FURRION

Wireless Observation System

Operating and Installation Instructions

This manual is for use with

Furrion® FOS48TAPK-BL
Wireless Observation System

Furrion® FOS48TA-BL
Wireless Observation System
With FRCBRKT-BL Mounting Bracket pre-installed.

Contents

Welcome

Furrion FOS48TAPK-BL Wireless Observation Camera System
Includes FRCBRKT-BL Mounting Bracket

Furrion FOS48TA-BL Wireless Observation Camera System
For vehicles with FRCBRKT-BL Mounting Bracket pre-installed.

Thank you for purchasing a Furrion Wireless Observation Camera System. Furrion's Wireless Observation 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 running light power source.

The Furrion Wireless Observation Camera 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.

The Furrion system with integrated camera antenna has been specifically designed for use on trailers, trucks, 5th wheels, caravans and RV's.

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

⚠IMPORTANT SAFETY INSTRUCTIONS

READ THESE INSTRUCTIONS CAREFULLY BEFORE INSTALLING OR USING THE SYSTEM

Electrical Safety

• A battery or 12V 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 Wireless Observation Camera System. Do not disassemble or attempt any repairs.

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

Installation

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

• Only use supplied or recommended parts.

• Use watertight connectors for the camera power supply cable to power source.

• Connect the rear camera to a 12-24V DC circuit using 18AWG or larger cables.

• 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.

⚠IMPORTANT SAFETY INSTRUCTIONS

Use

• Electrical appliances and overhead powerlines can affect the wireless signal.

• Do not place the monitor in a location where it might hinder field of vision while driving.

• Consideration should be given to any airbags when installing the monitor. Do not place the monitor where it might hinder the airbag or become hazardous if the airbag is deployed.

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 microfiber 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.

FOS48TAPK-BL
Wireless Observation Camera System

LCD Monitor

Monitor Stand

Camera

Monitor Power Cable

Camera Bracket

Camera Bracket Gasket

Camera Power Cable

FOS48TA-BL
Wireless Observation Camera System

For vehicles with FRCBRKT-BL Mounting Bracket pre-installed.

LCD Monitor

Monitor Stand

Camera

Monitor Power Cable

The FOS48TA-BL is for customers who have the FRCBRKT-BL Mounting Bracket already installed on their vehicle. If there is no Mounting Bracket pre-installed on your trailer you will need to aquire the FRCBRKT-BL Mounting Bracket separately in order to properly install the camera system.

Installation

NOTE: It is recommended to pair the camera and monitor before permanently mounting the camera and monitor (See page 18).

Mounting Bracket

(If the FRCBRKT-BL Mounting is pre-installed please go to page 12)

⚠ 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

- For optimum performance, the camera should be mounted where there is minimal obstruction between the camera and monitor.
  -Dense side wall material and electrical appliances can reduce signal strength.
- Where practical, as high as possible at the rear of the vehicle.
- In the horizontal-center of the vehicle or as close as possible.
- Mount camera at least 2" above or below running lights. Close proximity to lights may cause image blooming, blurring and reduced night vision performance.

Suitable installation position.

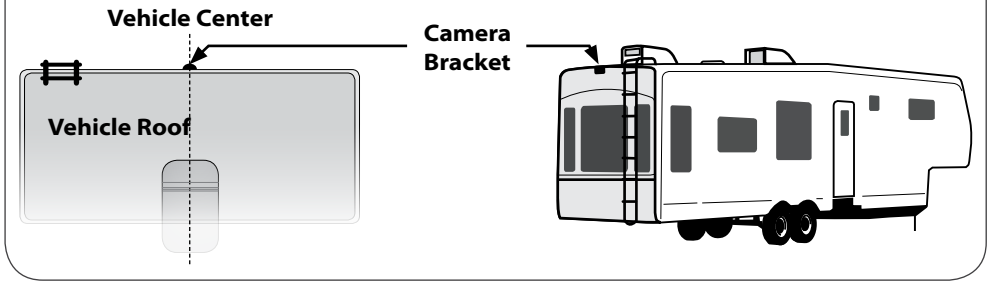
- The area should be flat with enough surface area to accommodate the bracket.
- The surface area should be clean & dry for a watertight installation.
- Ensure that power can be fed to the installation area from within the vehicle.

Testing

Prior to permanently mounting the camera, it is advisable to check if the intended mounting location will achieve adequate signal.

