ventra

VLCD-K7 Series

Blind Spot Vision Enhancement / DVR System

Installation / User Guide

Please read and follow all instructions before install and operation. Save for future reference.

For latest update and specs, visit www.ventrainc.com

Manual Ver 10 22

IMPORTANT Failure to follow these safety warnings could potentially result in an accident, serious injury or death

Never solely rely on camera displays. Always physically check surrounding to ensure complete safety while operating the vehicle or equipment

Ventra vision enhancement system is a technology to aid driver in operating the vehicle. It is the complete responsibility of the driver to ensure safe driving

Install the device in a manner that does not obstruct the driver's view of the front or sides of the vehicle, or interfere with the safe operation of vehicle

Do not operate, adjust or view the device while driving or when vehicle is in motion

Do not install the device unsecurly on the dashboard, or place the device in front of or above an airbag

Please comply with all driving and traffic regulations

To reduce the risk of fire or electric shock, do not expose the LCD Monitor to water, liquid, rain or moisture

Disconnect the power from the LCD if equipment or wire is exposed to liquid

Disconnect and replace the cable if wire is stripped or damaged

Do not disassemble or alter the equipment, cable or accessories as this may lead to equipment error and failure, which will void all warranty

In the event of an impact or accident, please check to ensure the equipment is properly secured. Inspect the mounting bracket and screws for any signs of da mage

When using the power connection cable, ensure all connections are secured

Use only recommended SD card specifications as it may affect data storage

When Power is connected, do not remove the SD card as it may cause memory card failure

Do not modify the name of file folders in the SD card as it will cause directory and recording issues

Ventra VLCD-K7 system - Suitable for Vehicle, Equipment and Asset

Ventra vision enhancement system is ideal for any type of vehicle and asset including Vans, SUV, Semi Tractors, Specialized Vehicle, Construction, Farm Equipment, Forklifts and Trailers.

