User Manual

7in or 9in AHD Monitor

Dakota Micro Monitor Kit

Dakota Micro Part Number(s):
7in AHD Monitor – DM-H7
9in AHD Monitor – DM-H9

AGCO Part Number(s):
7in AHD Monitor – AG-H7
9in AHD Monitor – AG-H9

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SEE WHAT YOU'VE BEEN MISSING

8659 148½ Ave. SE.
Cayuga, ND 58013
Management System Registered to ISO 9001
www.dakotamicro.com

Thank you for purchasing our Dakota Micro, Inc. products
Always read the manual prior to operating this equipment. Also, please follow all safety signs and precautions.

I. INCLUDED MONITOR KIT COMPONENTS

Description	Picture
Dakota Micro, Inc. 7in or 9in AHD Monitor	
Monitor Wire Harness **DM PN: DM-MWH**	
Monitor Remote **DM PN: DM-HRMT** *(styles vary by kit)*	
A/C Power Wall Plug **DM PN: DM-PA3** *(styles vary by kit)*	
Monitor U-bracket with 4 Wing Bolt (styles vary by kit)	
Monitor Sun Shield	
12v Cigarette Lighter Power Adapter **DM PN: DM-12V** *(styles vary by kit)*	

II. MONITOR FEATURES

- Features the latest in Analog HD technology
- LED backlit
- View both NTSC and PAL cameras
- 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 ration
- 4 camera inputs
- Event triggers for each camera allow for triggered events to bring your camera to full view (I.E. putting the vehicle in reverse)
- Color, brightness, contrast, and volume controls that allow comprehension for use in different environments
- Remote control, sun shield, multiple power options and metal U-bracket monitor stand included

III.   **IMPORTANT INFORMATION REGARDING ANALOG AND AHD EQUIPMENT**
- After the introduction of the complete line of AHD Monitors, Dakota Micro will no longer offer analog monitors.
- All analog Dakota Micro wireless equipment **will not** work with AHD Monitors. Please contact Customer Service for help with your wireless set up.

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®/EnduraCam® 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 monitor 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.
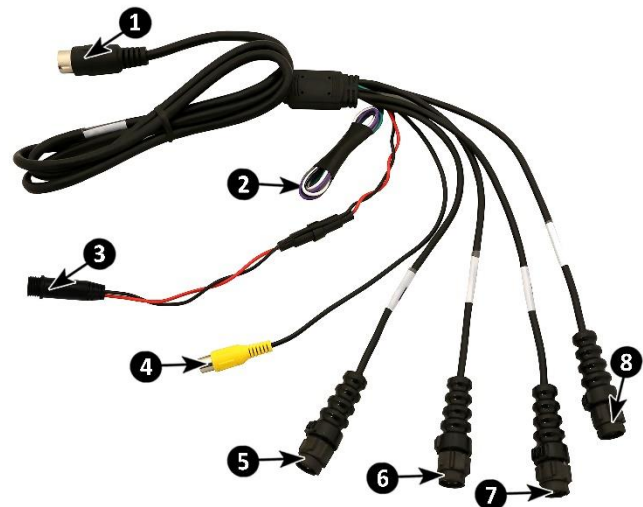3. Attach the monitor to the mount and tighten the wing nuts.
   Use ONLY the nuts included in kit, bolts longer than 10mm will damage your monitor

V.   **INSTALLATION**

A. Monitor Wire Harness Details

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

VI.   POWER

A.   Supplying Power with 12v Power Adapter
    a.   Attach the power input connector (3 above) to your included 12v cigarette lighter power adapter.
    b.   Plug cigarette lighter adapter into 12v power source.

B.   Hardwire Power Adapter *(Sold as an aftermarket accessory)*
    a.   If you would like to hardwire your power supply, please contact your local Dakota Micro, Inc. dealer for available hardwire power adapters (PN: *DM-HDWRE*).
    b.   Dakota Micro hardwire power adapters have a maximum circuit capability of 5 amp.

C.   Fuses
    a.   There is a small in-line glass fuse located on the red and black power wire (3 above). When replacing this fuse, use a MAX 2amp glass fuse.
    b.   There is a small glass fuse located on the inside tip of the 12v portion of the power adapter (PN: DM-12V). When replacing this fuse, use a MAX 2amp 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 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. 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 switch the unit to its respective camera channel automatically. ***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, 3, or 4 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 events are active.

VIII. REMOTE & MONITOR OPERATION
A. 7in or 9in Monitor Operations – Front (7in shown below)

1-3 NOT USED		
1	Not Functional	Not Functional
2	Not Functional	Not Functional
3	Not Functional	Not Functional
4	- Key	To decrease parameter
5	+ Key	To increase parameter
6	MENU	Allows users to access the menu. Once in the menu, toggles through menu options
7	AV Key	Each button press switches between AV1, AV2, AV3, & AV4. Also selects menu options within sub menus
8	Power	Powers Monitor ON and OFF (2 second delay)

B. Remote Operations

POWER ON/OFF

Allows users to decrease parameter or toggle menu settings ON/OFF

Allows users to increase parameter or toggle menu settings ON/OFF

VIDEO SELECT – Manually toggles between cameras, AV1, AV2, AV3 and AV4 and then back to AV1. Also, moves up within sub menus

Changes the view of the screen 16:9 and 4:3 or moves down through the sub menu options.

