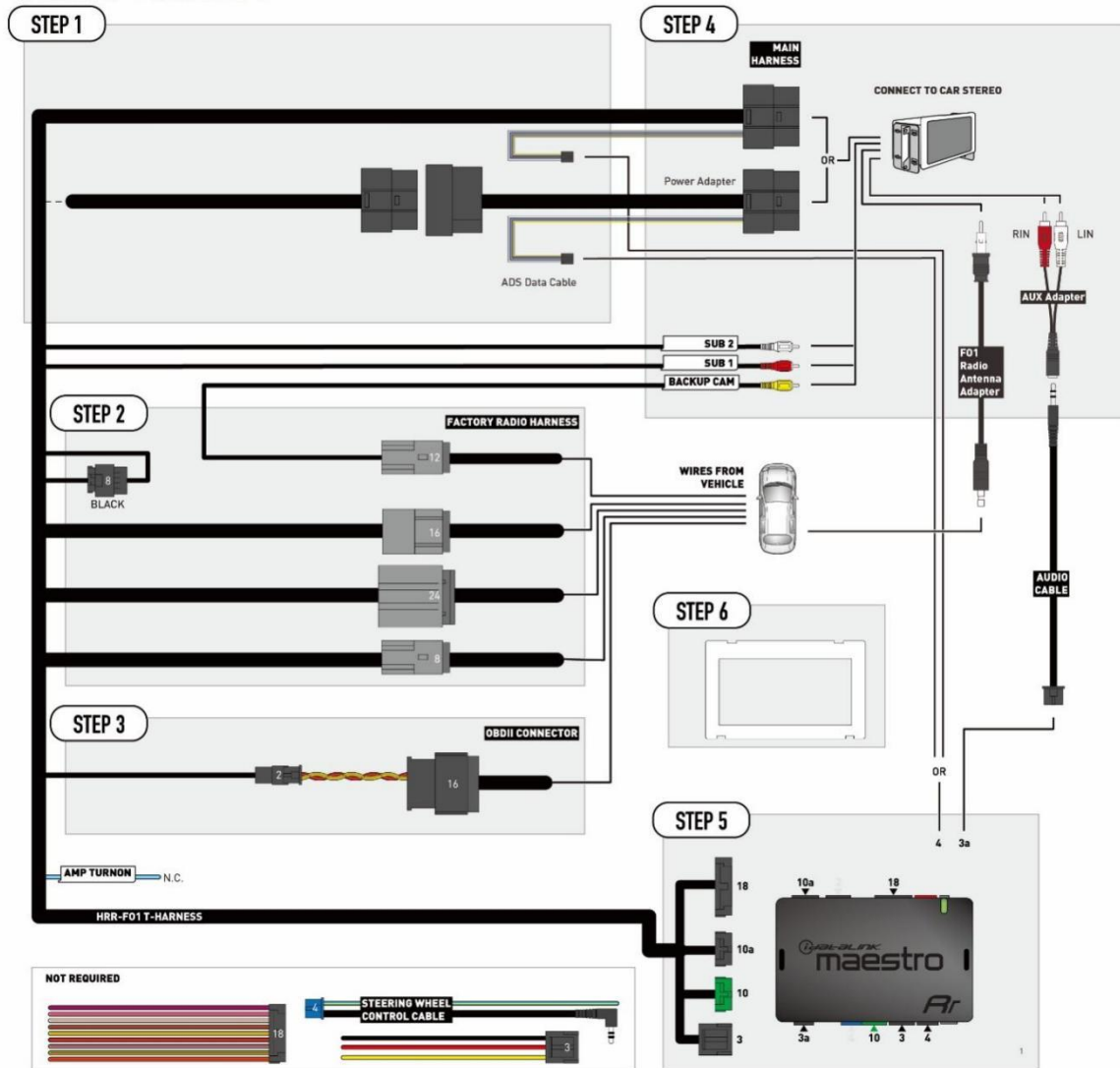
OR

- Plug the data cable from the **Main Harness** to

the Maestro RR module.

- Plug the Audio cable into the Maestro RR module.
- Connect all the harnesses and then test your installation.

WIRING DIAGRAM



[Connection Diagram of 2009-2012 Ford F-150 With Navigation]

2. Ford F150 Without Factory Navigation (2009-2012)

This part provides a brief overview of the procedures required to remove the factory stereo and install the new car stereo. The instructions apply specifically to 2009-2012 Ford F-150 without navigation models and are designed to guide you through the replacement process in a safe, accurate, and efficient manner.