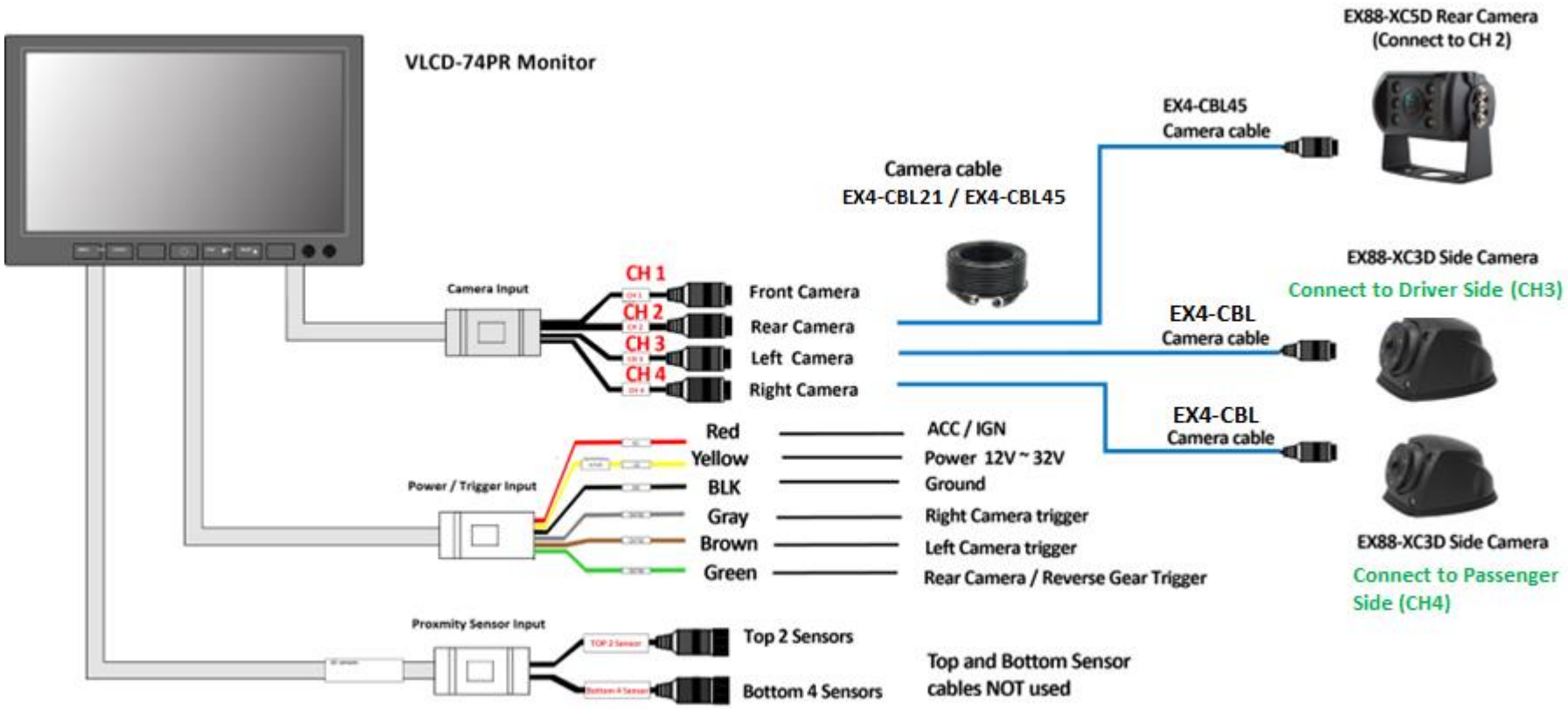





Feature Highlight

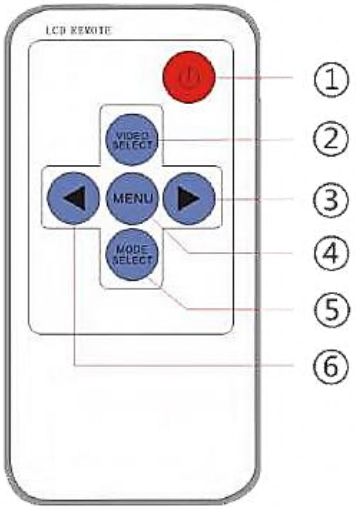
- 3 -1 Multifunction System: Blind spot / front and rear-view camera display, Rear object sensor detection, LCD screen display and video recorder
- 7” LCD Hi Resolution monitor connects up to 4 cameras
- Minimize blind spots with wide angle view cameras
- Continuous auto loop video recording function
- Supports up to 128 GB MicroSD card storage
- Supports 1080P AHD / 720P AHD and CVBS camera resolution
- Configurable split screen display mode (4 CH Quad Mode, 3 CH T-Mode, 2 CH dual mode, 1 CH Full Screen)
- Video playback function directly on LCD monitor
- Trigger cables automatically switch camera display view
- Parking Mode Function records continuous video while vehicle is parked

System Layout Wiring Diagram

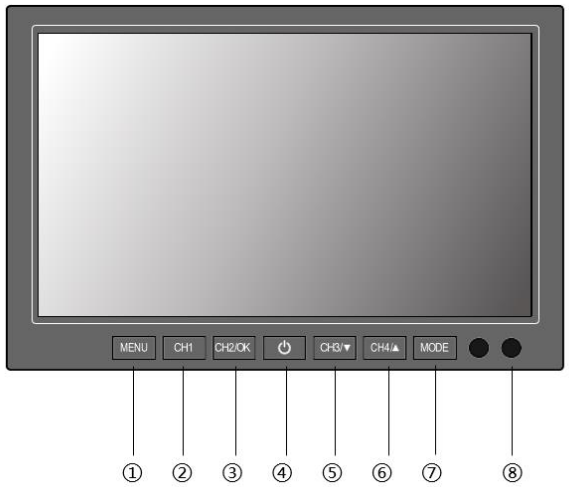


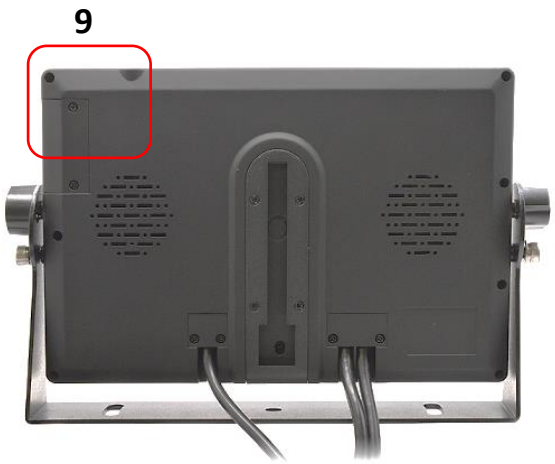
IMPORTANT **System must have constant power to retain system clock, or else the date and time will revert to factory default. Ensure the YELLOW Wire (12V) is connected to a constant 12V Source fuse. This will NOT drain vehicle battery**