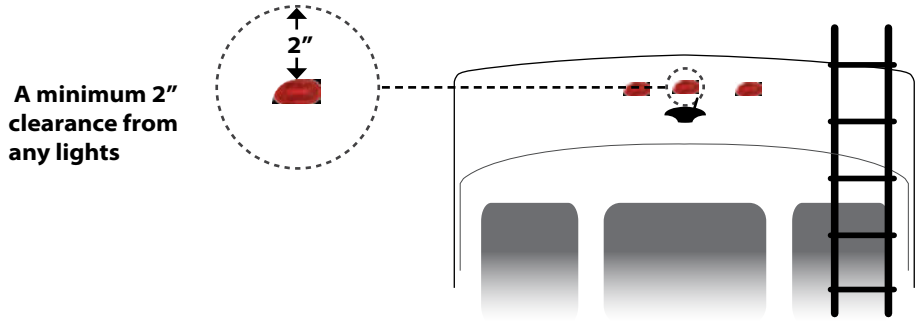
- Temporarily secure the camera in it's intended location or close as possible.
- Check signal icon on the monitor. Ideally there should be 3-4 bars.
- If the signal is 0-1 bars, reposition the camera and or monitor . The signal can also be improved by decreasing the amount obstructions between the camera and monitor.

Camera Location



Mounting Bracket

Proximity To Lights



Signal Strength

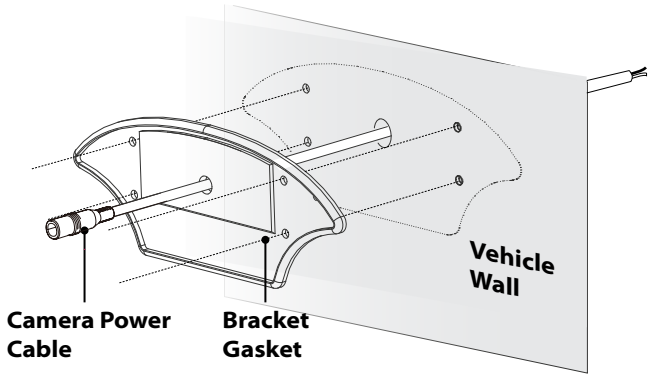
Good signal transmission

Poor signal.
Improve the signal by repositioning the camera and or monitor.
Move any obstructions between the camera and monitor.

Mounting Bracket

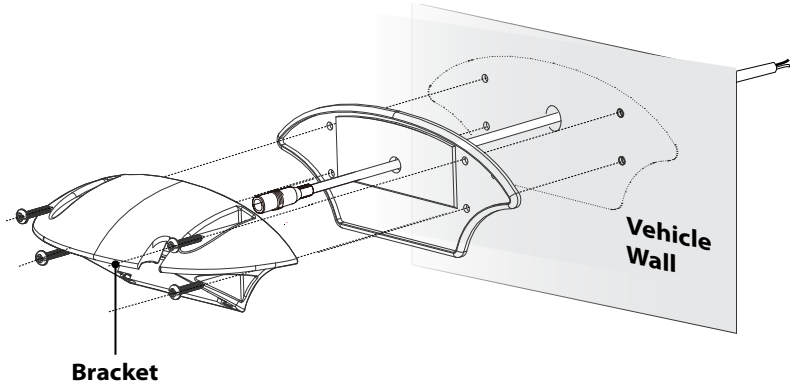
❶ Use the Bracket Gasket to mark and outline where the center hole will be drilled then drill a 5/8th" hole.

❷ Feed the supplied 6ft 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.



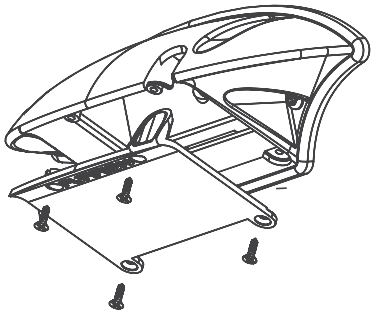
❸ Fix the Gasket & Bracket to the rear of the vehicle using 4 x #2 head 3/4" self tapping screws. (*other screws can be used depending on side wall material*.) Ensure that the Camera Power Cable does not get caught between the vehicle wall & gasket or the Bracket & Gasket.

❹ Ensure the sealing lip around the edge of the gasket is seated over the edge of the bracket before fully tightening the screws.



