

## Digital Wireless Observation System

### Operating and Installation

### Instructions



This manual is for use with

**Furrion FOS48TAPK-BL**

**Digital Wireless Observation System**

**Furrion FRCBRKT-BL**

**Digital Wireless Observation System**

**With FRCBRKT-BL Mounting Bracket pre-installed.**

---

# Welcome

## **Furrion FOS48TAPK-BL Digital Wireless Observation System Includes FRCBRKT-BL Mounting Bracket**

## **Furrion FRCBRKT-BL Digital Wireless Observation System For vehicles with FRCBRKT-BL Mounting Bracket pre-installed.**

Thank you for purchasing a Furrion Digital Wireless Observation System. Furrion's digital wireless observation system is one of the easiest rear view camera systems to install in your trailer, truck or RV. All that is required is a connection of a single DC power supply to the rear camera from a running light power source.

The Furrion digital wireless observation system uses digital wireless technology giving the major benefit of superior signal transmission with low interference on a single bandwidth channel. This means the Furrion camera unit eliminates the interferences which other analogue signal systems are subject to, meaning the Furrion digital system gives you a clearer picture of what is behind you no matter where you are.

This Furrion system with integrated antenna attached to the camera has been specifically designed for use on trailers, trucks, 5th wheels, caravans and RV's. This system has been designed for extended range applications or security monitoring.

Before installation and use, please read all instructions carefully. This will ensure safe use and reduce the risk of injury to persons.

<b>IMPORTANT SAFETY INSTRUCTIONS.....</b>	<b>4</b>
<b>System Parts.....</b>	<b>5</b>
<b>Installation Mounting Bracket.....</b>	<b>6-7</b>
<b>Installation Camera Wiring.....</b>	<b>7</b>
<b>Installation Mounting Bracket cont.....</b>	<b>8</b>
<b>Camera Installation.....</b>	<b>9</b>
<b>Camera Positioning.....</b>	<b>10</b>
<b>Monitor Installation.....</b>	<b>11</b>
<b>Pairing.....</b>	<b>12</b>
<b>Picture Control.....</b>	<b>13</b>
<b>Trouble Shooting.....</b>	<b>14</b>
<b>Specifications.....</b>	<b>15</b>

---

# IMPORTANT SAFETY INSTRUCTIONS

## READ THESE INSTRUCTIONS CAREFULLY BEFORE INSTALLING OR USING THE SYSTEM

### Electrical Safety

⌘ A battery or 12 or 24V DC electrical system presents a risk of electrical shock or burn hazard. Ensure all power sources are isolated before installation.

⌘ Insulate unconnected wires with vinyl tape or similar.

⌘ Use insulated tools when working with a power supply.

### Caution

⌘ There are no user serviceable parts in the Furrion Digital Wireless Observation System. Do not disassemble or attempt any repairs.

⌘ There are no fuses or disconnects in the Furrion Digital Wireless Observation System. Install external fuses/breakers as required.

### Care

⌘ Do not wash the vehicle with an automatic car wash or high pressure water. This may damage the camera.

⌘ Clean the LCD screen with a microfibre cloth, do not use coarse or abrasive materials.

⌘ Do not use alcohol or ammonia based products to clean the LCD screen. Only use specialist screen cleaning products.

⌘ Use a wet cloth to clean the camera lens. A dry cloth may scratch the camera lens.

### Installation

⌘ Installation & wiring of this product require specialist skill. To ensure proper installation and to ensure safety, please seek a specialist technician.

⌘ Only use parts supplied or recommended.

⌘ Use watertight connectors for camera power supply cable to power source.

⌘ Use 16AWG or larger cables to supply power to the camera unit.

⌘ Connect rear the camera to a 8-30V DC circuit only.

⌘ Ensure correct polarity of DC power supply to the camera

⌘ To reduce the risk of fire, connect the camera only to a circuit provided with a maximum branch-circuit over current protection device.

⌘ Don't route wiring in areas that may get hot.

⌘ Take necessary precautions when working at elevated levels.

## FOS48TAPK-BL Digital Wireless Observation System



LCD Monitor



Monitor Stand



Camera



Monitor Power Cable

## FRCBRKT-BL Digital Wireless Observation System



Camera Bracket



Camera Bracket  
Gasket



Camera Power  
Cable

# Installation

## Mounting Bracket

(If the FRCBRKT-BL Mounting is pre-installed please go to page 9)

### ⚠ Caution

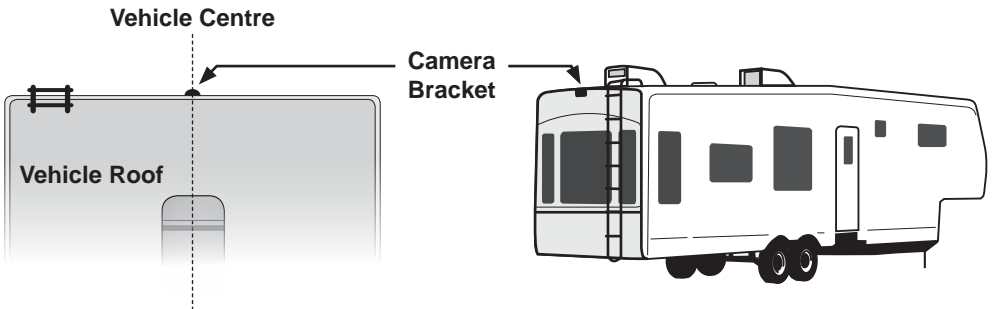
- Ensure there are no electrical cables, gas lines, pipes or other important parts behind where the drill holes will be.
- During installation, remove the key from the ignition & isolate the 12v or 24v power source.

