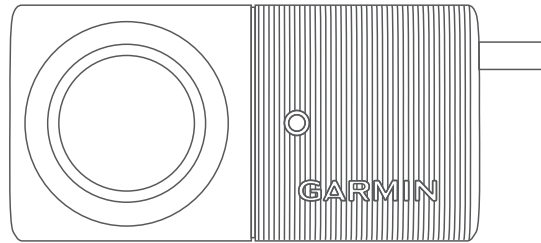


GARMIN®



BC™ 50 IR WIRELESS BACKUP CAMERA INSTALLATION INSTRUCTIONS

Introduction

⚠ WARNING

See the *Important Safety and Product Information* guide in the product box for product warnings and other important information.

Garmin® strongly recommends having an experienced installer with the proper knowledge of electrical systems install the device. Incorrectly wiring the power cable can result in damage to the vehicle or the battery and can cause bodily injury.

This device is intended to enhance your situational awareness when used properly. If used improperly, you could become distracted by the display.

When connecting the power cable, do not remove the in-line fuse holder. To prevent the possibility of injury or product damage caused by fire or overheating, the appropriate fuse must be in place as indicated in the product specifications. In addition, connecting the power cable without the appropriate fuse in place voids the product warranty.

⚠ CAUTION

To avoid possible personal injury, always wear safety goggles, ear protection, and a dust mask when drilling, cutting, or sanding.

NOTICE

When drilling or cutting, always check what is on the opposite side of the surface to avoid damaging the vehicle.

These installation instructions do not apply to a specific vehicle type, and are meant as a guide when installing this product on your vehicle. For questions specific to your vehicle, you should contact the vehicle manufacturer.

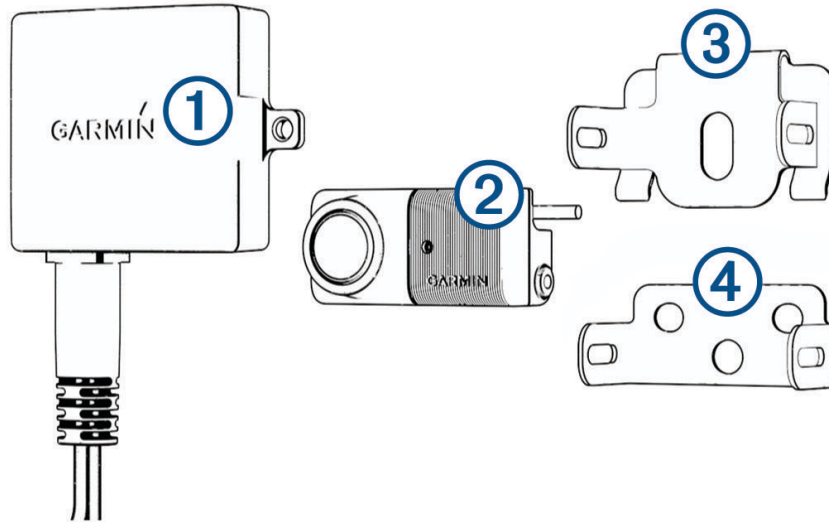
Getting the Owner's Manual

The owner's manual includes instructions for using device features and accessing regulatory information.

Go to garmin.com/manuals/BC50IR.



Device Overview



Item	Description
①	Transmitter
②	Camera
③	Camera license plate clip bracket
④	Camera surface mounting bracket

Tools Needed

- Drill and 10 mm, or size X (0.397 in.) drill bit
- #2 Phillips screwdriver
- Screws, bolts, or cable ties (to secure the transmitter)
- RV sealant (optional)

Installation

Camera Mounting Considerations

When selecting a location to mount the camera, observe these considerations.

- You should test a mounting location before you permanently mount the camera.
- Installing the camera higher on the back of the vehicle provides a better viewing angle.
- Two brackets are included. You can use the camera license plate clip bracket to attach the device to a license plate or other similar surface. You can use the camera surface mounting bracket to secure the camera to the vehicle using the included screws.