LCD Monitor Layout



1	Power	Screen off, Power off system
2	Video Select	Up selection
3	Right	Right selection / OK
4	Menu	Enter Menu settings / Return button
5	Mode	Change camera display mode. In video playback mode – Play / Pause function
6	Left	Left selection / OK





1	Menu	Short press to access Settings menu / Long press for 3 seconds to access video playback menu
2	CH 1	Display CH 1 image
3	CH 2 / OK	Display CH 2 image, OK button applicable when in settings menu
4	Power	Screen off, power off system
5	CH 3 / Down	Display CH 3 image / Down menu scroll when in settings menu selection
6	CH 4 / Up	Display CH 4 image / Upward menu scroll when in settings menu selection
7	Mode	Change camera display mode. In video playback mode – Play / Pause function
8	IR Receiver	Receiver for handheld remote
9	SD Card Slot (Rear of Monitor)	MicroSD card for video recording. Support up to max. 256 GB capacity. Minimum write speed Class U1 and up

Install VLCD-74PR LCD monitor

1. Depending on the vehicle, the LCD monitor may be ceiling mounted or dash mounted. The U Shape monitor bracket can be flipped based on location
2. Different mount options may be used – monitor has slide rail on the rear, as well as ¼ hole 20 thread. Custom mount brackets sold separately
3. Clean mounting surface to remove dust and debris, ensure an even flat surface. Use screws with washer (or nut and bolt) into the base of U-Shaped bracket
4. Ensure the mounting bracket is properly secured to avoid movement or fall
5. Monitor angle may be adjusted by loosening the knobs on the side of monitor. Once adjusted, tighten knob to ensure angle is secured

