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**PMK-SP02**

**Mercedes-Benz Sprinter HD Camera  
Package**

**INSTALLATION MANUAL**



**ECHOMASTER**  
**PRO**



# Thank you for purchasing the EchoMaster Mercedes-Benz Sprinter HD Camera Package

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## REQUIRED COMPONENTS:

- PMM-UN02 - HD Mirror Monitor
- MM-SPR-BRK - Mercedes-Benz Sprinter Mirror Bracket
- EM-AHD-MMCH-FG - Camera with Housing
- FVMONUN02HAR - Mirror Monitor Harness
- FVMONSPR-PWR-HAR - System Power Harness
- Camera Extension Harness



## TOOLS NEEDED:

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1. Plastic Trim Tool
2. Wire Fishing Tool
3. Diagonal Cutters
4. 11/64" Drill Bit or Unibit
5. 1/2" Drill Bit or Unibit
6. Phillips Bit with Bit Holder
7. 10mm Driver Bit
8. Unibit or 11/64" or 1/2" Drill Bits
9. Drill





## Mercedes-Benz Sprinter HD Camera Package

# INSTALLATION GUIDE

## CAMERA EXTENSION HARNESS FITTING INSTRUCTIONS

### Harness Routing Overview



## STEP 1:

Start with removing the trim panel in the top left (driver) rear pillar of the vehicle. Route the one Mini-Din connector end down through the opening into the pillar itself. Route the other Mini-Din connector end towards the front of the vehicle following the factory wire channel along the upper driver side wall. See the Harness Routing Overview for a general path to follow.



Illustrations are typical and may not match exact vehicle detail



## STEP 2:

Feed one Mini-Din connector end down the inside of the rear driver-side pillar itself, to the rear door boot. Leave this end of the cable hanging out of the opening until you are ready to route the cable through the door boot.



## STEP 3:

Route the other Mini-Din connector end to just behind the bulkhead and leave it loose so that it can later be connected to the FVMONUN02HAR harness. Once this connector end has been routed, pull any excess cable towards the back of the vehicle to have the necessary length to route through the rear door boot.



Illustrations are typical and may not match exact vehicle detail



## STEP 4:

Before routing the cable further, remove the rear door panel to gain access to the interior of the door to properly route the cable. Begin by opening the rear door completely and locating the push clips holding the panel to the door. There will be a total of 8 push clips. Use a nylon fastener removal tool to release the push clips.



Illustrations are typical and may not match exact vehicle detail



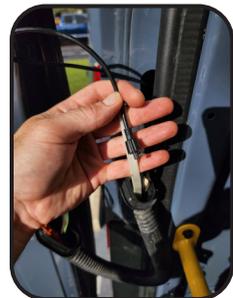
## STEP 5:

With the Mini-Din connector routed through the rear driver's side pillar and the rear door panel removed, continue by removing the rear door boot and both plastic clips that hold the door boot in place from both the door and vehicle. There are 4 pressure release tabs on the plastic pieces that can be bent towards the middle of the opening in the center to release the piece from the hole in the metal.



## STEP 6:

With this done, feed the Mini-Din connector through the opening where the door boot is normally seated. Then, feed the wire fishing tool through the door boot and both plastic pieces that clip into the openings. Take the Mini-Din connector and secure it to the wire fishing tool and pull the cable through the door boot and both plastic pieces. Pull the cable through until slightly taut.



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## STEP 7:

With the cable ran through the boot and both plastic pieces, re-insert the plastic pieces into each end of the door boot and re-seat them into the corresponding openings while passing the Mini-Din connector end into the door. Route the cable down towards the license plate area. Once the cable is down in the lower door area, it is in position to connect to the camera.



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## FULL VIEW MIRROR / HARNESS FITTING INSTRUCTIONS

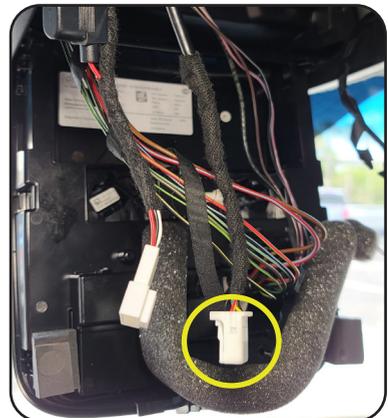
### STEP 1:

Using a plastic trim tool or similar, pry down and release the front dome light panel and swing towards the front of the vehicle.