### Suitable installation position

- Where practical, as high as possible at the rear of the vehicle.
- In the horizontal centre of the vehicle or as close as.

### Suitable installation position..

- Mount the camera directly above the red running lights.
- At least 2" away from any lighting. *Close proximity to lights may cause image blooming, blurring and reduced night vision performance.*
- The area should be flat with enough surface area to accommodate the bracket.
- The surface area should be clean & dry for a watertight installation.
- Ensure that power can be fed to the installation area from within the vehicle.

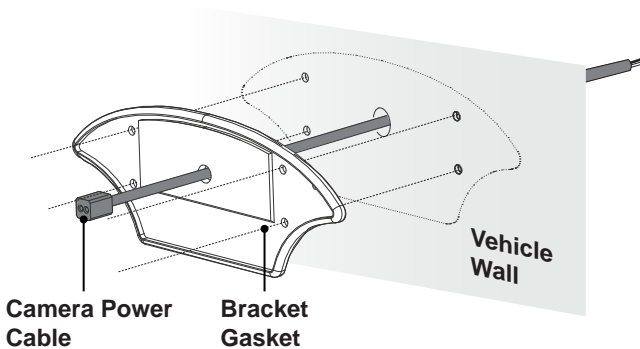


# Installation

## Mounting Bracket

① Use the Bracket Gasket to mark and outline where the centre hole will be drilled then drill a 5/8<sup>th</sup> hole.

② Feed the supplied 6<sup>ft</sup> Camera Power Cable through the gasket. Ensure the bare wire end of the cable goes into the vehicle and the flat side of the gasket faces inward.



## Wiring the Camera

### Electrical Power

- To use the Digital Wireless Observation System for observation purposes, it needs to be wired to a constant 12V/ 24V power source. e.g *If connected to running lights, the running lights must be on for the system to operate.*
- To use it as a reversing camera, it can be wired to a circuit that comes on when the vehicle is reversing.e.g *reversing lights*

Connects to  
Camera



Connects to  
12V/ 24V  
Power Supply

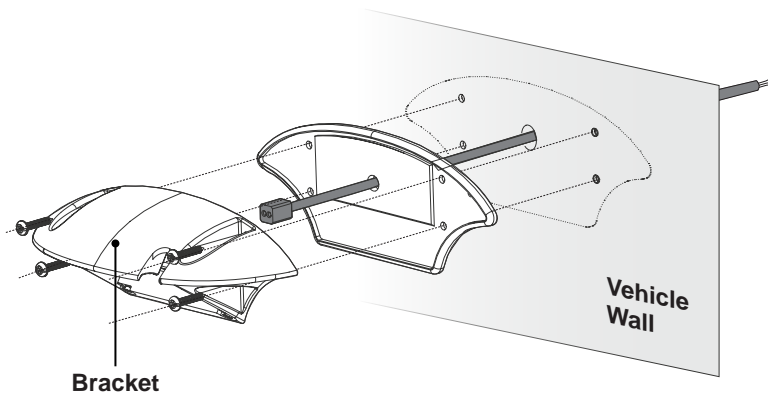
- Ensure correct polarity when wiring the cables. **RED + BLACK -**
- Wire connections & terminals must be sealed to be waterproof.
- ⚠ When connecting wires, ensure the circuit is isolated by disconnecting the - negative terminal on the battery.

# Installation

## Mounting Bracket

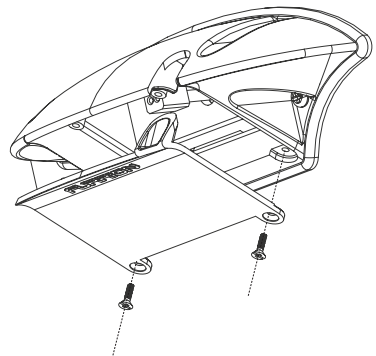
3 Mount the gasket & bracket to the rear of the vehicle. Ensure that the Camera Power Cable does not get caught between the vehicle wall & gasket or the Bracket & Gasket.

3 Fix the Gasket & Bracket to the rear of the vehicle using 4 x #2 head 3/4" self tapping screws. (*other screws can be used depending on side wall material.*) Ensure the sealing lip around the edge of the gasket is seated over the edge of the bracket before fully tightening the screws.



## Mounting Bracket

If only installing the FRCBRKT-BL Mounting Bracket, secure the Camera Power Cable inside the mounting and attach the cover.



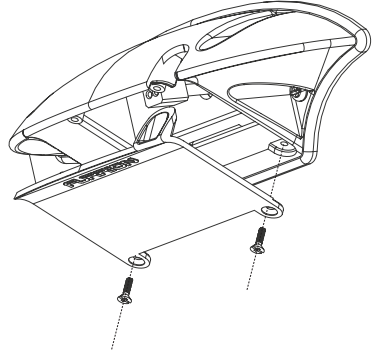


# Installation

## Camera Installation

### FRCBRKT-BL Pre-install only

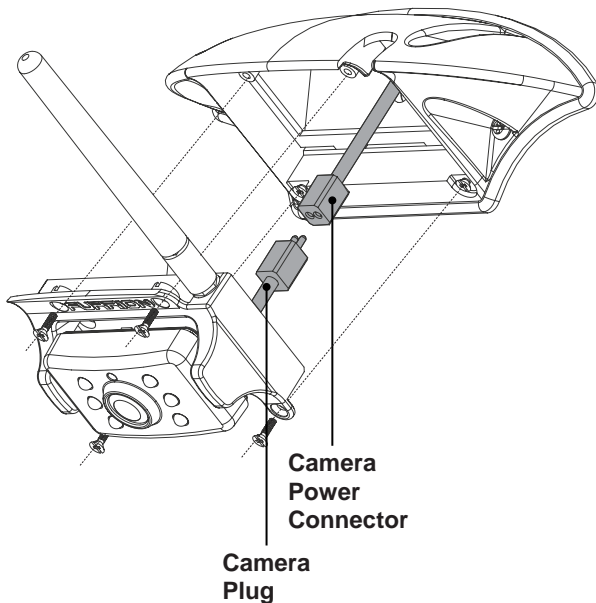
If installing to a pre-installed FRCBRKT-BL Mounting Bracket, remove the cover by unscrewing the 2 screws.