System Power / Trigger Wire Connection

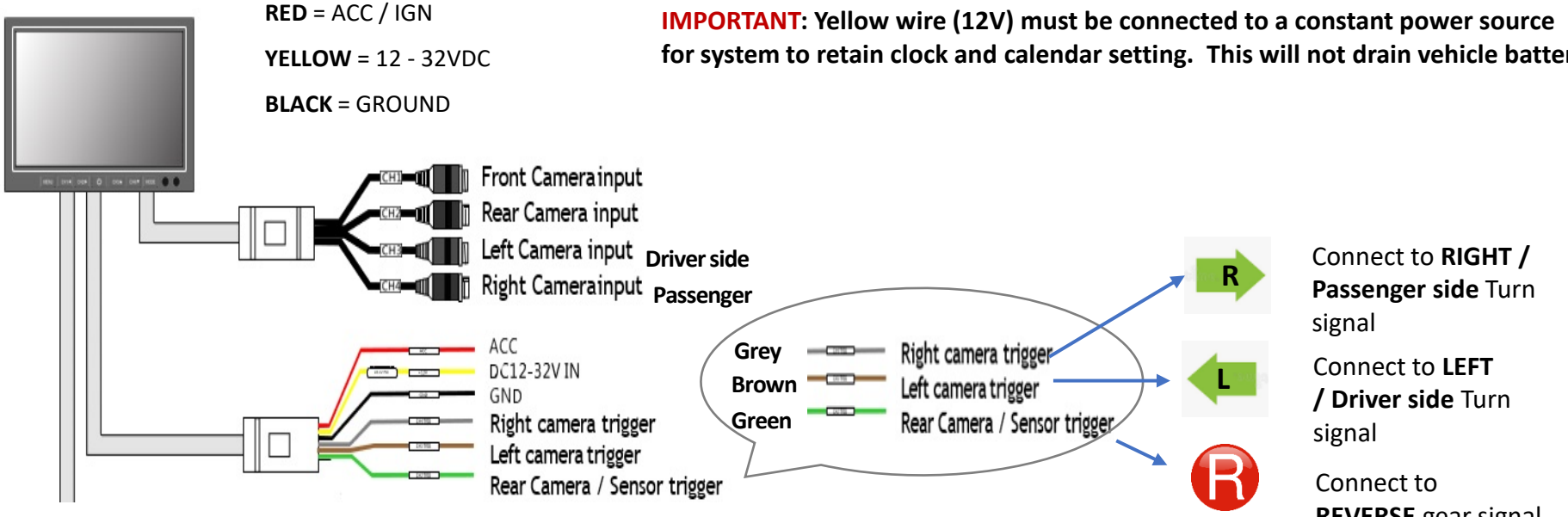
System requires 3 wire connection

RED = ACC / IGN

YELLOW = 12 - 32VDC

BLACK = GROUND

IMPORTANT: Yellow wire (12V) must be connected to a constant power source for system to retain clock and calendar setting. This will not drain vehicle battery



Connect to **RIGHT / Passenger side** Turn signal

Connect to **LEFT / Driver side** Turn signal

Connect to **REVERSE** gear signal

IMPORTANT: **Check vehicle manufacture user manual to ensure proper connection of power, fuse and turn signal wire**. **Never CUT, Strip and splice OEM factory wires as it may damage or interfere with vehicle operation. Use Posi- Tap / T-Tap connectors when connecting Ventra systems to vehicle wire.** As many wires are multi function wires and when tapping into those, could lead to other undesired malfunctions.

Turn Signal Trigger – OPTIONAL CONNECTION

When finding turn signal, find the TRUE Turn Signal. Use voltage meter to measure the wire of turn signal. Example: Tap the brake and see if there's voltage. If there's voltage on the wire, then it's a multipurpose wire – do not connect Ventra turn signal trigger wire to that wire

For any triggered action, such as turn signal or reverse gear, the monitor will continue to display full screen mode of that camera for **7 seconds** (user configurable) after trigger is disengaged.

EX88-XC3D Side camera for both driver and passenger side

CH 3 Input = Driver Side Camera

CH 4 Input = Passenger Side Camera

Camera angle should **NOT** be obstructed by any object. Camera should be placed at **least 3 inches** above fender

IMPORTANT – Check the interior of the truck first to ensure no existing factory cable / hardware before drilling camera hole to avoid any damage. Use Cable loom to protect cable and leave some slack for cable to move with vehicle sway

1. Once location is determined, use the rubber shock absorbent pad from the camera as the screw mounting and camera cable hole template
2. Using a **¼"** drill bit, drill a pilot hole first. Then use a **¾"** hole saw to drill the main hole for camera cable to go through. Clean any debris from the hole to prevent sharp edges
3. Carefully remove the 4 screws from camera housing to expose the screw holes to affix to vehicle.
4. Use **cable loom** to protect camera cable. Feed **the EX4-CBL15 15ft** camera cable through, and secure the cable with the grommet on the camera. Use screws (or nut and bolt) to secure camera on vehicle. Apply weather sealant to grommet to prevent water leakage through the truck body
5. Secure all camera cables to truck with cable ties. Route camera cables along the interior of the truck, avoiding sharp edges and corner. Provide slack for cable to minimize cable pull tension

Camera angle orientation can be adjusted by loosening the 4 screws located on each corner of the camera housing.

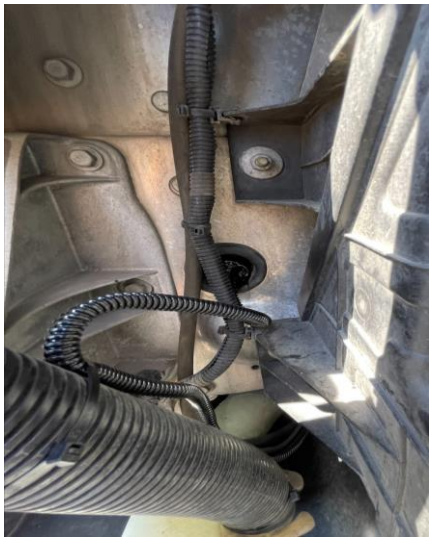
Gently rotate the camera angle so the **BLUE dot (light sensor) is at the bottom (6 o'clock position),** corresponding to the camera placement orientation.
This ensures proper camera viewing angle / orientation.