### STEP 2:

Using a wire fishing tool, route the 12 pin connector side of the harness from the rear of the headliner to the opening just above the dome light panel that was dropped in the previous step. Leave the connector in this opening to be connected in a later step.



Illustrations are typical and may not match exact vehicle detail



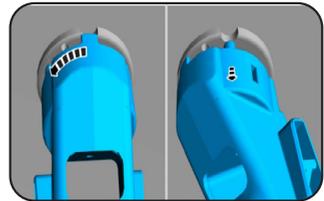
## STEP 3:

Using a plastic trim tool, remove the shroud from behind the rear view mirror to gain access to the wiring and prep the factory mirror for removal by removing any connectors that may be attached to it.



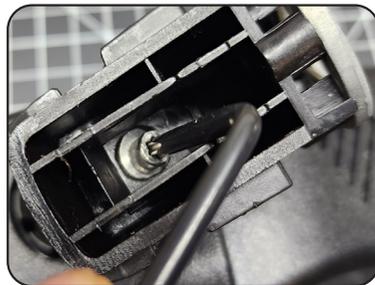
## STEP 4:

Remove the mirror by grabbing the mirror at the base near the windshield and twisting it counter clockwise to the 10 o'clock position. Once in the 10 o'clock position, pull towards the rear to remove.



## STEP 5:

At this time and depending on your vehicle application, it may be necessary to install a vehicle specific mirror mount to the HD mirror monitor. Using the provided T20 torx tool or a T20 Torx hand driver, remove the universal mirror mount bracket and install the vehicle specific mirror mount bracket.



Illustrations are typical and may not match exact vehicle detail

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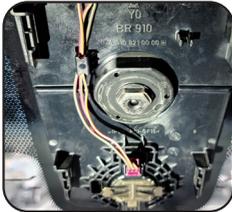
## STEP 6:

Using a wire fishing tool, route the 12 pin connector from where it was routed in Step 2 to behind the factory rear view mirror location.



## STEP 7:

Install the new mirror by starting with the top of the mirror mount at the 10 o'clock position and place it on the twist lock mount. Twist the base of the mirror until the top of the mirror is at the 12 o'clock position. You should feel the alignment tab click into place.



## STEP 8:

Route the cable down to the mirror using the factory wire guides. Install the mirror connector trim cap as shown below. Finally, plug the connector into the back of the mirror.



Illustrations are typical and may not match exact vehicle detail



## STEP 9:

Reinstall the shroud behind the mirror and dome light housing.



## STEP 10:

Route the opposite end of the harness with the 4 pin Mini-Din connector up and over the bulkhead on the driver side, routing the harness along the factory wires as you go. Connect the Mini-Din connector from the mirror harness to the Mini-Din connector on the Camera Extension Harness routed to this location previously. Secure the cable to the factory wiring at the location shown.



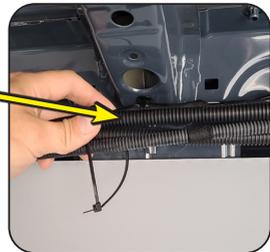
Secure Wires Here

## STEP 11:

With the mirror connections made and the harnesses now properly connected together, secure the cable to the factory wires in the rear driver's side corner of the vehicle and in the center. Feel free to secure the wires in as many points as necessary to ensure the cable will not pull loose and fall, or droop from its location.



Secure Wires Here

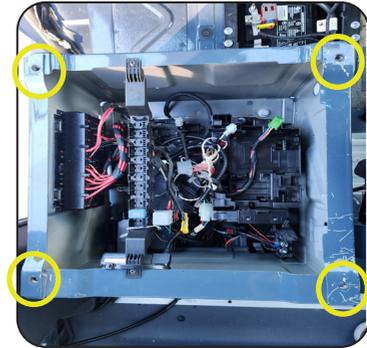


Illustrations are typical and may not match exact vehicle detail



## STEP 12:

Next, install the FVMONSPR-PWR-HAR. You will need to gain access to the driver's side, under-seat wiring. To do so, you will need to remove the four 10mm bolts (circled in yellow) holding the driver's seat to its mount. The seat can then be leaned forward to gain more access to the underseat wiring.