**1** Locate the Camera Power Connector from within the Bracket and connect it to the Camera Plug.

**2** Ensure the camera antenna is secured tight.

**2** Secure the camera to the Bracket using the 4 screws.



---

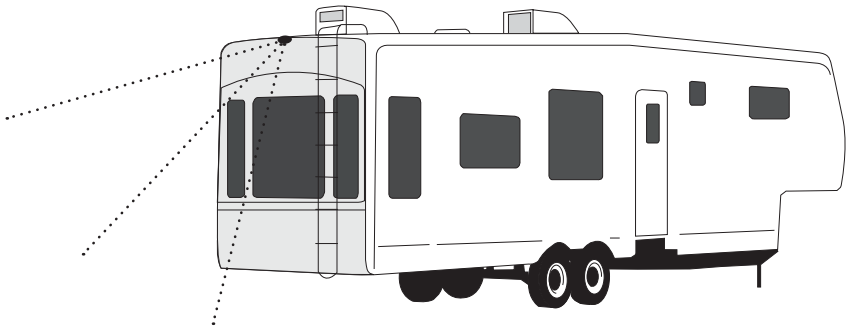
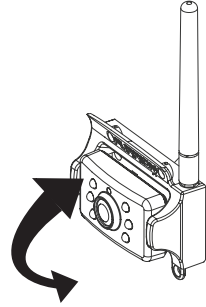
# Installation

## Camera Positioning

The camera can be tilted up & down to obtain the best viewing angle.

### Positioning the Camera

- Adjust the camera up or down then check the view via the monitor.
- If the camera is to be used as parking camera, part of the vehicle, such as the bumper, should be visible on the monitor.



# Installation

## Monitor Installation

### Positioning the Monitor

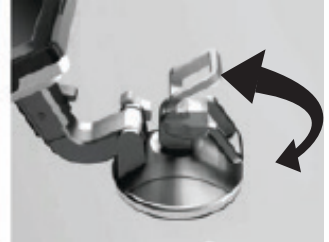
- Ensure the the is placed so that it does not obstruct vision when driving.
- Do not place in an area where it might interfere with driving.
- The surface area should be clean, smooth & flat.



**With the lock open, position the mount.**



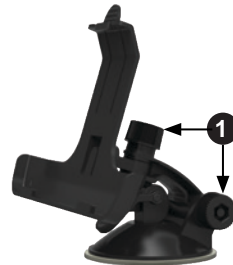
**Press mount down against the surface.**



**Push the mount lock down.**

### Adjusting the View Angle

- Swivel & Tilt the mount to set the optimum viewing angle.
- Lock the position by tightening the locking screws. ①



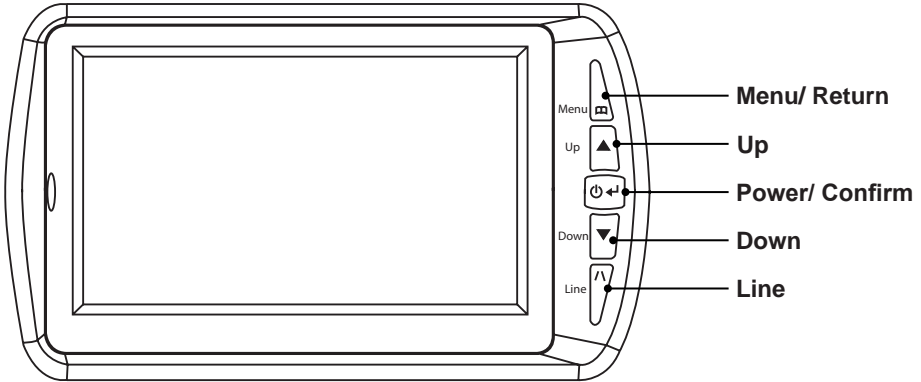
### Connecting the Monitor

- Route the power cable to the vehicle's cigarette lighter socket/12/24V power outlet. The cable must not interfere with the safe operation of the vehicle.\
- Insert the small 12/24 Volt DC plug of the power cable into the right side of the monitor.
- Plug the 12/24 Volt cigarette lighter plug into the vehicle's cigarette lighter socket.

# Operation

## Pairing

After installation, the camera & monitor need to be paired.  
This only needs to be done once.



### Pairing procedure

Ensure both the camera and monitor have power supplied.  
*The vehicle may need to be running*

1. Bring the monitor to within close proximity for pairing.
2. Press the **Power** button to turn on the monitor.
3. Press the **Menu** button, this will bring up 4 icons on the screen.



4. Use the **Up** & **Down** buttons to scroll across to the **Pair** icon.



5. Press the **Power/ Confirm** button to start pairing. A **Pair** icon will be displayed.



6. Press the small button on the underside of the camera for 2 seconds.
7. An **OK Pair** icon will be displayed once pairing is complete.