EX88-XC3D Side camera for both driver and passenger side - continued

IMPORTANT Always use cable loom to protect the cable from objects, sharp edges and liquid. Use cable tie to secure cable

Keep cable away as far away as possible from engine and high temperature components. Leave

Can route camera cable with existing vehicle cable to ensure optimal routing back into the vehicle compartment



EX88-XC5D rear camera on the rear of truck, van, equipment - (Refer to next page for cable routing)

1. Camera placement should be as close to the center as possible and not be obstructed by any object to ensure full video image. If there are existing lights or objects on the vehicle, mount the camera to either side, or below any objects such as racks or ladder

2. Using a ¼" drill bit, drill a pilot hole first. Then use a ¾" to drill the main hole for camera cable to go through. **IMPORTANT – Check the interior of the truck first to ensure there are no existing factory cable or hardware inside the truck to avoid any damage**

3. Once hole is drilled, feed **the EX4-CBL45 45ft** camera cable through **(protect camera cable with cable loom)**, and secure the cable with the grommet on the camera. Use screws (or nut and bolt) to secure camera on vehicle. Apply weather sealant to grommet to prevent water leakage through the truck body

4. Camera angle can be adjusted by loosening the screws located on the side of camera. Ensure the camera can see a **portion of either the rear door or step rail** as a point of reference. (Orange dotted line illustrates the angle as reference)

5. Secure all camera cables to truck with cable ties to avoid damage from door or object objects

6. Route camera cables along the interior of the truck, avoiding sharp edges. Connect camera cable to **INPUT 2** of the LCD monitor

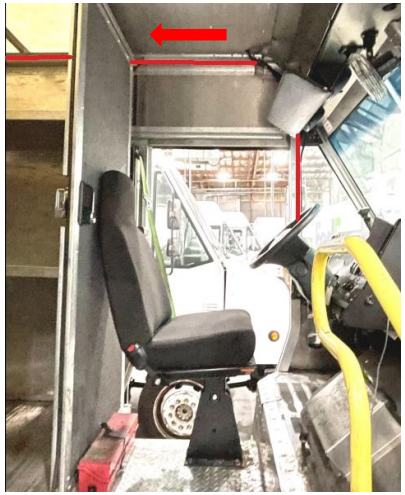
EX88-XC5D rear camera on the rear of truck, van, equipment - continued

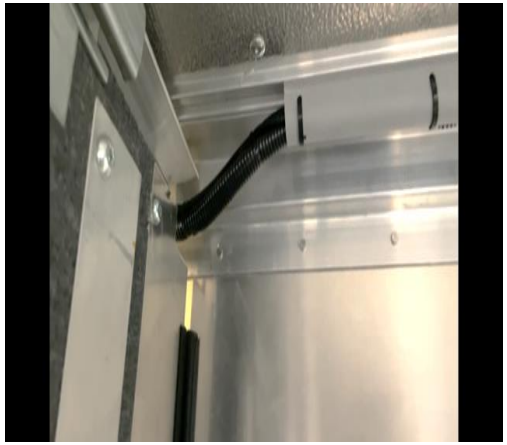
For sidestep van: can run the rear camera cabling from the DRIVER SIDE to the back of the truck

Use cable loom to protect cable and cable tie to secure cable. Make sure it does not dangle or get caught in the rear door panels and springs

