

User's Manual

Waterproof 7in AHD Monitor

Dakota Micro Waterproof Monitor Kit

Dakota Micro Part Number(s):
7in AHD Waterproof Monitor – DM-WH7

AGCO Part Number(s):
7in AHD Waterproof Monitor – AG-WH7

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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 WATERPROOF MONITOR KIT COMPONENTS
PER PART NUMBER: DM(AG)-WH7**

Description	Picture
<p>Dakota Micro, Inc. Waterproof 7in AHD Monitor</p>	
<p>Monitor Wire Harness PN: DM-MWH</p>	
<p>Monitor Remote DM PN: DM-HRMT <i>(styles vary by kit Not included in all kits)</i></p>	
<p>12v Cigarette Lighter Power Adapter PN: DM-12V <i>(styles vary by kit Not included in all kits)</i></p>	
<p>12v Hardwire Power Adapter PN: DM-HDWRE</p>	
<p>Monitor U-bracket with 4 Wing Bolt</p>	

II. MONITOR FEATURES

- Features the latest in Analog HD technology
- Waterproof monitor with twist locking watertight power connection
- Ultra-bright LED backlit screen
- 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 ratio
- 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 Dakota Micro camera 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 from a 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

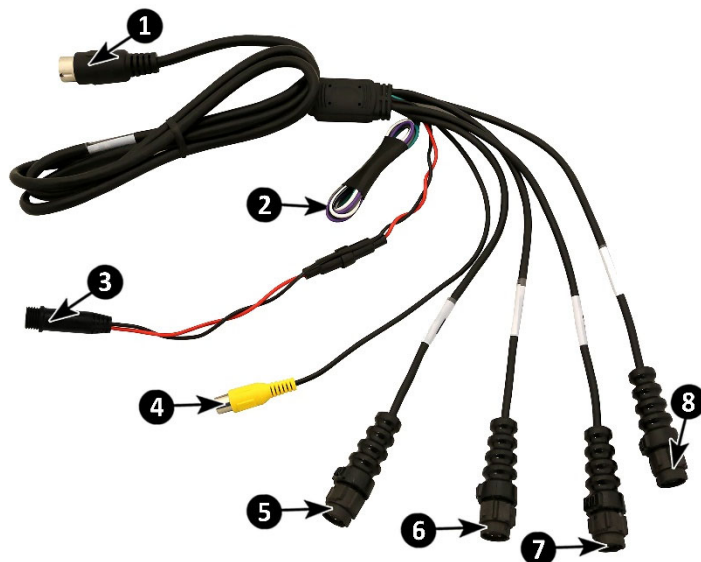
1. With the mount and monitor attached, find and mark the desired position for the monitor.
2. Remove the monitor from the mount.
3. Attach the monitor to the mount and tighten the wing nuts.

****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. Watertight Power Input
4. RCA-Video Output
5. AV1 - Audio/Video Input
6. AV2 - Audio/Video Input
7. AV3 - Audio/Video Input
8. AV4 - Video Input



VI. POWER

A. Supplying Power with 12v Power Adapter

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

B. Hardwire Power Adapter

1. If you would like to hardwire your power supply, utilize the instructions included in the packaging.
2. Dakota Micro hardwire power adapters have a maximum circuit capability of 5 amp.

C. Fuses

1. 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.
2. There is a small glass fuse located on the inside tip of the 12v portion of the power adapter (PN: DMAC-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. **Example:** 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

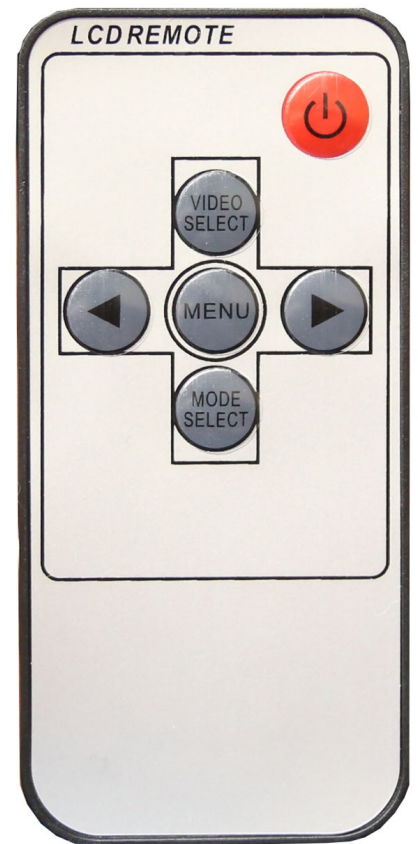
A. Monitor Operations – Front



1		POWER ON/OFF
2		Allows user to navigate left through menus
3		Allows user to navigate right through menus
4		Allows user to access menu. Once in menu, toggles through menu options of Picture, Volume, Function, System, & Clock
5		Allows user to decrease parameter or toggle menu settings ON/OFF
6		Allows user to increase parameter or toggle menu settings ON/OFF
7		Each button press switches between AV1, AV2, AV3, & AV4. Also selects menu options within sub menus

B. Remote Operations

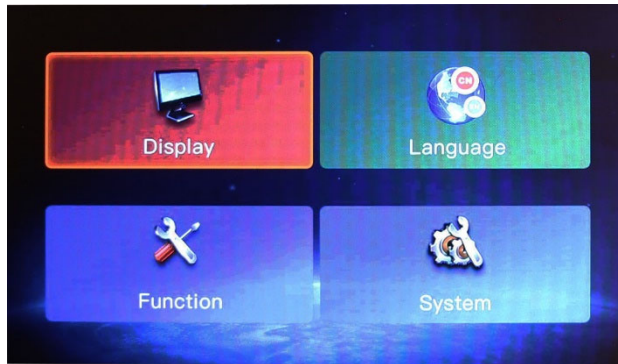
	POWER ON/OFF
	Allows user to navigate left through menus
	Allows user to navigate right through menus
	Manually toggles between cameras, AV1, AV2, AV3 and AV4 and then back to AV1
	Non-Functional for this model monitor
	Allows users to access menu. Once in menu, toggles through menu options of Picture, Volume, Function, System, & Clock