Part One Disassembly



Step 1

Switch off the vehicle's ignition.



Step 2

Remove the trim cover located at the top of the car stereo. Then remove two screws beneath the cover.



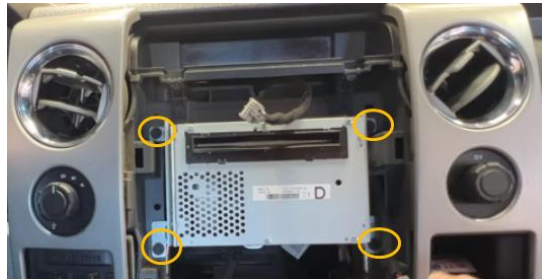
Step 3

Remove the USB panel and disconnect its electrical connector. Then, using a socket wrench to remove the 7mm bolts securing the components located behind the USB panel.



Step 4

Use a plastic panel removal tool to carefully release both side panels from the dashboard.



Step 5

Remove the trim bezel and disconnect all connectors. Then, remove the four screws securing the factory car stereo. Once the screws are removed, carefully pull out the stereo and disconnect all rear connectors.

Part Two Cable Harness Connection

Refer to the detailed wiring connection steps provided below for different configurations of the Ford F-150 (2009-2012) without factory navigation.

Part Three Assembly



Step 1

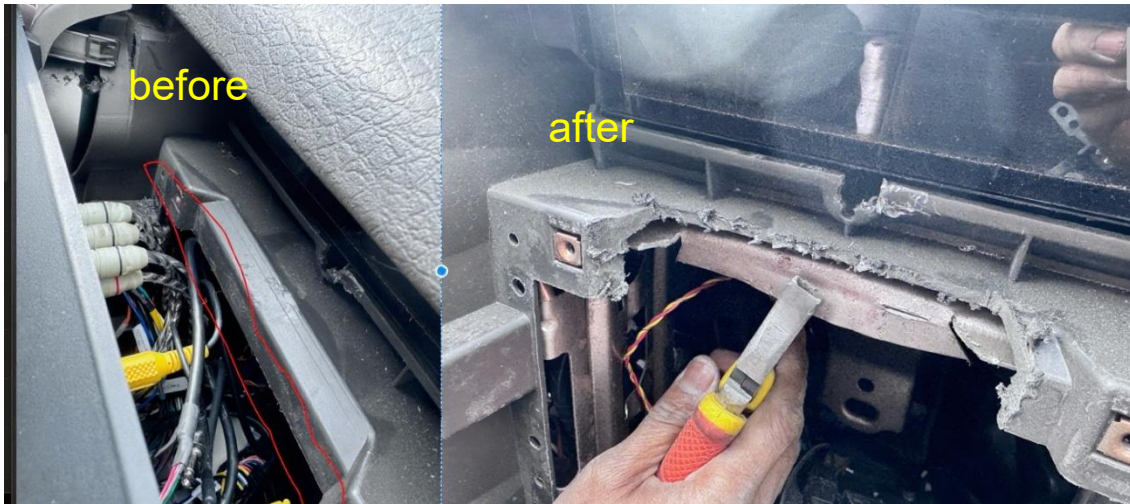
Secure the two included plastic mounting brackets to the new trim bezel of the new car stereo.



Step 2

Install the Vision car stereo assembly into the dashboard of vehicle.

Note:



When installing an aftermarket head unit in 2009–2012 Ford F-150 models, the factory plastic mounting bracket may obstruct the rear RCA output ports. To ensure proper clearance, the bracket's edge must be trimmed. Professional installation is recommended.

Cable Harness Connection

Follow the wiring instructions that match your vehicle's configuration for installation.

Step 1

- ① Connect the **Main Harness** of the HRR-FO1 T-harness directly to the car stereo.

OR

- ② Connect the HRR-FO1 harness to the **Power Adapter**, then plug the other end of the **Power Adapter** into the car stereo.

Step 2

- (Skip this step for vehicles equipped with factory navigation radios.)

This step is required for vehicles equipped with SYNC but without a factory navigation system. Refer to the Vehicle Wire Chart.

- Disassemble the dashboard carefully and remove the factory radio from its housing without disconnecting it.
- Use a multimeter to test the SWI 2 wire. Connect the BLACK test probe to ground (-) and connect the RED test probe to the wire SWI 2 wire. With the ignition and radio turned ON, the multimeter should read approximately 5 volts if the SWI 2 wire is active. This voltage should drop when pressing the steering wheel Voice, Phone, or OK button.
- Cut the SWI 2 INPUT wire.

