

User Manual

AgCam® or EnduraCam® 9" AHD Quad Monitor Kit

Dakota Micro Part Number(s):
9" AHD Quad Monitor – DM-H9Q

AGCO Part Number(s):
9" AHD Quad Monitor – AG-H9Q



**SEE
WHAT
YOU'VE
BEEN
MISSING**

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Thank you for purchasing equipment from Dakota Micro, Inc.

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

See the Dakota Micro, Inc. website for installation training videos at www.dakotamicro.com.

**I. INCLUDED MONITOR KIT COMPONENTS
(PER PN: DM-H9Q/AG-H9Q)**

Description	Picture
<p>Dakota Micro, Inc. 9" AHD Quad Monitor</p>	
<p>Monitor Wire Harness <i>PN: DM-H9QMWH</i></p>	
<p>Monitor Remote <i>PN: DM-H9QRMT</i> (styles vary by kit & battery is included)</p>	
<p>A/C Power Wall Plug <i>PN: DM-PA3</i> (styles vary by kit)</p>	
<p>Monitor U-bracket with 4 Wing Bolts <i>PN: DMAC-9M Bracket</i></p>	
<p>Monitor Sun Shield</p>	
<p>12v Cigarette Lighter Power Adaptor <i>PN: DM-12V</i> (styles vary by kit)</p>	

The AgCam® and EnduraCam® camera lines are a durable, reliable surveillance system with the innovative ability to be quickly moved from one application to the next.

II. STANDARD FEATURES

- Feature the latest in Analog HD technology
- View 1, 2, 3 or 4 cameras at the same time
- LED backlit
- Compatible with NTSC or PAL cameras, simultaneously
- Compatible with AHD or CVBS cameras, simultaneously
- Advanced LCD technology allows you to clearly see your image from any angle
- Mirror the view of any of your cameras for use as a backup camera
- 2 Year Warranty
- 16:9 aspect ratio
- 4 Camera Inputs
- Available in 9in size
- Event triggers for each camera allow for triggered events to bring your camera to full view (IE: putting the vehicle in reverse)
- Color, brightness, contrast, and volume controls that allow compensation for use in different environments
- Remote control, sun shield, and metal U-bracket monitor stand included

III. IMPORTANT INFORMATION ABOUT ANALOG & AHD

- For multi-camera systems, all cameras can be either AHD or Analog, simultaneously

IV. MONITOR INSTALLATION & MOUNTING

A. Mounting Precautions

Remove your monitor carefully from packaging and inspect all mounting hardware. Mounting location is the most important part of the monitor installation as it ensures you the maximum visual benefit from your AgCam® system. With that said, when installing your monitor, ensure to follow these three (3) precautions:

1. The monitor is out of direct sunlight. This will prolong the life of the unit as well as ensure optimum visibility.
2. The monitor does not obstruct view.
3. The monitor does not interfere with the normal operation of equipment.

WARNING:

Dakota Micro, Inc. is not responsible for any damages caused to your monitor, or yourself, due to the improper installation or use of a suction cup monitor mount, whether it be product sold by DM or product purchased from another source.

B. Universal Bracket Mounting

1. Hold monitors U-bracket in place on monitor.
2. Attach bracket with included wing bolts.

C. Finalizing Universal Bracket Installation

1. With the mount and monitor attached, find and mark the desired position for the monitor.
2. Remove the monitor from the mount.
3. Attach the monitor to the mount and tighten the wing nuts.

