

## Specifications

Specifications		
	Camera	Monitor
Voltage	DC:9--30V	DC:9--30V
Current	≤300mA	≤300mA
Standby Current	\	≤1mA
Wireless Range	≤300M(outdoors)	≤300M(outdoors)
Wireless Frequency	2400~2483.5MHz	2400~2483.5MHz
Image Sensor	1/3" Color CCD 720P	
Lcd Display	\	5.0" 800x480
Camera	30f/sMAX f2.3 F2.8 H108.8°	\
IR	850nm filter	
Receiver Sensitivity	\	-88±3dBm
Working Temperature	-10°C ~ +60°C	

# iRV Technologies Operation Manual

## HD Digital Wireless Observation System






**iRVCM1**



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## Adjusting astern indicator line

After the camera is installed, turn on the monitor. When display the camera image, press **LINE**  button to show astern indicator line.

Press **UP**  button to show **H** icon, then press **DOWN**  to adjust the height of astern indicator line.

Press **UP**  button to show **W** icon, then press **DOWN**  to adjust the width of astern indicator line.

Press **UP**  button again, only when **H** and **W** disappear, the adjusted astern indicator line will be saved.



**⚠ WARNING Astern indicator line is only for reference. Please pay more attention to the actual situation around the vehicle. Be sure to be safe.**

## Troubleshooting

### 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.

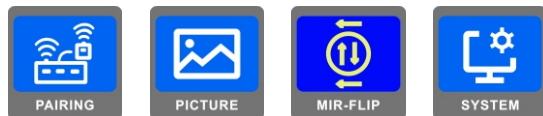
### Intermittent/ Weak signal

- Check if the camera antenna is fitted & secured correctly.
- Distance between camera & monitor is too great.
- Interference from overhead power lines may be affecting the signal.

## Operation

### Picture Mirror / Flip Controls

1. Press the **POWER/MENU** button, this will bring up 4 icons on the screen.

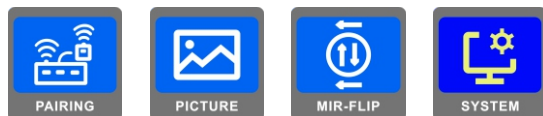


2. Using the **UP & DOWN** buttons to scroll across the **MIR-FLIP** icon. the **ENTER/DISPLAY** button to confirm selections, the monitors view settings can be adjusted to suit various viewing preferences.



### SYSTEM Setup Controls

1. Press the **POWER/MENU** button, this will bring up 4 icons on the screen.



2. Using the **UP & DOWN** buttons to scroll across the **SYSTEM** icon. the **ENTER/DISPLAY** button to confirm selections, the monitors view settings can be adjusted to suit various viewing preferences.



## ⚠ 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.

#### Caution

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

\*There are no fuses or disconnects in the HD 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 unit 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 9-30V 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.

## System Parts

### HD Digital Wireless Observation System



LCD Monitor



Camera



Monitor Stand



Monitor Power Cable



Camera Bracket

Camera Bracket Gasket

Camera Power Cable

iRVPWK Mounting Bracket Pre-installed

## Installation

### Mounting Bracket

(If the iRVPWK Mounting is pre-installed please go to page 5)

#### ⚠ Caution

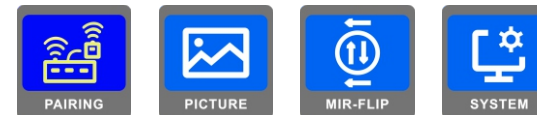
- Ensure there are no electrical cables, gas lines, pipes or other important parts behind where the drill holes will be.
- During installation, remove the key from the ignition & isolate the DC12v or 24v power source.

### 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.
- Mount the camera directly above the below running lights.

## Operation

3. Press the **POWER/MENU** button, this will bring up 4 icons on the screen.



4. Use the **UP & DOWN** buttons to scroll across to the **PAIRING** icon.



5. Press the **ENTER/DISPLAY** button to start pairing. "PAIRING START" with 20-second countdown will be displayed, the indicator light is quick blinking.