- Connect the PINK/RED wire of HRR-FO1 T-harness to the SWI 2 INPUT wire going to the steering wheel. Insulate the wire side going to the SYNC module and plug the SYNC harness into the SYNC module.

Step 3

- Connect the HRR-FO1 2-pin white connector to FO1 subwoofer cable.
- Connect the factory harness to the HRR-FO1 T-harness.

Step 4

- Connect the HRR-FO1 2-pin black connector to the black connector of the OBDII extension harness.
- Plug the OBDII connector into the OBDII of the vehicle.

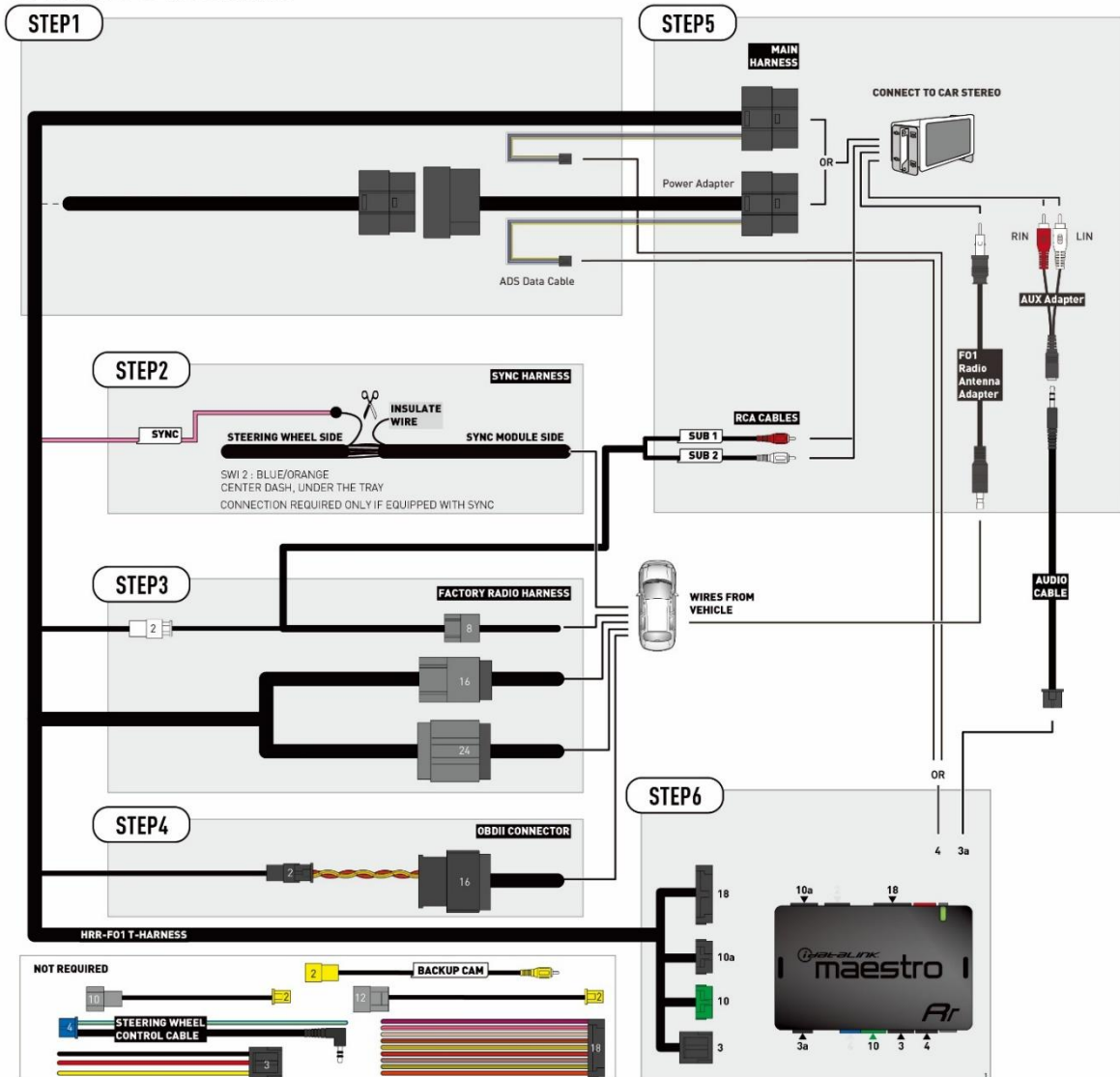
Step 5

- Plug the **FO1 Radio Antenna Adapter** into the car stereo's **FM-ANT** port, and the other end into the vehicle.
- Connect the **AUX Cable** as follows:
Two RCA connectors → Plug into the car stereo's **RIN** and **LIN** ports.
Other end → Insert the audio jack from the **Audio Cable**.

