

# DAKOTA MICRO

## User Manual

OverView® 1080P HD Digital 7" Wireless Waterproof Monitor and 120° Camera



**DM Part Number(s)**

DMOV-DWH7C

**Description(s)**

This OverView® kit includes one (1) HD digital 7" wireless waterproof monitor, one (1) HD digital 120° wireless cameras, and accessories.

Always read the manual prior to operating this equipment. Also, please follow all safety signs and precautions.

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**Included Components**

Description	Picture
<p>OverView® 1080P HD Digital Wireless 7 in Waterproof Monitor</p>	
<p>Locking 12V Auxiliary Power</p>	
<p>OverView® 1080P HD Digital Wireless Camera PN: DMOV-DWHC</p>	
<p>Locking Hardwire Power</p>	

**Optional Wireless Kit Components**

Description	Picture
<p>Dakota Micro® Locking AC 3A Electrical Outlet Power PN: DM-PA3</p>	
<p>OverView® 1080P HD Digital Wireless Camera PN: DMOV-DWHC</p>	

## Standard Features

### Camera

- Minimum focal distance of 5"
- Built-in, high quality CCD camera with high performance infrared (IR) illuminator modules
- IR has effective range of 45'+ in complete darkness
- Built-in CDS light-source sensor automatically turns the IR's on/off by detecting the light intensity of the environment
- 2.8mm Camera lens provides 110-degree field of view

### Monitor

- 7" LED Backlit Monitor
- Capable of displaying 4 digital wireless cameras
- Capable of auto scan between Cameras 1, 2, 3, & 4
- View cameras one at a time, side by side, or quad view
- Manual image switching modes




## Power

### Supplying power to your OverView® wireless monitor with provided 12v power adapter

1. Attach the power input connector on monitor to your included 12v cigarette lighter power adapter.
2. Plug cigarette lighter adapter into 12v power source.

### Supplying power to your OverView® wireless cameras with provided hardwire power adapter

1. Attach the power input connector on camera to your included hardwire power plug.
2. Attach t-tap power clips as follows:

<p>a. Hardwire power adapters include two sets of wire tap and female disconnects for both power (red) and ground (blue)</p>	
<p>b. The wire tap clamps onto the wire you're connecting to; the female disconnect crimps onto the Hardwire power adapter: RED for power, BLUE for ground</p>	
<p>c. The female disconnect slides firmly into the end of the wire tap, making a secure connection</p>	

3. **WARNING:** Hardwire MUST be attached to a MAX 7.5A fused circuit or damage will occur. Warranty void if instructions are not followed.

### Supplying power to your OverView® wireless kit via AC power

1. If you would like to provide power to your OverView® wireless kit via AC power, you will need to purchase the accessory AC power adapters from your local Dakota Micro, Inc. Dealer, part number: DM-PA3.
2. **IMPORTANT:** Each unit will need an AC power adapter.

## Event Trigger Wire Operations

### Event Trigger Wire Color Guide

1. Camera 1 – Brown
2. Camera 2 – Yellow
3. Camera 3 – White
4. Camera 4 – Blue

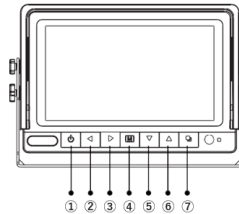
### Event Trigger Wires Explained

Event trigger wires can be attached to any 12v positive event. This will cause the monitor to change to that camera, regardless of the state of the monitor (i.e. ON/OFF or channel selection). The most recent event will be the primary display. So, if two (2) video channels (AV1 & AV2) are attached to an event output, the event that happens last will change the monitor to its respective camera view.

The wires can be attached to any positive output 10.5v to 16.9v switch or supply to cause the monitor to automatically switch the unit to its respective channel camera. **Example:** If you were to attach the AV1 wire to a positive output from an unloading auger on a combine, the monitor would switch from channel 2 to channel 1 when the auger is extended. The event circuit should be neutral in its normal state and change to HIGH (+12v) when the event is considered to be active.

