



DVR-908 Digital Video Recording
System GUIDE

provisionusa.com

Rev. C - 8/11/2022

IMPORTANT NOTICES

PRO-VISION tries to ensure that the information provided in this document is as comprehensive as possible at the time of publication. However, because of PRO-VISION's drive to provide the best products through continual improvement, PRO-VISION reserves the right to update the information in this document at any time without prior notice.

Copyright © 2022 PRO-VISION Solutions, LLC. All Rights Reserved. This document and supporting data are the exclusive property of PRO-VISION, Inc. and may not be copied, reproduced, or translated to another language without permission.

PRO-VISION provides no warranty of any kind with regard to this material, including, but not limited to, the implied warranties of merchantability and fitness for a particular purpose. PRO-VISION shall not be held liable for errors contained within this document or for incidental or consequential damages in connection with the furnishing, performance, or use of this material.

SOFTWARE AND FIRMWARE UPDATES

PRO-VISION is committed to the continual testing and improvement of our software and firmware. As new revisions become available, these updates will be made available to your company; fees may apply depending on your licensing agreement.

THIRD-PARTY PRODUCTS

PRO-VISION expressly disclaims all responsibility and liability for the installation, use, performance, maintenance, and support of third-party products. PRO-VISION advised its customers to make independent evaluations of such products.

SUGGESTIONS

PRO-VISION prides itself on designing its products with the customer in mind. We want to hear from you. Tell us about your experience and how you are using your PRO-VISION products. Our team is dedicated to providing the best product experience; we will try our best to accommodate any suggestions provided into our future products and services.

TRADEMARK NOTICES

Mozilla Firefox® is a registered trademark of the Mozilla Foundation. Chrome™ and Google Maps™ are registered trademarks of Google, Inc. 3M is a registered trademark of 3M. ChargeGuard® is a registered trademark of Havis, Inc. All other marks, names, and logos mentioned herein are the property of their respective owners.

MANUFACTURER CONTACT INFORMATION

PRO-VISION Solutions, LLC.
8625-B Byron Commerce Dr.
Byron Center, MI 49315
800-576-1126
www.provisionusa.com

For more information about PRO-VISION and its products, go to www.provisionusa.com or call us at (800) 576-1126.

Thank you for choosing *PRO-VISION!*

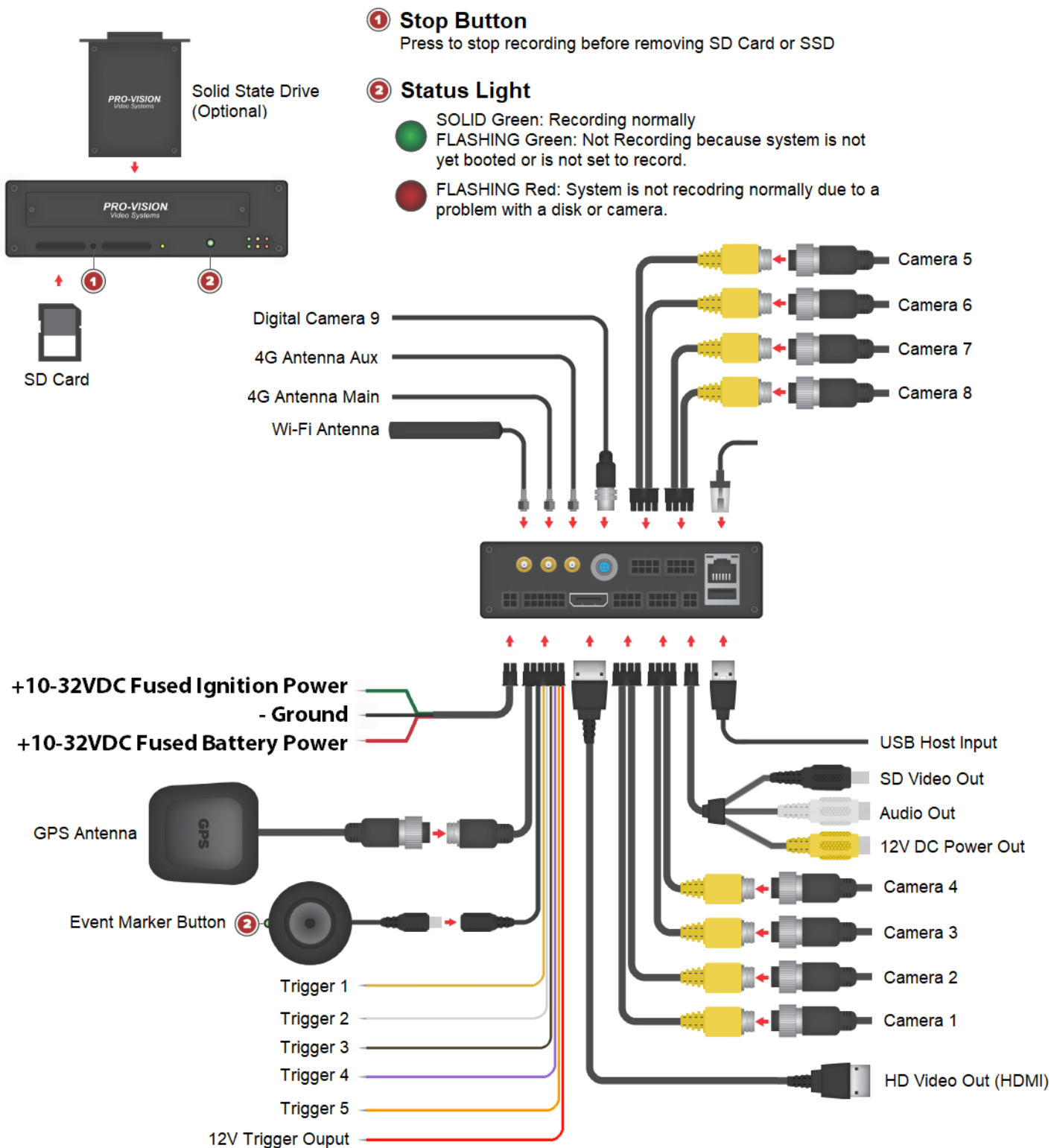
Please read this manual carefully before use and keep it for future reference.

Understanding this manual prior to installation will greatly reduce the time needed for system installation.

Technical support is available Monday thru Friday from 8:00 AM to 7:00 PM EST for questions.

QUICK REFERENCE

This page is designed for quick reference. Continue further in this guide for detailed instructions.



INSTALLATION

Understanding the System

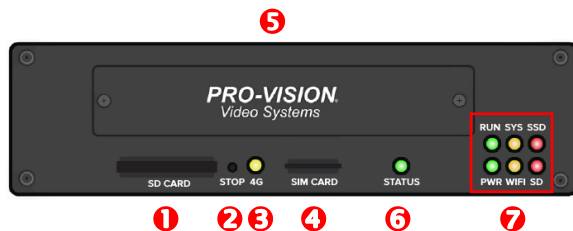
PD-1902 DVR Unit

The Digital Video Recorder (DVR) unit is located inside the locking cage. To remove the DVR, slide the top of the cage forward slightly and lift up on the front. The DVR is removed by lifting on the front of the DVR and sliding it forward.



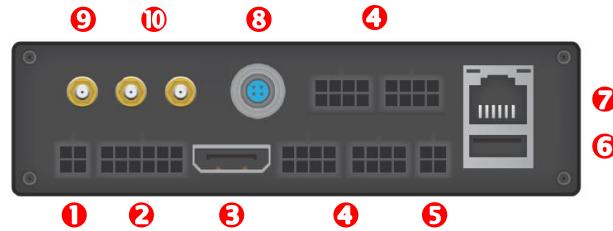
This device complies with Part 15 of the FCC Rules. Operation is subject to the following two conditions: (1) this device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation.

Front of DVR:



- ❶ – SDXC Card Slot
- ❷ – Record STOP Button
- ❸ – 4G Status Indicator
- ❹ – 4G SIM Card Slot
- ❺ – Solid-State Drive Tray
- ❻ – System Status Indicator
- ❼ – Operational Status Indicators

Rear of DVR:



- ❶ – Power Cable Connection
- ❷ – GPS/EVT/Triggers Cable
- ❸ – HD A/V Output Connection
- ❹ – Analog Camera Input Connections
- ❺ – A/V Output Connection
- ❻ – USB Port
- ❼ – LAN Port
- ❽ – Digital HD Camera Input
- ❾ – Wi-Fi Antenna Connections
- ❿ – 4G Antenna Connections

Locking Cage

PD-1808 Locking Cage Base

The locking cage base is used to secure the DVR in whichever mounting position the user requires. It can be mounted horizontally or vertically, the internal g-force sensor performs best when mounted near parallel or perpendicular to the ground.

PD-1809 Locking Cage Cover

The locking cage cover completes the DVR cage and allows the user to lock and secure the DVR from being tampered with.



Data Storage Devices & Readers

SD Card

The base DVR-908 kit may come with different size SD cards base on the ending of the kit number. Kits ending in “-64” includes a 64GB SDXC card. The SD card is the primary recording media for your DVR unit; it contains the video that is recorded by the DVR.

Spare/Replacement cards are available in various sizes to meet the desired storage capacity requirements:

- 32GB SDHC (P/N: PD-1716)
- 64GB SDXC (P/N: PD-1718)
- 128GB SDXC (P/N: PD-1728)
- 256GB SDXC (P/N: PD-1738)

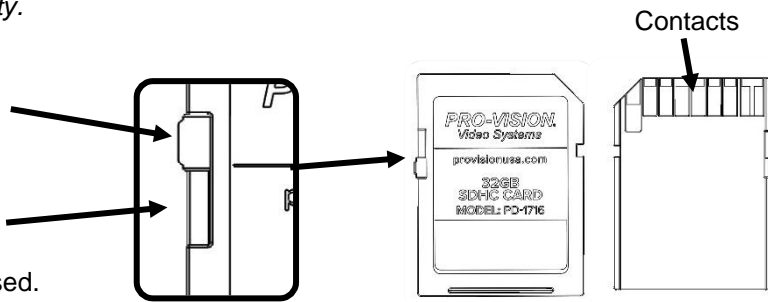
IMPORTANT: *The SD card can only be inserted into the unit with the contacts first and label facing away from the windshield. If the SD card is inserted improperly, you risk damage that may not be covered under warranty.*

Normal:

Switch must be in this position to record.

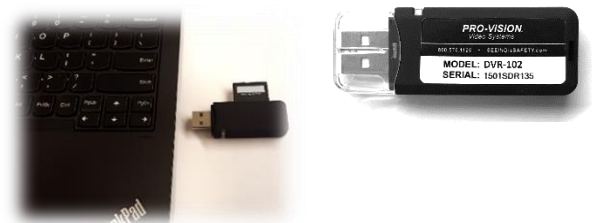
Read-Only:

Slide the switch down to protect video from accidentally being erased.



USB Card Reader

The USB Card Reader (P/N: DVR-102) allows any SD, SDHC, or SDXC card to be read in a computer through a USB port. For best performance use a USB 2.0 port; this will provide the maximum read speed from the SD card.



Solid-State Drive:

A Solid-State Drive (SSD) is a high-capacity storage device that utilizes high-performance, solid-state flash memory to provide storage that is not affected by the typical vibration experienced in a mobile environment.

Solid State Drives are available in multiple capacities:

- 500GB SSD (P/N: DVR-830)
- 1TB SSD (P/N: DVR-831)
- 2TB SSD (P/N: DVR-832)
- 4TB SSD (P/N: DVR-834)



Solid-State Drive Reader:

The Solid-State Drive Reader (P/N: DVR-802) is a cable used to connect an SSD to a computer for the purpose of viewing files or downloading data from the SSD to a computer or network.



DVR Interface Cables

The DVR Interface Cables are used to connect to the vehicle and other system components.

Power Cable:

This cable supplies battery power to the DVR unit; it also includes an ignition signal input cable to turn the system ON and OFF. The power cable includes fuses for both the battery and ignition power.



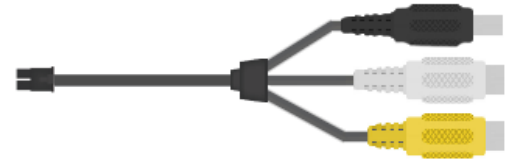
Camera Interface Cables (Qty. 4):

These cables are used to connect analog cameras 1-8 to the DVR unit. It supplies power and receives the video and audio from each camera. The cables are identical except for the labeling of the camera numbers.



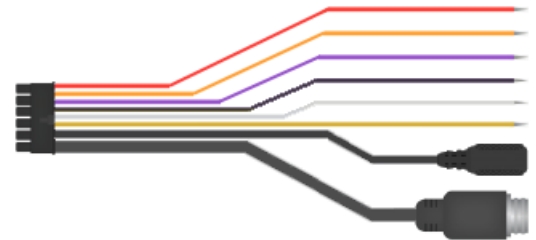
Video Output Cable:

This cable is used to output the live video and audio from the DVR unit to a display monitor for aiming the cameras or real-time observation of the camera view(s). It includes a temporary power output to power a display for aiming purposes.



GPS/Event/Trigger Cable:

This cable is used to connect the GPS Antenna, Event Marker, and up to five (5) external trigger inputs to the DVR unit.



Wi-Fi Antenna:

The Wi-Fi Antenna is used by the DVR to allow wireless viewing of the camera and DVR settings as well as wireless transfer of files to a server in a building. At least one antenna needs to be connected to the DVR.



4G Antennas:

The two (2) 4G Antennas are used by the DVR for cellular connection to the DVR. The antennas are only included with the optional 4G version of the DVR unit.



Camera Cables

PX-1942 15ft Analog HD A/V Cable:

15ft Analog HD cables are used for the connecting both analog standard definition (SD) and high definition (HD) cameras to the DVR unit. The male ends connect to cameras and the female ends connect to the DVR.



PX-1943 33ft Analog HD A/V Cable:

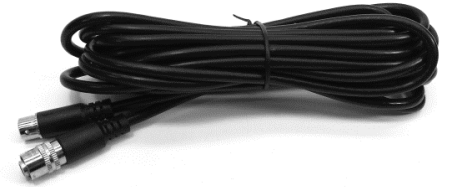
33ft Analog HD cables are used for the connecting both analog standard definition (SD) and high definition (HD) cameras to the DVR unit. The male ends connect to cameras and the female ends connect to the DVR.



PX-1841 10ft Digital HD A/V Cable:

10ft Digital HD cables are used for connecting digital HD cameras to the DVR unit. The male ends connect to cameras and the female ends connect to the DVR.

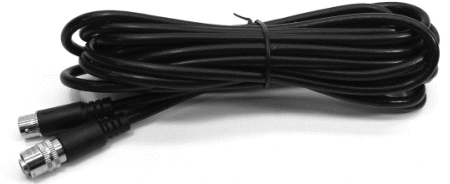
Note: *Two 10-ft. cables cannot be connected to each other. If more than one cable is needed, the PX-1843 30ft Digital HD Extension Cable must be used.*



PX-1842 20ft Digital HD Cable:

20ft Digital HD cables are used for the connecting digital HD cameras to the DVR unit. The male ends connect to cameras and the female ends connect to the DVR.

Note: *Two 20ft cables cannot be connected to each other. If more than one cable is needed, the PX-1843 30ft Digital HD Extension Cable must be used.*



PX-1843 30ft Digital HD Extension Cable:

30ft Digital HD cables are used for the connecting digital HD cameras to the DVR unit. The male ends connect to cameras and the female ends connect to the DVR. The 30ft cable may be used by itself or with any other Digital HD cable, but the 30ft cable must be closest to the DVR. Up to three (3) PX-1843 extension cables may be connected in a series.



DVR Installation

DVR Unit Mounting

The DVR unit is the core of the Recording System. All system connections go to the DVR unit. The storage device (SD Card or SSD) is located inside the DVR unit. A good mounting location is important for the DVR unit as its location should be readily accessible for viewing status, removing the disk, and ideally for reducing system installation time.

Choosing Mounting Location:

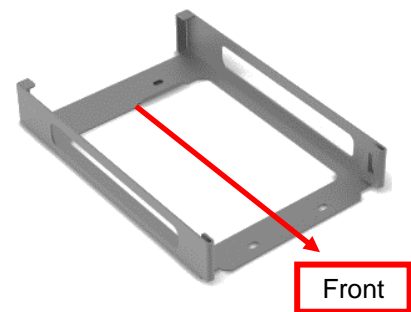
The DVR unit itself is small and can be mounted in varied locations. The black lockable mounting cage has four (4) pre-drilled holes for mounting; however, additional holes can be drilled in the mounting cage to provide better attachment to the mounting surface.

Things to consider when choosing mounting location:

- Access to the front of the DVR to view lights and/or remove storage media.
- Access to insert and turn the key to remove cover, should test for accessibility as necessary.
- Access to the rear of the DVR for service purposes.
- Locate all structural elements that may make it difficult to run wires. Avoiding these by choosing a good mounting location saves installation time in addition to better usability.
- Proximity with other Radio Frequency (RF) devices, such as two-way radios and computers, must be 6" or more.
- Cable routing for power, GPS, Event Marker Button, triggers, and cameras.
- Fastening to mounting surface and what is behind it.

Recommended Mounting Locations:

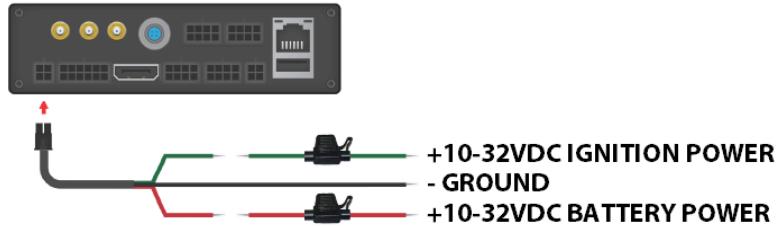
- Front overhead compartment above windshield: Mount to the driver's side for easy cable routing.
- Compartment above the driver: Place locking enclosure and use the key to ensure easy access.
- Under the first seat behind the driver: Mount inverted directly to the seat bottom.



Example of an International bus in the compartment above the driver

Installing Power Cable

The power cable provides power to the unit and controls when it is on or off. Make sure the primary battery power connection is to a reliable 12V-24V DC power source. The cable may be routed from either direction.



- RED** **Fused 12-24V DC Battery Power:** The battery power wire should be connected to an always-on power supply on the vehicle. The connection should include a 3A fuse and be on its own dedicated circuit. If possible, connect the unit directly to the positive terminal of the vehicle's battery through a 3A fuse.
- GREEN** **Key ON Ignition Signal:** Signals the unit that the vehicle is ON. It can be connected to a 12-24V DC ignition source (Fused), or to a ground level ignition source. If using a ground level ignition source, the wire must first be connected to a 12V source and the setting for "Ignition Level" changed to LOW in the power menu.
- BLACK** **Chassis or Battery Ground:** The ground wire connects directly to a clean grounding stud/screw or directly to the negative terminal of the battery.

IMPORTANT: Do not connect the red battery power wire to a battery drain protection device such as a ChargeGuard®; this can cause abnormal performance and/or damage the electronics inside the recording unit. The unit itself has a battery drain protection function built in.

You must use fuses that can handle the current draw of the unit with all cameras and accessories. With the DVR unit, 8 cameras, GPS, Event Marker Button, and a Solid-State Disk (SSD) the current draw is ~3A at 12 VDC.

The power cable includes (2) fuse holders with 3A fuses that are intended for use when making final connections to the vehicle to protect the power cable and the drive recorder unit. Other suitable fusing methods with appropriate amperage fuses may be used instead of the included fuses.

Analog Camera Installation

The DVR unit supports any combination of up to eight (8) analog Standard Definition (SD) and Analog High Definition (AHD) cameras.

Cameras are connected to the yellow analog camera inputs on the Camera Interface cables (shown below).