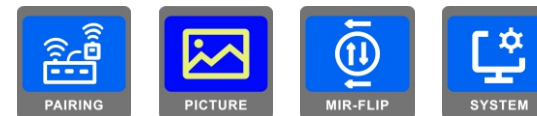


6. Once pairing successfully, the monitor will display the camera image. **PAIRING FAILED** will appear on the monitor after 20 seconds if the pairing procedure has been unsuccessful.

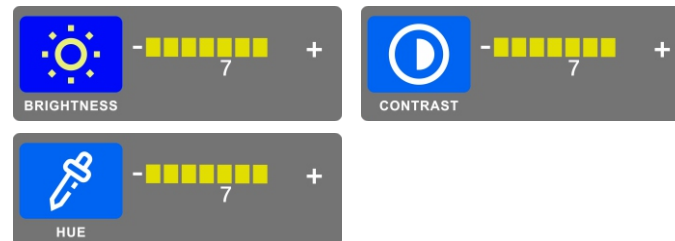
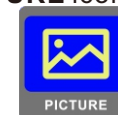
- \* For better pairing results, bring the monitor closer to the camera.
- \* The camera has an automatic pairing function. After power-on, if it is not connected to monitor within 8 seconds, it will automatically enter the pairing state and wait for the monitor to pair.

## Picture Controls

1. Press the **POWER/MENU** button, this will bring up 4 icons on the screen.

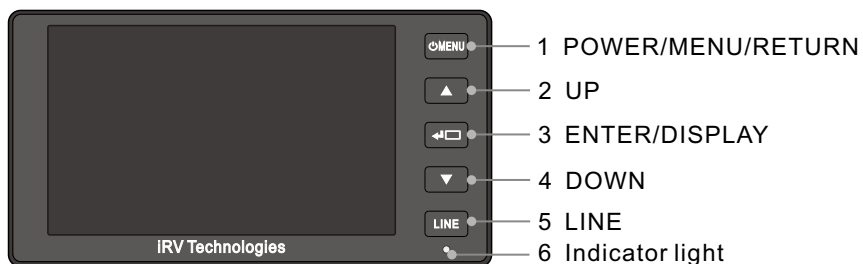


2. Using the **UP & DOWN** buttons to scroll across the **PICTURE** icon. the **ENTER/DISPLAY** button to confirm selections, the monitors view settings can be adjusted to suit various viewing preferences.



# Operation

## Monitor Controls



### 1 POWER/MENU/RETURN

- In power off, quick push makes the device on.
- In power on, quick push to enter "Setup Menu", push and hold to make the device off.
- In "Setup Menu" mode, quick push to return the previous menu, or exit from "Setup Menu".

### 2&4 UP & DOWN

- Press this button to select functions in "Setup menu" .

### 3 ENTER/DISPLAY

- In "Setup Menu" mode, press this button to select.
- In image displaying mode, press this button to make the screen on or off.

### 5 LINE

- Press this button to make the on-screen asterisk indicator line on or off.

### 6 Indicator light

- The indicator light is on when the unit is power on.  
The indicator light is off when the unit is power off.