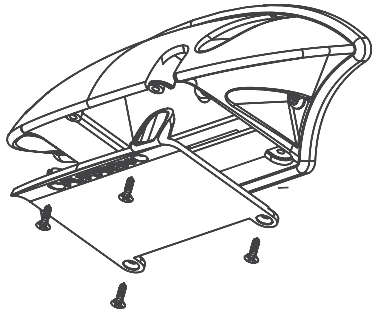
Mounting Bracket

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

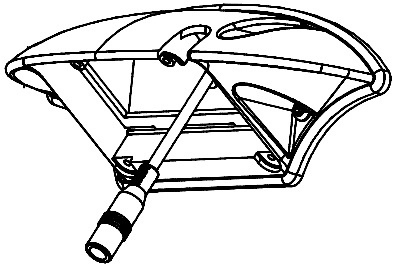


Camera Installation

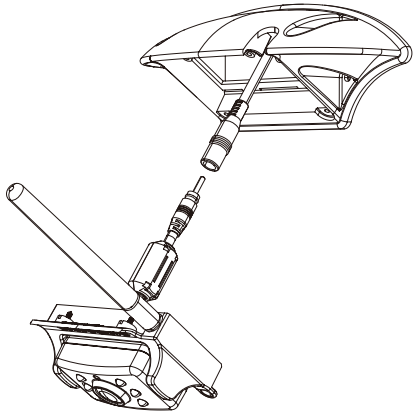
❶ Remove the Bracket Cover by unscrewing the four screws.



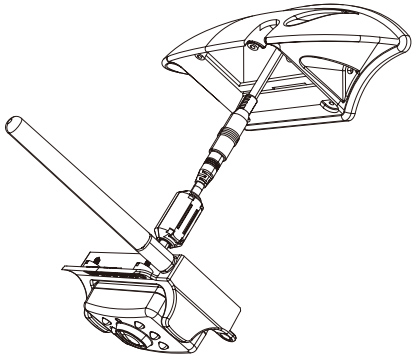
❷ Pull out the Camera Power Cable, leaving approx 2 inches of slack.



❸ Connect the Camera Power Cable to the Camera Cable

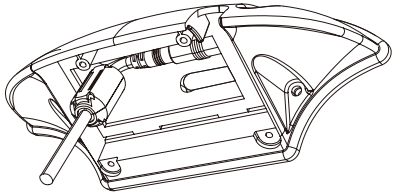


❹ Place the attached cables and connections into the Bracket Housing by first placing the cable to the right.

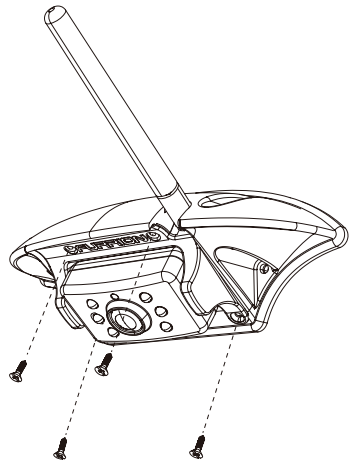


Camera Installation

❺ Now place the Camera Cable Filter in the left of the Bracket Housing.



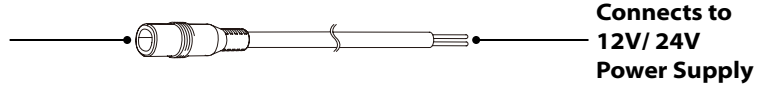
❻ Making sure that the connections are secure and the camera antenna is secured tight, gently place the Camera into the Bracket.
Secure the camera to the Bracket using the 4 screws.