Analog HD Camera Cables/Connections:

Cameras can be either directly connected, or connected through analog A/V cables:

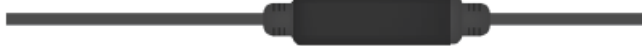
- PX-1942 5m (16ft) Analog A/V Cable
- PX-1943 10m (33ft) Analog A/V Cable



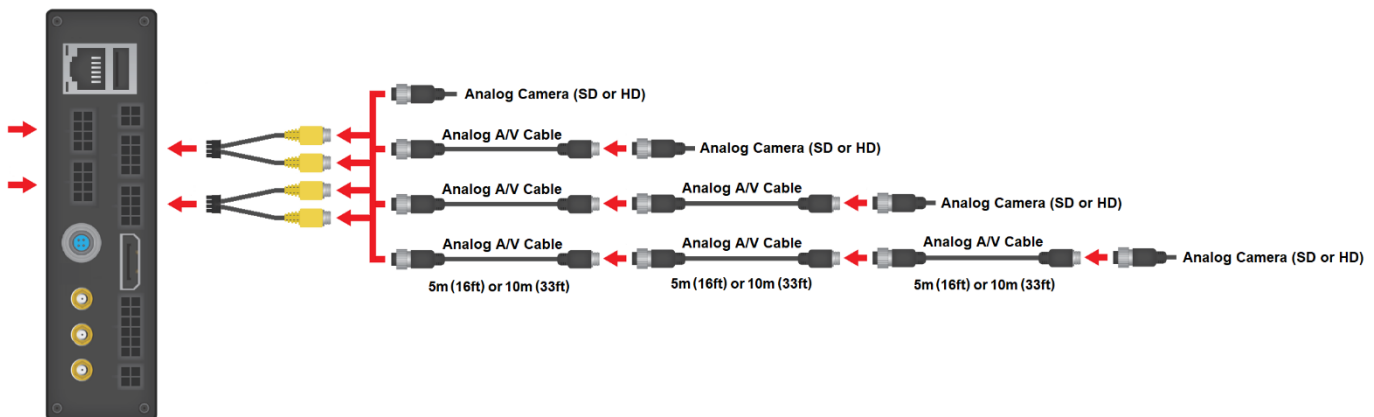
Step 1 Align arrows on connectors and then slide them together.



Step 2 Thread the collar of the female connector until it is tight.



Step 3 Slide the rubber boot over the connectors, completely covering the connection for a durable waterproof seal.



Analog HD Wide-Angle Low Profile Camera Installation



The AHD Low Profile Camera (Kit P/N: DVR-923, Camera P/N: PC-1923) is designed to be mounted inside the vehicle for coverage of the driver, passengers, and cargo. It has a very low-profile housing, allowing it to be mounted to the ceiling or headliner, providing an optimal field of view. The camera has four (4) infrared (IR) LED's that provide illumination during low light/dark conditions. The camera also has a microphone built into the camera housing. The camera lens has an extremely wide 180° horizontal and 90° vertical coverage. The camera also has an optional flush mounting bracket (P/N: PC-1268) for applications where the camera cannot protrude.

Mounting Location:

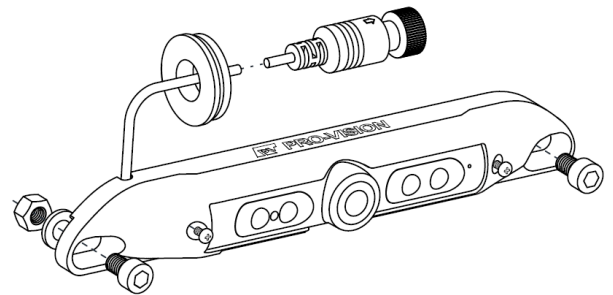
This camera is normally used in the interior of the vehicle because of its small size and wide field of view. The camera can only be mounted to a horizontal surface. It is designed to be mounted directly to the mounting surface and can adjust up and down for proper aim.

Standard Installation:

1. Locate the desired mounting location of the camera. It is recommended to power on the DVR unit and temporarily connect the camera to it and observe that the view in the desired mounting location is satisfactory before proceeding to the next step.
2. When the desired mounting location is found, mark or measure the two (2) mounting screw hole locations in the camera.
3. If the cable will be routed behind a vehicle panel, it is common to drill a 3/4" hole behind the camera where the cable exits the camera body. Mark and drill this hole if needed. Remove any burrs or jagged edges from the hole to prevent damage to the cable. If surface mounting, there is a notch in the top left of the camera for the cable to exit and then route into the gap of panel.
4. Route the camera cable into the hole and then install the camera to the marked locations from step 2. Attach the camera with the supplied mounting hardware.
5. Route and install the extension cable(s) to the cameras final mounting location and connect it to the camera. Leave enough slack (typically 4"-6") to allow removal of the camera. This will simplify service in the future.
6. Power on the DVR unit, connect to the Wi-Fi, and view the live camera image to properly aim it on the view page. (See [Viewing Cameras on a Smart Device](#) for connection details) To adjust the camera aim, loosen the two (2) small Phillips head screws on either side of the camera assembly.
7. After the camera is aimed, tighten the two (2) Phillips's head adjustment screws.



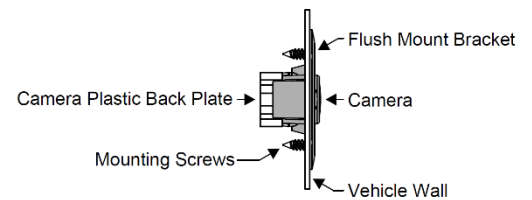
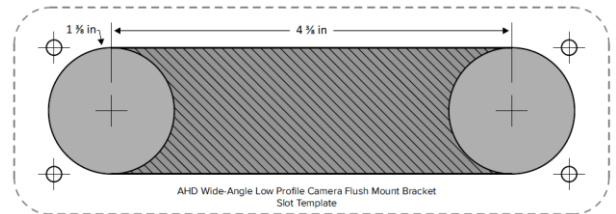
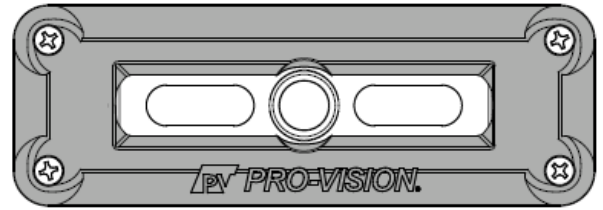
Flush Mount Bracket with the PC-1923 Camera



Example view from interior of mini van

Optional Flush Mount Installation (Requires P/N: PC-1268):

1. Remove the four (4) screws and plastic back plate from the back of the camera and set aside.
2. Remove the camera assembly from the low-profile aluminum housing and place it into flush mount bracket.
3. Place plastic back plate from Step 1 on flush mount bracket and tighten all four (4) screws.
4. Power on the DVR unit, connect to the Wi-Fi, view the live camera image, and determine if the view is acceptable. (See [Viewing Cameras on a Smart Device](#) for connection details.) If needed, the camera can be rotated up or down by 15° in either direction.
5. After verifying the camera location, use the template included with the flush mount bracket to mark the two (2) main slot holes.
6. Drill the two (2) main holes for the camera using a 1 3/8" inch hole saw.
7. Use shears or a grinding tool to remove the material between the two (2) holes.
8. Route the camera cable as desired in the newly cut slot. Place the flush mount bracket in the slot and mark the four (4) mounting holes.
9. Using a 1/8" drill bit, drill pilot holes at the marked four (4) mounting holes.
10. Install the four (4) mounting screws to attach the bracket to the vehicle.



Analog HD Forward Facing Camera Installation



The AHD Forward Facing Camera (Kit P/N: DVR-922, Camera P/N: PC-1922) is designed to record the area in front of the vehicle through the windshield. The camera lens has a wide 130° horizontal field of view and vertical field of view of 70°. The camera has a built-in microphone for audio recording and is able to capture discernable video in low-light and day-time conditions.

Mounting Location:

The PC-1922 AHD Forward Facing Camera is designed to mount to the front windshield of a vehicle as close to the center and as high as possible, usually just below or on the passenger side of the rearview mirror mounting bracket. Ensure that the window tint is not within the camera's field of view and that the camera is mounted in a location that least obstructs the drivers visibility. An optional pedestal mounting bracket (P/N: PC-1017S) is available to allow mounting of the camera without attaching it to the windshield glass.

Installation:

1. Slide the mounting bracket over the top of the camera so that the Pro-Vision logo located on the mounting bracket is facing the rear side (cable side) of the camera. Using the six (6) assembly screws provided, attach the mounting bracket to the camera. Only install the assembly screws finger tight for now as final aiming adjustments will need to be made later.
2. Clean the top of the mounting bracket along with the approximate camera mounting area on the front windshield.
3. Remove the film from one side of the double-sided adhesive and firmly press it to the top of the mounting bracket. DO NOT remove the film from the windshield side of the adhesive yet.
4. It is recommended to power on the DVR unit, temporarily connect the camera to it, hold the camera up to the windshield, and observe the view in the desired mounting location to ensure that the view is satisfactory before permanently attaching the camera and routing the cable. (See [Viewing Cameras on a Smart Device](#) for connection details)
5. When the desired mounting location is found, use tape to mark the camera mounting location on the windshield.
6. Remove the remaining film from the adhesive and firmly press the mounting bracket to the front windshield in the marked location for at least 30 seconds. Remove any tape from the windshield that was used to mark the camera mounting location.
7. Make any final aiming adjustments required to the camera and tighten up the six (6) assembly screws.
8. Connect the camera to the extension cable running to the "Camera 1" connector on the PLE-1910 cable connected to the DVR unit and verify that the camera is functioning as expected.



Example View

Analog HD Mini-Dome Camera Installation



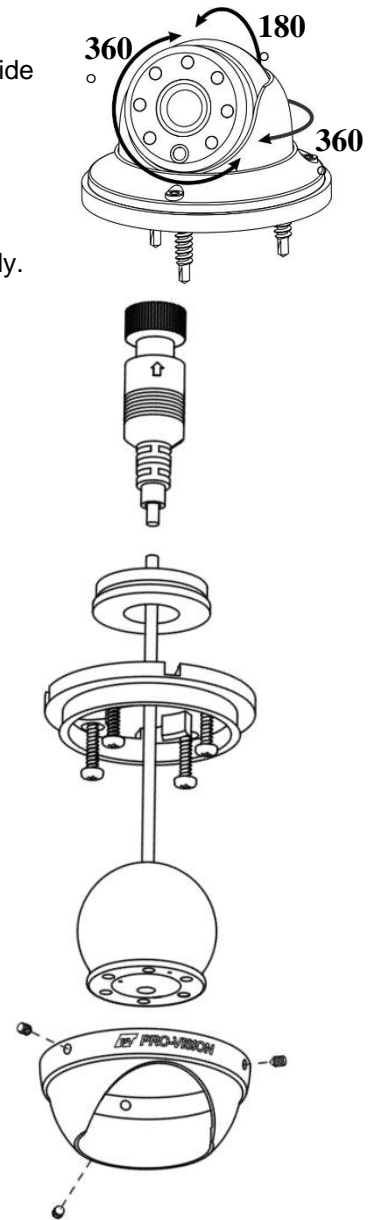
The AHD Mini-Dome Camera (Kit P/N: DVR-921, Camera P/N: PC-1921) is designed to be mounted inside a vehicle. The camera is used most often mounted in the interior of the vehicle covering the driver, passengers, or cargo. It has a built-in microphone for audio recording as well as built-in night vision LED's with an automatic sensor for capturing video in low-light conditions. Its small form factor and high adjustability allow this camera to be mounted in a multitude of interior locations. The camera lens has a wide 170° horizontal and 90° vertical coverage.

Mounting Location:

The ball and socket dome design allows 360° rotation around the base, 180° adjustment perpendicular to the base, and 360° rotation to level the image. The camera typically is installed with the cable going through a panel directly underneath the mounting location to hide the cable, but it can also be installed where the cable exits the side of the base if there is no room to route the cable behind the camera's mounting location.

Installation:

1. Disassemble the camera by loosening the three (3) hex head set screws located on the locking ring. Lift up on the locking cover and remove it from the camera assembly. Remove the camera ball and pull the cable through the mounting base.
2. Find the desired camera mounting location and hold the mounting base up in position.
3. Mark the four (4) mounting holes using a marker or pencil.
4. If the cable is going to be routed through the center cable hole and into a panel, mark the center cable hole as well.
5. If applicable, drill out the marked center hole using a 3/4" drill bit. Clean up any sharp edges to prevent damage to the cable.
6. If the camera cable will exit through the cable groove in the mounting base instead of through the mounting surface, the cable must be routed through the cable groove before attaching the mounting the base to the mounting surface.
7. Align the camera base over the marked screw holes and then using a drill with a Phillips bit, install the four (4) self-tapping mounting screws.
8. Connect the camera connector to the cable running to the DVR unit, if it is not yet installed, install the cable at this time and then continue to step 9.
9. Hold the camera ball and feed any excess cable through the hole or cable groove in the mounted base until the camera ball is resting on the center of the mounting base.
10. Place the camera locking cover over the camera ball. Loosely tighten the three (3) set screws holes using a 1.5mm Allen wrench, allowing the camera ball to freely move until the desired camera aim is set.
11. Power on the DVR unit and connect to the Wi-Fi to view the live camera image to properly aim it on the view page. (See [Viewing Cameras on a Smart Device](#) for connection details)
12. When finished aiming, fully tighten the three (3) set screws.





Example View: Rear seat of Ford Interceptor Sedan



Example View: Cargo area of a Dodge Ram Cargo Minivan

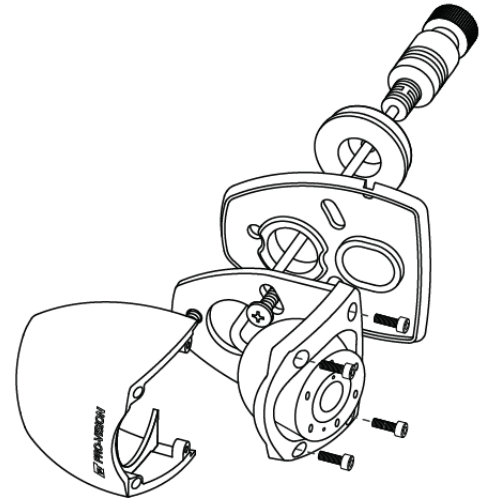


Analog HD Side Camera Installation

The AHD Side Camera (Kit P/N: DVR-920, Camera P/N: PC-1920) is designed to provide coverage around the outside of the vehicle. The camera is waterproof rated IP-67 and has a wide-angle lens that can capture a wide area around the outside of the vehicle. The camera is designed to be mounted directly to a vehicle exterior body panel. The camera has six (6) infrared (IR) LED's that provide illumination during low light/dark conditions. The camera also has a waterproof microphone built into the camera housing. The camera lens has a wide 145° horizontal and 80° vertical coverage.

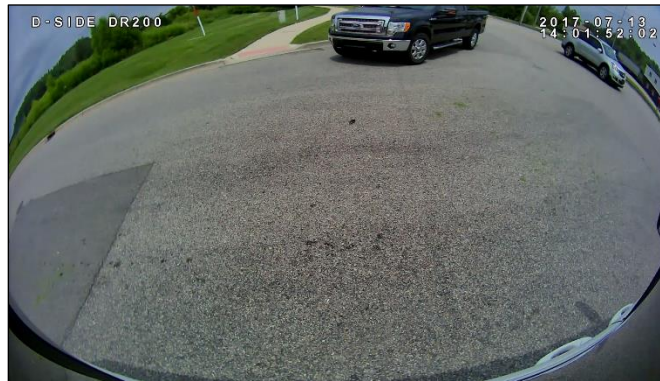
Mounting Locations:

The camera's wide field-of-view allow flexible mounting in either a down facing or rear facing configuration while still providing very good coverage of the side of the vehicle. For down facing general recording applications, the camera is typically mounted directly to the roof or side of vehicle body near the roof facing outward perpendicular to the direction of vehicle travel at a downward angle. The camera should be mounted as close to the outside edge of the roofline as possible to prevent blind spots directly next to the vehicle. For rear facing applications utilizing the camera to cover blind spots in combination with a monitor, the camera should be mounted as far toward the front of the vehicle as possible. When mounting to the vehicle, consider spray and debris from the tires could affect the camera image, so it is recommended to mount the camera a minimum of 3 feet off the ground to help prevent this. Always check the mounting structure under the camera for proper access to route the cable.



Installation:

1. Remove the four (4) Allen head cover mounting screws from the camera and then remove the camera ball and cable.
2. With just the camera base and gasket, hold in desired mounting location and mark the three (3) camera base mounting screw locations and the center of the cable exit hole in the base.
3. It is recommended to power on the DVR unit, temporarily connect the camera to it, set the camera in the mounting base (with gasket attached), and observe that the view in the desired mounting location is satisfactory before permanently attaching the camera and routing the cable(s).
4. Before drilling holes, ensure there is adequate clearance for mounting screws and cable routing clearance.
5. If you are certain of the cameras mounting location, drill the center cable hole with a 3/4" or 7/8" drill bit, and it is also recommended to predrill the three (3) mounting screw holes with an 1/8" drill bit.
6. Route the camera cable through the base and gasket, and then through the cable hole in the mounting surface.
7. Use the mounting hardware provided to attach the camera base to the mounting location.
8. Attach the camera cover to the camera with the four (4) Allen head mounting screws. Leave the screws slightly loose until the camera is aimed.
9. Power on the DVR unit and connect to the Wi-Fi to view the live camera image to properly aim it on the view page. (See [Viewing Cameras on a Smart Device](#) for connection details)
10. After the camera is aimed, tighten the four (4) Allen head mounting screws to lock the camera aim.



Example View: Analog HD Side camera in a downward facing application on the driver's side of a delivery van

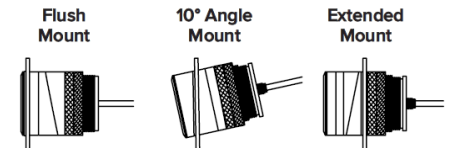
Analog HD Flush Mount Camera Installation



The AHD Flush Mount Camera (Kit P/N: DVR-918, Camera P/N: PC-1918) is designed to be mounted in a body panel or bumper of the vehicle, flush with the surface. The camera is used most often inside the rear bumper of vehicles, but it also works well mounted in an enclosure above the engine compartment or rear window on rear engine busses. It has a built-in night vision LEDs with an automatic sensor for capturing video in low-light conditions. Its small form factor and low-profile mounting are its biggest advantage. The camera lens has a wide 130° horizontal and 65° vertical coverage.

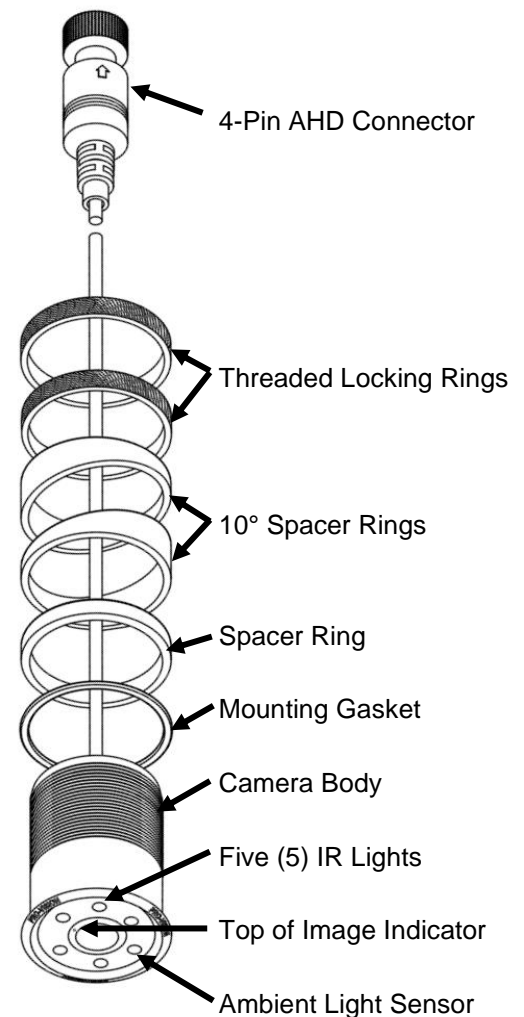
Mounting Location:

The camera mounts in a 1.25" hole and can be rotated 360° for proper aim; the camera can also be tilted at a 10° angle by installing the angle rings on either side of the mounting surface.