## Monitor Operation

1. Power
2. Left (Volume -/Menu)
3. Right (Volume +/Menu)
4. Menu/Esc
5. Down (CH switch)
6. Up (CH switch)
7. OK/Camera Toggle



### Setting Up/Pairing Your Camera





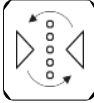




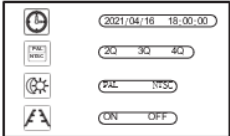
1. Plug monitor into chosen power source. With no cameras connected, the monitor will display “No Signal” message.
2. Have monitor show one camera image at a time **IMPORTANT: Camera will not pair in split screen or SCAN mode.**
3. Plug 1 camera into the chosen power source.
4. Press “MENU” button to enable menu selection. **IMPORTANT: Menu NOT accessible in split screen mode.**
5. Use Left/Right arrows to select the “Pair” icon (pictured below)
6. Press “OK” (7 on image above) button to select.
7. Once selected, your monitor will display the message “Please press pair key on Tx side 20”, which means your monitor will scan for available camera signals.

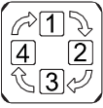





### To Pair Additional Cameras

1. Change the monitor to another video input and follow the above instructions for each additional camera.

**DISCLAIMER:** If camera signal cannot be found, unplug camera for 10 seconds and try again.

**Additional Menu Options**

Icon	Screen Image	Functionality
		<p><b>Pair:</b> Establishes the connection between the monitor and camera.</p> <p><b>IMPORTANT: To pair, your monitor should be powered but your cameras SHOULD NOT. See instructions above (IX. SETTING UP/ PAIRING YOUR CAMERAS).</b></p> <p>When pairing the cameras, be sure to pair one camera at a time.</p> <p>The monitor will not be able to pair the camera if the monitor is in split screen.</p>
		<p><b>Picture Setting:</b> Allows adjustment of brightness, contrast, color (adjusts monitor, so this setting affects both cameras), and volume.</p> <p>Brightness: 0-9 (Press left/right arrows to adjust)          Contrast: 0-9 (Press left/right arrows to adjust)          Color: 0-9 (Press left/right arrows to adjust)</p>
		<p><b>Normal/Mirror image setting:</b> Allows users to adjust viewing of cameras. 4 modes available</p>
		<p><b>Multiscreen mode:</b></p> <p>Can choose what layout you would prefer for split, triple, or quad view.</p>
		<p><b>System Settings:</b></p> <p>Adjust the date and time          Select to turn off 2, 3, or 4 camera view screens          Change camera PAL/NTSC          Change monitor day/night mode.</p>

		<p><b>Autorotation:</b></p> <p>Turn the channels on/off that would be included in the auto rotation.</p> <p>Length in seconds between each change.</p>
		<p><b>Reverse Guidelines:</b></p> <p>Turn the guideline on/off or adjust it right and left on screen</p>
	<p>N/A</p>	<p><b>Not Available in this model</b></p>
	<p>N/A</p>	<p><b>Not Available in this model</b></p>



## Specifications

<b>Camera</b>	
Camera	Digital wireless infrared waterproof camera
Emissive power	18dBm
Image sensor	1/ 2.9" color CMOS
Valid pixel	PAL: 1920(H)X1080(V)
Definition	1080P
IR-CUT	Automatic Switching
Minimum Illumination	0 LUX (Built in 18 PCS infrared light to turn on)
Viewing angle	120°
Waterproof grade	IP69K
Shock proof grade	5G
Working voltage range	DC 11~32V
Shape size	4.21in (107mm) (W) x 2.95in (75mm) (H) x 2.78in (70.5mm) (D)
<b>LCD Monitor</b>	
Display Device	Color LCD monitor
LCD display size	7"
Frequency Range	2400~2483.5MHz
Receiving Sensitivity	<-86dBm (1MHZ QPSK MD300RE)
Resolution	1024x (RGB)x600
Viewing Angle	L/R: 85/85 U/D: 85/85
Contrast Ratio	800:1
LED brightness (cd/m <sup>2</sup> )	600
Response time (ms)	25
Receiving range	300 ft (Open distance)
Throw the load	DC 24+ 174V/350ms
Working Temperature	-4°F~140°F (-20°C~60°C)
Storage Temperature	-22°F~158°F (-30°C~70°C)
Input power supply	DC 8~32V (5W Max)
Waterproof grad	IP68
Shape Size	8.67in (220mm) x 5.87in (149mm) x 3.31in (84mm) (sunshade with bracket)