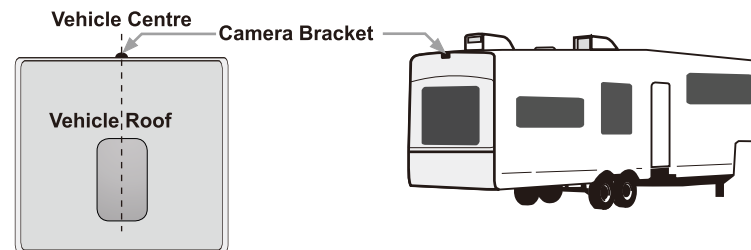
## Pairing

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

### Pairing procedure

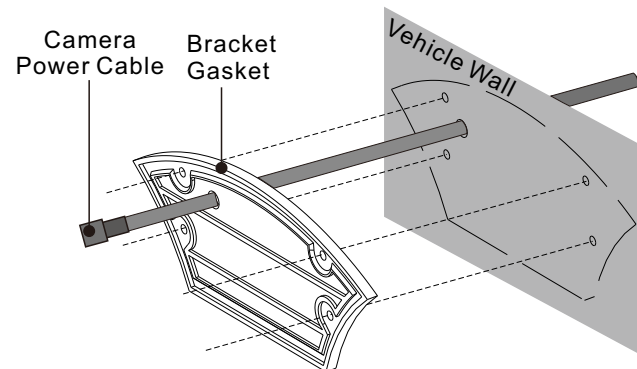
- Ensure both the camera and monitor have power supplied.  
The vehicle may need to be running
1. Bring the monitor to within close proximity for pairing.
  2. Press the **POWER/MENU** button to turn on the monitor.

- 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.



## Mounting Bracket

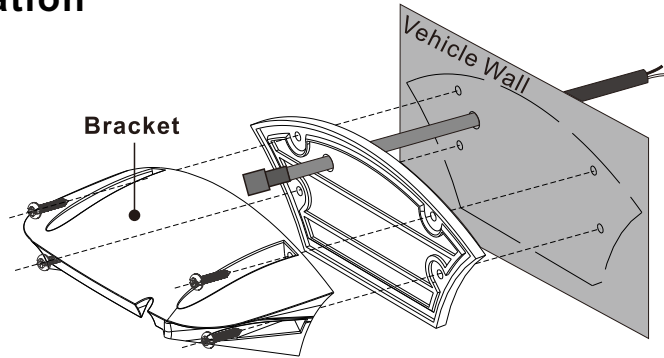
- 1 Use the Bracket Gasket to mark and outline where the centre hole will be drilled then drill a 5/8" hole.
- 2 Feed the supplied 6' Camera Power Cable through the gasket. Ensure the bare wire end of the cable goes into the vehicle and the flat side of the gasket faces inward.



- 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.

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.

## Installation

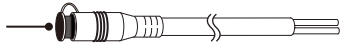


### Wiring the Camera

#### Electrical Power

- To use the HD 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

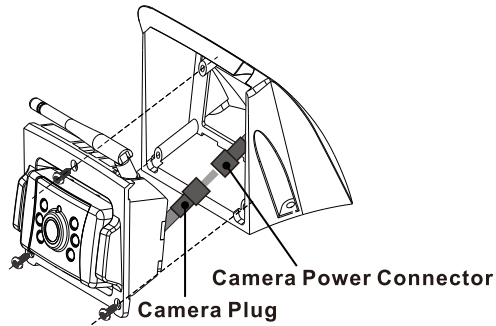


Connects to  
12V/ 24V  
Power Supply

- 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.

#### Camera Installation

- 1 Locate the Camera Power Connector from within the Bracket and connect it to the Camera Plug.
- 2 Secure the camera to the Bracket using the 3 screws. Ensure the camera antenna is secured tight.



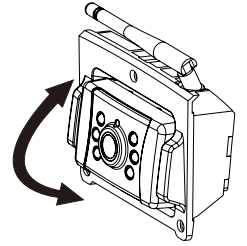
## Installation

### 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.



### 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

- Tightening the screw 1 to set the optimum viewing angle.
- Lock the position by tightening the locking screw 2.



#### 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.

**Warning:**

Changes or modifications to this unit not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment.

**NOTE:**

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.

**FCC Statement:**

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 the dealer or an experienced radio/TV technician for help.

The equipment complies with FCC Radiation exposure limit set forth for uncontrolled environment. This equipment should be installed and operated with minimum distance 20cm between the radiator and your body.