Installation:

1. Locate the desired mounting location, check for proper clearance behind the surface for the camera body, then mark and drill a 1.25" hole.
2. Disassemble the camera by loosening the two (2) threaded lock rings, removing them, and sliding them off the cable and connector. Then removing all the spacer rings.
3. Determine the order of the spacers as needed based on the desired mounting as shown in the images above right.
4. Slide the outer spacers over the cable and onto the camera, then slide the camera, cable first, through the mounting hole.
5. Slide the inner spacers over the cable and onto the camera.
6. Install the mounting gasket between the outer mounting surface and the camera body or the first spacer.
7. Slide the two (2) threaded locking rings over the cable and then thread them one at a time onto the camera body.
8. Connect the camera connector to the cable running to the DVR unit, if it is not yet installed, install the cable at this time and then continue to step 9.
9. Power on the DVR unit and connect to the Wi-Fi to view the live camera image to properly aim it on the view page. (See [Viewing Cameras on a Smart Device](#) for connection details)
10. When finished aiming, fully tighten the first locking ring and then the second locking ring.



Analog HD Marker Light Camera Installation



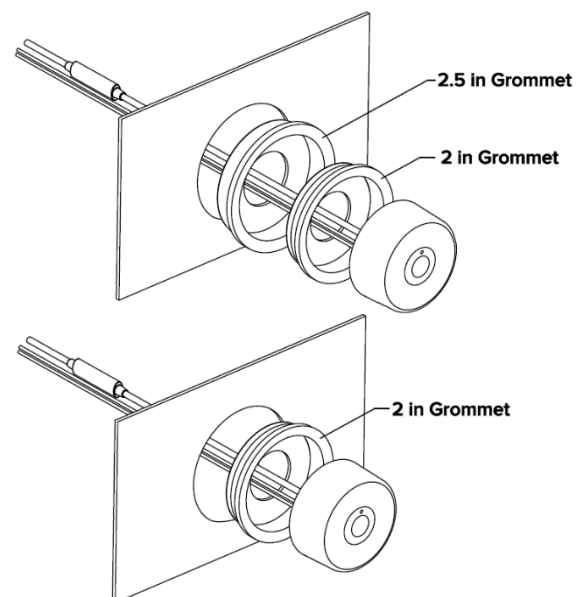
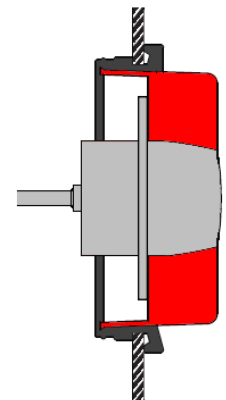
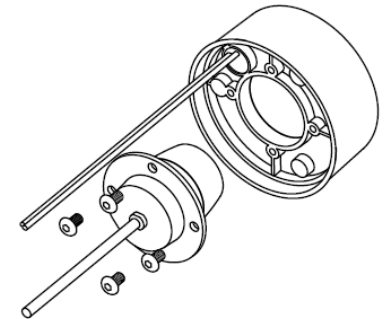
The AHD Flush Mount Camera (Kit P/N: DVR-910, Camera P/N: PC-1910) is designed to be mounted in an existing 2" or 2.5" marker light hole in the rear body of the vehicle to replace a standard 2" or 2.5" marker light. The camera is used most often as a backup camera and replaces a marker light in the rear bumper. This camera is primarily used because it does not require any holes to be drilled in the vehicle body and is typically very durable because the marker lights are typically mounted in a protected area on the rear of the vehicle. The camera lens has a wide 145° horizontal and 80° vertical coverage.

Mounting Location:

The camera mounts in an existing marker light hole. The camera can be rotated 360° for proper aim but cannot be tilted at an angle. If possible, the camera should replace the center most marker light to provide the driver with the most natural view.

Installation:

1. Locate the desired mounting location, remove the existing light to check for proper clearance for the camera body.
2. Disconnect the wiring from the original light, then remove it and the grommet.
3. Assemble the camera to the light assembly using the 4 mounting screws.
4. Install the new grommet into the hole. For 2.5" light applications, first install the larger grommet into the hole, then install the smaller grommet. (As shown below right)
5. Connect the red 12V LED power wire and black ground wire from the light assembly to the existing wiring through the grommet.
6. Slide the camera cable into the hole in the back of the grommet.
7. Connect the camera connector to the cable running to the DVR unit, if it is not yet installed, install the cable at this time.
8. Press the camera light assembly into the grommet and rotate the camera until the white dot is at the top.
9. Power on the DVR unit and connect to the Wi-Fi to view the live camera image so it can be properly adjusted to level by rotating the light in the grommet. (See [Viewing Cameras on a Smart Device](#) for connection details)



Analog HD Low Profile Camera Installation



The AHD Low Profile Camera (Kit P/N: DVR-912, Camera P/N: PC-1912) is designed to be mounted in the rear of the vehicle. It is very low profile, allowing it to be mounted at the top of the rear for easier wiring and better field of view. The camera mounting hole pattern matches that standard 7" on center spacing of US license plates for easy mounting over license plates for light duty vehicle applications where space is limited, or drilling holes is not desired. The camera has four (4)

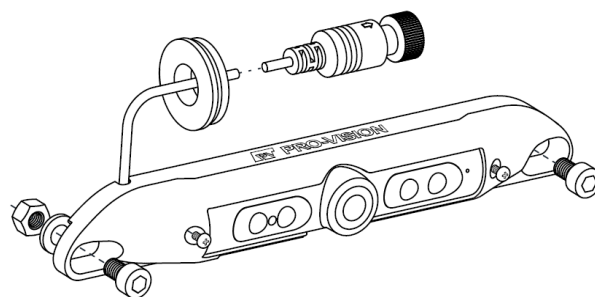
infrared (IR) LED's that provide illumination during low light/dark conditions. The camera also has a waterproof microphone built into the camera housing. The camera lens has a wide 145° horizontal and 80° vertical coverage.

Mounting Location:

This camera is often used on the outside rear of light duty vehicles like cars, vans, and SUVs to provide video capture of backup incidents and observation behind the vehicle. The camera can only be mounted to a horizontal surface, it is designed to be mounted directly to the mounting surface and can adjust up and down for proper aim. The camera mounting screw holes spacing allows direct mounting to US license plate bolt pattern.

Installation:

1. Locate the desired mounting location of the camera. It is recommended to power on the DVR unit and temporarily connect the camera to it and observe that the view in the desired mounting location is satisfactory before proceeding to the next step.
2. When the desired mounting location is found, mark or measure the two (2) mounting screw hole locations in the camera. If license plate mounting, skip this step.
3. If the cable will be routed through the vehicle body, it is common to drill a 3/4" hole behind the camera where the cable exits the camera body, mark and drill this hole if needed. Remove any burrs from the hole to prevent damage to the cable. If license plate mounting, there is a notch in the top left of the camera for the cable to exit and then route into the body of the vehicle.
4. Route the camera cable into the hole and then install the camera to the marked locations from step 2. Attach the camera with the supplied mounting hardware.
5. Route and install the extension cable(s) to the cameras final mounting location and connect it to the camera. Leave enough slack to allow removal of the camera to simplify service in the future (typically 4"-6").
6. Power on the DVR unit and connect to the Wi-Fi to view the live camera image to properly aim it on the view page. (See [Viewing Cameras on a Smart Device](#) for connection details) To adjust the camera aim, loosen the two (2) small Phillips head screws on either side of the camera assembly.
7. After the camera is aimed, tighten the two (2) Phillips's head adjustment screws.



Example view from the rear of a Thomas C2 School Bus

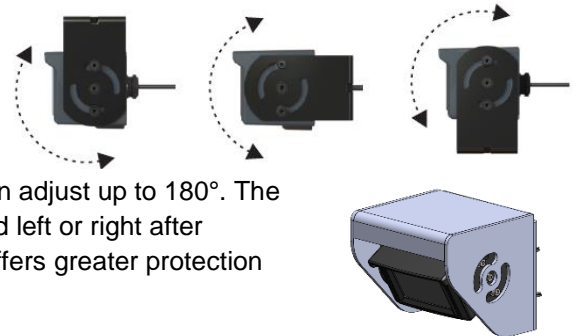


Analog HD Heavy Duty Camera Installation

The AHD Heavy Duty Camera (Kit P/N: DVR-916, Camera P/N: PC-1916) is designed to be mounted in the rear of the vehicle. It is small, allowing it to be mounted at the top of the rear for easier wiring and better field of view. The camera bracket allows for mounting above, below, or directly to the mounting surface. The camera has four (4) infrared (IR) LED's that provide illumination during low light/dark conditions. The camera has a waterproof, built-in microphone. The camera lens has a wide 110° horizontal and 60° vertical coverage. The camera also has an optional heavy-duty mounting (P/N: PC-1271) for applications where the camera is mounted in an area that requires additional protection from damage.

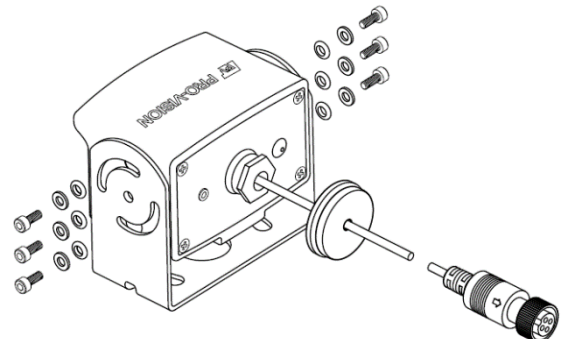
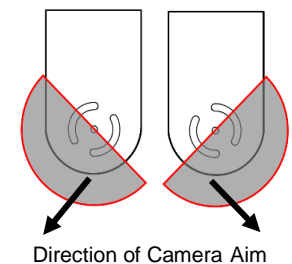
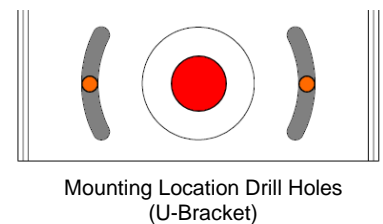
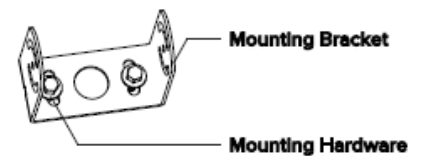
Mounting Location:

This camera is often used on the outside rear of heavy-duty vehicles like box trucks, van trailers, and fire trucks to provide video capture of backup incidents and observation behind the vehicle. When using the U-Bracket, the camera can only be mounted to a horizontal surface, it can be mounted above, below, or directly to the mounting surface and can adjust up to 180°. The camera mounting screw holes are slotted to allow the camera to be aimed left or right after mounting. The Heavy-Duty Bracket is designed for vertical mounting. It offers greater protection from heavy debris and covers the camera from the top and sides.



Standard Installation:

1. Locate the desired mounting location of the camera. It is recommended to power on the DVR unit and temporarily connect the camera to it and observe that the view in the desired mounting location is satisfactory before proceeding to the next step.
2. When the desired mounting location is found, mark or measure the two (2) mounting screw hole locations in the bracket (shown in **ORANGE** at right). If necessary, remove the camera from the bracket.
3. If the cable will be routed through the vehicle body, it is often routed through a 3/4" holed drilled directly in the center of the vehicle body behind the bracket (shown in **RED** color above). Mark and drill this hole if needed. Remove any burrs from the hole to prevent damage to the cable.
4. Install the camera bracket to the marked locations from step 3 (shown in **ORANGE** above). Ensure the bracket is oriented for properly aim as shown in the image above right, if needed flip the bracket 180° to allow proper adjustment.
5. Install the camera into the bracket with the six (6) screws, metal washers, and nylon washers as shown at right. Leave the screws slightly loose until final camera aim adjustment is completed.
6. Route the camera cable through the mounting hole in the center of the bracket (if applicable) and install a grommet or put adhesive around the cable to provide a seal with the hole.
7. Route and install the extension cable(s) to the cameras final mounting location and connect it to the camera. Leave enough slack to allow removal of the camera if necessary for service in the future (typically 4"-6").



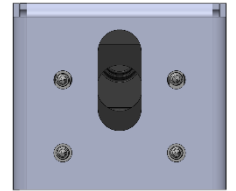
8. Power on the DVR unit and connect to the Wi-Fi to view the live camera image to properly aim it on the view page. (See [Viewing Cameras on a Smart Device](#) for connection details)
9. After the camera is aimed, tighten the six (6) mounting screws on the sides of the camera.

Optional Heavy-Duty Bracket Installation (Requires P/N: PC-1271):

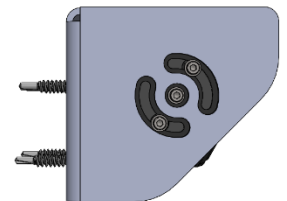
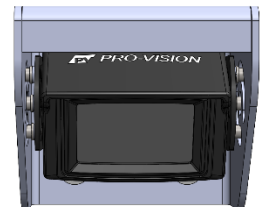
1. Locate the desired mounting location of the camera. It is recommended to power on the DVR unit, temporarily connect the camera, and observe that the view in the desired mounting location is satisfactory before proceeding to the next step.

Important! Make sure there is no wiring behind the desired mounting location that could be damaged when mounting the camera to the vehicle.

2. If the cable will be routed through the vehicle body, it is typically routed through a $\frac{3}{4}$ " hole drilled directly in the center of the vehicle body behind the bracket. Mark and drill this hole if needed. Remove any burrs or jagged edges from the hole to prevent damage to the cable.
3. Holding the bracket up with the cable slot centered on the hole drilled from step 2, use a $\frac{5}{16}$ " socket to screw the four (4) mounting screws into the vehicle body. Make sure that the bracket is level to the vehicle body. When mounting to thicker metal surfaces, pre-drilling the mounting holes may be necessary
4. Route the camera cable through the cable hole and install a grommet or put adhesive around the cable to seal the cable routing hole.
5. Install the camera into the bracket with the six (6) screws and washers. Leave the screws slightly loose until final camera aim adjustment is completed.
6. Power on the DVR unit and connect to the Wi-Fi to view the live camera image to properly aim it on the view page. (See [Viewing Cameras on a Smart Device](#) for connection details)
7. After the camera is aimed, tighten the six (6) mounting screws on the sides of the camera.



Mounting Location Drill Holes
(Heavy-Duty Bracket)



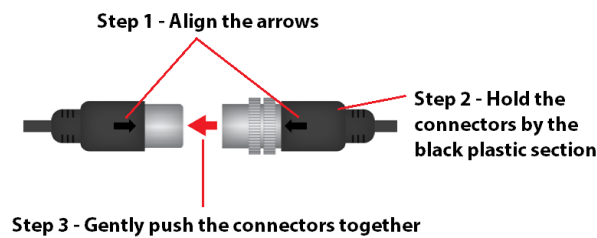
Digital HD Camera Installation

The DVR unit supports one (1) digital HD camera.

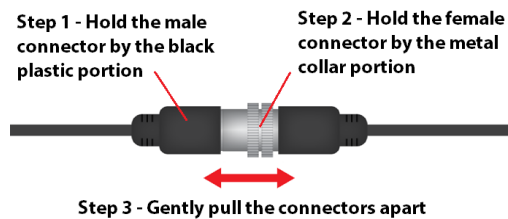
Digital HD Camera Cables/Connections:

The digital HD camera can be connected via a single 10 ft. or 20 ft. cable included with the camera kit or using a specific combination of multiple cables (see below).

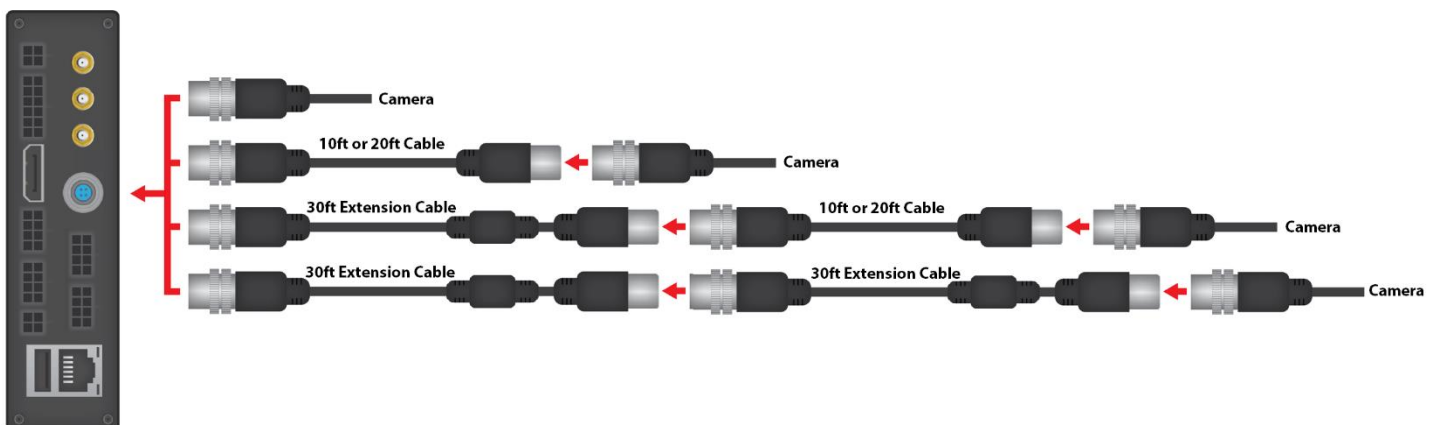
To connect a camera or cable, align the arrow on the connector with the notch on the plug on the DVR unit (arrow should be visible when looking at the DVR unit from the top) and then gently press the connector in holding on to the black part of the connector until a click is heard. The HD cameras and cables use a sliding quick release collar on the female connectors, holding this connector by the sliding metal collar will make it difficult for the release mechanism to engage when connecting the camera or cable.



To disconnect a camera or cable, simply grab the female connector by the metal collar and pull it backwards to disengage the locking mechanism and allow the connectors to separate.



The Digital HD camera can be connected to the DVR using the cable configurations shown below:



IMPORTANT! If using a 30 ft. Extension Cable (Part # PX-1843) it must be connected directly to the DVR Unit or to another 30 ft. Extension Cable in the proper order as shown above. Connecting two 10 ft. / 20 ft. Cable together or between the 30 ft. Extension Cable and the DVR will provide intermittent or no camera signal.

Cable Routing:

After the locations of DVR and cameras have been determined, cables for the camera(s) can be routed. Determine the approximate cable routing to the locations of each of the cameras. Remove all panels along the route that cables will take to ensure accessibility. After the panels are removed and the path is accessible install the cables.

