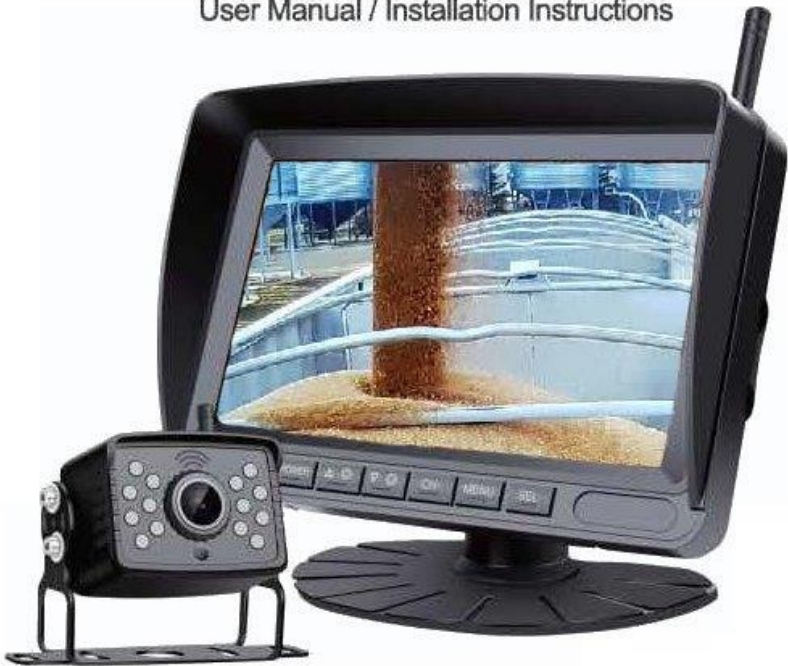


MICHEL'S WIRELESS CAMERA SYSTEMS

User Manual / Installation Instructions



WIRELESS CAMERA SOLUTIONS

Before installation, please read the manual

Introduction

Please read all of the installation instructions carefully before installing the product. Improper installation will void manufacturer's warranty.

Thank you for purchasing a Michel's Wireless Camera System. With this manual you will be able to properly install and operate the unit.

The Camera System is intended to be installed as a secondary visual component. If using as a Backup Camera System, it should not be used as a substitute for the standard rear-view mirror or for any other mirror that exists in your vehicle.

Note: In some jurisdictions, it is unlawful for a person to drive a motor vehicle equipped with a TV viewer or screen located forward of the back of the driver's seat or in any location that is visible, directly or indirectly, to the driver while operating the vehicle.

What's in the Boxes?

Monitor Box



1. 7" IPS Monitor
2. Sunshade
3. Car Charger & Direct Power Cord
4. Butterfly Mounting Bracket
5. U-shape Mounting Bracket
6. Antenna
7. Install tools and accessories (Not Shown)

Camera Box

1. Wireless Camera and mounting bracket
2. Antenna
3. Install tools and accessories (Not Shown)

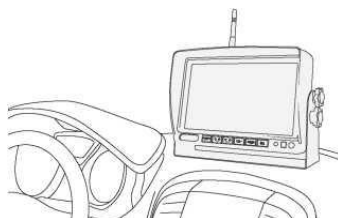


NOTE: The contents included may change without notice or may look different then the above picture.

Installation Diagram

Monitor Installation

Choose a monitor location that does not block your view and complies with local laws for safe driving. Do not place in an area where it might interfere with driving.



Select bracket installation method

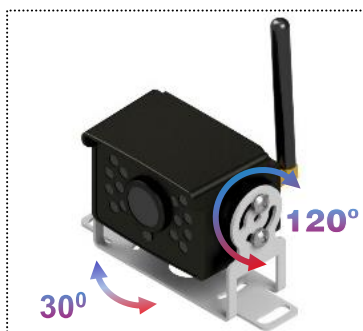
There are two choices when it comes to mounting the monitor. This a u-shaped bracket and a butterfly bracket. The u-shaped bracket can only be rotated 120° in one direction up and down. The butterfly bracket is capable of rotating 360° around the base and 120° up and down. The butterfly bracket also has the ability to conform to uneven surfaces by shaping the fins around the object.



Both brackets include a two-sided tape and other mounting hardware. Choose the bracket that works best for your application.

Camera Installation

The Camera has a mounting u-bracket. This bracket allows the camera to rotate 30° side to side and 120° up and down. For proper night vision, make sure the camera is mounted away from the back up lights.



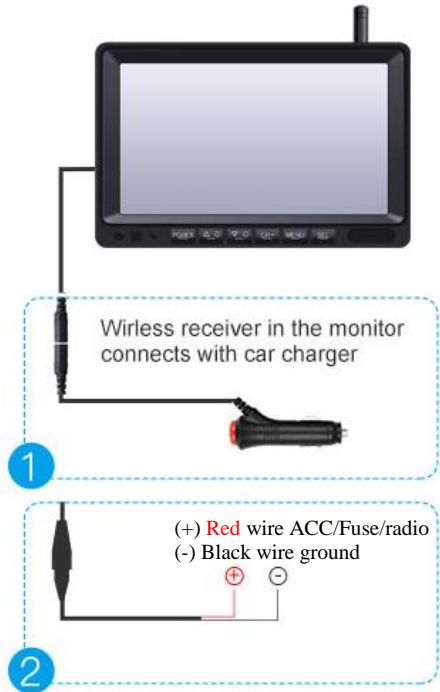
Power Connections

Monitor

There are 2 options to power the monitor.