Step 6

- Plug the **ADS Data Cable** of the **Power Adapter** into the Maestro RR module.
- OR**
- Plug the **ADS Data Cable** from the **Main Harness** into the Maestro RR module.
 - Connect the other end of the **Audio Cable** to the Maestro RR module.
 - Connect all the harnesses to the Maestro RR module, then test your installation.

WIRING DIAGRAM



[Connection Diagram of 2009-2012 F-150 Without Factory Navigation]

3. Ford F-150 Without Navigation (2011-2014)

Cable Harness Connection

Follow the wiring instructions that match your vehicle's configuration for installation.

Step 1

- ① Connect the **Main Harness** of the HRR-FO1 T-harness directly to the car stereo.

OR

- ② Connect the HRR-FO1 harness to the **Power Adapter**.

Step 2

- Connect the white 2-pin connector from the HRR-FO1 harness to the FO1 subwoofer cable.
- Connect the factory harness to the HRR-FO1 T-harness.

Step 3

- Connect the black 2-pin connector of the HRR-FO1 harness to the black connector of the OBDII extension harness..
- Plug the OBDII connector into the OBDII port of the vehicle.

Step 4

- Plug the **FO1 Radio Antenna Adapter** into the car stereo's **FM-ANT** port, and connect the other end to the vehicle.
- Connect the **AUX Cable** as follows:

Two RCA connectors→ Plug into the car stereo's **RIN** and **LIN** ports.

Other end → Insert the audio jack from the **Audio Cable**

- Plug the harnesses into the aftermarket car stereo.

For vehicles equipped with a factory Shaker amplifier:

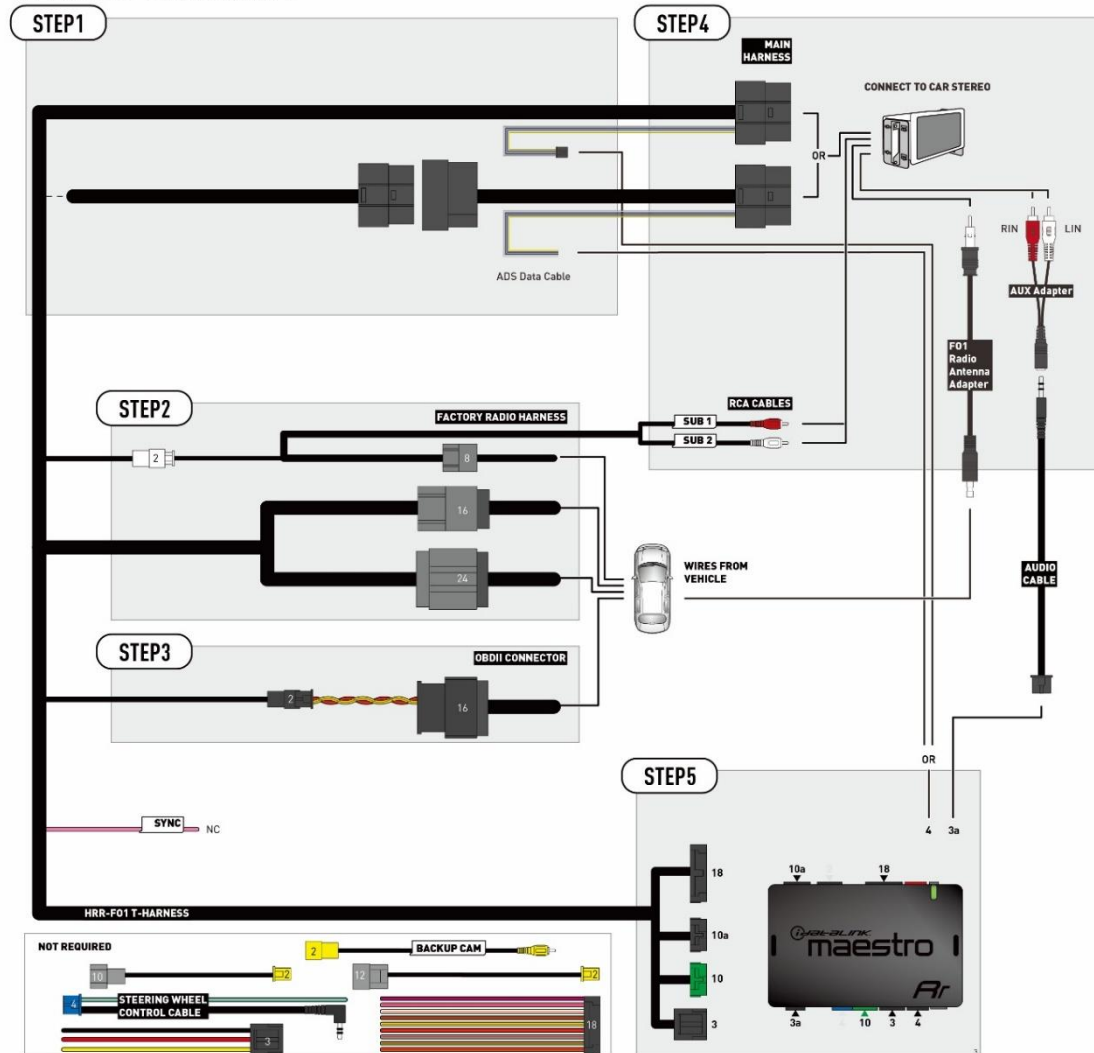
NOTES:

- The RCA connectors labeled SUB IN can be used to feed the subwoofer channel of the factory amplifier.
- SHAKER 1000 only: The RCA connector labeled SUB 2 can be used to feed the second subwoofer channel.
- THX only: The RCA connector labeled SUB 2 can be used to feed the center channel of the factory amplifier.

Step 5

- Connect all the harnesses to the Maestro RR module, then test your installation.

WIRING DIAGRAM



[Connection Diagram of 2011-2014 Ford F-150 Without Navigation]

Chapter 5 Troubleshooting Table

Before contacting technical support, please consult the troubleshooting table below to quickly resolve common issues.

IMPORTANT SAFETY WARNINGS:

- **Disconnect Power:** Always disconnect the vehicle's negative battery terminal and wait at least 5 minutes before handling any wiring to ensure the system is fully powered down.
- **Professional Installation Recommended:** To prevent damage to the device or vehicle, and to avoid personal injury, disassembly or repair should only be performed by a qualified technician.
- **Verify Compatibility:** Ensure all components—including the antenna, wiring harness, car stereo and firmware—are fully compatible with your specific vehicle model and regional standards.

No.	Problem	Solution
1	GPS signal reception issues	Check that the GPS antenna is securely connected. The recommended position is on the interior of the vehicle's A-pillar.
		GPS functionality may be limited in signal-obstructed environments. Please avoid parking your vehicle in places such as underground garages, mountainous areas, or other areas with poor signal reception.
2	No rearview image or failure to switch to rearview	Verify proper connection of the reverse detection wire and camera harness. Ensure all connections are secure and correctly seated.
3	The car stereo fails to power on	Verify that the B+ (constant 12V), ACC (ignition signal), and chassis ground wires are securely and correctly terminated.

		Use a multimeter to confirm that the voltage at the B+ and ACC terminals is within the operational range of 9V-16V. Incorrect wiring connection can lead to abnormal voltage readings, and prevent the stereo from powering on.
		If no voltage is detected on B+ or ACC, inspect the power supply circuit. Check the power cables for any visible damage or loose connections and verify the integrity of the fuse.
		If no voltage is present at the ACC terminal: (1) Verify that the ADS protocol module is properly connected to the computer. (2) Flash the module using software configured for the vehicle model. (3) Confirm that all wiring connections comply with the vehicle-specific installation manual.
4	Protocol communication malfunction	Connect the ADS interface module to the computer and ensure that the configuration matches the specific vehicle model. Then, flash the module using the appropriate software and a valid authorized serial number.
		Verify that all wiring connections align with the dedicated installation manual. Check for any loose or improperly seated connectors.
5	Car stereo and mobile device pairing failure	Verify if the mobile device is connected to other Bluetooth devices. If so, unpair all other devices to prevent signal interference.
		Verify cellular signal strength and network connectivity.

6	Touchscreen clock desynchronized from actual time	Verify the network connectivity.
		Verify that the location settings in the car stereo are correctly configured.