**PAIRING FAILED** will appear on the monitor after 13 seconds if the pairing procedure has been unsuccessful.

\*For better pairing results, bring the monitor closer to the camera.

### Unpairing

To unpair the camera from the monitor, exit the menu, press & hold **Down** for 5 seconds.

---

## Picture Control

Using the **Up & Down** buttons to navigate and adjust and the **Power/ Confirm** button to confirm selections, the monitors view settings can be adjusted to suit various viewing preferences.



Picture Settings



Brightness



Contrast




Color



Picture Rotation

# Troubleshooting

<b>Problem</b>	<b>Solution / Issue</b>
Monitor won't turn on	-Check that power cable is connected
	-Check the cigarette lighter has 12-14V DC Output
	-Check the fuse in the cigarette socket adaptor
Camera & Monitor won't pair	-Check if the camera is receiving power
	-Reduce the distance between the camera & monitor during pairing.
	-Make sure to hold the camera pairing button for 2 seconds.
Intermittent/ Weak signal icon appears 	-Check if the camera antenna is fitted & secured correctly - it should be vertical.
	Distance between camera & monitor is too great.
	Interference from overhead power lines may be affecting the signal.
	Try unpairing and pairing.

# Specifications

Specifications		
	Camera	Monitor
<b>Voltage</b>	DC8-30V	DC8-30V
<b>Current</b>	≤300mA	≤200mA
<b>Standby Current</b>		≤1mA
<b>Wireless Range</b>	≤300M (outdoors)	≤300M (outdoors)
<b>Wireless Frequency</b>		2.4Ghz
<b>Image Sensor</b>	1/4" Color CMOS VGA	
<b>LCD Display</b>		4.3" 480*272
<b>Camera</b>	Max 25frames/sec VGA f1.7mm, F2.0	
<b>IR</b>	850nm filter	
	View Distance ≥1.5m	
	Brightness ≥ 2Lux	
<b>Receiver Sensitivity</b>		78±3dBm
<b>Working Temperature</b>	10/+50	10/+50

# FURRION®



## Furrion Digital Wireless Camera System

Designed for 5th Wheel, RV, Caravan and Trailer applications

Furrion's new easy install wireless camera kit comes in two parts,

1. Furrion mount bracket prep kit. *Part No.* **FRCBRKT-BL**

2. Furrion Camera and Monitor Kit. *Part No.* **FRC12TA-BL**

*Check if your RV or Trailer has been pre installed with the mounting bracket prep kit.*



## Contents:

1. Safety Information
2. General Information
3. Installation instructions
4. Operation
5. Trouble shooting
6. Warranty
7. Technical Specification

# Safety Instructions

Please Read these instructions carefully before installation and operating your Furrion reversing camera unit.

The following symbols are used throughout this manual to indicate potentially dangerous situations or mark important safety instructions.



**WARNING:** Indicates a potentially dangerous condition. Use extreme caution when performing this task.



**CAUTION:** Indicates a critical procedure for safe and proper operation of the controller.



**NOTE:** Indicates a procedure or function that is important for the safe and proper operation of the controller.

## General Safety Information

- Read all of the instructions and cautions in the manual before beginning installation.
- There are no user serviceable parts inside the Furrion Rear camera system Do not disassemble or attempt to repair any part of the camera system.
- Disconnect all sources of power to the camera before installing.
- There are no fuses or disconnects on the Furrion reversing camera unit. Install external fuses/breakers as required.
- Do not allow water to enter the LCD Display.
- Connect 12V power cable to the camera unit using waterproof connectors.

Excessive heat can be caused from a loose connection.



Caution:

A battery or 12V DC electrical system presents a risk of electrical shock or burn hazard. Ensure all power sources are isolated before installation.



Warning:

These installation instructions are for the use by qualified personnel only. To reduce the risk of electric shock, do not perform any servicing other than that specified in the operating instructions.



Caution:

To reduce the risk of fire, connect the camera only to a circuit provided with a maximum branch-circuit over current protection device.



Note:

Ensure to watertight connectors which connecting camera power supply cable to power source.



Warning:

Use 16AWG or larger cables to supply power to camera unit.



Warning:

Ensure to connect the rear camera to the correct polarity 12V DC power supply. Red = Positive.

## **Installation Safety Precautions**

Use correct size cable and connectors for supplying power to your rear camera

Ensure the power supply circuit has circuit protection

Connect rear camera to a 12-14V DC circuit only

Use insulated tools when working with power supply

Use correct safety equipment when working at elevated levels

Ensure camera prep bracket gasket is correctly sealed and weatherproof.

Ensure correct polarity of DC power supply to camera

## General information

### Overview:

Thank you for purchasing a Furrion reversing camera system. Furrion's reversing camera system is one of the easiest rear view camera systems to install in your trailer, truck or RV. All that is required is a connection of a single DC power supply to the rear camera from a reversing power source.

The Furrion reversing camera system is using **digital wireless** technology giving the major benefit of superior signal transmission with low interference on a single bandwidth channel. This means the Furrion camera unit eliminates the interferences which other analogue signal systems are subject to, meaning the Furrion digital system gives you a clearer picture of what is behind you no matter where you are.

This Furrion system with integrated antenna attached to the camera has been specifically designed for use on trailers, trucks, 5th wheels, caravans and RV's. This system has been designed for extended range applications or security monitoring.

### Features:

This unit can be used as a reversing camera, tow hitch monitor or security monitor.