IX. MENU SETTINGS

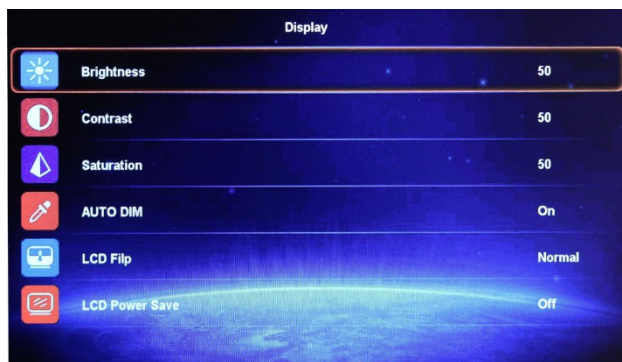
1. Press the MENU key on the monitor or remote to bring up the menu.
2. Press the + or - key to move right or left.
3. Press the MENU key again to toggle through menu options.
4. Use the + and - key on the monitor or the right and left arrow keys on the remote to change the value of the highlighted item.
5. Use the + and - key to move up and down through the individual menu selections. Press MENU button to select item.
6. To exit, allow monitor to time out (approximately 15 seconds) or exit the menu faster by pressing the power button.

HOME



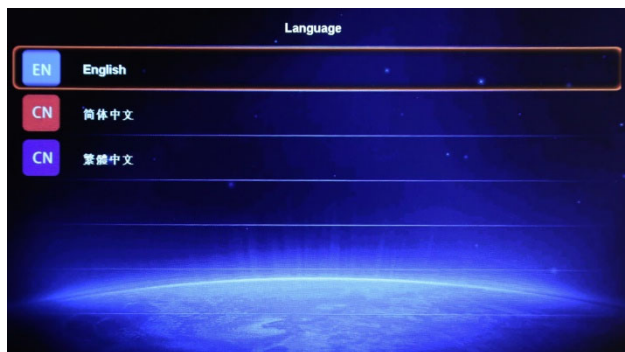
DISPLAY: Adjusts the brightness of the image.
LANGUAGE: Select your preferred language.
FUNCTION: Viewing settings.
SYSTEM: Software settings.

DISPLAY



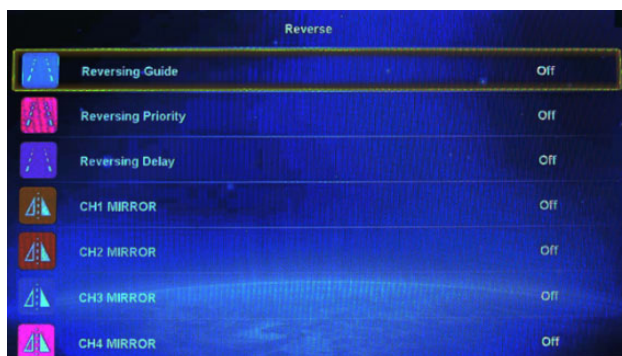
BRIGHTNESS: Adjust the brightness of the image.
CONTRAST: Adjust the contrast of the image.
SATURATION: Adjust the level of saturation on the image.
AUTO DIM: Will dim the monitor based on lighting conditions.
LCD FLIP: Allows you to rotate or reverse the image.
LCD POWER SAVE: Set a time the monitor will be placed in power saving mode.

LANGUAGE



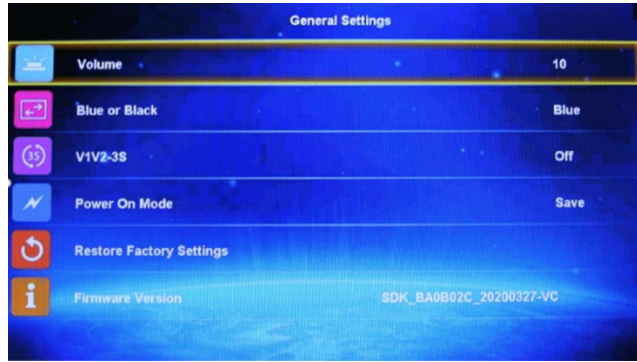
LANGUAGE: Allows user to select language (English is default).

REVERSE



REVERSING GUIDE: Allows user to turn on guidelines.
REVERSING PRIORITY: Not applicable on this monitor.
REVERSING DELAY: Allows user to set the amount of time monitor will remain on when a trigger has been disengaged.
CH1 MIRROR: Allows user to mirror image.
CH2 MIRROR: Allows user to mirror image.
CH 3 MIRROR: Allows user to mirror image.
CH 4 MIRROR: Allows user to mirror image.

GENERAL SETTINGS



- VOLUME:** Adjust volume level.
- BLUE OR BLACK:** Choose blue or black background.
- V1V2-3S:** Cycles cameras in three second intervals.
- POWER ON MODE:** Option to save, power ON/OFF.
- RESTORE FACTORY SETTINGS:** Return settings to default.
- FIRMWARE VERSION:** Update firmware version.

XI. SPECIFICATIONS

Screen Size	16:9 Digital Panel
Overall Size	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	600cd/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	IP68
Video Output Port	RCAx1 Video Out - Analog (CVBS) ONLY
Video Input Port	X4 AHD video input channels

XIII. 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 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" 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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