## Warnings

1. When selecting a camera system from Dakota Micro, Inc., be sure to utilize the appropriate system for your use. AgCam®, EnduraCam® and InnoPro® cameras are designed for high impact, moisture, vibration, and a variety of other rough conditions. OverView® and RazerCam™ cameras and kit components are designed for light use, low vibration, and low moisture. OverView® and RazerCam™ equipment is not warranted when used in situations outside of the above-mentioned parameters. We always request that customers keep in mind that our less expensive OverView® and RazerCam™ product line is cheaper because it does not feature the reliability and durability of our AgCam® and EnduraCam® lines. The warranty available on these products reflects that durability.
2. To avoid electrical shock and maintain optimal functionality, do not open the enclosures. High voltage may be present and there are no user serviceable parts inside. All warranties will be void should any enclosures be tampered with in any way.
3. Do not use any harsh chemical solvents, cleaning agents or corrosive detergent to clean away dirt on the surface of the screen or lens.
4. On AgCam® and EnduraCam® products, the photo-chromic camera lenses have been made impact-resistant and have been drop-ball tested according to Sec. 3.84,21 CRF BUT ARE NOT UNBREAKABLE. Because they have been hardened chemically, they show no stress pattern. Inspect your lenses frequently. Chipped or scratched surfaces will reduce protection. Such lenses should be replaced only by the manufacturer.
5. Power to cameras is not interrupted by turning off monitor; 12v power source must be terminated when not in use to avoid battery drain. To avoid this problem be sure when hard wiring a unit, use a fused circuit.
6. Do not use your Dakota Micro, Inc. camera system for anything other than legal surveillance and observation uses. Dakota Micro, Inc. is not liable for any illegal or nefarious usage.

## Product Warranty/Repair Process

1. For Technical Support call 1 701-538-4403 OR email techsupport@dakotamicro.com
2. Technician will assist in troubleshooting product malfunction.
3. If product malfunction cannot be remedied and a repair is deemed necessary, Technician will issue a case number.

**IMPORTANT NOTE:** *The Technician will note if the repair APPEARS to be a warranty or non-warranty issue based on customer description of the issues at hand. No final determination can be made until inspection and testing of the equipment is completed at the factory.*

4. To ensure fast and effective repairs, customer is required to send:
  - Dakota Micro, Inc. product that technician has requested/deemed necessary in the proper diagnosis and repair of malfunction. This may include some or all components of the kit.
  - Original/Copy of purchase receipt.
  - For serialized items ONLY, if a copy of the original purchase receipt cannot be provided, then Dakota Micro, Inc. will use the product manufacture date.
  - Customer information, including return address, phone number & email address.
  - Case Number provided by Dakota Micro, Inc. technical support
  - Shipping and associated costs to ship product to Dakota Micro, Inc. factory to be borne by the customer unless otherwise specified.
5. Customer should mail product to:
 

Dakota Micro, Inc.  
Case # XXXX  
8659 148 ½ Ave. SE  
Cayuga, ND 58013
6. Upon receipt and evaluation of product at Dakota Micro, Inc. factory, it will be established if the repair is warranty or non-warranty. Customer will be notified of any applicable charges.
7. If the repairs are deemed non-warranty and require a service/repair fee of any kind, a credit card number will be required.
8. If customer is unable to be contacted over the course of 3 weeks regarding required non-warranty repairs, product will be held for 30 days and, if no response from customer, product will be discarded.
9. Any product returned without proper documentation may be returned at customer's expense.
10. Product returned with unconfirmed problems may be assessed an evaluation fee of up to \$60 per unit.
11. Return shipping costs will be borne by the party at fault; in other words, if Dakota Micro, Inc. determines that the defective product was covered under warranty, Dakota Micro, Inc. pays the shipping charges. If Dakota Micro, Inc. determines that it was the customers fault, the customer will pay shipping charges. If a particular circumstance cannot be determined than the cost of shipping charges will be decided on a discretionary basis depending on the situation at hand.