Installation Tips:

1. For multi-camera installations it is recommended to mark both ends of the camera cable with the camera number using a marker with text (1, 2, 3, 4, etc.) or tick marks (I, II, III, IIII, etc.) on both ends of each cable. This will easily identify which cable is at each location when final connections are made to the DVR.
2. Carefully open all video cables and lay them out to full length. This will make it easy to pull the cable and make sure there are not snags or knots in the cable while it is unraveling.
3. When making holes for cables in panels drill a 3/4" hole with a drill bit or step drill bit.
4. Leave at least 4" of slack near the camera connection points to allow future servicing of cameras.
5. If excess cable is present, this can be doubled over or wound up. After running cables, you may want to use cable ties to secure them in place. If you do this, do not overtighten the cable ties. It is possible to damage the shielding inside the cables by overtightening; make the cable ties snug or slightly loose. **Do not use a cable tie guns as these will overtighten the cable ties.**

IMPORTANT! Read and understand the installation instructions below for the camera(s) to be installed BEFORE drilling any holes in the vehicle. Some of the cameras have specialized mounting designs that are not apparent without reading the instructions.

Digital HD Dual-Lens Stop-Arm Camera Installation



The HD Dual-Lens Stop-Arm Camera (Kit P/N: DVR-824 Camera P/N: PC-1824) is designed to capture license plates and faces of drivers that pass a school bus while the bus is stopped and has its flashing red lights and stop-arm open. The camera is waterproof (IP-67 rated) and has two (2) lenses with low-light image sensors set at 45° angles to the side of the bus that can provide 180° of coverage on the road side of the bus. The camera is designed to be mounted directly to the bus, parallel to the road with four (4) self-drilling Phillips head screws. The camera also has a waterproof microphone for audio capture.

Mounting Locations:

The camera must be mounted parallel to the road surface on the driver's side of the bus. The open stop-arm should be partially visible in the camera field-of-view, but not so much as to obstruct vehicle license plate capture.

Recommended mounting (shown at right):

- 6"-18" below the bottom of the stop sign on the stop-arm itself
- 12"-60" from the center of the open stop arm forward or rearward

On most bus models, mounting in the area forward of the stop arm provides faster and easier wire routing to the DVR.

The camera must be orientated such that the two (2) 4 mm socket head bolts screw in from the bottom and the "PV" logo is upright, facing toward the center of the road. The proper orientation of the mounting bracket and camera are marked with "UP"↑

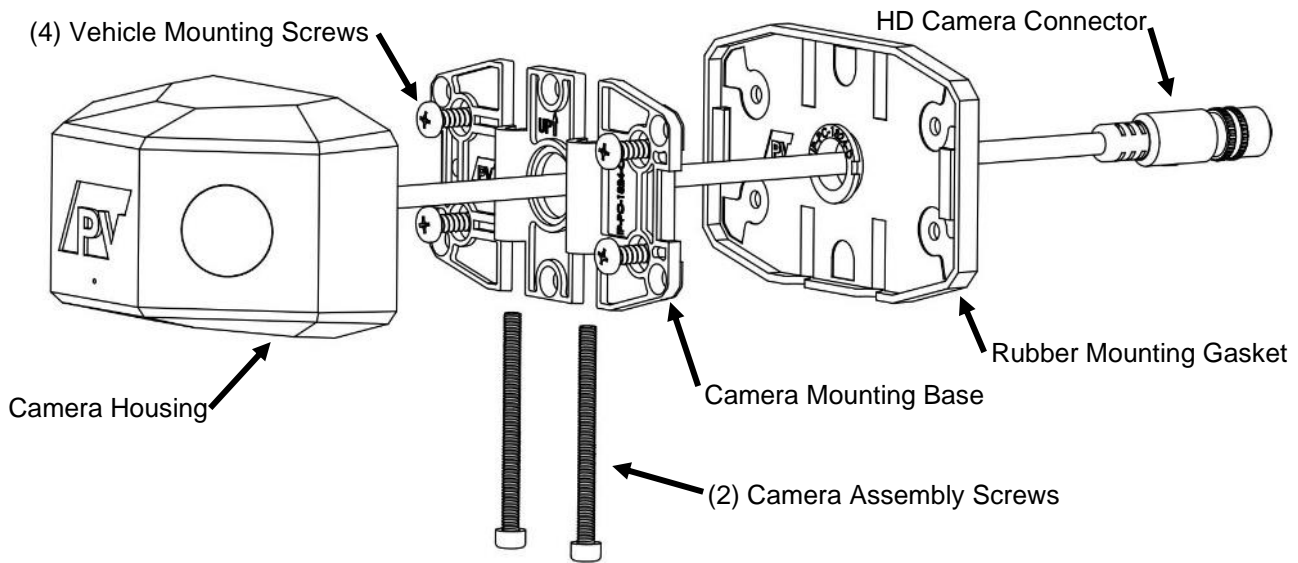


IMPORTANT! For the first installation of each different vehicle model variation, it is recommended to temporarily connect the camera, without the mounting base assembly attached to the recording unit. Power the system on and then hold the camera in the desired mounting location to observe the view to confirm it is satisfactory before continuing.

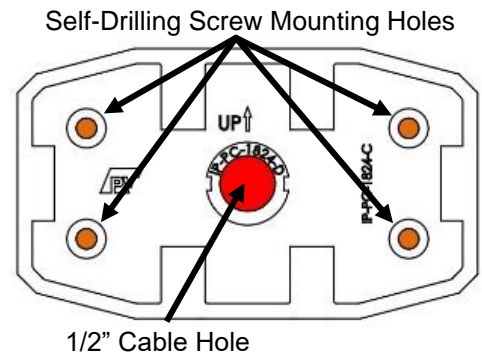


Shown above is a view from the stop-arm camera mounted forward of the stop-arm on a bus. Note that the stop arm is partially in the view when open but not obstructing license plate capture

Installation:

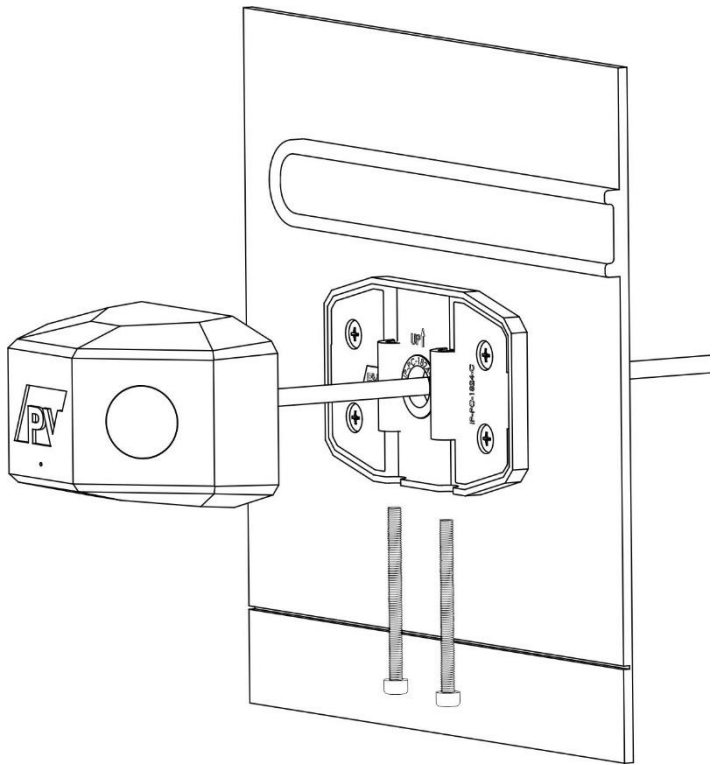


1. Attach the camera mounting base to the rubber mounting gasket as shown to the right. Hold the mounting base assembly to the desired mounting location and ensure the base is parallel to the body lines on the side of the bus. Mark the center of the four (4) camera base mounting screw locations (shown in **ORANGE**) and the large center cable hole (shown in **RED**).
2. Place the camera mounting base assembly aside and then verify that there is clearance behind the four (4) marked mounting screw locations, as well as clearance and access to behind the one (1) large, marked cable hole location.



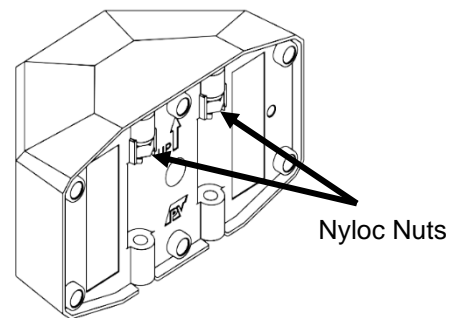
3. Drill a 1/2" diameter hole in the center marked location (shown in **RED** above). DO NOT DRILL THE OTHER HOLES.

4. Using the female end of the camera connection or extension cable, verify there is enough clearance for the connector to fit through the hole and route toward the recording unit. If needed, drill the 1/2" hole out to 3/4" to allow the connector to route into the vehicle body.
5. If certain of the camera's mounting location and that the correct hole for the cable has been drilled, place the mounting base assembly so that the four (4) **ORANGE** marks completed in **Step 1** are showing. Orient the mounting base assembly so that the bolt cutouts in the base and gasket point toward the ground and the "UP" arrow points toward the roof of the bus. Use the four (4) self-drilling screws provided to attach the base and gasket to the side of the bus.
6. After the base and gasket are securely attached to the bus, route the camera cable through the drilled center cable hole and place the camera in the mounting base assembly. Orient the camera so that the bolt cutouts in the housing are pointed toward the ground and the "UP" arrow points toward the roof of the bus as shown to right.



7. Slide the two (2) 4 mm bolts into the bottom of the camera connecting the camera housing to the mounting base assembly. Using the provided 3 mm ball end Allen wrench, tighten the bolts into the Nyloc nuts that are attached to the bottom of the housing. The bolts should be nearly flush with the rubber gasket when fully tightened.
8. Connect the camera cable to the extension cable running to the DVR, and then connect the extension cable to the "Camera 7" port on the DVR unit for the camera to be recognized.

IMPORTANT! *The Nyloc nuts used for mounting the camera experience reduced holding performance after each removal and reinstallation. If the camera is removed and reinstalled multiple times, it is recommended to apply a medium-strength liquid thread locker (such as Permatex® Threadlocker Blue) to the end of the bolt threads or inside of Nyloc nuts before reassembly.*



Stop-Arm Camera Triggering:

The stop-arm camera contains an automatic detection function to automatically detect cars passing and generate small video clips that are easy to locate and find for violations. The detection function relies on an external trigger to the DVR unit to tell it when the stop-arm is open to begin detecting vehicles. To use this function, a 12V constant signal from the vehicle when the stop-arm is open must be connected to one of the trigger inputs of the DVR and then configured in the DVR web interface. See **Settings > Stop-Arm Camera**.

Display Installation

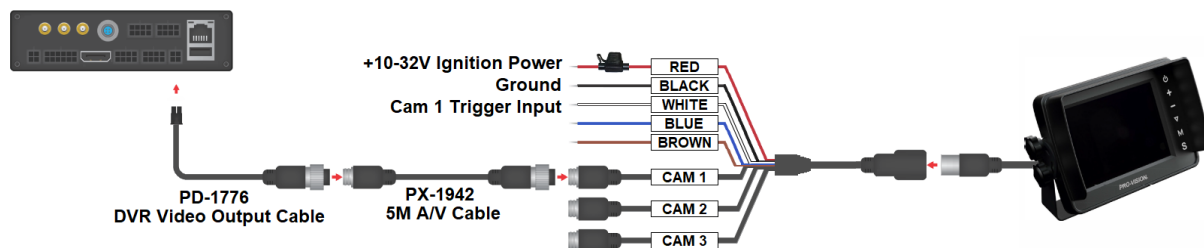
There are multiple different monitors available that installed in the vehicle and connected to the DVR. The DVR unit includes a standard RCA video output for temporary display connection and aiming.

5", 5" Waterproof, and 7" HD Monitor Kits

The 5" (PM-1950S), 5" Waterproof (PM-1930S), and 7" (PM-1970S) monitors all share the same mounting and installation instructions; they have the same connections and have similar mounting hardware.



1. Determine monitor mounting location and then decide which mount will be used. The U-shaped mounting bracket works well mounting to the dash or ceiling. The adjustable fan mounting bracket works well adhesive mounted to dashboards or windshields, it also can be screw mounted.
2. Use the included mounting hardware and install the mounting bracket. If the adhesive mount is to be used, hold the mount against the desired location and check to see if it fits well, if there is a curve to the surface, bend the bracket slightly to match the mounting surface before adhering. Remove the adhesive backing and then firmly press the mount to the surface and hold for 30 seconds. It is recommended to allow adhesive to cure for 1 hour prior to attaching monitor.
3. Locate your ignition-controlled power and ground locations in the vehicle. A fused location is not needed as the power harness for the monitor includes an inline fuse.
4. Make the proper connections to the red and black wires on the power harness to the vehicle power connection as noted in the diagram below. The green wire is not necessary for this application.
5. Route the power harness large female connector to the mounting location of the monitor.
6. Mount the monitor to the mount and make the connection from the monitor to the monitor power harness. Make note of the connector alignment arrows making the connection.
7. If the monitor power harness CAM 1 connector is further than 3 ft. from the DVR, use a 5m AV cable to connect the monitor power harness to the DVR output.
8. Connect the PX-1942 5M A/V cable to the CAM 1 (Camera 1) input of the monitor power harness, then run the male end to the PD-1776 DVR to Monitor Interface Cable.
9. Connect the CAM 1 Trigger (White) to a triggered power source if it is desired to have the monitor automatically turn on in when triggered; a trigger connection is not required as the monitor can be manually powered on with 7the power button.

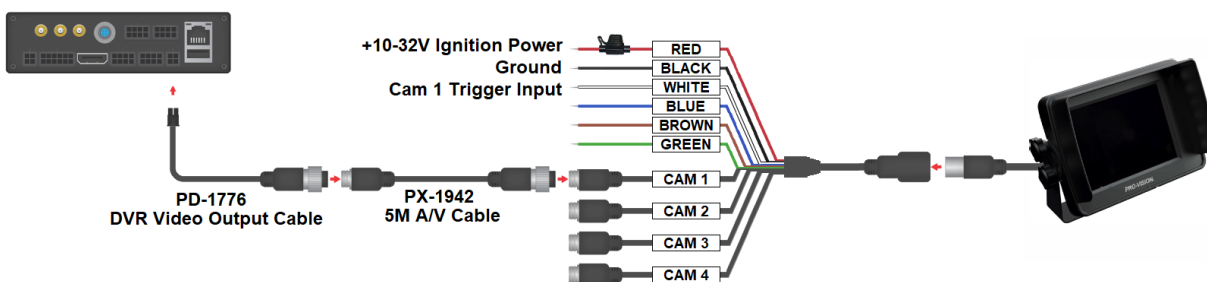


7" and 10" HD Quad Monitor Kits

The 7" Quad (PM-1980S) and 10" Quad (PM-1990S) monitors share the same mounting and installation instructions, have the same connections, and have similar mounting hardware.



1. Determine the monitor mounting location and then decide which mount to use. The U-shaped mounting bracket works well when mounting to the dash or ceiling. The adjustable fan mounting bracket works well adhesive mounted to dashboards or windshields. Alternatively, the fan bracket can also be screw mounted.
2. Use the included mounting hardware and install the mounting bracket. If the adhesive mount is to be used, hold the mount against the desired location and check to see if it fits well. If there is a curve to the surface, bend the bracket slightly to match the mounting surface before adhering. Remove the adhesive backing and then firmly press the mount to the surface and hold for 30 seconds. It is recommended to allow the adhesive to cure for 1 hour prior to attaching monitor.
3. Locate your ignition-controlled power and ground locations in the vehicle. A fused location is not needed as the power harness for the monitor includes an inline fuse.
4. Make the proper connections to the red and black wires on the power harness to the vehicle power connection as noted in the diagram below. The green wire is not necessary for this application.
5. Route the power harness large female connector to the mounting location of the monitor.
6. Mount the monitor to the mount and make the connection from the monitor to the monitor power harness. Make note of the connector alignment arrows making the connection.
7. If the monitor power harness CAM 1 connector is further than 3 ft. from the DVR, use a 5m AV cable to connect the monitor power harness to the DVR output.
8. Connect the PX-1942 5M A/V cable to the CAM 1 (Camera 1) input of the monitor power harness, then run the male end to the PD-1776 DVR to Monitor Interface Cable.
9. Connect the CAM 1 Trigger (White) to a triggered power source if it is desired to have the monitor automatically turn on in when triggered; a trigger connection is not required as the monitor can be manually powered on with the power button.



Antenna Installation

Wi-Fi Antenna

There is one (1) Wi-Fi antenna included with the system, it is connected to the Wi-Fi connection ports on the rear of the DVR unit. The antenna is needed to allow configuration of the unit through Wi-Fi.



4G Antennas

There are two (2) 4G antennas included with the system if you purchased the optional 4G version, they are both identical and can be connected to either of the two (2) 4G connection ports on the rear of the DVR unit. At least one antenna connected to the 4G primary antenna input is needed to allow connection. The second antenna is recommended as it provides greater diversity in situations where signal is poor.



Installation Restrictions

- The antennas must be installed at least 20 cm (7 7/8") from any person in their normal, seated position.
- The antennas must be installed at least 20 cm (7 7/8") from any other antenna.
- Use only 2 dBi, vertical polarized, dipole antennas provided by PRO-VISION. Use of any other antenna voids the warranty and removes the user's authority to operate the equipment.

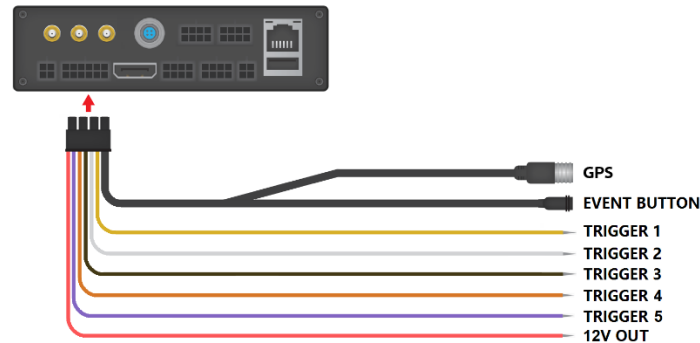
Recommended Installation:

- The antennas perform best when installed vertically.
- Metal panels and tinted glass reduce the range and effectiveness of the antenna, for best range install outside metal panel or onto untint areas of windows.
- Common installation locations are in the front windshield or in the front bulkhead area of vehicles with fiberglass front exterior headers.
- The Wi-Fi antenna should be installed with the best line of sight to the buildings Wi-Fi access point.

IMPORTANT! *Some vehicles have wires embedded in the glass that are used for radio antennas and/or for defrosting the window; do not mount the antenna to this portion of the glass as it can reduce the radio reception and/or the heat can reduce the adhesion of the antenna on the glass.*

System Triggers

The unit has five (5) auxiliary trigger inputs located on the PD-1835 GPS / Event / Triggers cable at the rear of the unit. Each trigger input can be used in a variety of ways. The trigger inputs are used to trigger alarm recordings, to display a four-character word on the recording, to trigger an audible alarm, to switch the display view, or a combination of all events. The unit also has one (1) trigger output; this output can provide 12VDC (0.1A Max Current) to trigger a relay or other external function in the vehicle.



How Trigger Inputs Work

The standard setting for the trigger inputs is such that when a 12V signal is sent to a trigger wire, an alarm recording will be triggered to start, and a corresponding four-character acronym will display on the screen.

Example: When Trigger 1 receives 12V, “T1” will display on the video by default.

When the 12V signal is removed, the four-character word will no longer display on-screen, and the DVR will continue the alarm recording for a preset amount of time (Post-Event Recording).

Configurable Trigger Input Settings

- Each trigger can be set independently to receive a high-level signal (1V to 24V DC) or a low-level signal (GROUND).
- Each trigger can be set independently to display any four-character phrase; characters include capital letters A-Z and numbers 0-9. Examples: “PTO”, “DOOR”, “OHL3”, “BRK4”, “DR11.”
- Each trigger can be set independently to turn alarm recording ON or OFF by camera.
- The Alarm recording can be configured to have Pre-Event Recording of 0-60 seconds. Pre-Event Record Time is a segment of video prior to the activation of the trigger that will be added to the beginning of the alarm recording.
- The Alarm recording can be set to perform a Post-Event Recording of 0-180 seconds. Post-Event Record Time is the time that the DVR will continue an alarm recording after a trigger signal has been removed.