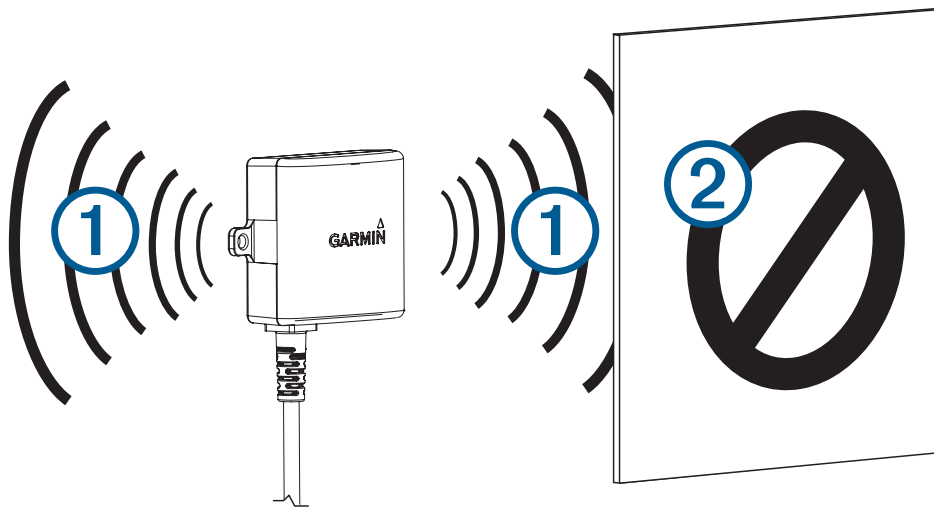
Transmitter Location and Wiring Considerations

NOTICE

The transmitter is not intended to be held or worn on your body while it is in use.

When selecting a location to install the wireless transmitter, observe these considerations.

- You should test a proposed installation location before you permanently install the transmitter.
- Some vehicles do not provide constant minimum voltage to the reverse lamps. You should use an automotive relay when connecting the transmitter and camera to a power source that does not provide constant voltage.
- Although the transmitter can transmit the video signal approximately 50 ft (15.24 m), the location of the transmitter can affect this range.
 - The closer you install the transmitter to the device, the more reliable the signal.
 - The signal transmits from the flat front and back surfaces ① of the transmitter. The transmitter provides the best signal when either flat surface points toward the receiver.



- Dense metal or appliances ② in the path of the transmitter greatly reduce the transmission distance.
- The fewer solid objects that exist between the path of the transmitter and the device, the more reliable the signal.
- The fuse holder located near the transmitter is not waterproof. Installing the fuse holder in a location that is exposed to the elements is not recommended.
- The connector between the camera and the transmitter is not waterproof. If you make this connection in a location exposed to the elements, you must make sure that the connection is waterproof.
- If you are installing the camera on a boat trailer or other location that may be exposed to water, you must waterproof all wiring connections and the fuse holder in the transmitter cable.