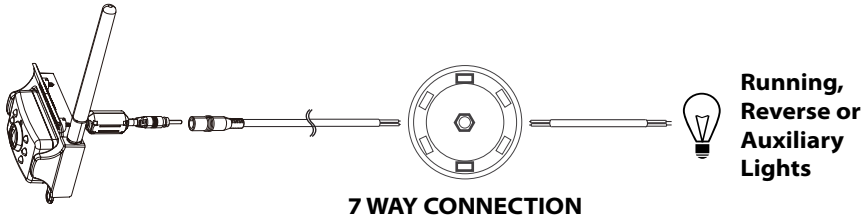
Wiring the Camera

Electrical Power

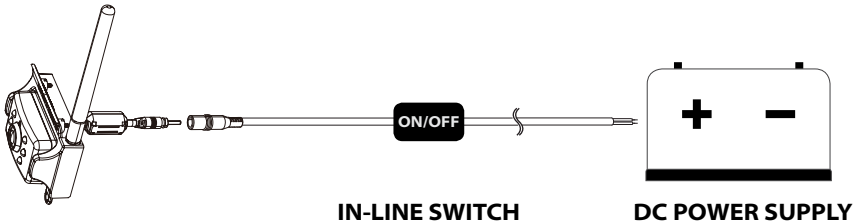
- The Furrion Wireless Observation Camera System can be connected to an electrical power source via a 7 Way Connector.
- Wiring to running lights: the camera will activate when the running lights are switched on.
- Wiring to reverse lights: the camera will activate when the vehicle engages reverse gear.
- ⚠ When connecting wires, ensure the circuit is isolated by disconnecting the **-** negative terminal on the battery.
- Ensure correct polarity when wiring the cables. **RED +** **BLACK -**
- Use 18AWG cables or higher
- Wire connections & terminals must be sealed & waterproof.



Consult the vehicle's service manual for specific wiring color code.



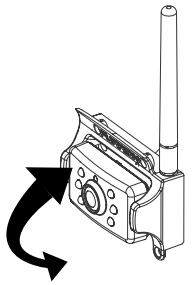
When wiring this camera directly to a 12V battery or converter in your RV, use an in-line switch on the power cable to power on or off your camera. This will enable this camera to be used when parked without a tow vehicle connected.



Camera Positioning

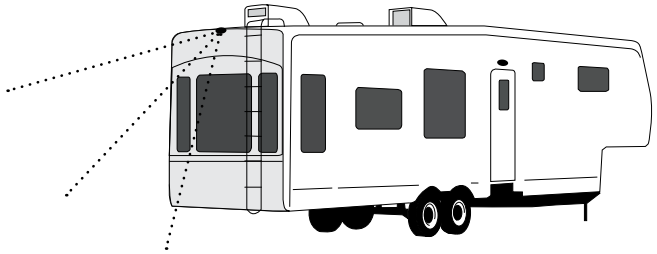
Positioning the Camera

- Adjust the camera up or down then check the view via the monitor.
- When using the camera as a parking camera, part of the vehicle, such as the bumper, should be visible on the monitor.

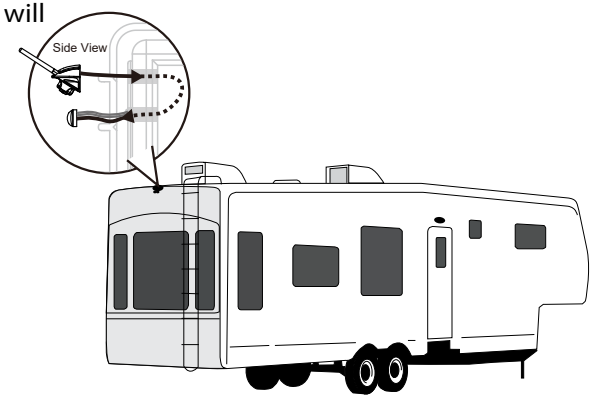


Reverse Camera

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



The camera can be wired to the Rear Marker / Clearance light power supply. When the lights are turned on the camera will be active.

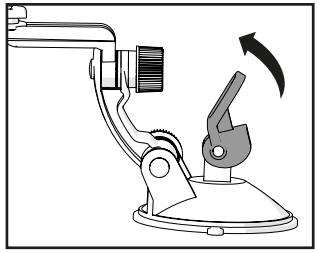


Installation

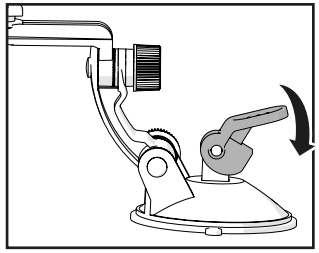
Monitor Installation

Positioning the Monitor

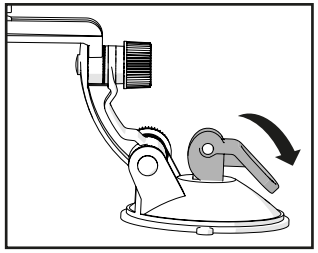
- Ensure the Monitor is placed so that it does not obstruct vision when driving.
- Do not place in an area where it might interfere with driving.
- The surface area should be clean, smooth & flat.



With the lock open position the mount.



Press the mount down against the surface.