Leave some slack in the cable to minimize tension from vehicle movement

Once rear camera is mounted, check and adjust the camera angle as needed

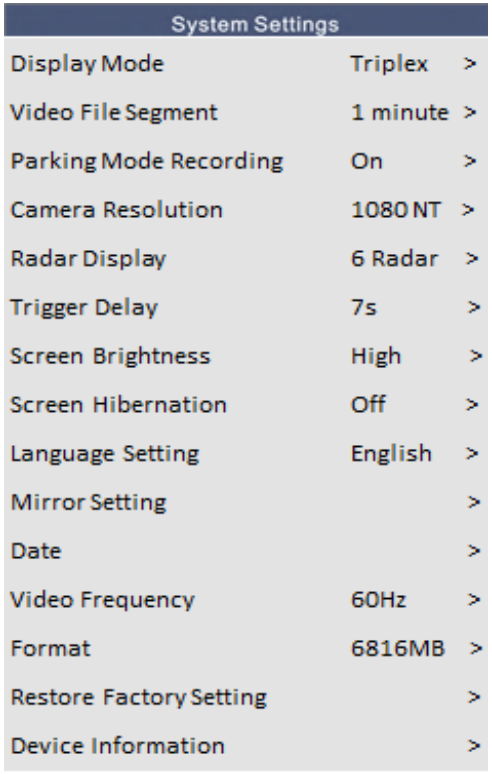




System Settings

For Radar Display, Select OFF as VLCD-K system does not include rear sensors

To access the Settings Menu, press the MENU button on the LCD monitor



Display Mode	Quad 4 CH, Quad "H Mode" T-Shape 3 CH, Split Screen	Select preferred camera display mode
Video File Segment	1 minute, 3 minutes, 5, minutes	Each video recording length duration before new video file.
Parking Mode Recording	On, Off (Default = Off)	Continuous video recording while vehicle is parked
Camera Resolution	1080 NTSC (US Default), 1080P PAL, 1080P TVI, 720P TVI, 720P NTSC, 720P PAL, CVBS	Video resolution of camera
Radar Display	6, 4, Off (Default = 6)	Number of rear sensors connected to system. **SELECT OFF for VLCD-K723**
Trigger Delay	1s, 3s, 5s, 7s, 10s (Default = 7 seconds)	Video display timer after trigger disengaged. System revert back to default display mode after set timer
Screen Brightness	Low, Medium, High (Default = High)	Brightness of LCD screen
Screen Hibernation	On, Off (Default = 6)	LCD screen auto dims to standby mode. Screen will auto wake up upon trigger or button activation
Language Setting	English, Spanish, Deutsch, Russian	
Mirror Setting	See Menu	Change image display of individual camera. Normal is opposite, Mirror is identical
Date	Date and Time Setting	Monitor must always have constant power to retain date/time. If power is interrupted, will need to reset date/time
Video Frequency	60Hz, 50Hz (Default = 60Hz)	Video frequency of camera
Format	Displays the SD card storage capacity, Format SD card menu	Card must be formatted on initial use. Maximum capacity 256 GB Micro SD Class 10 / U1 and faster
Restore Factory Setting	Restore all settings to factory default	
Device Information	Display device Firmware version	

Video Recording / Format SD Card / Parking Mode Recording

Intelligent auto video recording of all 4 cameras simultaneously when system powers on, regardless how many cameras are installed, and which camera(s) is displayed on the screen. (Red Dot Indicates Recording)

Video recording duration is user configurable (1 min, 3 min, 5 min) in settings menu. This means each video time durtaion before system starts a new video recording file. (i.e. system programmed to 3-minute video file segment. Every 3 minutes will be a new video recording file)

Automatic loop recording ensures system is continuously recording. System automatically deletes the oldest videos files from SD card with new files.

System will only record video if SD card is installed in LCD monitor

Split Screen View

Single Camera View

Format SD Card **(Card must be formatted on initial install)**

SD Storage: Maximum 256 GB Micro SD card capacity, Class 10 / U1 or faster speed

Formatting: SD card MUST be formatted first in the LCD monitor on initial install

To Format SD Card > **Menu** > Scroll to **Format** > Enter Password

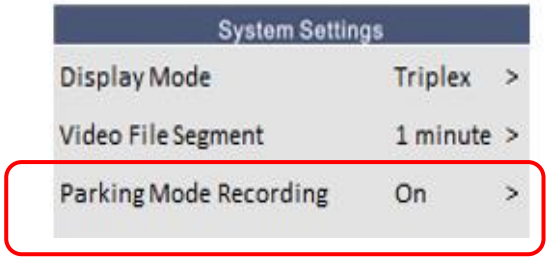
Password Sequence = CH 1, CH 2, CH 3, CH 4, MODE

Select **Yes** to format card

Parking Mode Recording:

This feature must be Enabled in the **Settings Menu** to activate. Parking mode provides enhanced security with continuous video recording while vehicle is parked

This is **NOT** a motion activated recording mode. System will continuously draw power from vehicle battery, ensure vehicle battery is in good condition and can provide sufficient power.