### This unit features:

- Wide angle viewing lens
- Night vision LED lights
- Camera mounting bracket to reduce glare
- Digital wireless signal for clear picture quality
- Easy installation
- Adjustable camera angle

# Installation

FRCBRKT-BL

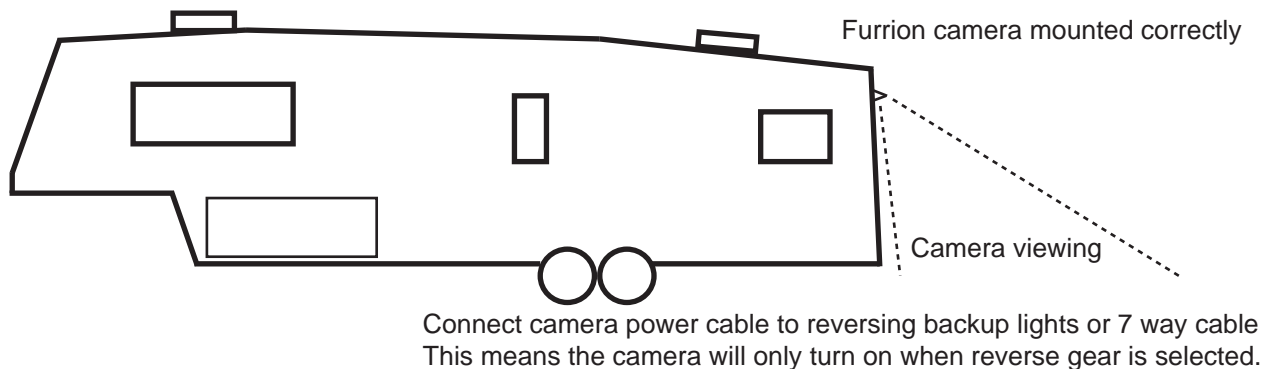
Furrion reversing camera mounting bracket installation:

The Furrion reversing camera prep kit includes:

- 1 x Reversing camera mounting bracket
- 1 x Mounting bracket gasket
- 1 x 6ft power cable
- 1 x Removable Bracket cover

When wiring the Furrion camera system as a reversing camera, the power supply for the camera must come from a reversing indication power source (backup lights) or transmission wiring. The power source can also be from the 7 way connection on your trailer using the green wire from the center pin for the back up light power source or from directly at the back up tail light circuit which feeds to the reversing bulbs.

For reversing camera use, mount the camera bracket on a elevated position at the rear of the trailer or RV.



Do not mount camera in a low position..

For reversing camera function, do not connect camera to a constant power source.

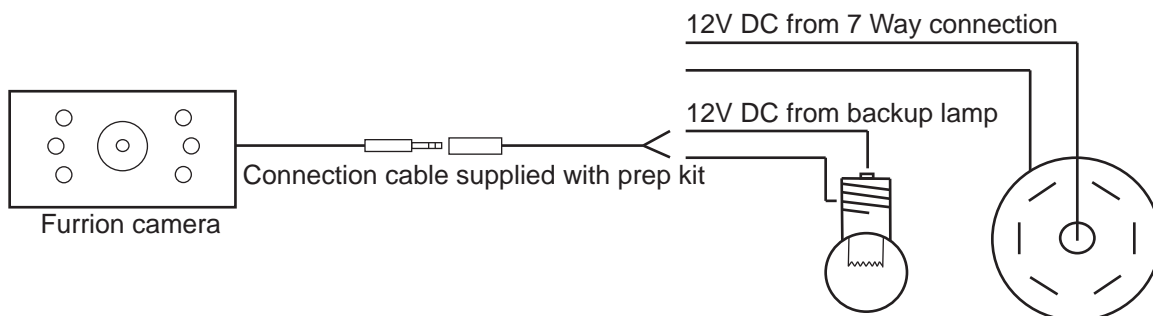
For best results, mount the camera in a high position to increase the viewing angle.

# Mounting and wiring the camera prep bracket kit

## Wiring:

For using your camera kit as a reversing camera system:

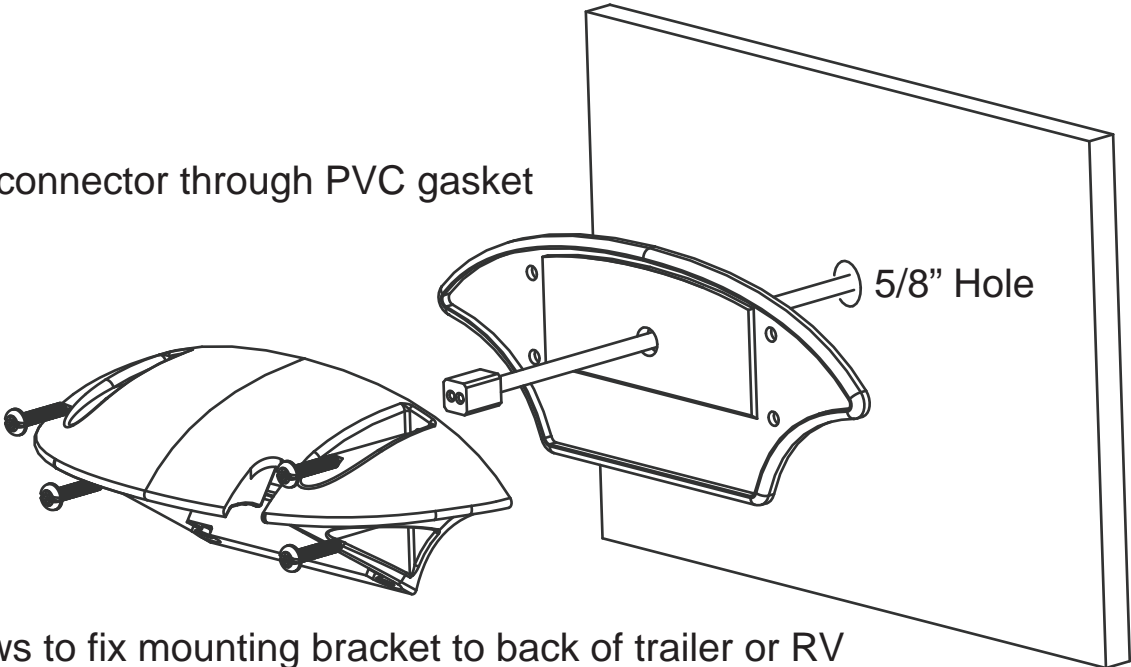
1. Isolate the 12V power system
2. To provide power to the wireless camera for use as a reversing camera, run a 2 core 16AWG internal cable from your reversing (back up) light on the rear of your trailer, truck or RV, or from your 7 way cable reversing power supply.  
(7way reversing connections.. center pin #7 positive + Ground pin #1 negative).
3. Connect the camera prep kit power cable to the reversing wire from step 2. Supplied 6 ft power cable for the camera:  
Red = Positive  
Black = Negative
4. Find a suitable position to mount your camera mounting bracket on the rear of your trailer or RV. Make sure the mounting position is at the center line of the RV and is positioned as high as possible. Ensure the mounting surface is flat and has enough surface area for the entire mounting bracket to fit.
5. Drill a 5/8" through hole on the rear of the trailer or RV in the position where the camera is to be mounted. Use a grommit to protect cable.
6. Feed the power cable through the hole and gasket, before mounting the camera bracket with 4 screws



Use one of these power sources to supply 12V DC when the system is applied as a reversing camera

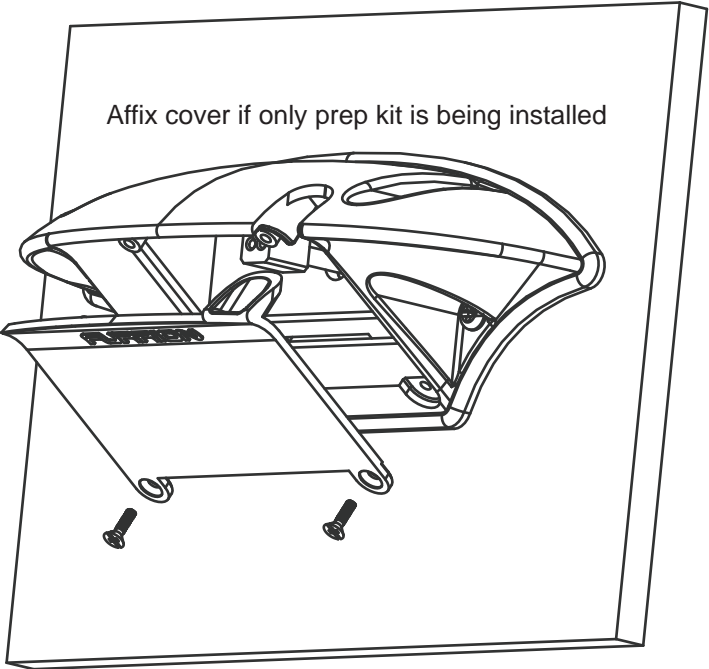
# Mounting bracket installation

Feed connector through PVC gasket



Use 4 screws to fix mounting bracket to back of trailer or RV

Ensure the bracket is mounted securely and the gasket is watertight.



\* If the camera bracket is being mounted as a prep kit without the camera, secure the wire connector inside the bracket and attached the cover. (as above)