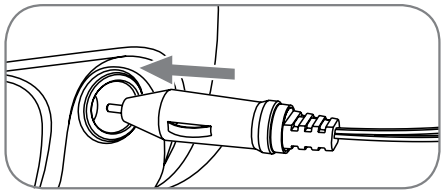
Push the mount lock down.

Adjusting the View Angle

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

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.



Installation & Operation Overview

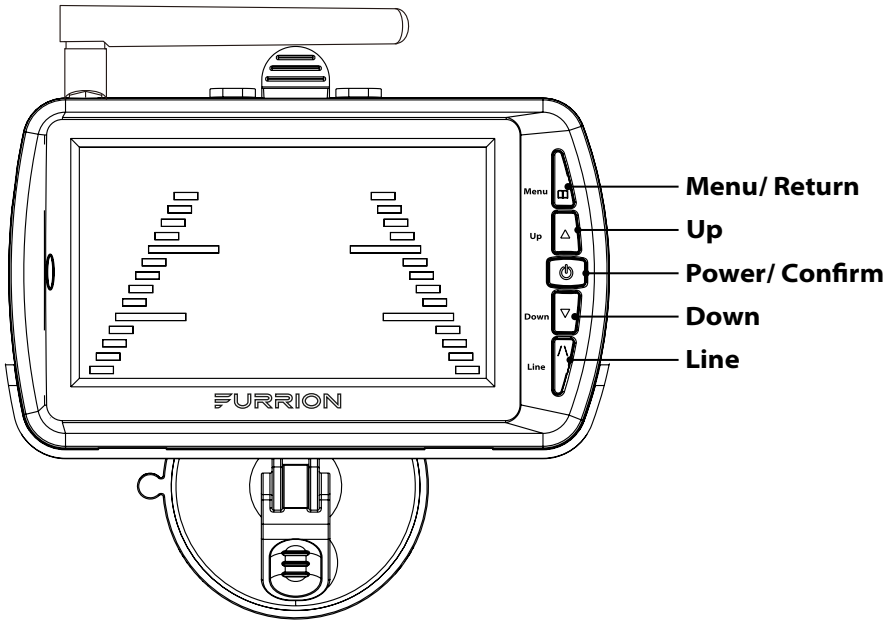
This troubleshooting document helps to resolve Furrion FOS48TA-BL Wireless Observation System connectivity issues.

Vehicle manufacturers differ in the way they install cameras to the electrical circuits of a vehicle.
This means that the method for activating the camera will vary depending on the vehicle manufacturer.

Manufacturer	Installation Method	Camera Activation
Forest River	Marker/ Clearance or Running Lights	Marker/ Clearance or Running Lights Turned ON
Grand Design	Reverse/ Backup Lights	Vehicle in Reverse gear or Clearance / Marker lights ON
Open Range	Reverse/ Backup Lights	Vehicle in Reverse gear
Keystone RV Company	Converter Panel	Switch Turned ON

* This table is for reference only. Your RV may be wired differently from this table.

Monitor Controls



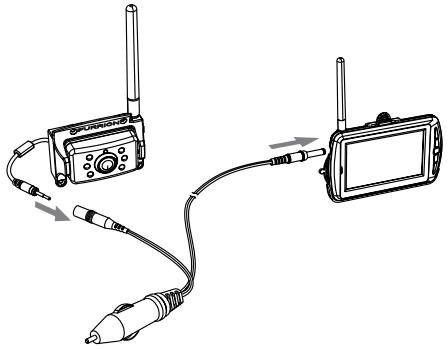
Menu/ Return	Use this button to switch between the Viewing screen and the Menu screen.
Power/ Confirm	Use this button to turn the monitor On & Off and to confirm menu selections.
Up Down	Use this button to navigate menu selections and to adjusts settings.
Line	Use this button to turn the on-screen Guidelines On & Off.

Pairing

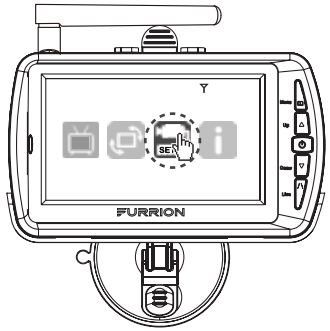
After installation, the camera & monitor need to be paired in order to work.