Video Playback: In LCD monitor

Press **MENU button** for **3 seconds** to enter video playback album

Navigate menu via **UP / DOWN** arrow to select video file. Each camera channel records its own video file and is displayed separately in the album as:

(F = Front, B = Back, L = Left / Driver, R = Right / Passenger)

Videos are stored in chronological order.

Press **OK** to play video

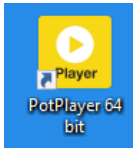
Follow on screen display prompt to Pause, go to next file or return to Main menu

Videos cannot be deleted from the system as a security measure

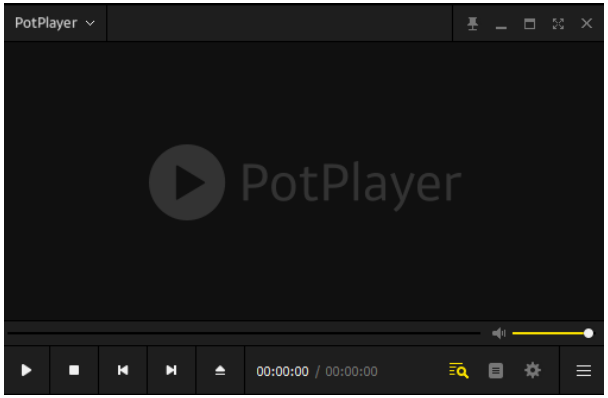
Press **Menu** button again to exit playback mode

Video Playback: SD Card view Windows PC

To view the SD card on a Windows computer, remove SD card from system when it is powered OFF, insert SD card into PC



Install **PotPlayer** (Free open source media player)
https://potplayer.daum.net/



Follow on screen display prompt to select video file based on camera, time/date

Video Display Mode

System can be configured to display multiple camera viewing options

1 Cam Full Screen, 2 Cam Split Screen, 3 Cam Tri-View, Quad Square, Quad H

Press **Mode** to manually navigate Camera display sequence

Press CH 1, CH2, CH3, CH 4 button to select individual full screen image

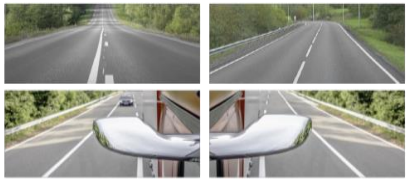
Default viewing mode is Triplex, 3 CH T-Shaped display consisting of the Rear Camera on the Top, Driver side camera on the Left and Passenger side camera on the Right

To change default display mode > **Menu** > Select **Display Mode** > Change setting

When trigger wires are connected to Left / Right turn signa or Reverse, upon activation of trigger, the LCD will automatically display the corresponding camera in full screen, and remain for **7 seconds** after trigger is disengaged

Trigger delay timer configurable in system setting
(1s, 3s, 5s, 7s 10s)

Refer to Setting Menu



VENTRA LIMITED WARRANTY

Ventra Technology warrants the system against defects in material and workmanship for a period of **one (1) year** from the date of original purchase. During this period, Ventra's liability for any defective product, or any product part, shall be limited to the repair or replacement of the product, at Ventra's sole discretion.

This warranty does not apply to defects or damages resulting from mishandling, accident, abuse, negligence, lightning, water/liquid, power surges, improper interfacing, operation outside of design limits, misapplication, improper repair, or unauthorized modification.

The term "Ventra Product" is limited to the hardware components and required firmware. It DOES NOT include software applications or programs, non-Ventra products or peripherals. To the extent permitted by local law, all non-Ventra products or non-Ventra branded peripherals - such as external storage SD card are provided provide the respective manufacturer's own warranties directly to you and are not covered by this Limited Warranty.

To obtain service within the warranty period, please contact Ventra at tech@ventrainc.com for assistance. If product repair or replacement is necessary, a Return Merchandise Authorization (RMA) will be issued. The Customer will be solely responsible for shipping charges, insurance and proper packaging to prevent breakage in transit, whether the product is covered by this warranty. All shipments of repaired or replaced products by Ventra will be F.O.B. California.

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The information in this specification sheet reflects the current technical specifications at the time of print. **Ventra reserve the right to change** the technical or physical specifications and features without prior notification. While every effort has been made to ensure the accuracy of the information, certain specifications are based on approximate figures

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