Connecting Trigger Input(s)

To connect each trigger input, determine the trigger signal type: 12-24V Signal, the level will be set to “HIGH” (Default), Ground (-) signal will require the level to be set to “LOW” for the trigger.

After your trigger source has been located, run a wire from the source to the desired trigger input on the GPS/Event/Trigger Cable.

How the Trigger Output Works

The trigger output is designed to provide power to activate a 3rd party or vehicle accessory when a preset scenario on the DVR occurs. For example, if the excess idling is triggered, it can send a 12V signal to a driver or other vehicle system.

Configurable Trigger Output Settings

The trigger output can be programmed to activate when any trigger input is active or if the vehicle idling alarm is active.

Connecting Trigger Output

The trigger output can provide up to 12VDC 0.1A (100mA) to activate an accessory, if a higher current/voltage accessory is to be used, an appropriate 12V relay must be used to provide the proper current/voltage to the accessory. After your trigger destination has been located, run a wire from the destination to the “12V TRIGGER OUTPUT on the DVR. This circuit should be fused to prevent damage to the DVR.

External Event Marker Button



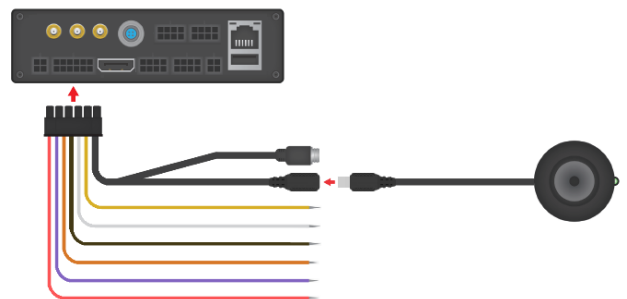
The Event Marker Button (P/N: PD-1770) is used to provide the driver an easy way to mark Normal video as an important Alarm Video and to serve as a marker to mark a point of importance within an Alarm video. The button also provides the driver with a clear indicator of the system operation.

Recommended Mounting Locations:

The button should always be mounted within reach of the driver while seated normally and buckled. The LED status light on the button should be visible either directly or indirectly (reflected off a nearby dash or console) by the driver. If unsure of the button location or LED brightness it is recommended to temporarily power the DVR unit with the button connected prior to installing to observe the LED visibility. The buttons are commonly mounted to the dash to the left of the gauge cluster, to the upper driver’s side corner of the windshield (to the glass) or on the center console.

Installation:

The Event Marker Button includes 6m (20 ft.) of cable. This cable needs to be routed starting from the button location to the PD-1833 GPS/Event/Trigger Interface Cable at the rear of the DVR. The button is usually mounted within reach of the driver using the included adhesive pad. When mounting the button, be sure to rotate the button so that the LED light faces in the proper direction.



LED Light:

The event marker button LED will begin to flash green while the DVR is booting, once booted and the disk is loaded it will switch to solid green when it begins recording.

FLASHING GREEN - ON but not recording

SOLID GREEN - Recording normally

FLASHING RED - Not recording due to problem, LED will also momentarily flash red when button is pressed

SOLID RED – Hardware problem/button malfunction

GPS Receiver Antenna Installation

The GPS Antenna (P/N: PD-1750) provides GPS data to the DVR, this data includes vehicle speed, location, and current date/time. The data can be used to trigger events, map the vehicles location during playback, as well as synchronize date/time with the DVR.



Recommended mounting locations:

Typically the GPS Antenna is mounted to the dash in front of the driver close to the windshield.

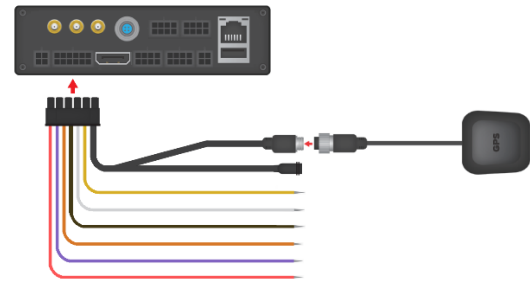
Unsure about mounting location?

If you are unsure about your GPS mounting location providing proper signal strength, power on the DVR unit with the GPS antenna connected prior to installing it. The GPS antenna will have a red LED light come on underneath the “GPS” print. This light will flash red if a signal cannot be acquired, and will be solid red if acceptable signal strength is acquired. Ensure the vehicle is outside, and then place the antenna in the desired location. If the LED light stays solid red then that location is suitable for mounting. If the LED light flashes red in the mounting location, then the signal is not acceptable and an alternate location will need to be found.

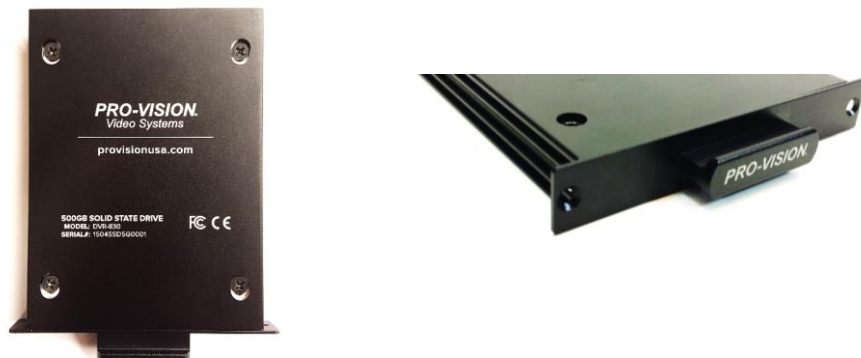
The buttons are commonly mounted to the dash to the left of the gauge cluster, to the upper driver’s side corner of the windshield (to the glass), or on the center console.

Installation:

The GPS Receiver Antenna has 4m (13 ft.) of cable. Because of the size of the antenna, it is best to start routing this cable from the antenna location to the DVR. The black 4-pin connector on the antenna will connect to the 4-pin “GPS” connector on the PD-1833 GPS / Event / Triggers at the rear of the DVR unit. The GPS Antenna is waterproof and can be mounted on the vehicle exterior, but can provide a good signal when mounted in the vehicle interior. It can be fixed to the mounting surface using the included adhesive, the built-in magnet, or simply placed on the surface if mounted in the front dash or rear deck.



Solid-State Drive (SSD) Installation



The DVR has the capability of adding an additional high capacity solid state storage device. This drive can be used in addition to or instead of the included SDXC Card.

Solid-State Drives (SSD's) are available in the following configurations:

- DVR-830 – 500GB
- DVR-831 – 1TB
- DVR-832 – 2TB
- DVR-834 – 4TB

Installation:

To install, remove the two Philips head screws on the the “PRO-VISION” front panel on the DVR and then slide the SSD in the open slot. Use the same screws to secure the SSD in place.

The DVR will default to storing information on the SSD even if a removeable SDXC card is installed in the DVR. When the SSD is full, the DVR will write over the non-alarm data files. It will write to the removeable SD installed only when the SSD is completely full of alarm data. The DVR settings can be changed to prevent writing over existing data. If that option is chosen, the data will need to be downloaded and removed from the SSD to allow the DVR to continue recording.

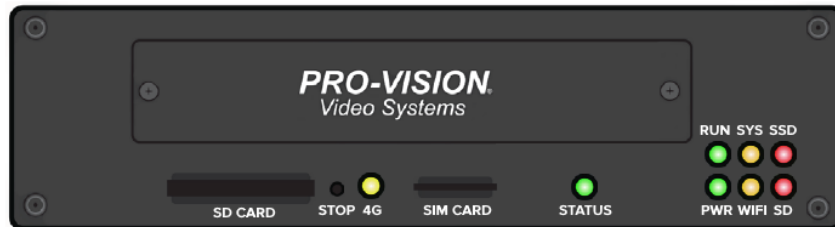
In the event of SSD failure, or if the SSD is removed, the DVR will automatically continue recording to the SDXC card if present.

Caution! *Do not remove the SSD from its mounting tray, this tray includes all the relevant warranty information for the product including is size identification and serial number. If the drive is removed from the tray the warranty will be void.*

CONFIGURATION

After the installation is completed, the DVR must be configured to fully utilize its functionality. This requires the vehicle ignition to be powered ON and a smart device (tablet, laptop, smartphone) to connect and configure the system.

Note: *The DVR must be powered ON for configuration; when the DVR is powered ON, the green PWR light will be ON solid. (If the PWR light is blinking, the system is in standby mode.)*



Minimum Recommended Changes

There are hundreds of settings on the DVR unit to allow it to be customized to each customer's unique requirements. If you are an installer and are unsure of what special settings should be set, you should at least set the minimum settings and then the other settings can always be changed later. The minimum recommended changes are:

- Unit ID - Each system should be set with a unique Unit ID to indicate which unit the video was recorded on.
- Time Zone – This is required to ensure the device has the proper date/time during recording.
- Wi-Fi AP SSID – This is the name of the DVR's Wi-Fi used for configuration, it is recommended to match this in some way to the Unit ID of the vehicle, so it is easy to identify the unit when multiple are on in the same area.

DVR Status Lights

- 4G **AMBER** Normally OFF. Indicates when the DVR is connected to a 4G network. This light requires the DVR to be configured with the optional 4G modem.
- STATUS **GREEN/RED** Solid green indicates the DVR is on, operating and recording normally. Flashing green indicates the DVR is still booting up, or is operating properly, but is not set to record. Flashing red indicates the system is operating but cannot record; this can be due to a missing or full storage device or DVR issue.
- PWR **GREEN** Solid green indicates DVR is on. Blinking with green RUN indicates there is no ignition signal and DVR is in the time-delayed shutoff mode.
- RUN **GREEN** Blinking indicates DVR is on. Blinking with green PWR indicates there is no ignition signal and DVR is in the time-delayed shutoff mode.
- WIFI **AMBER** Blinking amber indicates the DVR is connected to a Wi-Fi network.
- SYS **AMBER** Blinking amber indicates the number of cameras configured to record that are not recording, this requires configuration to be accurate.
- SD **RED** Flashing indicates data is recording to SD card. Solid indicates the SD card is present, but no data is being recorded. OFF indicates no SD card is present.
- SSD **RED** Flashing indicates data is recording to the solid-state drive. Solid indicates solid-state drive is present but is not recording. OFF indicates there is no solid-state drive present.

Connecting to the DVR

The DVR can be connected with an Ethernet (LAN) cable to a laptop, or it can also be accessed wirelessly using a Wi-Fi connected laptop, tablet, or smartphone device.

1. Connect to the DVR:

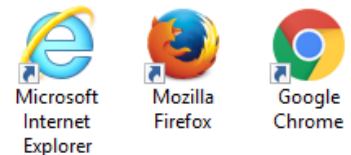
a. LAN:

Connect a cable from the LAN port on the DVR unit to a LAN port on the laptop using a standard (Non-crossover) LAN cable. Your computer must have a static IP address set on the LAN adapter to connect to the DVR. To set the computer to a static IP, see step 2.

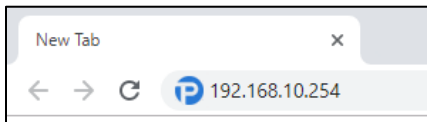
b. Wi-Fi:

On a Wi-Fi-enabled device (laptop, smartphone, or tablet) go to the Wi-Fi settings and connect to the Wi-Fi with the name "PV_RANGER_xxxxxx". The Wi-Fi has a default password of "doesitall". If the unit has already been configured, the Wi-Fi may be disabled or renamed, "xxxxxx" represents the last 6 unique characters of the devices MAC address. The front of the DVR has a LED indicator for Wi-Fi to show the status of the Wi-Fi connection. If the Wi-Fi light on DVR goes on and then back off again, the Wi-Fi is rebooting. Any time Wi-Fi settings are changed, the Wi-Fi must reboot for the changes to take effect. The light for Wi-Fi will also go off when the DVR is rebooting.

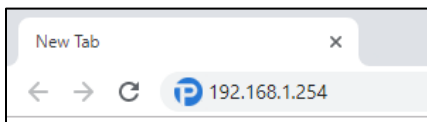
2. Open a web browser software application such as Microsoft® Internet Explorer®, Mozilla® Firefox®, or Google® Chrome® browser.



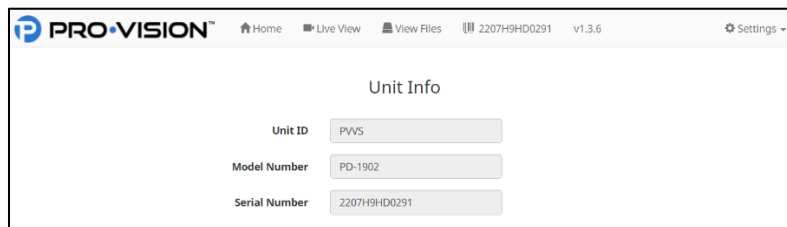
a. LAN: Type "192.168.10.254" in the browser address bar and press enter.



b. Wi-Fi: Type "192.168.1.254" in the browser address bar and press enter.



3. You will now be on "PRO-VISION" web interface for the DVR unit. You will see current Unit ID (Default: "PVVS" if not yet configured), the model number (PD-1902), and the device's serial number.

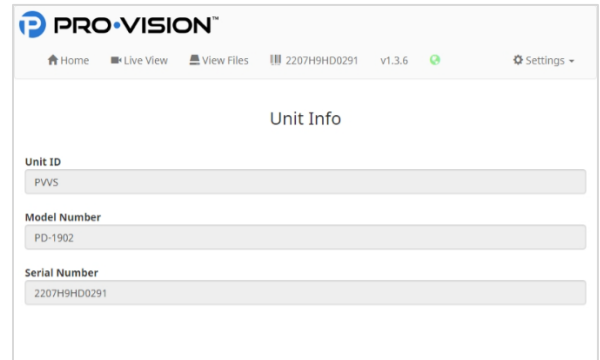


4. You can now navigate to the desired page; Live Video, View Files, or Settings. When you click on the desired page a password prompt will appear, enter the appropriate username/password. The default accounts are listed below.

Username	Password	Description
admin	doesitall	Administrative account with full access, also can set passwords/accounts
liveview	seethecams	Access to only see live video
playback	watchvids	Access to only playback video
settings	changeitems	Access to only see/modify settings

Home Page

The DVR Interface displays a top navigation bar with the main sections available within the interface – Home, Live View, View Files, Unit ID, Firmware Version, a green icon indicating internet connectivity, and a Settings drop-down menu with Basic, Advanced, Admin, and Info items.



Basic DVR Settings

Basic DVR settings are adjusting by clicking on the Settings drop-down menu located in the right, top corner of the web page and then selecting the category.

Power Settings

The power settings allow the user to set when the system turns on and off. By default, the system will turn on with the vehicles ignition and turn off 1800 seconds (30mins) after the key is turned off.

Operation Controlled by:

Set to “Vehicle Ignition” for normal operation, this can be changed to “Schedule” to set certain times of the day to power the system on/off rather than by ignition state.

Stop Recording Delay:

Set the number of seconds after the key turns off that the DVR unit will continue to record for. Commonly this is set to 600 seconds (10 min) regardless of the power down time.

Power Off Delay:

This setting is used to configure the amount of time the DVR will continue to remain powered on and active after the vehicle ignition has been turned OFF, this works in conjunction with the “Stop Recording Delay” setting above. If the vehicle is not using Wi-Fi transfer this is commonly set to 600 seconds. If transfer software is used to transfer files at the end of the day, this setting is normally set around 3600 seconds (1 hour) to allow sufficient time to transfer data.

Date & Time Settings

Date Format:

Allows the user to select which date format as it will appear on the video.

Current Unit Time (24h):

Shows the time the DVR is currently set at, using 24-hour format.

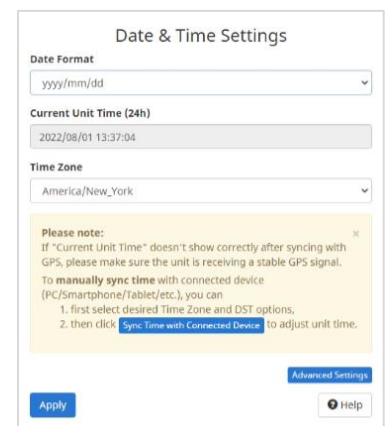
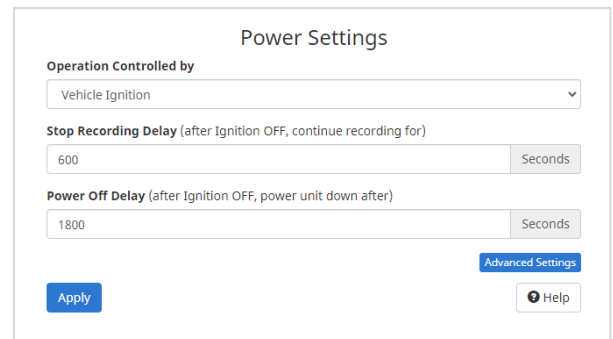
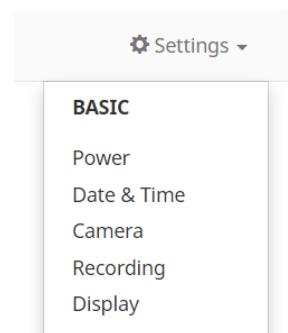
Time Zone:

Select the time zone for your area. This is required if using GPS time sync, if set incorrectly GPS will synchronize to the incorrect time.

Daylight Savings:

Set Daylight Saving Time for three global regions or disable DST.

If you do not have GPS coverage when you are setting the time, you can manually sync the time with your device by pressing “Sync Time with Connected Device”. Once GPS signal is acquired the time will be synced with the GPS.



Camera Settings

Select the camera you want to adjust by clicking on one of the numbered red buttons at the top of the screen.

Camera Title:

Enter a unique title for each camera to identify it in the upper left corner of the video.

Camera Lost Alarm:

Enabling this option will cause the DVR to emit a loud "beep" if the camera signal is lost.

Flip Vertically:

Enabling this option will cause the image to flip vertically.

Flip Horizontally:

Enabling this option will cause the image to flip horizontally.

Audio Volume:

This option allows the audio input volume of the specific camera to be adjusted so that audio playback on the computer is even.