***Use ONLY the nuts included in the kit, bolts longer than 10mm will damage your monitor.**

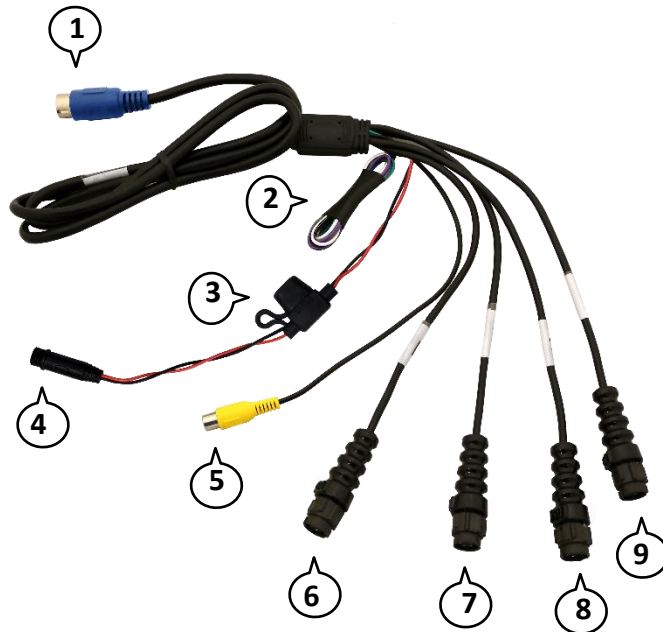


NOTE: Turn the monitor on only after it has been securely mounted, supplied with power, and the cameras are connected

V. INSTALLATION

A. Monitor Wire Harness Details

1. Input to Monitor
2. AV1-4 Event Trigger Wires
3. Fuse
4. Power Input
5. RCA-Video Output
6. AV1 – Audio/Video Input
7. AV2 – Audio/Video Input
8. AV3 – Audio/Video Input
9. AV4 – Video Input



VI. POWER

A. Supplying Power with 12v Power Adaptor

1. Attach the power input connector (3 above) to your included 12v cigarette lighter power adaptor.
2. Plug cigarette lighter adaptor into 12v power source.

B. Hardwire Power Adaptor

1. If you would like to hardwire your power supply, please contact your local AgCam® dealer for available hardwire power adaptors (PN: *DM-HDWRE* is included in four-camera kits only)
2. Dakota Micro hardwire power adaptors have a maximum circuit capability of 5 amp.

C. Fuses

1. There is a small in-line blade fuse located on the red and black power wire (3 above). When replacing this fuse, use a MAX 3amp blade fuse.
2. There is a small glass fuse located on the inside tip of the 12v portion of the power adaptor (PN: *DMAC-12v*). When replacing this fuse, use a MAX 3amp glass fuse.

VII. EVENT TRIGGER WIRE OPERATIONS

A. Event Trigger Wire Color Guide

1. Camera 1 – Green
2. Camera 2 – Purple
3. Camera 3 – Gray
4. Camera 4 – White

B. Event Trigger Wires Explained

Event trigger wires can be attached to any 12v or 24v positive output event switch or supply. The event circuit should be neutral in its normal state and change to HIGH (12v or 24v) when the event is active. This will cause the monitor to automatically switch to that camera, regardless of the state of the monitor (i.e. ON/OFF or different channel selection). Up to 3 cameras can be triggered on and simultaneously displayed at the same time. For example, if you have trigger wires 2 and 4 hooked up to a positive event, a split screen of cameras 2 and 4 will be displayed. You can also set a camera to be a priority so when it is triggered it will override any other image to full screen. See Menu Setting for more details.

VIII. MONITOR & REMOTE OPERATIONS












B. Monitor Operations



1	Headphone Jack	Output for audio (disabled)
2	Full Screen	Will show cameras 1/2/3/4 each time pressed.
3	Duplex Screen/Triplex	Will show two or three cameras in different combinations each time pressed. Adjust default selections in Display Mode Settings.
4	Quad Screen/H	First press displays all four cameras in quad view. Second press views all four cameras in H view. Adjust viewing options in Display Settings. Duration between screen views can be adjusted in Loop Preview under Display Settings Mode.
5	- Key	To decrease parameter/Up/Down
6	+ Key	To increase parameter/Up/Down
7	MENU	Enables / Disables Menu
8	AV Key	Will show cameras 1/2/3/4 each time pressed/ In MENU acts as ENTER key & Down arrow
9	POWER	Turns monitor ON/OFF.
Port 10 and 11 is located on the back side of the monitor		
10	Battery	N/A (only on DVR versions)
11	SD Card	N/A (only on DVR versions)