1. Use the supplied car charger.
2. Wire directly to a power source such as the radio's switched input power wire.

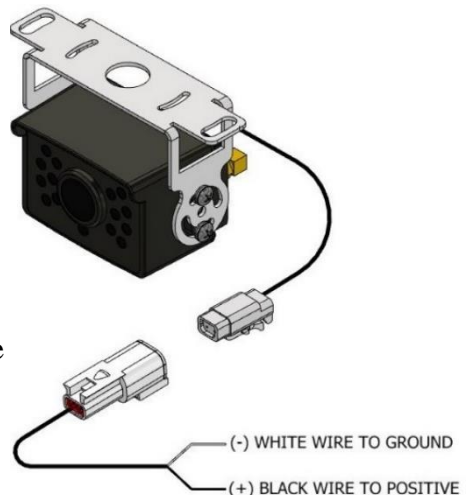
The Red wire is positive (+) and the Black wire is Ground (-). Note: If wiring direct, clarify that the supply power is fused.



Camera

Connect the camera to a switched power source. If the camera is not connected to a switched power source, it will be continuously drawing power and could result in draining the battery.

*****Important***** The White wire is (-) ground and the Black wire is (+) positive.



Monitor Operation



Button Function

POWER	Use this button to turn the monitor On and Off
△ O	Use this button to navigate menu selections backwards and to adjust settings. Hold down to rotate the screen; Note this is different than the Mirror-Flip in the menu.
▽ O	Use this button to navigate menu selections forwards and adjust settings.
CH-	Camera switch
MENU	MENU
SEL	Use this button to Start/Stop recording.

Recording Function

The monitor has the option to record the video and be used as a dash cam. The monitor will record all 4 cameras onto different files at the same time. When looking at the file structure, the last digit indicates which channel it is recorded from. For example, -1 corresponds with CAM1.



In order to use the recording function within the monitor, an Sd card must be inserted into the SD Slot under the cover on the back of the camera. Use the supplied screw driver to remove the screw that secures the cover to the monitor. It is recommended to use an SD card of 128G or less. To start/stop recording press the SEL button. When recording there will be a red “REC” on the screen showing that it is recording.

System Functionality

The Monitor

- Each monitor is capable of seeing 4 different channels at one time. The 4 channels are CAM1, CAM2, CAM3 and CAM4. These channels correspond with different cameras. Camera A outputs to CAM1, Camera B outputs to CAM2, Camera C outputs to CAM3, and Camera C outputs CAM4.
- The Monitor has the ability to view one camera at a time, or all four camera cannels together.
- The monitor will always pair to each channel automatically as it becomes within range of the Camera's output.
 - o As an example; Truck 1 has a monitor in the cab and is approaching an auger with a Camera A (CAM1). As the truck approaches it automatically connects to the camera and the operator can now see Camera A on CAM1. ***NOTE*** it is possible to have more than 1 Camera A camera with single/multiple monitors as long as the cameras are far enough apart.
 - o For example, 3 separate combines all have a Camera B on the auger. As the operator pulls up with a grain cart it automatically picks up Camera B from each combine. Now if the Cart was equipped with a camera arm on it and a Camera A, the operator could then see a view from the camera arm (Camera A) and also a view from the auger of the combine (Camera B).
- Every Monitor in this series will be able to see all for channels. Therefore, the number of monitors is limitless. There are a few restrictions to this expandability.
 - o Only one monitor can receive the signal from a camera at one time. Ex. If two trucks each have a monitor, only the first truck to receive the signal from a camera will be able to view that camera. The second truck will only be able to see that camera once the first truck has lost communication with the camera or the first truck turns the power off to the monitor and drops the signal.
- The monitors have the ability to record all four channels at the same time.

The Camera

- There are only 4 different Cameras. Camera A, B, C, & D. The 4 cameras each output to a corresponding channel as follows: Camera A outputs to CAM1, Camera B outputs to CAM2, Camera C outputs to CAM3, and Camera C outputs CAM4.
- Camera's never need to be paired to the monitor. They only need to be within range of the monitor to be viewed.
- Can connect to an unlimited number of monitors.
- The down side is that each camera can only output to one monitor at a time.
- Another down side is that it may be possible to see someone else's camera on your monitor. There is no security to restrict another person from viewing your camera and vice versa.

Specifications

Power Supply	DC12to36V
Wireless Frequency	2.4 GHz
2.4G Wireless network range	2403-2480MHZ
Wireless Range	300m (open area)
Delaying Time	<200ms
Operating temperature	-20°C ~ 80°C

CAMERA

Image Sensor	1/3 inch
Waterproof Rating	IP69K
View Angle	127°[H] 170°[D]
Camera Pixel	1000TVL

MONITOR

LCD Size	7-inch IPS
Resolution	1024(H) x600(V)
Contrast	500:1
Brightness	500cd/rrf
Response Time	25ms
Power Consumption	<500mA

Troubleshooting

Problem	Solution
Monitor Won't turn on	Check the cigarette lighter has 12-36V DC Output
	Check the fuse in the Cigarette socket adapter
Camera and Monitor won't Connect	Check if the camera is receiving power
	Make sure the camera is within range
Weak Signal	Check if the camera and monitor antennas are installed
	Distance between camera and 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 overhead power lines may be affecting the signal
Night Vision is poor	The night sensor on the camera may be dirty or obstructed
	Ensure the camera is installed at least 2 inches away from rear lights
Dark Picture	Check whether brightness and contrast are adjusted correctly

Michels Industries, Ltd.

P.O. Box 119

St. Gregor, Saskatchewan

S0K 3X0 Canada

Ph# (306)366-2184 or Fax# (306)366-2145