Brightness:

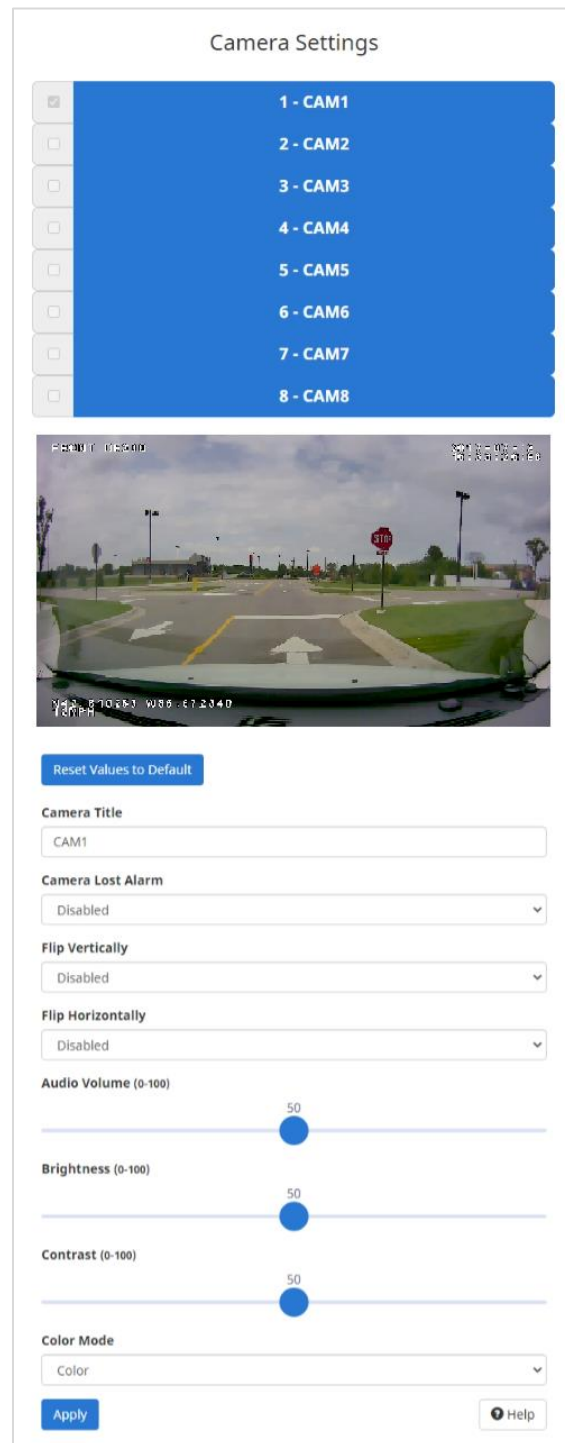
Adjust the brightness of the camera image (0-100) 50 default.

Contrast:

Adjust the contrast of the camera image (0-100) 50 default.

Color Mode:

Allows the user to change the color mode or make custom corrections to the image color.



Recording Settings

Configure Cameras:

Select the method of configuring cameras, if you unsure, select “All at Once” to configure all cameras with the same settings.

Video Recording:

Select when the camera(s) will be recording.

Always Record video whenever the unit is on.

Event Only Record video only when triggered by an event.

Never Never record video, camera will only be used for observation.

Audio Recording:

Select when the camera(s) will be record audio.

Always Record audio whenever the unit is on.

Event Only Record audio only when triggered by an event.

Never Never record audio.

Resolution:

The recording resolution for each camera determines the overall number of pixels recorded, the larger the number the better the image clarity. 1080P is highest, 540P lowest.

Bitrate:

The bitrate is the amount of data used per second for video recording. Higher bitrates will provide the highest picture quality but will also provide the lowest amount of stored video. Lower bitrates will reduce the quality of the video but increase the amount of storage capacity on the disk. Bitrate affects the sharpness, color definition and overall clarity of the image. Low bitrates will provide images without less accurate colors and pixilation of the image.

Frame Rate:

The framerate is the number of images (frames) captured per second of video. A higher number will provide a smoother video but will reduce the overall image quality if the bitrate is not changed; if the bitrate is increased it will lower the amount of video that can fit on the disk. Lower frame rates will allow for more recorded video and better image clarity, but the video will appear “choppier”. The default framerate is 10fps and it is only recommended to increase the framerate for exterior camera views and only if the video is unsatisfactory.

Video File Length:

This setting will determine the maximum length for each video file, the default setting is 10 minutes, so each hour would create 6 video files.

Camera Status:

Shows current state of each camera. If the display indicates “OK” that means the camera is connected and working properly. If it displays “No Signal,” the camera communication has not been established or is not working properly.

Record Status:

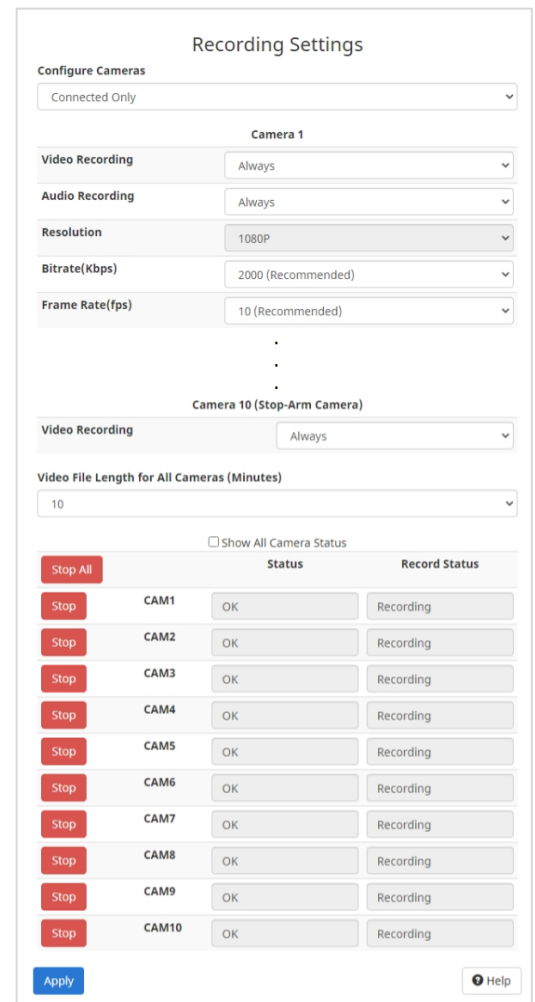
Indicates if the camera is currently recording by displaying “Recording” or displaying “Idle” (not recording).

Start All and Start/Stop:

Allows the control of the camera recording state, typically used to temporarily start/stop recording for testing purposes.

OSD:

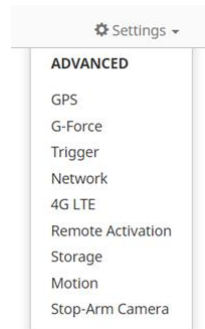
OSD is the On-Screen Display of data overlay on the video, unchecking this box will the video overlays.



Stop	Status	Record Status
Stop	CAM1 OK	Recording
Stop	CAM2 OK	Recording
Stop	CAM3 OK	Recording
Stop	CAM4 OK	Recording
Stop	CAM5 OK	Recording
Stop	CAM6 OK	Recording
Stop	CAM7 OK	Recording
Stop	CAM8 OK	Recording
Stop	CAM9 OK	Recording
Stop	CAM10 OK	Recording

Advanced DVR Settings

Advanced DVR settings are adjusting by clicking on the settings button in the upper right corner of the web page and then selecting the category from the drop-down menu.



GPS Settings

GPS Status:

Status of the GPS Signal, if the GPS is not connected or signal has not yet been acquired it will be displayed in this box.

GPS Baudrate:

Baud rate of GPS antenna communication, for the PD-1902 it is 4800. This should only be changed if specified by a PRO-VISION technician.

Coordinates OSD:

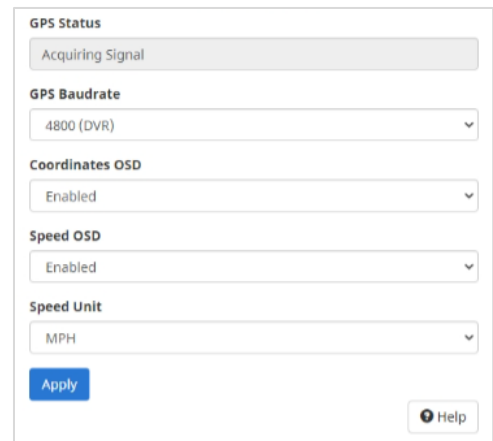
Disabled this if it is not desired to show the location coordinates on the video.

Speed OSD:

Disabled this if it is not desired to show the speed on the video.

Speed Unit:

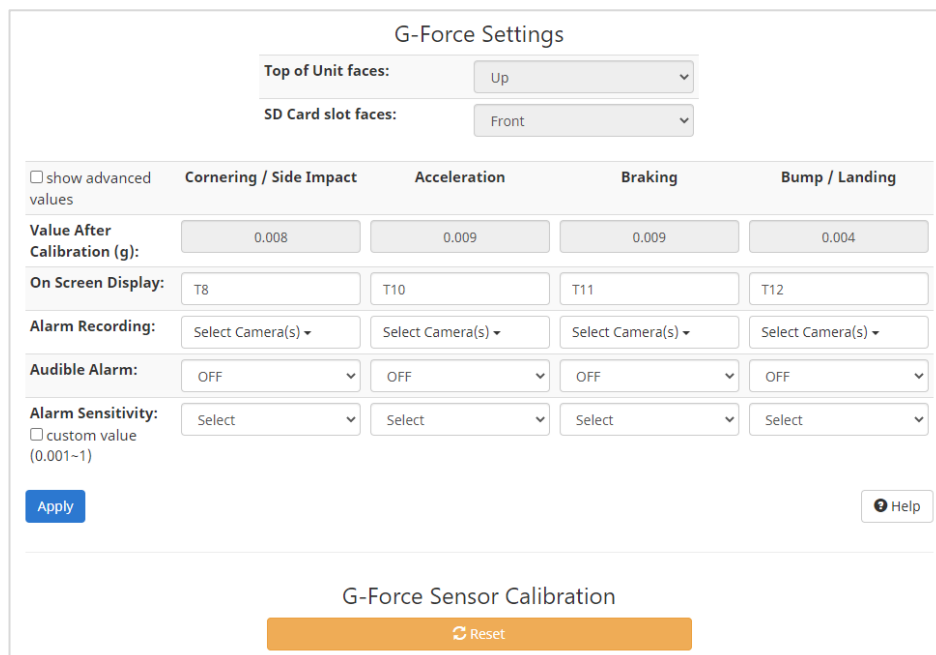
The units used in the on-screen display for the current vehicle speed. (MPH or KPH).



G-Force Settings

The DVR unit has a built-in G-Force sensor that can be used as a trigger to activate alarm recording. The sensor must be calibrated after the system is installed. To calibrate, ensure the DVR is mounted and the vehicle is parked on a level surface and then follow the onscreen prompts on the G-force page to complete the calibration.

After calibration, various settings can be configured to trigger Alarm recording and set sensitivity.



G-Force Calibration (Reset)

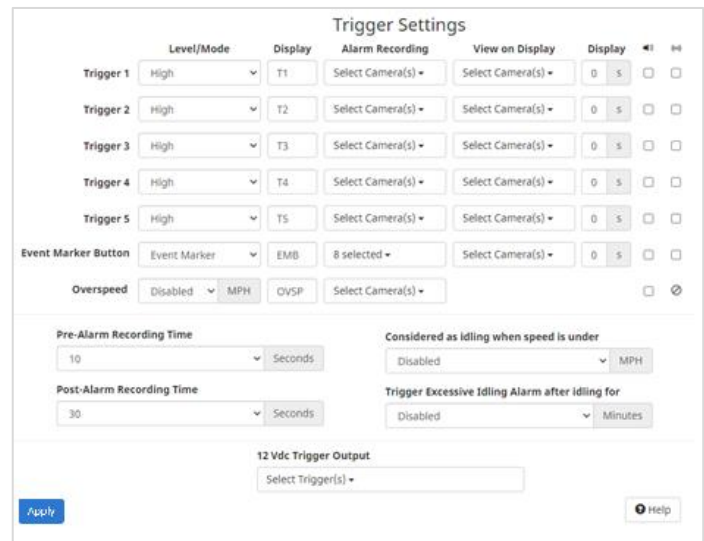
If the DVR has been relocated on the vehicle or if it is suspected that the calibration is incorrect, press the “Reset” button at the bottom of the page. A warning dialog box will display allowing the user to continue and replace all previous configurations with new or default settings or cancel the action. To continue the reconfiguration, follow additional system prompts after selecting “Yes”.



Trigger Settings

This page allows the configuration of all the triggers for activating Alarm functions. Each row in the trigger setup pages refers to a specific trigger.

Triggers 1-5 are the physical trigger wires on the rear of the DVR unit, Event Marker Button is referring to the external event marker button typically mounted near the driver, and overspeed is based on the vehicle speed from the GPS.



Level/Mode:

Type of signal set to High if connecting to a 12-24V DC signal or to “Low” if setting to a ground level signal. Normally this would be set to “High”, but the wireless microphone trigger (Trigger 3) should be set to “Low” level.

Display:

Enter a four-character code to show on the video in the bottom left corner when a trigger is active. Example: If trigger 1 is for a light bar activation, the word LTS may be used.

Camera Alarm Recording: Select the camera views that will Alarm record when the event has been triggered.

Full Screen View:

If selected when the trigger is active the monitor view will change to the selected view. When the trigger is inactive the view will return to the default view set on the “Display Settings” page.

Alarm Beep:

Checking this box provides an audible tone to alert the operator that a trigger has been activated.

Remote Activation:

Checking this box will use the selected trigger to send a remote activation signal for BODYCAM devices if the remote activation feature is also enabled.

Pre-Event Record Time:

Also known as pre-event recording, this is the amount of time the system will "cache" video for an alarm event (0-60 seconds). When a trigger is activated, this amount of time before the activation will be added to the start of the event.

Post-Event Record Time:

Also referred to as post-event recording, this is the amount of time an alarm recording will continue after a trigger has been deactivated (0-180 seconds).

Idling Alarm:

If desired, set the speed (typically 0MPH) and time before an idling alarm is triggered on the DVR.

12VDC Trigger Output:

Select the desired triggers that will activate the 12VDC output (if connected).

Network Settings

The network settings allow the user to configure the LAN and Wi-Fi functions of the DVR unit. The default configuration is to have Wi-Fi enabled using Wi-Fi Access Point Mode. There are two different Wi-Fi modes on the DVR unit that can be set from the “Wi-Fi Mode” option at the top of the page. The device can be set to one of the following modes:

1. Access Point Mode:

Enabled by default, this mode allows your smart device to connect directly to the DVR unit via Wi-Fi for remote configuration and access to view cameras and recorded video files.

2. Client Mode (Unit to Building):

This mode is used to allow your device to automatically connect to your building’s Wi-Fi when it comes into range. Once connected to the network, video files on the DVR can be accessed and transferred remotely either manually or automatically using the SecuraMax, CloudConnect, or Connect (ECB) software.

Note: If the device is set to Wi-Fi Client mode, it cannot be directly accessed via Wi-Fi AP to change settings (since the AP mode is no longer enabled). The Wi-Fi AP mode can be temporarily re-enabled by pressing and holding the “STOP” button on the front of the DVR for 7 seconds and then releasing once a single beep is heard. To return the DVR to Wi-Fi Client mode, press and hold the “STOP” button on the front of the DVR for 7 seconds and then release once a single beep is heard or connect to it via Wi-Fi AP mode and change the Wi-Fi Mode setting through the web interface.

If you do not want to use the built-in Wi-Fi, set the “Wi-Fi” at the top of the page to “Disabled”. Once applied, the only way to connect to the DVR unit is through the LAN connection.

Wi-Fi Settings: Access Point Mode:

When enabled, the Wi-Fi AP mode broadcasts a Wi-Fi SSID to allow devices to connect. The SSID is password protected using WPA2 AES security mode

Unit IP:

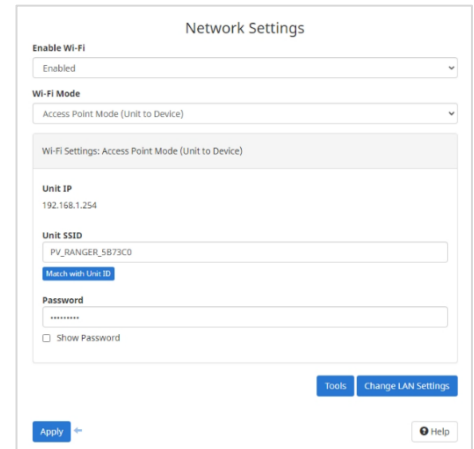
This is the IP address of the DVR unit for communication to your device once connected.

Unit SSID:

This is the name of the Wi-Fi AP that the DVR will broadcast. The default configuration is “PV_RANGER_XXXX”. This should be changed to a name that contains the unit number of the vehicle to allow identification among the other vehicles around it. Clicking “Match with Unit ID” will automatically add the set Unit ID to the name of the Wi-Fi SSID.

Password:

Password security protects the Wi-Fi from undesired access. All DVR units are shipped using a default password of “doesitall” which should be changed to something unique. In general, fleet Wi-Fi passwords are set to the same, unique organization password.



Network Settings

Enable Wi-Fi: Enabled

Wi-Fi Mode: Access Point Mode (Unit to Device)

Wi-Fi Settings: Access Point Mode (Unit to Device)

Unit IP: 192.168.1.254

Unit SSID: PV_RANGER_5B73C0

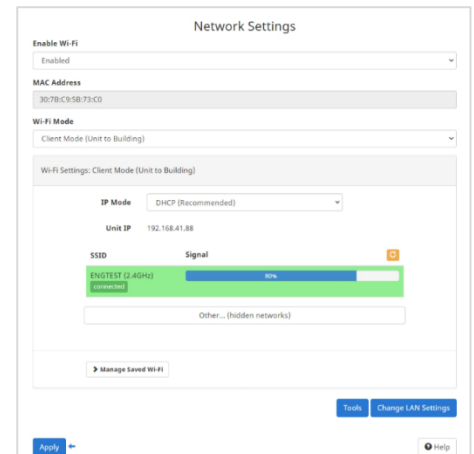
Match with Unit ID

Password: *****

Show Password

Tools Change LAN Settings

Apply Help



Network Settings

Enable Wi-Fi: Enabled

MAC Address: 30:7B:C9:5B:73:C0

Wi-Fi Mode: Client Mode (Unit to Building)

Wi-Fi Settings: Client Mode (Unit to Building)

IP Mode: DHCP (Recommended)

Unit IP: 192.168.41.88

SSID: ENGTEST (2.4GHz) [Broadcast]

Signal: [Progress bar]

Other... (hidden networks)

Manage Saved Wi-Fi

Tools Change LAN Settings

Apply Help



Wi-Fi Settings: Access Point Mode (Unit to Device)

Unit IP: 192.168.1.254

Unit SSID: PV_RANGER_PVVS

Match with Unit ID

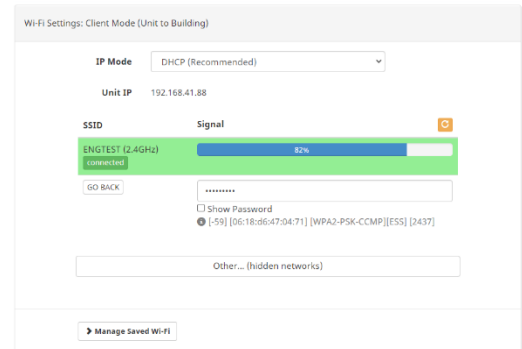
Password: *****

Show Password

Wi-Fi Settings: Client Mode:

When the DVR is in Wi-Fi Client mode, a list of available Wi-Fi networks displays. Select a network, enter the password, and then click the “Apply” button at the bottom of the page. The DVR connects and display its connected IP and signal strength.

Wi-Fi Client mode supports only WPA2 Personal (AES or TKIP) and WPA2 Enterprise (PEAP) network security types.



IP Mode:

Allows the user to select the IP mode for the connection (Static or DHCP). It is recommended to leave it at DHCP.

Unit IP:

If connected, the IP address of the DVR unit will display.

SSID:

This is the name of the building Wi-Fi AP that the DVR will connect to. A green indicator button below the SSID shows the connectivity status (connected or not connected).

Signal (Strength):

Displays the receiving signal strength in a percentage.

Go Back:

This shows all available network connections.

Password:

This is the password of the building Wi-Fi AP. Passwords are typically case sensitive (upper and lowercase letters).

Other (hidden networks):

This shows any additional, available networks. Requires an SSID, Username, and Password to access.

Manage Saved Wi-Fi:

This displays the Wi-Fi networks previously entered for the DVR connection. Wi-Fi networks can be added or removed.

LAN Settings:

Click “Change LAN Settings” to configure advanced network settings. These settings should only be changed by someone with advanced technical knowledge as this action can cause loss of communication with the DVR.

LAN MAC Address:

This the location of the networked device.