C. Remote Operations

Standard Remote

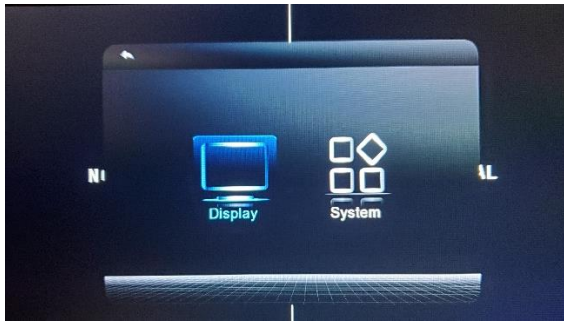
	POWER ON (give it a few seconds) / OFF
	Switches between video channels
	Displays Menu
	Navigation Arrows
	Navigation Arrows
	Navigation Arrows
	Navigation Arrows
	Brings Channel 1/Camera 1 Full screen
	Brings Channel 2/Camera 2 Full screen
	Brings Channel 3/Camera 3 Full screen
	Brings Channel 4/Camera 4 Full screen



IX. MENU SETTINGS

A. Monitor Menu Settings

1. Press the MENU key on the face of monitor or remote. MENU key also acts as “enter” key once within menu.
2. Use the AV key on the monitor (up and down arrows on remote) to select an item under each section. Selected menu items turn blue.
3. Use – or + on the monitor (left and right arrows on remote) to change the value of the highlighted item.
4. To exit: Press the MENU button monitor (left or right arrow on remote) multiple times until the menu goes away. Allow monitor to time out (approximately 10 seconds).



MAIN MENU

Display: Adjusts monitor display settings
System: System Settings including time setup



DISPLAY SETTING

DISPLAY ADJUSTMENT: When utilizing microphone, allows for noise reduction settings

Scene Mode: Adjusts look of entire display – highlight, film, brilliance, cool, warm, custom. Adjustment of brightness, contrast, saturation & hue of chosen scene also available

Image Adjust: Allows adjustment of individual cameras – brightness, contrast, saturation, hue. You can also individually flip each camera.

LOOP PREVIEW: Set auto rotation time between screen views– OFF, 3, 5, 8, 10 or 15 seconds

POWER ON MODE: Select the default camera view when you power on. Select from cameras: 1, 2, 3, 4, ½, ¾, H, and Quad

INSTALLATION MODE: Choose from more default camera view options.

Install Select: Mode 1 is regular screen view and Mode 2 flips screen upside down.

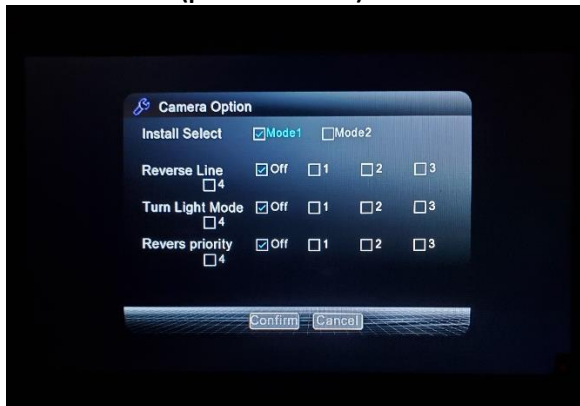
Reverse Line: Check the boxes of which cameras (or none) you’d like to view the reverse guidelines. Note, reverse lines can only be displayed in full screen one at a time.

Turn Light Mode: N/A

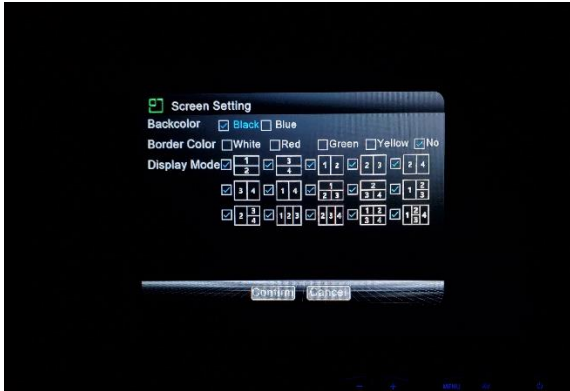
Reverse Priority: Select which single camera overrides any other trigger event when reversing

AUTO DIMMER: Mark “On” if you want the monitor to automatically dim in low-light conditions

Installation Mode (pictured below)



Display Mode (pictured below)



DISPLAY MODE:

Allows adjustment of how cameras are displayed on screen as well as background & border colors



SYSTEM SETTING

LANGUAGE SETTING:

Select Language

POWER SAVING MODE:

Set Power Saving Mode duration – Off, 10min, 30min, 1 hr, 2 hr.