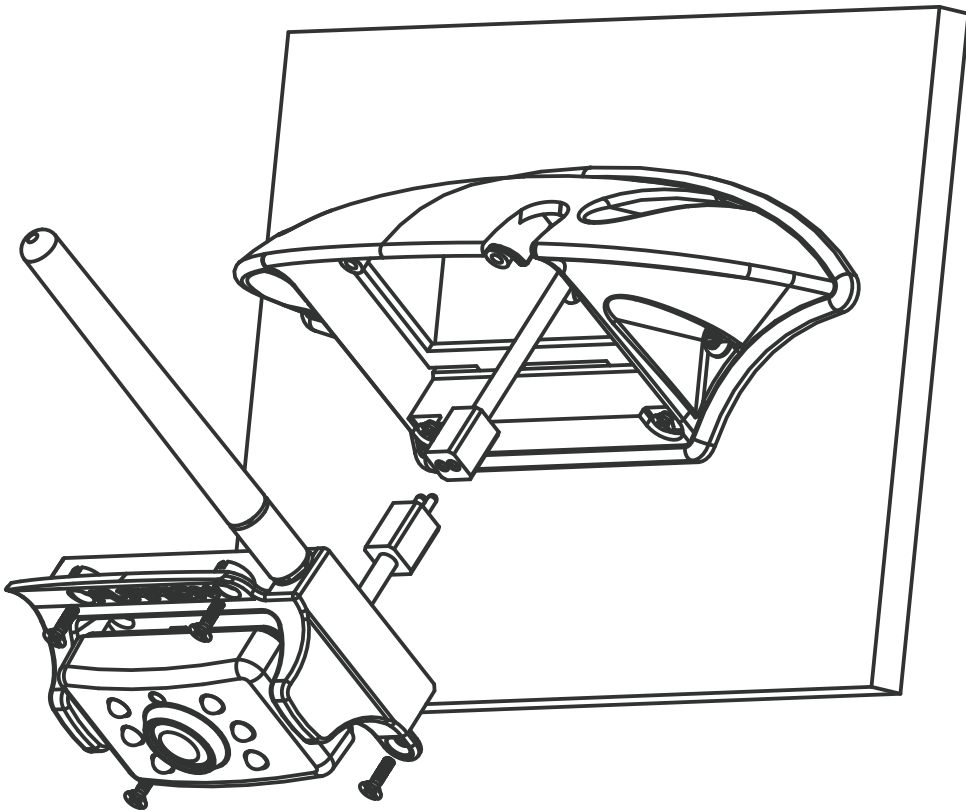
## Installation of camera

If your RV or trailer has a Furrion reversing camera prep kit pre installed by the OEM manufacturer. You will need to purchase a Furrion FRC12TA-BL Camera and monitor installation kit.

To install the camera onto a pre installed mounting bracket:

1. Remove the cable cover which is held by 4 screws on the underside of the bracket
2. Locate the connector inside the prep kit mounting bracket
3. Connect the camera plug and socket together and install the camera with the 4 screws

See below:



Camera viewing angle can be adjusted after camera is mounted

## Monitor Installation

When choosing a location to mount the monitor, make sure the monitor is in an area that will not obstruct your vision while driving.

1. Before mounting the monitor, clean the mounting surface well.
2. Position the suction mount to the smooth surface which suits your requirement.
3. Press the suction cap against the smooth surface and press the lock down to attach and fix the mount to the surface.



Snap in the monitor to the suction mount.

4. Adjust the mounting arms to suit your view angle to the monitor and tighten the screws on the mount to fix the position.
5. Route the power cable to the vehicle's cigarette lighter socket/12/24 V power outlet. The cable must not interfere with the safe operation of the vehicle.
6. Insert the small 12/24 Volt DC plug of the power cable into the right side of the monitor.
7. Plug the 12/24 Volt cigarette lighter plug into the vehicle's cigarette lighter socket.

To maximize the effectiveness of the suction mount, it is recommended that the application be performed under the following conditions:

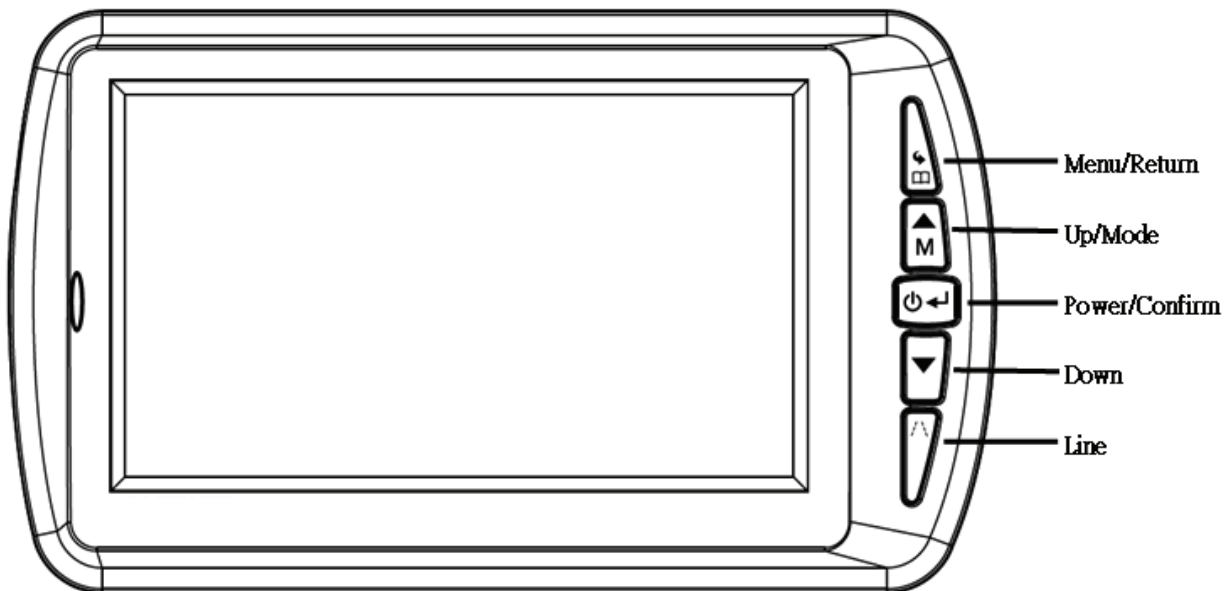
- Surface temperature should be between 21 and 38 degrees Celsius.
- Application below 10 degrees should be avoided.
- Application should not occur in direct sunlight.

Mounting should be protected from exposure to direct sunlight for a period of 24 hours.

**NOTE: UNDER EXTREME BRIGHT LIGHT CONDITIONS, THE SCREEN IMAGE MAY TAKE A FEW SECONDS TO STABLIZE. PLEASE WAIT UNTIL THE IMAGE HAS STABLIZED BEFORE BACKING UP.**

# Operation

Once you have fitted the camera to your trailer, RV, truck or caravan you will need to pair the wireless camera with the LCD monitor before use. (This is only required at initial system commissioning to pair the camera with the LCD screen.)