Set DVR LAN as DHCP Client:

Select to use an assigned IP/DHCP (connect to router/switch) or a static IP/Static IP.

DVR LAN IP:

This is the LAN IP Address of the DVR unit. It should not be changed unless attempting to connect the LAN port of the DVR directly to another routing device.

DVR LAN Netmask:

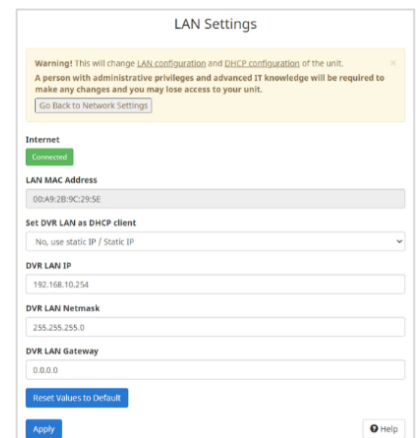
This is the subnet mask of the DVR unit’s LAN IP.

DVR LAN Gateway:

If the DVR unit is to be connected to the internet through LAN, this must set to the IP of the gateway/router.

Reset Values to Default:

This will return the DVR to its original configuration.



Static IP:

It is not recommended to change the static IP address on the DVR unit's LAN connection unless it is necessary to connect the LAN to an in-vehicle router or gateway.

MAC Address:

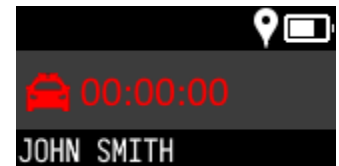
MAC addresses are unique numbers used to identify networked devices. The MAC address can be used to locate the device on the network, if you intend to connect the device to your local network, it is recommended to record the MAC address of each unit for future reference. If the device has been connected to the network, you can find it from a Windows PC on the network by opening "command prompt" then using the command "arp -a" to view the current Address Resolution Protocol (ARP) cache and then locating the devices MAC from the list of all devices on the network and viewing its associated IP address.

4G LTE

If the device was purchased with the 4G modem, this page will show options and status for the 4G functions, it allows the carrier selection and the enabling of the 4G service. If the device does not have a 4G modem, this page will display a message indicating, "No Modem Found".

Remote Activation

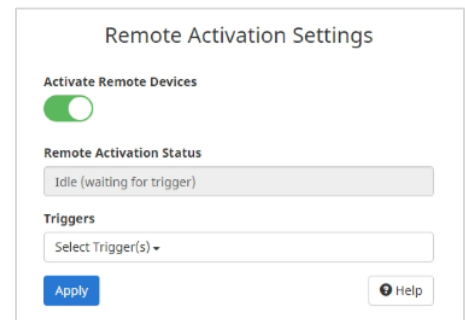
The PRO-VISION DVR-908 system has a radio that can transmit a signal that can remotely start recording of a BODYCAM 4 device. The DVR and the BODYCAM must each be configured to allow the remote activation function to work.



The DVR unit allows any of its connected triggers to be configured for remote activation. The activation signal will begin broadcasting when the preset trigger on the DVR is enabled (such as the level 1 lights).

Any BODYCAM 4 camera(s) that are within a 30 ft. (9M) range of the vehicle will be activated by the signal from the DVR unit. When activated, the camera will display an icon to the left of recording time representing activation by the vehicle DVR. When the camera is activated, it will follow the same sounds, LED states, and vibrations as when the camera is manually activated by the user.

- When a BODYCAM 4 is activated by a signal, recording notifications will occur the same as if the user has activated it manually; the LCD display will show an indicator of the type of device that activated it.
- BODYCAM 4 cameras that are activated by the activation signal do not also broadcast a signal. Only cameras in the proximity of the signal originator will be activated.
- Remote activation only starts Event recording on the BODYCAM 4; Event recording must be stopped manually on each device that was activated.
- Once a camera has been remotely activated by a signal, if that camera manually ends the event, it will not become reactivated by that same signal.
- When the DVR is triggered, the signal continues broadcasting until the trigger is stopped. If a configured BODYCAM 4 enters the proximity of that DVR at any time while it is broadcasting, it will be activated.



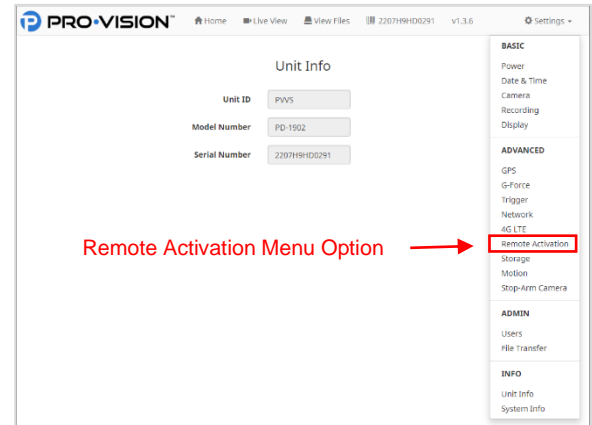
BODYCAM 4 Configuration:

The camera configuration must be set to allow it to be activated by vehicle DVR units. A secondary option Activate camera from devices? My Organization / All Compatible

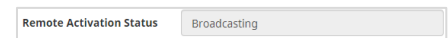
DVR-908 System Configuration:

This DVR signal can be set to broadcast when a trigger on the In-Car system is active. It is typically configured to be broadcasting when the overhead flashing lights are active but can be configured to be activated from any of the systems triggers. To enable this functionality, the in-car system must be set to broadcast when triggered.

1. Connect to the DVR unit and navigate to the “Remote Activation” settings page.
2. Turn on the “Activate Remote Devices” switch.
3. Choose the desired triggers that will activate the cameras from the “Triggers” dropdown.
4. Press “Apply” to apply and save the changes.



Test the function by enabling the trigger; the “Remote Activation Status” should change from “Idle” to “Broadcasting”.



Storage

Disk Information:

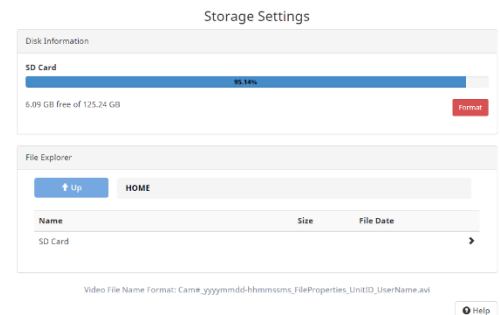
This area shows the memory available and free on the SSD or SD card.



Format:

This button will format the disk and erase all previously stored data.

File Explorer:

This area allows the user to browse the storage disks and remotely view and download files.



1. Choose the disk (SD or SSD) and click on it to open it.
2. The disk will contain log files that can be viewed, or you can choose the “Video” or “Alarm” folder to begin navigating the video file storage.
3. Each file will have two options on the right side:
 - a. Press the “Open” button  to open the file in your web browser (If supported).
 - b. Press the “Download” button  to download the file to your device for local playback.

Motion Settings

Motion-triggered recording is used when motion within a specific camera view or region within a camera view is needed to trigger the recording. This should only be enabled for interior cameras. The DVR and cameras need to be powered ON for motion detection to function. Motion detection can only be enabled on the analog camera inputs of the DVR (Cameras 1-4).

Click on a button along the top of the menu to choose a specific camera to adjust settings. Changes made on this page are for selected camera only. Please note that images are displayed on these pages are not live, but rather a still image grabbed at the time of loading the page.

Motion Areas:

Click on image in the desired areas to detect motion.

Motion Recording:

Enable this function to use the motion detection to trigger Alarm recording on the DVR.

Adaptive Bitrate:

This allows the DVR to conserve data by reducing file size when there is little movement, disabling this feature provides the best picture quality but the smallest file sizes.

Audible Alarm:

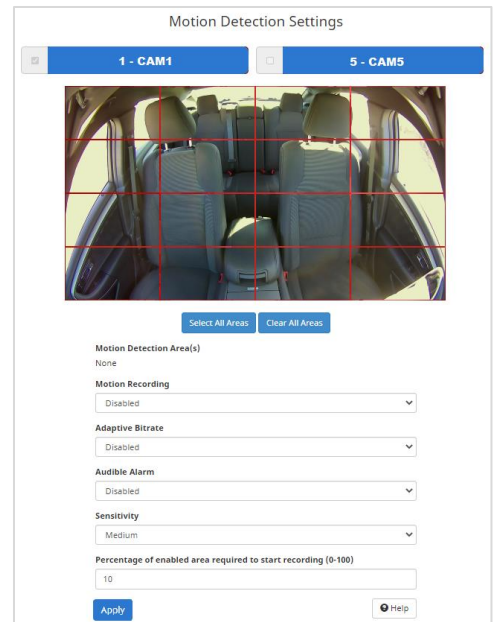
Motion activity causes the DVR to produce a loud beeping if this is enabled.

Sensitivity:

This is the amount of motion required to trigger.

Percentage:

This is the size of the object(s) that triggers motion. The larger the percentage, the larger the moving objects.



Stop-Arm Camera

If a DVR-824 Stop-Arm camera is connected to the DVR unit, the “Stop-Arm Camera” settings page will appear in the DVR unit’s web menu under “Advanced” settings.

Vehicle Detection Status: Shows the current status of the detection feature.

Disabled Feature is disabled.

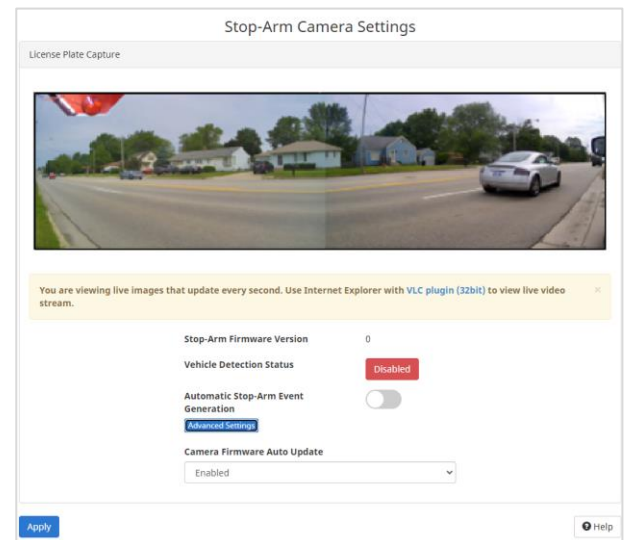
Ready Feature is enabled and ready to use.

Detected Trigger is active, and a vehicle or object has passed the stop-arm camera.

Automatic Stop-Arm Event Generation: The switch will enable the automatic event generation. Slide this switch to the right to enable the detection feature.

Stop-Arm Trigger Connection: Select the desired trigger that is connected to the stop-arm open trigger signal. The event detection feature will only be looking for events when this trigger signal is present.

Testing:



To test the stop-arm camera functionality, ensure the page status displays as **Ready**, turn on the trigger for the stop-arm by activating the red lights, and then physically move hand across from one camera lens to the other, the status should change to **Detected**.

The DVR unit will create a “Stop-Arm” folder in the root directory of the primary recording disk. Then a folder will be created with the date/time of the event. This folder will contain video files from both cameras for 5 seconds before and 5 seconds after the test event:

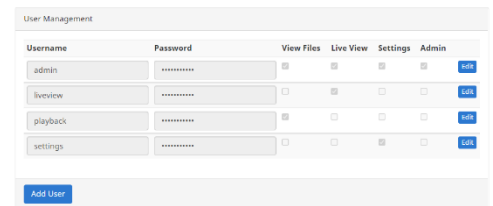
SD/StopArm/20200101/20200101_10/7_201200101_102511_PVVS.avi Rear Facing Camera View

SD/StopArm/20200101/20200101_10/7_201200101_102511_PVVS.avi Front Facing Camera View

Admin

Users

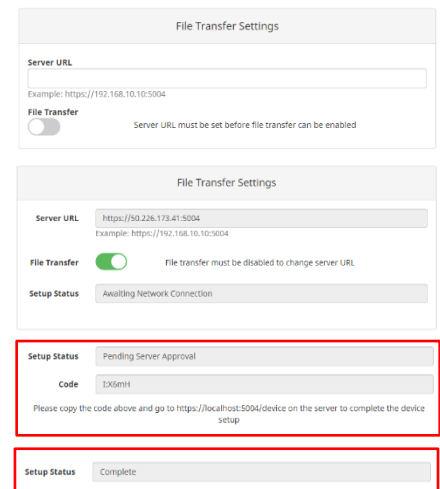
The “User Management” page is only accessible to an “Admin” user account. This page allows the customization, addition, and changing of passwords and permissions for user accounts. There are four user accounts created by default with various permission levels. To modify or delete the accounts, use the “EDIT” and “DELETE” buttons to the right.



File Transfer

The transfer page is where the software is configured to link to file transfer software. If using Connect (Formerly ECB), CloudConnect, or SecuraMax software, this must be configured for use.

Server URL: This is the address of the server that is used with the connectivity software. To find the specific Server URL, open the software and locate the “Add Device” page. After entering Server URL, click the selector switch to enable File Transfer. The switch will change to green color and show “Awaiting Network Connection” in the status box. Once properly set up and linked to the server, the “Setup Status” box will display “Complete”.



Info

Unit Info

Unit ID appears in each camera video and video file name. It controls what shows up in PVTransfer/SMX.

System Info

The system information can be accessed via the top menu bar by clicking on the unit serial number link, or via the Settings drop-down menu. This page contains Unit Info, Camera Info, and optional actions such as Configuration Import or Firmware Update, Configuration export, Reboot, and Factory Reset.

The screenshot shows the 'Unit Info' configuration page. At the top, there is a label 'Unit ID' followed by a text input field containing 'PVV5'. Below this is a yellow informational box with the text: 'Unit ID appears in each camera video and video file names. It controls what shows up in PVTransfer/SMX.' At the bottom left is a blue 'Apply' button, and at the bottom right is a 'Help' icon.

The screenshot shows the 'System Info' page. It is divided into two main sections: 'Unit Info' and 'Camera Info'.
Unit Info:
Serial Number: 220719R020211
Model Number: PD-1902
Firmware Version: 1.3.6
More
Camera Info:
Camera 1: Version: AHD_1809P30
Camera 2: Version: AHD_1809P30
Camera 3: Version: AHD_1809P30
Camera 4: Version: AHD_1809P30
Camera 5: Version: AHD_1809P30
Camera 6: Version: AHD_1809P30
Camera 7: Version: AHD_1809P30
Camera 8: Version: AHD_1809P30
Below the camera list is a section titled 'Import Configuration / Update Firmware'. It contains a file selection area with the text: 'Select a configuration file (*.cfg) or firmware file (*.tar) to update:' and a 'Choose File' button. At the bottom of this section are 'Upload', 'Export Settings', 'Reset Log', and 'Help' buttons. At the very bottom of the page are two large blue buttons: 'Reboot' and 'Factory Reset'.

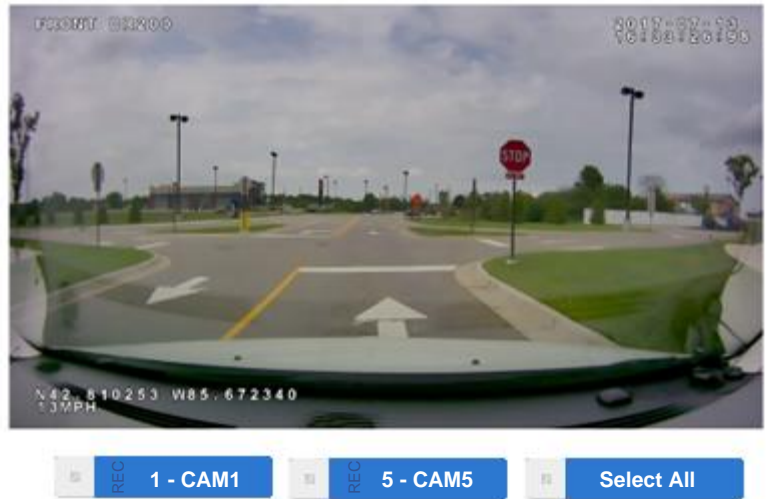
Viewing Cameras on a Smart Device

The DVR can be accessed using an Ethernet cable to a laptop or desktop PC, or it can be accessed wirelessly using a laptop, tablet, or smartphone device (with Wi-Fi AP Mode enabled).

1. Follow connection steps in the [Connecting to the DVR](#) section in this guide.
2. The “Home” page will open, then choose “Live View” from the top of the page.

“REC” will display in red next to the camera number for cameras that are currently recording.

“ALM REC” will display in yellow next to the camera number for cameras that are currently alarm recording.

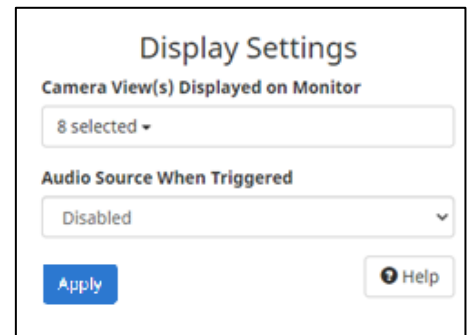


Select the camera you wish to view by clicking the red camera box; to select multiple cameras click the checkbox(s) next to the red camera box.

Viewing Cameras on a Display

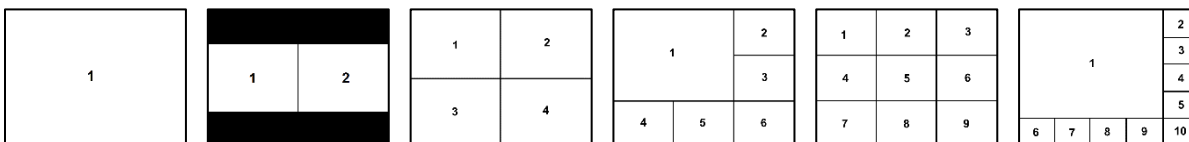
Cameras can be viewed live on a monitor display. There are two video outputs on the rear of the DVR:

1. **SD A/V Output:**
 Using the included A/V Output cable, connect the yellow RCA composite video output to a video input on your display.
2. **HD A/V Output:**
 Using a standard HDMI cable (purchased separately), connect to a HDMI port on your display.



The output settings can be configured on the “Display” setting page. Choose the camera views that you wish to display on the monitor. Each of the cameras will display in a split screen configuration based on the selected cameras.

Single and Multiple Camera Displays (1, 2, 4, 6, 9, and 10)



You can also configure which camera audio is live when the DVR is triggered.

Refer to the connection diagram in the [Installation Quick Guide](#) at the beginning of this document for connection details.

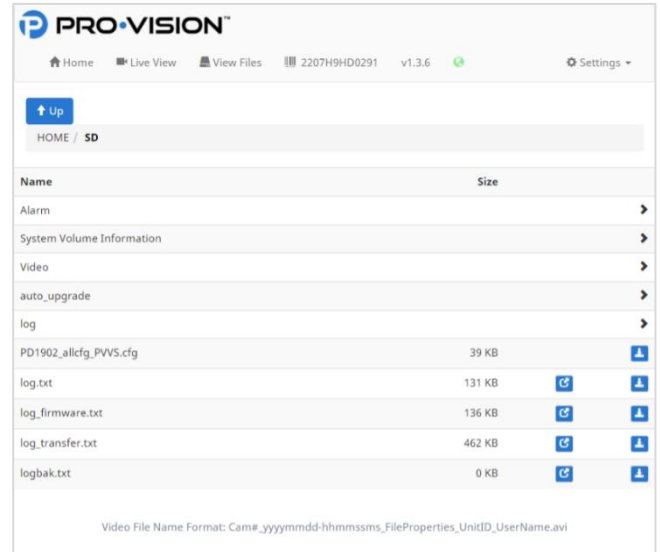
VIDEO PLAYBACK

There are multiple methods of playing back video from the DVR unit:

1. Directly from the DVR unit through a web browser.
2. Removing the SD Card or SSD and connecting it to a computer.
3. Directly from the office computer/server using one of PRO-VISION connectivity software packages such as Connect, CloudConnect, or SecuraMax.