RESTORE FACTORY:

Restore monitor to factory settings

SYSTEM UPGRADE:

Install firmware updates (SD card would need to be supplied by manufacturer to update; updates generally not needed)

X. SPECIFICATIONS

B. LCD Monitor	
Screen Size	16:9 digital panel
Overall Size	9.25in(L)x 6.1in(H)x1.44in(D) 235mm(L)X155mm(H)X36.5mm(D)
Weight	30.4oz (862g)
Power Input	DC 12v-24v
Color System	NTSC/PAL auto switch
Operating Temp.	-30°F~130°F (-34°C~+54°C)
Brightness	350cd/m ²
Resolution (HxV)	1024(H)x600(V)
Contrast	500:1
Viewing Angle	L/R: 70° Up: 50° Down: 70°
Operating Voltage	Min. 12v (Check monitor label for specific voltage range)
Lighting Source	LED Backlit
Environmental Rating	IP50
Video Output Format	Full/Quad/split/ Auto Switch
Video Output Port	RCaX1 Video Out - Analog (CVBS) ONLY
Video Input Port	X4 AHD video input channels

XI. WARNINGS

- When selecting a camera system from Dakota Micro, be sure to utilize the appropriate system for your use. AgCam and EnduraCam cameras are designed for high impact, moisture, vibration, and a variety of other rough conditions. OverView cameras and kit components are designed for light use, low vibration, and low moisture. OverView 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 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.
- 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.
- Do not use any harsh chemical solvents, cleaning agents or corrosive detergent to clean away dirt on the surface of the screen or lens.
- 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.
- 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 5-amp fused circuit.
- Do not use your Dakota Micro camera system for anything other than legal surveillance and observation uses. Dakota Micro, Inc. is not liable for any illegal or nefarious usage.

XII. 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 Repair Authorization (RA) number.

IMPORTANT NOTE:

The Technician will note on the RA form 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 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 will use the product manufacture date.
 - Customer information, including return address & phone number. If the phone number is not included, the customer will be sent a letter requesting the needed information.
 - RA Number provided by Dakota Micro Technical Support
 - Shipping and associated costs to ship product to DM factory to be borne by the customer unless otherwise specified.
5. Customer should mail product to:

Dakota Micro, Inc.
RA # XXXXX
8659 148 ½ Ave. SE
Cayuga, ND 58013
6. Upon receipt and evaluation of product at Dakota Micro Factory, it will be established if the repair is warranty or non-warranty. If requested, customer will be called and 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 requested by Order Processing after the repair is completed.
8. If customer is unable to be contacted over the course of 3 weeks regarding required non-warranty repairs, product will be returned, unrepared, to the customer.
9. Any product returned without proper documentation may be returned at customer's expense.
10. Product returned with unconfirmed problems will be assessed a \$60 evaluation fee per unit
11. Return shipping costs will be borne by the party at fault; in other words, if Dakota Micro determines that the defective product was covered under warranty, Dakota Micro pays the shipping charges. If Dakota Micro determines that it was the customers fault, the customer will pay shipping charges. If a circumstance cannot be determined than the cost of shipping charges will be decided on a discretionary basis depending on the situation at hand.

XIII. CONSUMER LIMITED WARRANTY**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 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 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 three (3) years for AgCam® /EnduraCam® and InnoPro® cameras; two (2) years for AgCam®/ EnduraCam® monitors, and Wireless components; Twelve Months (12) for all Overview Cameras & Monitors, cables and all other accessories.

The Dakota Micro 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.

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 steps set forth in the complete Dakota Micro "Warranty & Repair Policy" listed on page 11 - section XVI, and provide proof of purchase to Dakota Micro.

Neither the sales personnel of Dakota Micro 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. 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 to the purchaser with respect to the Product, and shall constitute full satisfaction of all claims. In no event shall Dakota Micro 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.

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 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 location 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 and the purchaser.

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

XIV. 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.

XV. CONTACT US

8659 148 ½ Ave. SE.
Cayuga, ND 58013

Management System Registered to ISO 9001

www.dakotamicro.com