MENU – Allows users to access menu. Once in menu, toggles through menu options.
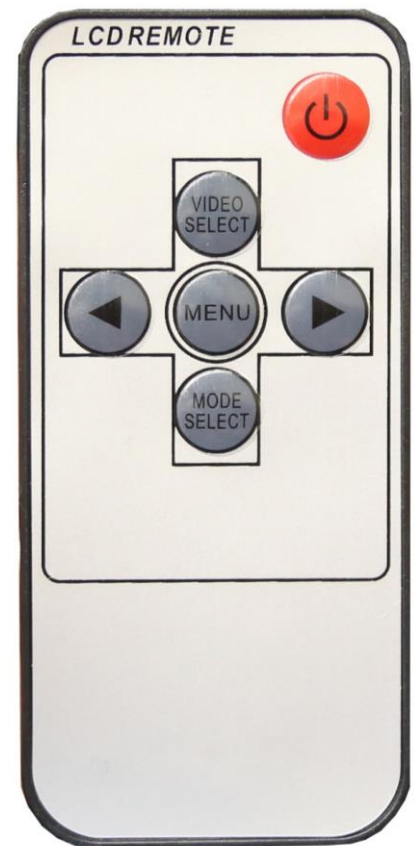
IX. MENU SETTINGS

1. Press the MENU key on the monitor or remote to bring up the menu.
2. Press the MENU key again to toggle through the menu options.
3. Use the – and + keys on the monitor or the Left and Right arrow keys on the remote to change the value of the highlighted item.
4. Use the AV on monitor or Video Select and Mode Select on remote to move up and down through the individual menu selections. Selected menu items turn red.
5. To exit, allow monitor to time out (approximately 15 seconds) or exit the menu faster by pressing the menu button to go through all the menu options.

DISPLAY
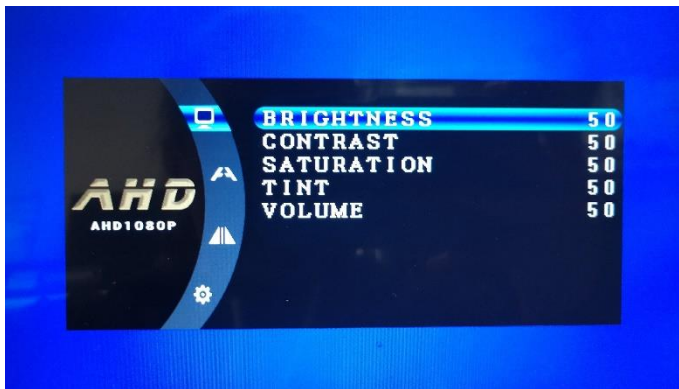
BRIGHTNESS: Adjusts the brightness of the image.
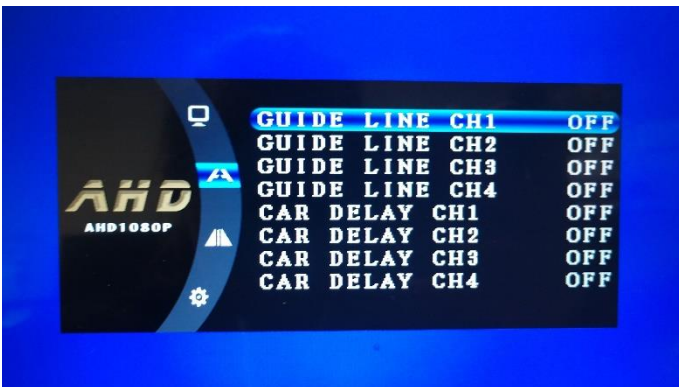**CONTRAST:** Adjusts the contrast of the image.
SATURATION: Adjusts the saturation of the image.
TINT: Adjusts the tint of the image
VOLUME: Adjusts the volume level.

GUIDELINE/DELAY

GUIDE LINE CH1-4: Allows user to turn ON/OFF guides. Guidelines appear only during triggered events.
CAR DELAY CH1-4: Allows user to set duration of triggered camera on individual cameras.
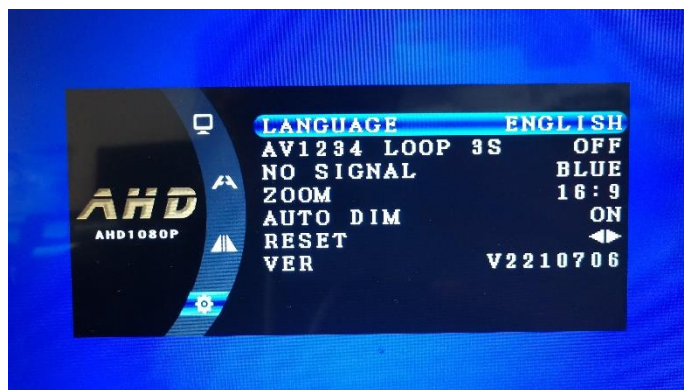
FUNCTION

ROTATE: Allows user to rotate the whole image for all channels.
MIRROR CH 1-4: Allows user to choose specific channels they may want to mirror.

SYSTEM

LANGUAGE: Allows user to change the language.
AV1-4 LOOP 3S: Allows user to have images automatically change on a 3 second loop.
NO SIGNAL: Allows user to change the color of the screen when there is no camera signal.
ZOOM: Changes the screen between 16:9 and 4:3
AUTO DIM: Turns auto dim on/ off.
RESET: Factory Reset
VER: Latest version of the monitor

X.   SPECIFICATIONS

Screen Size	16:9 Digital Panel
Overall Size	9in - 6.1(H)x9.25(W)x1.44(D)in 154.94(H)x234.95(W)x36.5(D)mm 7in - 4.84(H)x7.04(W)x1.14(D)in 123(H)x179(W)x29(D)mm
Weight	396g avg. (7in); 547g avg. (9in)
Power Input	DC 10–32v
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 Backlight
Environmental Rating	IP50
Video Output Port	RCAx1 Video Out - Analog (CVBS) ONLY
Video Input Port	x4 AHD video input channels

XI.   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 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 (12) Months 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" available on our website at www.dakotamicro.com

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.

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