Viewing Video through a Web Browser

1. Connect to the drive recorder through Wi-Fi on your device.
2. Open a web browser on the device and type “192.168.1.254” in the address bar and press Enter.
3. The drive recorder’s web interface will open, and you will see the Unit ID and be prompted to login.
4. Login to the interface using one of the login credentials (Default for View Files only permissions is Username: “playback” Password: “watchvids”)
5. Click on “View Files” to navigate to the playback page.
6. The contents of the disks will be shown. Select the disk, then click on the desired folder for playback: “Video” for normal video, “Alarm” for event marked videos.
7. Select and click the appropriate date for the desired event.
8. Select and click the date and hour folder (24-hour format) for the desired video.
9. Choose the appropriate file to download it to your device for playback.



Viewing Video from the SD Card

The DVR unit stores video on an SD Card or on an SSD. It can be removed and connected to a computer for review.

1. Use a key to unlock the DVR cover and remove it.
2. Press the stop button to stop video recording. To ensure the recording is stopped, check to see that the STATUS LED on the front of the unit is NOT solid green.

Important! *The unit will automatically resume recording 30 seconds after the “STOP” button is pressed; if the recording LED becomes solid green before the disk has been removed, press “STOP” again.*

3. Remove the SD card press pressing it in slightly until it clicks, then it will pop out enough to handle.
4. Place the SD Card into a PRO-VISION® USB SD Card Reader (Part # DVR-102) or an equivalent SD Card reader with SDXC card support, then connect the reader to a USB port on the computer.
5. Go to “Computer” or “My Computer” to access the files. The drive will show as an additional “Removable Disk” on the computer.
6. Navigate through the files to the desired date/time and double click a file to play on the computer’s media player.

Viewing Videos Transferred with Software

PRO-VISION Connect (Formerly Enhance Connectivity Bundle)

Open the PRO-VISION Player software, click the Vehicle List button, from the window that opens, select your vehicle/device, and then click on the transfers tab.

CloudConnect

Login to your CloudConnect account and then use the search box on the homepage to locate your video. You can also select your vehicle/device and then view the recent transfers.

SecuraMax

Login to your SecuraMax account and then use the search/filter box on the homepage to locate your video.

File Structure & File Naming

File structure:

SD / Alarm / 20170508 / 20170508_10 / 2_20170508_104500_PVVS01.avi

SD / Alarm / YYYYMMDD / YYYYMMDD_HH / C_YYMMDD_HHMMSS_[UnitID].avi

Disk / Video Type / Date / Date _ Hour / Camera _ Date _ Time _ Unit Number. File Type

Disk: Storage Disk Type (SD Card)

Video Type: Video for normal video, Alarm for important event video

YYYYMMDD: YYYY=Year, MM=Month, DD=Day of start of file

HH: HH where HH=Hour in 24-hour format

C: Camera number, 1=Front, 2=Inside, 3=External

HHMMSS: HH=Hour, MM=Minute, SS=Second for start of file

File Type: Video files are in “.avi” file format, Images are in “.jpg” file format

TROUBLESHOOTING

DVR Unit Troubleshooting

Problem	Possible Causes	Solution
DVR has no lights on and will not boot up.	DVR has no battery power or ground signal (no lights on DVR).	Check the fuse(s) on the red battery power and black ground wires on the DVR power cable for proper connection.
DVR has lights on but will not boot and begin recording.	DVR has no ignition signal.	Check the green ignition wire on the DVR power cable for connection when the vehicle key is ON.
	Ignition signal is set improperly.	DVR's are shipped with a high level (12-24VDC) ignition level setting, if using a ground ignition, the ignition level must be changed in the interface.
	There is an excessive current draw or power short on a camera, cable, or accessory.	Disconnect each item from the DVR one at a time to determine which item is preventing the boot.
The DVR powers on when the key is off and off when the key is on.	Ignition signal is set improperly.	DVR's are shipped with a high level (12-24VDC) ignition level setting, if you are using a ground ignition the ignition level must be changed in the interface.
The DVR remains on after the key is turned off.	The ignition power off delay is set on the DVR.	Adjust the power off delay in the DVR menu to 0 seconds to make it turn off with the ignition.
DVR will not load the SD Card.	The SD card is not inserted fully.	Ensure the SD card is fully inserted and clicked into DVR, it should be flush with the DVR faceplate.
	The SD card is locked in write protected mode.	Remove the card and ensure that the switch on the card is up towards the contacts of the card.
	The SD card is not properly formatted for use in DVR.	Ensure the card is a PRO-VISION SD card and is formatted to the FAT32 file system (requires IT help).
	SD Card is corrupted.	Reformat the SD card to FAT32, contact tech support if needed.
	SD Card physically damaged.	Contact sales to purchase a replacement.
DVR will not load the Solid-State Drive (SSD).	The SSD card is not full seated in the drive tray.	Ensure the SSD is full inserted and clicked into DVR, it should be flush with the DVR faceplate (screws are recommended but not required).
	The SSD card is not properly formatted for use in DVR.	Ensure the SD card is formatted for the FAT32 file system (requires IT help).
	SSD Card is corrupted.	Reformat the SSD card to FAT32, contact tech support if needed.
The Status light on the DVR or event button is flashing RED.	The DVR is not recording because it does not have a disk loaded.	See the "DVR is not loading SD card/SSD" section above.
	The DVR is not recording because the SD/SSD is full of video.	Free up space on the disk by enabling Overwrite in the DVR's web interface or by deleting the Alarm video on the disk.
	The DVR is not recording because of a software issue internally.	Contact Tech Support.

Problem	Possible Causes	Solution
DVR is not recording at all.	The SD card or SSD is not able to be loaded by DVR.	See the "DVR is not loading SD card/SSD" section above.
	The camera(s) are not set to record.	Go to the Recording settings page of the web interface and ensure that the recording is set to Auto for each camera.
	There is no free space available on the SD/SSD.	Free up space on the disk by enabling Overwrite in the DVR's web interface or by deleting the Alarm video on the disk.
DVR is filling up with video and no longer recording (may be beeping also).	If the video on the disk that is full is all in the "Video" folder, then the Overwrite feature is not enabled.	Go to the web interface under Storage and ensure the "Overwrite" box is checked.
	If the video on the disk that is full is all in the "Alarm" folder, then something is triggering the recording too often.	Ensure that whatever triggers are set to record are only things that happen on occasion. Triggers that are recording for regular events will always fill up the disk. Check the Triggers, G-Force and GPS pages to uncheck the camera recording boxes for the triggers where recording is not necessary.
DVR is recording some cameras but not all.	The camera(s) that are not recording are not set to record in the menu.	Go to the Recording settings page of the web interface and ensure that the recording is set to Auto for each camera.
	A camera is not working properly or is damaged.	Test to ensure it is a camera problem by swapping that camera to another input on the DVR unit.
	A cable is damaged/broken.	Test the cable by bypassing it with another cable or connecting that camera directly to the DVR. Replace if damaged.
	If multiple cables are used, the correct cables might not have been used or were installed improperly.	Ensure that at least one cable is a 30 ft. repeater cable (has an inline booster), and that the repeater is connected to the DVR. Multiple 20 ft. cables cannot be connected.
DVR restarts/reboots on its own.	The SD card or SSD is not able to be loaded by DVR.	See the "DVR is not loading SD card/SSD" section above.
	There is a problem with a camera, cable, or accessory.	Disconnect each component one at a time to isolate the cause, review the log text file(s) on the SD card to determine what is causing the issue.
	There is a software problem with the DVR unit.	Contact technical support, have the log text file(s) from the SD card available.

Web/Viewing Troubleshooting

Problem	Possible Causes	Solution
Able to connect to the Wi-Fi but cannot access the DVR web interface.	The device is configured with an incorrect IP.	Ensure that the device(s) network settings for Wi-Fi are set to DHCP rather than a static IP.
	The web path was entered incorrectly.	Ensure the LAN web address of 192.168.10.254 was entered.
	The DVR's Wi-Fi AP has DHCP disabled.	On your device, enter a static IPv4 address of 192.168.10.100 mask of 255.255.255.0 and then connect to the DVR and go to the Wi-Fi settings and re-enable DHCP.
Can connect to DVR and view web interface but it is not responsive and will not display video.	The DVR is not actually connected and the page you are viewing is an offline stored version from a previous connection.	Establish a connection to the DVR.
Can connect to DVR and view web interface and everything seems to work except live video display.	The browser does not support the VLC® video viewing plugin.	Use a browser that supports the VLC® plugin such as Microsoft® Internet Explorer®.
	The VLC® video plugin is not installed for the browser.	Download VLC® Media Player for your computer from www.videolan.org and install it; the plugin for your browser (Microsoft® Internet Explorer®) must be selected during the install.
	The VLC® video plugin has not been activated to allow network access to view video.	Activate the plugin in your browser by going to the Tools > Add-Ons section. Find and activate the VLC® Plugin.
The web interface is accessible, but some functions do not work properly.	The browser on the device is displaying a stored version of the web page from a previous connection.	Refresh the browser and dump the stored version by pressing Ctrl + F5 while on the DVR web page.
Unable to view recorded videos over Wi-Fi or LAN.	The device does not support video playback, or a suitable video player or plugin is not installed.	For laptops, install the VLC® Plugin for Internet Explorer®, for tablets/phones you must download a video playback app from your app store.

DVR Connection/WIFI Troubleshooting

Problem	Possible Causes	Solution
DVR's Wi-Fi is not visible.	DVR is not powered ON or booted up fully.	Ensure the DVR is powered and booted, this takes 30 seconds from the time the key is turned on.
	DVR's Wi-Fi AP is disabled.	Connect a laptop to the DVR's LAN port and enter the DVR web menu to change settings or re-enable the Wi-Fi AP.
	DVR's Wi-Fi AP is set to "Hidden SSID."	Connect a laptop to the DVR's LAN port and enter the DVR web menu to change settings or make the Wi-Fi AP SSID visible.
DVR's Wi-Fi is visible, but device does not allow it to connect.	Device(s) Wi-Fi is disabled.	Re-enable the WIFI on the smartphone, tablet, or computer.
Wi-Fi signal goes in and out.	The signal strength of the Wi-Fi is poor.	Relocate the vehicle, reposition the antennas on the building and/or the vehicle.
	The Wi-Fi is rebooting.	Any time Wi-Fi settings are changed, the Wi-Fi must reboot for the changes to take effect.
	The DVR is rebooting.	If the DVR is rebooting, each time it will shut down the Wi-Fi during the reboot.
Wi-Fi light on DVR goes on and then back off.	The Wi-Fi is rebooting.	Any time Wi-Fi settings are changed, the Wi-Fi must reboot for the changes to take effect.
	The DVR is rebooting	If the DVR is rebooting, it will shut down Wi-Fi during every reboot.

Problem	Possible Causes	Solution
Able to connect to the Wi-Fi but cannot access the DVR.	The device is configured with an incorrect static IP.	Ensure that the network settings of the devices Wi-Fi are set to DHCP rather than a static IP.
	The web path was entered incorrectly.	Ensure the web address of 192.168.10.254 was entered.
	The DVR's Wi-Fi AP has DHCP disabled.	Enter a static IPv4 address of 192.168.10.100 mask of 255.255.255.0 and then connect to the DVR. Go to the Wi-Fi settings and re-enable DHCP.
DVR's Wi-Fi Client does not find the buildings Wi-Fi.	The buildings Wi-Fi is out of range of the DVR.	Relocate the vehicle, reposition the antennas on the building and/or the vehicle.
	The buildings Wi-Fi is using an unsupported name format.	Ensure the buildings Wi-Fi SSID name is not using spaces or special characters.
DVR's Wi-Fi Client will not connect the buildings Wi-Fi.	The signal strength is poor of the building's Wi-Fi AP.	Relocate the vehicle, reposition the antennas on the building and/or the vehicle.
	The security key was incorrectly entered.	Find the Wi-Fi AP again and reenter the security key.
	The security mode of the buildings Wi-Fi AP is not compatible with the DVR.	Change the security mode setting of the buildings Wi-Fi AP.

DVR Status Lights

LED Light	Indication	Description
STATUS (RED/GREEN LED) - DVR - Event Button	OFF	No power to DVR, or no power to Event Button.
	FLASHING GREEN	DVR is booting up or is booted up but not set to record.
	ON SOLID GREEN	DVR is recording, DVR is working properly.
	FLASHING RED	DVR cannot record, SD card issue, camera issue.
4G (AMBER LED)	OFF	No power to DVR, no 4G modem, 4G is disabled, or 4G has not yet booted.
	ON SOLID	4G is connected and available for data transfer.
	FLASHING	4G is connected and transferring data to/from DVR.
PWR (GREEN LED)	OFF	No power to DVR.
	ON SOLID	Ignition Accessory Signal Detected and DVR is booting/booted.
	FLASHING	System has no ignition signal and is in a standby/delayed shutoff state.
RUN (GREEN LED)	OFF	No power to DVR.
	ON SOLID	System error state, unplug then reconnect power to reset.
	FLASHING	Delayed shutoff if flashing with PWR, standby if flashing opposite PWR.
Wi-Fi (AMBER LED)	OFF	No power to DVR, Wi-Fi is disabled or not yet booted.
	ON SOLID	Wi-Fi is running and ready for connection(s).
	FLASHING	Wi-Fi is connected and transferring data to/from DVR.
SYS (AMBER LED)	OFF	No power to DVR, system not yet booted.
	ON SOLID	System Processor is running and ready for operation.
	FLASHING	System Processor is in operation.
SD (RED LED)	OFF	No power to DVR, No SD Card Inserted, SD Card is not detected.
	ON SOLID	SD Card has been detected and loaded by DVR.
	FLASHING	SD Card has been loaded and transferring data to/from DVR.
SSD (RED LED)	OFF	No power to DVR, No SSD inserted, SSD is not detected.
	ON SOLID	SSD has been detected and loaded by DVR.
	FLASHING	SSD has been loaded and transferring data to/from DVR.

SD Card Troubleshooting

Problem	Possible Causes	Solution
DVR will not load the SD Card or SSD	The SD card or SSD is not inserted fully.	Ensure the disk is fully inserted into DVR, it should be flush with the DVR faceplate.
	The SD card is locked in write protected mode.	Remove the card and ensure that the switch on the card is up towards the contacts of the card.
	The SD card or SSD is not properly formatted for use in the DVR.	Ensure the card is a PRO-VISION disk and is formatted for the FAT32 file system (requires IT help).
	SD Card or SSD is corrupted.	Reformat the disk to FAT32, contact tech support if needed. See below to identify and correct the cause of the corrupted disk.
	SD Card or SSD is physically damaged.	Contact sales to purchase a replacement.
Disk is corrupted or contains abnormal files	Disk was removed from DVR while recording.	Ensure that the status light is off or flashing green before removing the disk. If the status light is solid green, press the STOP button on the front of the DVR and wait until the light begins flashing before removing the disk.
	Disk was removed from computer while file was in use.	Ensure that all disk folders and playback software is closed before removing the disk from the computer. The best practice is to use the "Safely Remove" feature to remove the disk. This action will alert you if the disk is currently in use before removing it.
	DVR lost power while recording.	If the DVR's battery power or ground wire loses connection while the DVR is in operation, the DVR cannot properly shutdown and files can be corrupted. Allow the DVR to properly shut down or press the "STOP" button and then remove the disk before doing any service to the electrical system on the vehicle.
	DVR input voltage dropped below 10V or could not supply enough current to the DVR.	If the battery voltage drops below 10V, or the required current can't be provided to the DVR while it is in operation, the DVR cannot properly shutdown and files can be corrupted. This current supply issue can sometimes occur if a major draw on the electrical system occurs such as when the engine's starter is engaged to start the vehicle. Relocating the power connection directly to the battery may resolve this problem. Contact technical support for additional details.
	Computer lost power while disk was in use.	Ensure that the disk is properly removed from computer before power is disconnected.
	Disk is damaged.	Inspect the disk for physical damage, physical damage to the disk housing may cause the disk to not remain connected properly in the slot during DVR operation causing intermittent loss. Replace the disk with one that is not damaged.
	Disk is malfunctioning.	If the disk cannot be formatted, files cannot be erased, or is inaccessible, contact technical support to determine if it can be covered under warranty.

Camera & Accessory Troubleshooting:

Problem	Possible Causes	Solution
Some cameras are viewable in the web interface but not others.	A camera is disconnected or is not working properly or is damaged.	Test to ensure it is a camera problem by swapping that camera to another input on the DVR unit.
	A cable connection is not connected, or the cable is damaged.	Test the cable by bypassing it with another cable or connecting that camera directly to DVR. Replace if damaged.
	If multiple cables are used, the correct cables might not have been used or were installed improperly.	Ensure that at least one cable is a 30 ft. repeater cable (has an inline booster), and that the repeater is connected to the DVR. Multiple 30 ft. cables cannot be connected.
No cameras can be viewed live in the web interface.	Connection/Plugin Issue.	See the Web/Viewing section above.
GPS coordinates are not appearing on video files.	The GPS OSD is not enabled on the DVR.	Ensure that the "GPS OSD" is checked in the DVR web interface on the GPS settings page.
GPS speed is not appearing on the video files.	The GPS speed checking is not enabled on the DVR.	Ensure that the "Obtain Speed" box has "From GPS" Selected.
Event Button light is not working.	Event button is not completely connected to DVR cable.	Remove then reinsert the event button connector into the DVR interface cable.
	GPS/Event/Triggers cable on DVR is not fully connected or is damaged.	Check the cable to ensure that it is fully and securely connected to the DVR.
	Event button or cable is damaged.	Contact a sales representative to purchase a replacement.
GPS Overspeed trigger is activating too often.	The speed limit is set too low.	Adjust the "Speed Limit" to a higher speed.
G-Force is activating triggers too often.	The G-Force threshold for the X, Y or Z axis is set too low.	Adjust the threshold for the appropriate axis to a higher G-Force threshold setting.
The trigger wires are activating opposite from when the signal is received.	The signal "Level" is set incorrectly in the DVR interface.	Go to the Triggers page in the DVR menu and adjust the "Level" to the opposite of that being used for the current setting.
A beeping noise occasionally is heard on the DVR.	The "Buzzer" is enabled for a connected trigger, G-Force, or GPS.	Set the buzzer setting to "Off" to disable the beeping.
	The DVR has a problem and cannot record.	Check the SD Card and review the log file if needed.

COMPLIANCE

The PRO-VISION model PD-1902 Hybrid Digital Video Recorder (DVR) is a radio transmitter and receiver. It is designed and manufactured not to exceed the emission limits for exposure to radio frequency (RF) energy set by the Federal Communications Commission (FCC) of the U.S. Government. These limits are part of comprehensive guidelines and establish permitted levels of RF energy for the general population. The guidelines are based on standards that were developed by independent scientific organizations through periodic and thorough evaluation of scientific studies. The standards include a substantial safety margin designed to assure the safety of all persons, regardless of age and health. Before a device model is available for sale to the public, it must be tested and certified to the FCC that it does not exceed the limit established by the government-adopted requirement for safe exposure.

This device complies with part 15 of the FCC Rules. Operation is subject to the following two conditions: (1) This device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation.

This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and receiver.
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- Consult PRO-VISION Technical Support for help.

Changes or modifications to the equipment not expressly approved by PRO-VISION could void the product warranty and the user's authority to operate the equipment.



WARRANTY

PRO-VISION warranty provisions are applicable to all PRO-VISION DVR-908 system products. See PRO-VISION's website, www.provisionusa.com for detailed warranty information.