Menu/Return	Press to show OSD or return to the previous menu
Up/Channel	Select forward in OSD operation
Power/Confirm	Confirm or enter in OSD operation, press and hold for 2S to turn off and press to turn on
Down	Select backward in OSD operation, press and hold for 5S to clear pairing when there is no OSD
Line	Guideline display selection

To connect camera unit and screen together:

1. Ensure both rear camera and LCD display have 12V DC power supplied (Vehicle may need to be running and in reverse gear to supply power to camera)
2. Press the power button on the LCD display to turn on
3. Press the MENU button on the display (this will bring up 4 icons on the screen)
4. Using the up and down buttons scroll across to PAIR icon
5. Press power/confirm button (short press) ("pairing" icon will be displayed)
6. Press the small button on the underside of the camera unit for 2 seconds
7. On successful pairing OK will be displayed on the LCD display.

If there is no operation of the camera displayed on the LCD display within 30 seconds of pairing. Repeat pairing process.



**Note:**

If you are having trouble pairing the devices, reduce the distance between the camera unit and the LCD display for the pairing process.

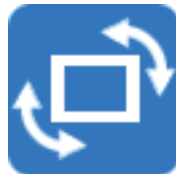
To remove or replace a paired camera from the LCD display memory, Exit the menu icons on the LCD display, then press and hold down the DOWN key for 5 seconds. This will erase all pairing memory stored on the LCD display. The pairing process must be completed again for the system to function.

**LCD Display Menu Icons:**

Signal strength indicator   Mirror/ rotated image indicator



Picture  
Settings



Rotate  
Camera  
Image



Connect  
Camera



Software  
Information

Using the Up and Down arrow buttons on the monitor, select which icon you wish to select, then press the power button to confirm selection.

**Two Camera Option: This system can support 2 seperate cameras paired to a monitor.**

This feature enables two seperate cameras to be paired with the same monitor. The cameras can be mounted in seperate locations if required. Once both cameras are paired, use the up and down buttons on the monitor to scroll between the camera views. Both cameras require a contant power supply to enable switching views.



When two cameras are paired to the system, cameras are not required to be connected to the reversing tail lights power supply, constant power source is required to be able to scroll between cameras using the up and down buttons on the monitor.)

**WARNING:**

When cameras are wired to a constant power source, do not use monitor when driving. Driving with a monitor on can be a violation in state law. Check legislation before use.

When the pairing Icon is selected, a sub menu will be displayed showing

\* **Master Select**

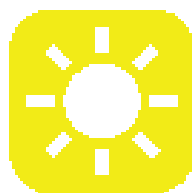
\* **Pair 1**

\* **Pair 2**

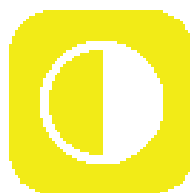
**When Pairing 1 camera, select Master Icon**

**When Pairing 2 cameras, select Pair 1 and Pair 2 for each camera**

**LCD Picture Settings** Sub Menu Icons:



Brightness  
Adjust



Contrast  
Adjust



Color  
Adjust

# Trouble Shooting

Monitor will not turn on

Ensure power cord is connected to the display correctly

Make sure the cigarette socket has power output of 12 - 14V DC

Check fuse in cigarette socket adapter

Camera and display will not pair

Check if camera unit is receiving power

Reduce the distance between camera and monitor while pairing

Ensure to hold the pairing button on the camera for 2 seconds

This icon flashes on the display:  
(intermittent / weak signal)



Check antenna is installed correctly on camera unit. Ensure it faces vertically.

Distance between camera and display is too great.

Delete camera from LCD display memory then re pair camera to display

System testing:

1. Disconnect and reattach the vehicle's negative battery cable.
2. Turn the ignition key to the accessory position, do not start the vehicle.
3. Engage the parking brake, and then put the shifter in the reverse position. This will engage the camera unit and picture will be displayed.
4. After testing the unit and you are satisfied with the route you have chosen for the cabling, you must permanently install it.
5. Route all wires behind interior panels or under carpeting so they are hidden.

## **Technical specification of LCD Display:**

1. Working voltage: DC8-30V
2. Working current:  $\leq 180\text{mA}$
3. Standby current:  $\leq 5\text{mA}$
4. Wireless communication distance:  $\geq 100\text{M}$  (open area outdoors)
5. Working frequency: 2.4G
6. Size of LCD display: 4.3'
7. Effective pixels of LCD: 480\*272
8. Sensitivity of receiver:  $-87\pm 3\text{dBm}$
9. Working temperature:  $-10/+50$

## **Technical specification of Camera unit:**

1. Working voltage: DC8-30V
2. Working current:  $\leq 220\text{mA}$
3. Transmitting distance:  $\geq 100\text{M}$  (open area outdoors)
4. Size of image sensor 1/4 inch Color CMOS VGA
5. Quality of image: Max.25frame/sec @ QVGA  
(frame rate adjusts dynamically according to the image)
6. Specification of camera:  
Focal length f1.7mm, aperture F2.0, IR filter 850nm
7. IR emission wavelength: 850nm
8. IR view distance:  $\geq 1.5\text{M}$
9. IR LED lit condition: Brightness  $\leq 2\text{Lux}$
10. Working temperature:  $-10/+50$

Product: Digital Wireless Camera System(FCA48TA-BL)  
Trade Name: FURRION  
Model Name: FRC12TA-BL  
Serial Model: FCA48TA-BL, FCS43TA-BL  
FCC ID : 2ABH3FRC12TA-BLC

Product: Digital Wireless Camera System(FCS43TA-BL)  
Trade Name: FURRION  
Model Name: FRC12TA-BL  
Serial Model: FCA48TA-BL, FCS43TA-BL  
FCC ID : 2ABH3FRC12TA-BLM



\* This product is backed by Furrions 12 month product warranty.  
See warranty card for terms and conditions.