Testing the Camera and Transmitter Location

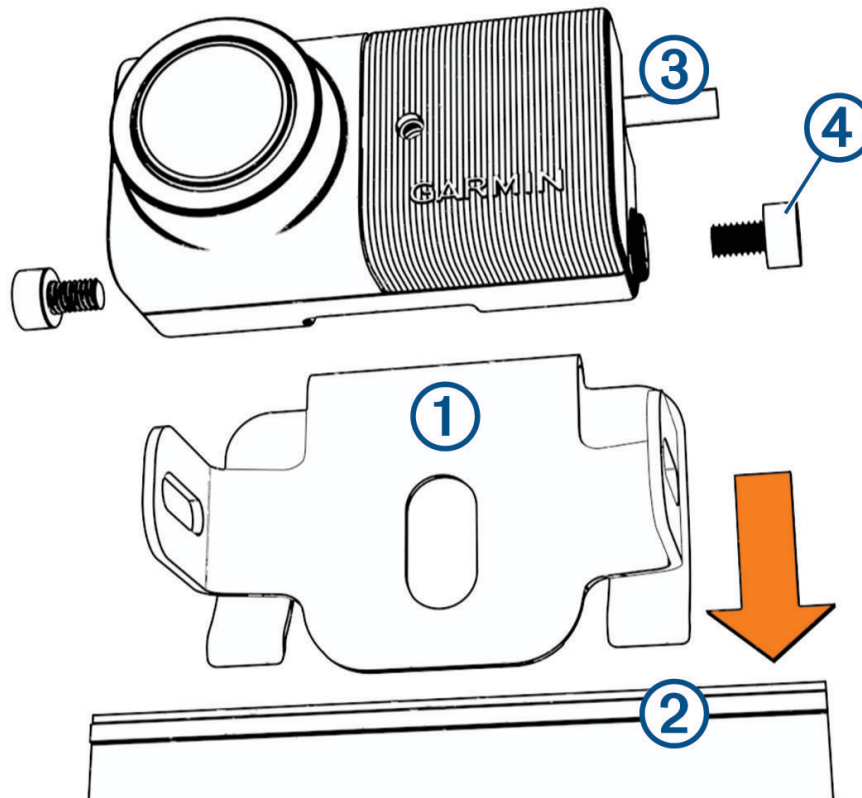
- 1 Temporarily secure the camera in the preferred mounting location.
- 2 Temporarily place the transmitter in the preferred installation location, and connect it to power and to the camera.
TIP: If you do not want to splice into the wiring of your vehicle for this test, you can connect the transmitter and camera to a 12 Vdc battery.
- 3 Test the transmitter for correct operation by viewing the camera on the compatible Garmin device.
NOTE: You may need to pair the camera to the Garmin device before you can view the image and test the transmitter location (*Pairing a BC 50 IR Camera with a Garmin Navigation Device, page 8*).
If you do not see video on the Garmin device at the preferred installation location, move the transmitter to another location and test it again. Minimize the amount of metal between the transmitter and the Garmin device.
- 4 Repeat steps 2–3 until the transmitter operates correctly.
- 5 Test the camera view by observing the video on the device.
- 6 If the camera does not provide the optimal view for your vehicle, move it to another location and test it again.
- 7 Repeat steps 5–6 until the camera mounting location provides the optimal view for your vehicle.
TIP: Make note of the camera orientation when you are testing the camera view to ensure correct permanent installation.

Mounting the Camera on a License Plate

Before you permanently mount the camera, you should test the mounting location for the optimal view for your vehicle (*Testing the Camera and Transmitter Location, page 4*).

If you have already connected the camera to the bracket, you must disconnect the camera from it.

- 1 Slide the bracket ① over the top of your license plate ②.



- 2 Place the camera in the bracket, and determine the best place for the camera cable ③ to enter the vehicle.