Pairing procedure

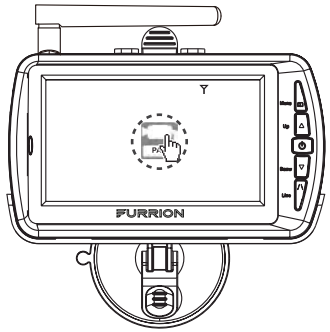
1. Ensure both the Camera & Monitor have power supplied.
(The vehicle may need to be running)



2. Press the ⏻ **POWER/ CONFIRM** button to turn on the monitor.
3. Press the 🕮 **MENU** button to bring up the Menu.
4. Use the ▼▲**UP** & **DOWN** buttons to scroll across to the **SETUP** icon. Press ⏻ **POWER/ CONFIRM** to enter the set up screen.

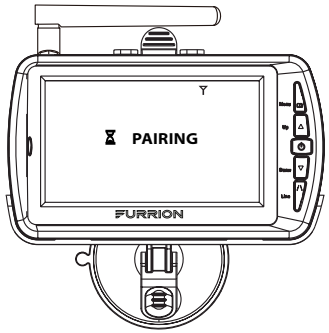


5. Use the ▼▲**UP** & **DOWN** buttons to scroll across to the **PAIR** icon.
6. Press the ⏻ **POWER/ CONFIRM** button to confirm.

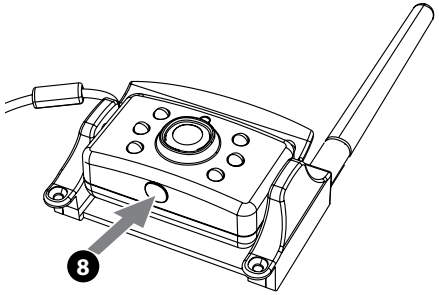


Pairing

❼ Once you press the ⏻ **POWER/ CONFIRM** button the screen will display **PAIRING**



❽ When **PAIRING** is displayed, press the small button on the underside of the camera for 2 seconds.



Unpairing

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

Settings

Picture Control

For optimum viewing, the monitor's picture settings can be adjusted

Picture Settings

❶ Press the 🕮 **MENU** to bring up the Menu.

❷ Select the **PICTURE SETTINGS** icon.
Press the 🕮 **POWER/ CONFIRM** button to confirm.

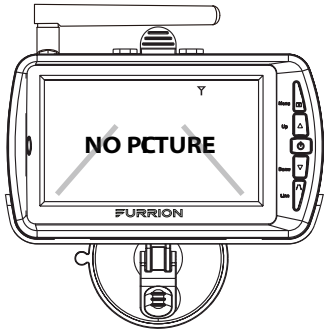
❸ Select **BRIGHTNESS**
or **CONTRAST**
or **COLOR**
Press the 🕮 **POWER/ CONFIRM** button to confirm.

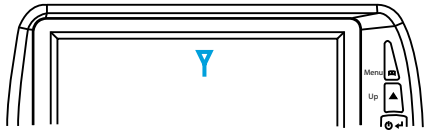
❹ Use the ▲▼ **UP** & **DOWN** buttons to adjust the picture.
Press the 🕮 **POWER/ CONFIRM** button to confirm.

Troubleshooting

Problem	Solution / Issue
Monitor won't turn on (no flashing Blue LED)	Check that power cable is connected
	Check the cigarette lighter has 12-24V DC Output
	Check the fuse in the cigarette socket adaptor
Camera & Monitor won't pair	Check if the camera is receiving power
	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. Reduce distance between Camera and Monitor
	Large dense objects could be obscuring the signal. If possible, move the objects.
	Interference from electrical appliances may be affecting the wireless signal. - Turn off the appliances when using the system.
	Interference from overhead power lines may be affecting the signal.
	Try unpairing and pairing.
Night vision is poor or does not function	The light sensor on the camera may be dirty.
	Ensure the camera unit is installed at least 2" away from rear lights
	Light sensor maybe be dirty or obstructed.
Monitors Blue LED flashes with no picture	The camera has no power connected.
	Ensure the tow vehicle is running
	Ensure the 7 way connector is connected.
	Ensure that the circuit the camera is connected to has power and is running.

Problems and Solutions





If there is no picture on the MONITOR, the ANTENNA ICON on the monitor will have no signal strength bars next to it.
The blue light on the right side of the monitor will flash and the monitor will turn off.
This means:
A: The camera is not getting power to send the wake up signal to the monitor.
B: The camera and monitor are not paired.