## Consumer Limited Warranty

Subject to the disclaimer, limitations and other directions stated hereafter, Dakota Micro, Inc. warrants that the Product will be free from defects in material and workmanship for periods as stated hereafter from the date of original purchase. **THIS WARRANTY IS EXPRESSLY MADE IN LIEU OF ANY AND ALL OTHER WARRANTIES, EXPRESS OR IMPLIED, INCLUDING THE IMPLIED WARRANTIES OF MERCHANTABILITY OR FITNESS. THE EXCLUSIVE REMEDY OF THE BUYER IS LIMITED TO REPAIR OR REPLACEMENT OF THE PRODUCT. EXCEPT AS STATED IN THIS WARRANTY, DAKOTA MICRO, INC. SHALL NOT BE LIABLE FOR ANY LOSS, INCONVENIENCE, OR DAMAGE, INCLUDING DIRECT, SPECIAL, INCIDENTAL, OR CONSEQUENTIAL DAMAGES, RESULTING FROM THE USE OR INABILITY TO USE THE PRODUCT, WHETHER RESULTING FROM BREACH OF WARRANTY, NEGLIGENCE, STRICT LIABILITY OF ANY OTHER LEGAL THEORY.** Any oral statements or representations made by anyone which are contrary to or at variance with the terms stated in this **LIMITED WARRANTY** are void.

Dakota Micro, Inc. will, at its option, either repair the defect or replace the defective Product or part thereof with a new or remanufactured equivalent at no charge to the purchaser for parts or labor for the period of five (5) years for AgCam® /EnduraCam® cameras; three (3) years for InnoPro® cameras; two (2) years for AgCam®/ EnduraCam® monitors, and Wireless components; Twelve (12) Months for all Overview® and RazerCam™ Cameras & Monitors, cables and all other accessories.

In addition to the five (5) years for AgCam® /EnduraCam® cameras Dakota Micro will warranty for the life of the camera against any variety of ingress within the camera housing. This includes moisture and dust particles that are found inside the camera resulting from a manufacturing defect and does not include ingress because of damage caused by no fault of Dakota Micro, Inc.

The Dakota Micro, Inc. limited warranty periods outlined above apply throughout the United States and Canada only. A one (1) year maximum limited warranty for all Products applies to all other geographic locations unless otherwise stated in writing by Dakota Micro, Inc.

This limited warranty does not apply to any issues connected with appearance that have no relation to the performance of the Product nor to any Product the exterior of which has been damaged or defaced, which has been subjected to improper voltage or other misuse, abnormal service or handling, or which has been altered or modified in design or construction.

In order to enforce the rights under this limited warranty, the purchaser should follow the process set forth in the Product Warranty/Repair Process, and provide proof of purchase to Dakota Micro, Inc.

Neither the sales personnel of Dakota Micro, Inc. nor any dealer or any other person is authorized to make any warranties other than those described herein, or to extend the duration of any warranties beyond the time periods described herein.

The warranties described herein shall be the sole and exclusive warranties and remedies provided by Dakota Micro, Inc. Correction of defects, in the manner and for the period of time described herein, shall constitute complete fulfillment of all liabilities and responsibilities of Dakota Micro, Inc. to the purchaser with respect to the Product, and shall constitute full satisfaction of all claims. In no event shall Dakota Micro, Inc. be liable or in any way responsible for any damages or defects in the Product which were caused by repairs or attempted repairs performed by anyone other than Dakota Micro, Inc.

Some states do not allow the limitation or exclusion of incidental or consequential damages, so said limitation may not apply to you.

Any action at law, suit in equity, or other judicial proceeding for the enforcement of any right provided for herein or otherwise, or with respect to any claim that a purchaser may have against Dakota Micro, Inc. shall be instituted only in the Courts of the State of North Dakota, either in the state district court located in Wahpeton, North Dakota or in Federal District Court located in Fargo, North Dakota. Without regard to conflicts of law principles, the laws of the state of North Dakota shall govern the interpretation and enforcement of the terms of this Limited Warranty and all aspects of the relationship between Dakota Micro, Inc., and the purchaser.

*This warranty gives you specific legal rights and you may also have other rights, which may vary from state to state.*

## Disclaimer

Dakota Micro Inc. products, specifications, pricing, and programs are subject to change without prior notice. Dakota Micro Inc. reserves the right to make design changes at any time without obligation to retroactively install them on previously sold units.



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Cayuga, ND 58013

[www.dakotamicro.com](http://www.dakotamicro.com)

*Management System Registered to ISO 9001*