## STEP 13:

With the seat out of the way, pull up the floormat behind the underseat cavity to reveal an opening to route the harness through. Using a wire fishing tool, route the 2 pin connector end of FVMONSPR-PWR-HAR from the inside of the cavity through the rear lower opening.



Illustrations are typical and may not match exact vehicle detail



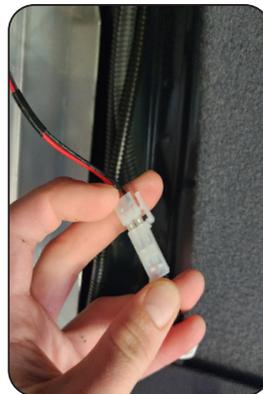
## STEP 14:

Next, locate the ignition and ground lugs in the underseat area. They will be in the rear right corner of the underseat cavity. Be sure to verify your connections using a multimeter. Reconnect any factory connectors that may have been disconnected prior to testing. Once connection points have been confirmed, use a 10mm socket to secure the ignition terminal to the ignition lug and the ground terminal to the ground lug.



## STEP 15:

Pull any remaining harness through the rear opening and route the 2 pin connector end of the harness up the B pillar. Locate the mating 2 pin connector from FVMONUN02HAR and connect the 2 pin connectors together.



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## HD CAMERA FITTING INSTRUCTIONS

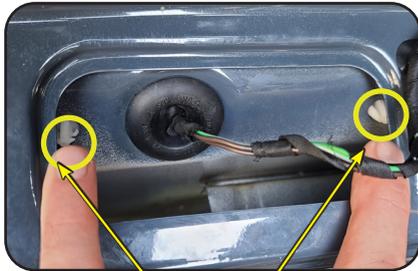
### STEP 1:

Begin by removing the two 10mm nuts holding the License Plate trim piece to the rear door. The locations of the nuts to remove are circled below.

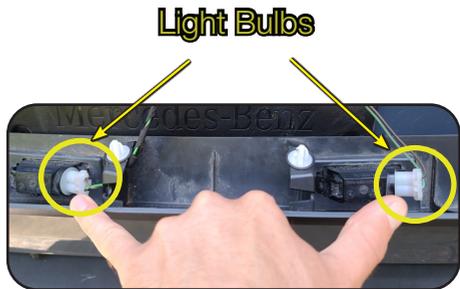


### STEP 2:

With the nuts removed, there are two push clips holding the trim piece in place. Pop those out and undo the two light bulbs by twisting the connector. This will allow the trim piece to be fully removed to mount the camera. Reference the images below for the location of the push clips and light bulbs.



**Push Clips**

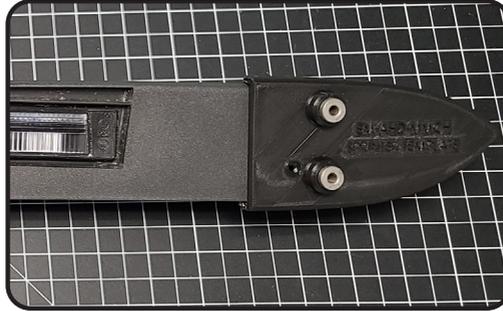


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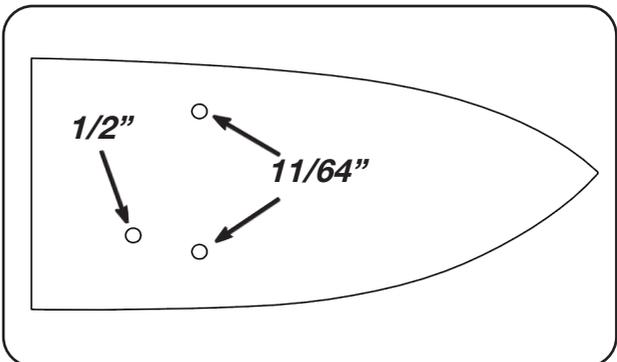
## STEP 3:

With the license plate trim piece removed, line up the EM-AHD-MMCH template, found on page 20, on the right hand side of the License Plate trim piece similar to the image below.



## STEP 4:

Using the EM-AHD-MMCH template and a marker, mark the three locations to be drilled to mount the camera. Using a standard drill bit or Unibit (step bit), drill the three holes using the diagram below for sizing reference.