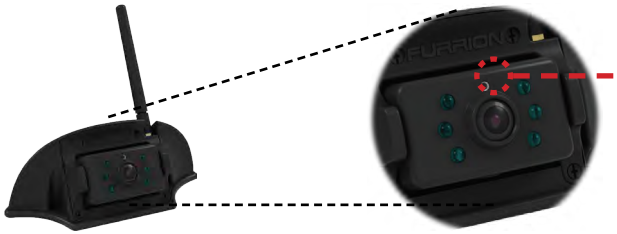
* Ensure the tow vehicle and RV are connected using the 7 way cable and power is being supplied to the clearance lights, reverse lights or converter panel in the RV.
How the camera receives power depends on manufacturer wiring, if you are having problems it is best to check all options to see which supplies power to your rear camera unit.
* When the monitor is plugged into a 12V power supply, once the rear camera receives power it will automatically send a signal to wake up the monitor and then display the rear view.

Please follow the following procedure to troubleshoot and remedy.
1. Verify that the CAMERA is ON.
2. If the CAMERA is found to be OFF, then the circuits powering the CAMERA need to be checked.
3. Once the CAMERA has been verified as ON, the CAMERA & MONITOR need to be PAIRED.
(Pairing is the procedure that wireless links the CAMERA & MONITOR)

Verifying if the Camera Is ON- Method 1

If your camera is not fitted with a Blue power indication LED, the first method involves checking the INFRARED LED's with a digital camera.

1. Move the CAMERA to a dark or shaded location. The darker the location, the easier it will be to see the INFRARED LED 's.
2. Cover the PHOTOCELL on the CAMERA. This will simulate night time and activate the INFRARED LED's



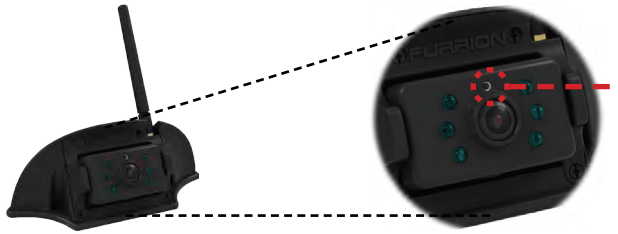
3. Using a Smartphone or a Digital Camera, view the CAMERA via the Smartphone or Digital Camera's display, check the phone has no IR filter. (smartphone forward facing cameras normally do not)

4. If the CAMERA is ON, the INFRARED LED's will appear visibly white in the Smartphone or Digital Camera's display.
5. If there is no white light from the INFRARED LED's, the CAMERA is OFF.

Verifying if the Camera Is ON- Method 2

The second method involves checking the INFRARED LED's manually.

1. Move the CAMERA to a dark or shaded location. The darker the location, the easier it will be to see the INFRARED LED 's.
2. Cover the PHOTOCELL on the CAMERA. This will simulate night time and activate the INFRARED LED's



3. In order to see the INFRARED LED's better, cup two hands around the CAMERA and look through them (as if looking through a window at night).
4. If the CAMERA is ON, a faint red glow will be visible from the INFRARED LED's.

A FAINT RED GLOW FROM THE LED's INDICATES THE CAMERA IS ON

NO VISIBLE RED GLOW INDICATES THE CAMERA IS OFF OR THE CAMERA IS NOT ADEQUATELY SHADED TO SEE ANY RED GLOW

Specifications

Specifications		
	Camera	**Monitor**
Operating Voltage	DC8-30V	DC8-30V
Operating Current	≤500mA@12V	≤300mA@12V
Standby Current		≤2mA@12V
Wireless Range	≤300ft (Open area)	≤300ft (Open area)
Wireless Frequency	2.4Ghz	2.4Ghz
Image Sensor	1/4" Color CMOS VGA	
LCD Display		4.3" 480*272
Camera	Max 25 frames/sec QVGA f1.7mm, F2.0	
IR	850nm filter View Distance ≥1.5m Brightness <= 2Lux	
Receiver Sensitivity		-78±3dBm
Working Temperature	-10/+50	-10/+50

Product: Digital Wireless Observation Camera System
Model Name: FOS48TA-BL

Product: Digital Wireless Camera
Model Name: FOC48TA-BL
FCC ID: 2ABH3FOC48TA-BL

Product: Digital Wireless Monitor
Model Name: FOD43TA-BL
FCC ID: 2ABH3FOD43TA-BL

This product is backed by Furrion's 12 month product warranty
See warranty card for terms & conditions.

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