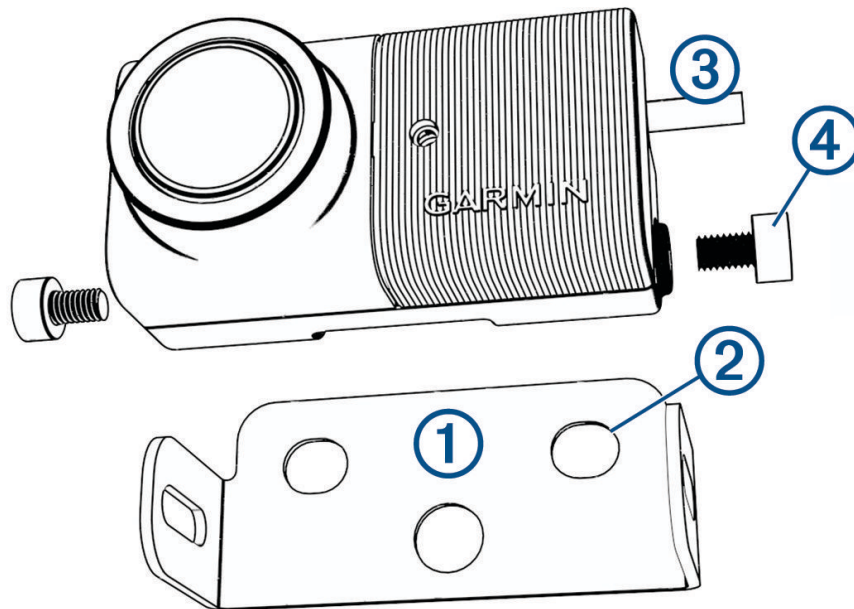
- 3 Using an appropriate drill bit, drill a hole for the camera cable to enter the vehicle.
- 4 Feed the camera cable through the hole, and route it to the transmitter location.
- 5 Adjust the angle of the camera, and tighten the hex screws ④ using the included hex key.
- 6 Apply RV sealant around the cable where it enters the vehicle (optional).

Mounting the Camera Directly on a Vehicle with Screws

Before you permanently mount the camera, you should test the mounting location for the optimal view for your vehicle (*Testing the Camera and Transmitter Location*, page 4).

If you have already connected the camera to the bracket, you must disconnect the camera from it.

- 1 Place the bracket ① directly on the surface of a vehicle, mark the locations of the two holes on the bracket ②, and secure the bracket to the vehicle using the included self-tapping screws.



- 2 Place the camera in the bracket, and determine the best place for the camera cable ③ to enter the vehicle.
- 3 Using an appropriate drill bit, drill a hole for the camera cable to enter the vehicle.
- 4 Feed the camera cable through the hole, and route it to the transmitter location.
- 5 Place the camera into the bracket.
- 6 Adjust the angle of the camera and tighten the hex screws ④ using the included hex key.
- 7 Apply RV sealant around the cable where it enters the vehicle (optional).

Mounting the Camera Directly on a Vehicle with Adhesive

If the included screws cannot be used for installation, you can install the camera using the included adhesive strips.

NOTICE

The adhesive is intended for long-term installation and can be difficult to remove. You should carefully consider the mounting location before you install the mount.

- 1 Using an appropriate drill bit, drill a hole for the camera cable to enter the vehicle.
- 2 Clean the camera bracket and the area of the vehicle where you want to place the camera bracket.
- 3 Remove the backing from one side of the adhesive strip, and press it into place on the camera bracket.
- 4 Remove the backing from the other side of the adhesive strip, press the bracket into place on the vehicle, and hold the bracket for 30 seconds to ensure proper adhesion.

NOTE: You should allow the bracket to remain in place at room temperature for 24 hours.

- 5 Feed the camera cable through the hole, and route it to the transmitter location.
- 6 Place the camera into the bracket.
- 7 Adjust the angle of the camera, and tighten the hex screws using the included hex key.
- 8 Apply waterproof sealant around the cable where it enters the vehicle (optional).

Installing the Transmitter

Before you permanently install the transmitter, you must test the installation location for correct operation ([Testing the Camera and Transmitter Location, page 4](#)).