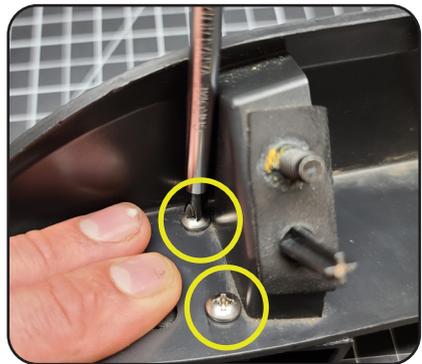
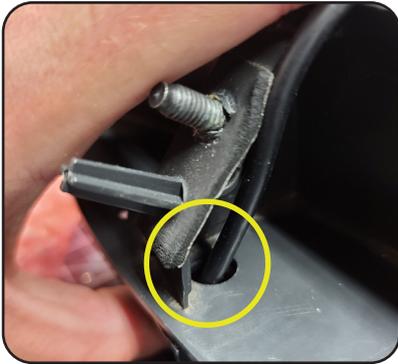


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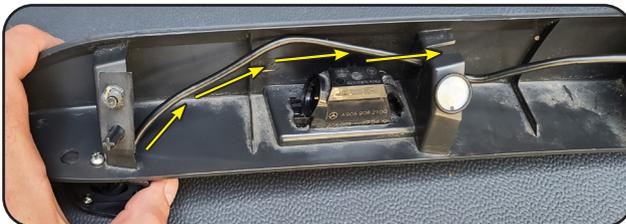
## STEP 5:

Feed the camera connector through the 1/2" hole drilled in the previous step and line the EM-AHD-MMCH housing up with the other two previously drilled 11/64" holes. Secure the camera housing using the supplied Phillips screws.



## STEP 6:

Route the cable toward the center of the license plate trim piece to pass through the factory grommet. With the cable routed, re-insert the light bulbs into the trim piece and locate the grommet that the factory wiring runs through.



Illustrations are typical and may not match exact vehicle detail



## STEP 7:

Using a knife or similar tool, carefully cut or poke a small hole in the grommet and pass the camera connector through.



## STEP 8:

With the camera connector now into the interior of the rear door, re-seat the license plate trim piece into place and reinstall the two 10mm nuts. Then, take the camera connector previously ran through the grommet and connect it to the cable that was ran through the door boot. Once connected, the installation is complete. Test the mirror and camera for proper functionality. If everything tests properly, then proceed with re-assembling the rest of the vehicle.



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## Operating Instructions

The vehicle ignition is required to be on for the unit to operate. The mirror will turn on and off with the key of the vehicle. When the mirror is on, pressing the “MENU” button or flipping the flip switch at the bottom of the mirror will turn the display off and on.

Pressing either of the arrow keys on each side of the “MENU” button while the display is on will adjust the brightness. There are 20 levels of brightness, from 0 to 100, available to adjust the display to your preference.

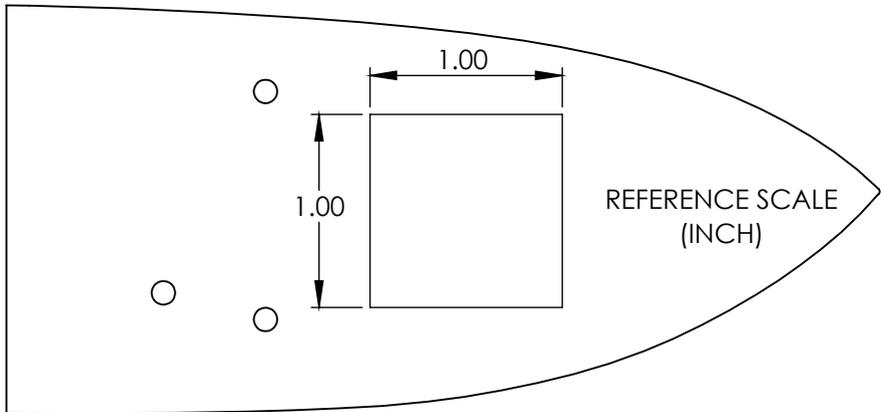
The vertical view of the camera can be adjusted in the mirror by pressing and holding the “MENU” button for 3 seconds and then pressing either of the arrow keys. There are 10 levels of adjustment, from 1 to 10, available to choose from.

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# ATTENTION

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