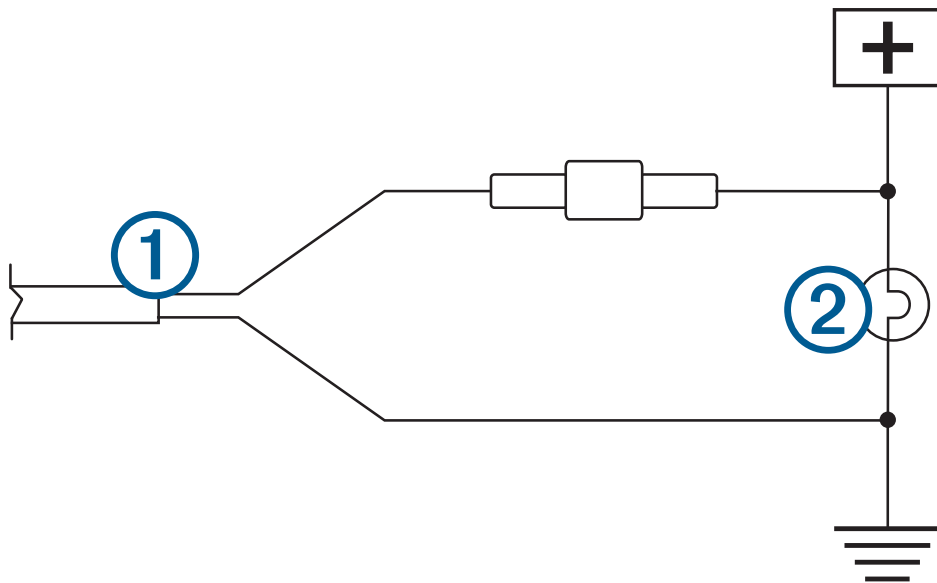
- 1 Secure the transmitter to the installation location using hardware appropriate for the location, such as screws, bolts, or cable ties.

The fuse holder located near the transmitter is not waterproof. Installing the fuse holder in a location that is exposed to the elements is not recommended.

- 2 Connect the camera and transmitter cables.

The connector between the camera and the transmitter is not waterproof. If you make this connection in a location exposed to the elements, you must make sure that the connection is waterproof.

- 3 Connect the power cable ① from the transmitter to a 12 to 24 VDC power source, preferably a reverse lamp ②, using the included solderless wire-splice connector.



NOTE: Connecting the transmitter to an always-on 12 to 24 VDC source, such as a running lamp, instead of a reverse lamp requires you to manually switch power to the transmitter. The transmitter may drain your vehicle battery if it is left on.

The included solderless wire-splice connectors are compatible with wire gauges from 16 to 22 AWG. If your vehicle wires are outside this range, you must use other connectors.

- 4 If you did not use the included solderless wire-splice connector, solder and heat-shrink the electrical connections to protect them from the elements.

Pairing a BC 50 IR Camera with a Garmin Navigation Device

You can pair the BC 50 IR camera with a compatible Garmin navigation device. Go to garmin.com/BC50 for more information about device compatibility.

1 Update your navigation device to the latest software.

Your device may not support the BC 50 IR camera without the latest software. For more information about updating the device software, see the owner's manual for your navigation device.

NOTE: The location of the camera app may vary by device model. See your navigation device owner's manual for more information.

2 Select an option:

- Select **Settings** > **Wireless Camera** > **Add New Camera** > **BC 50**
- From the apps menu, select **Tools** > **Wireless Camera** > **+** > **BC 50**.

3 Follow the on-screen instructions to finish pairing and setting up the camera.

4 Select **✓** or **Save**.

After you complete the pairing process with a camera for the first time, it connects automatically to the Garmin navigation device when power is applied.

Multiple Cameras

You can pair a maximum of four compatible Garmin wireless cameras.

See the owner's manual for your camera for information about pairing multiple cameras.

Specifications

Camera and transmitter input voltage	From 9 to 28 Vdc
Transmitter fuse	2 A, fast-blow
Camera and transmitter current usage	300 mA at 12 Vdc
Water rating (camera and transmitter)	IEC 60529 IPX67 ¹
Operating temperature range	From -20° to 60°C (from -4° to 140°F)
Wireless frequency	2.4 GHz @ 17.5 dBm maximum

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¹ The device is protected against the ingress of dust and withstands incidental exposure to water of up to 1 m for up to 30 min. Connections and fuses must be waterproofed or stay above the waterline. The camera does not transmit underwater.