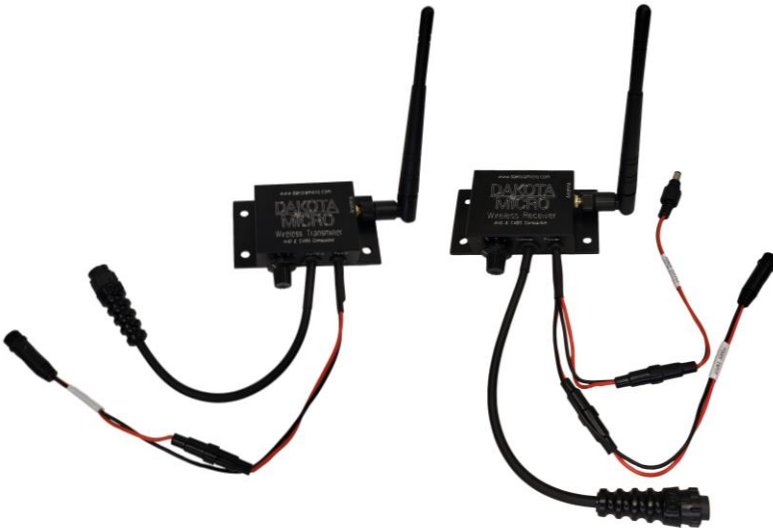


# DAKOTA MICRO

## User Manual

AGCO Dakota Micro® AHD/CVBS Wireless Transmitter and Receiver



DM Part Number(s)	Description(s)
AG-HTX	This AGCO Dakota Micro® kit includes one (1) AHD/CVBS wireless transmitter, one (1) 3dBi antenna, and power.
AG-HRX	This AGCO Dakota Micro® kit includes one (1) AHD/CVBS wireless receiver, one (1) 3dBi antenna, and power.

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

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**Included Components**

**AG-HTX**

Description	Picture
AGCO Dakota Micro® AHD/CVBS Wireless Transmitter	
Dakota Micro® 2.1 Barrel Male to Auxiliary Power PN: DM-12V	
Dakota Micro® 2.1 Barrel Male Hardwired Power PN: DM-HDWRE	
Dakota Micro® 2.1 Barrel Male to Electrical Outlet Power PN: DM-PA3	
Dakota Micro® Wireless 3dBi Antenna PN: DM-RH3A	

**AG-HRX**

Description	Picture
AGCO Dakota Micro® AHD/CVBS Wireless Receiver	
Dakota Micro® 2.1 Barrel Male to Auxiliary Power PN: DM-12V	
Dakota Micro® 2.1 Barrel Male Hardwired Power PN: DM-HDWRE	
Dakota Micro® 2.1 Barrel Male to Electrical Outlet Power PN: DM-PA3	
Dakota Micro® Wireless 3dBi Antenna PN: DM-RH3A	

**Before you Install**

- Always read the manuals prior to operating this equipment and please follow all safety signs and precautions.
- To better understand your new wireless equipment, we recommend that you power both your transmitter and receiver in an indoor, controlled location (i.e. from one side of a room to another) to better get acquainted with the equipment before installing it in its permanent location.

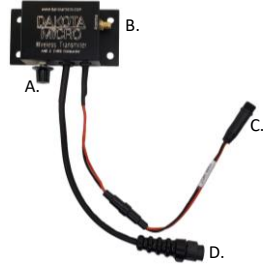
## Standard Features

- Allows for easy wireless upgrade for your Dakota Micro camera system
- Your Dakota Micro monitor is conveniently powered by your receiver for mobile applications
- Wireless waterproof receiver supports up to four (4) wireless cameras/channels.
- Transmitters and Receivers are available for purchase individually
- Waterproof transmitters and receivers can be mounted outside in hot, cold, or wet conditions
- Transmits on powerful and reliable 2.4GHz bandwidth
- Optional antennas allow you to view cameras up to 1 mile away (with line of sight)
- Channel selection switch on receiver allows for easy access to multiple cameras
- Capable of transmitting and receiving both AHD and CVBS (Analog) video signals

## Parts of you AHD Wireless System

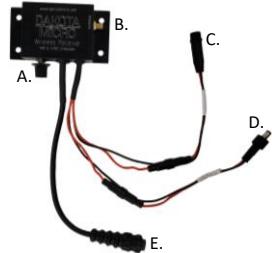
### Waterproof Transmitter (PN: AG-HTX)

- AV Channel select (4 channels) – rotate dial to select channel, set transmitter and receiver to same channel
- Antenna Input (Reverse SMA)
- Power Input (DC Power In 3000mA) to power the Transmitter
- Power out to camera. Video signal in from camera.



### Waterproof Receiver (PN: AG-HRX)

- AV Channel Select (4 channels)- rotate dial to select channel, set transmitter and receiver to same channel
- Antenna Input (Reverse SMA)
- Power Input (DC Power In 3000mA) to power the Receiver
- Power Output (DC Power Output 3000mA) to power the monitor (optional)
- Video Signal out to monitor



## Installation

### Installation Tips

- Always test equipment before installing to ensure proper signal strength and picture quality
- Line of sight means there are no obstructions such as buildings and tree belts. The fewer obstructions, the less interference to cause picture quality issues.
- There are several environmental conditions that may affect the range and quality of transmission. These may include electrical lines, Wi-Fi, wireless device signals like handheld radios, government agencies and radio stations. Therefore, Dakota Micro cannot guarantee any specific ranges.
- You may use Dakota Micro® cables to mount camera up to 120 feet from transmitter.

### Transmitter Installation

- Attach supplied 3dBi antenna or optional larger antenna (details on page 5 of manual) to Antenna Input (B).
- Connect the provided A/C power adapter into the transmitter (C), then plug into outlet to power.
- Plug the Dakota Micro® camera directly into the wireless camera input (D).
- Make sure the channel selector (A) matches the receiver.

### Receiver Installation

- Attach supplied 3dBi antenna or optional larger antenna (details on page 5 of manual) to Antenna Input (B).
- Plug the Dakota Micro receiver into the monitor wire harness (E)
- Match the channel selector (A) on the receiver to the camera you want to see.
- Connect either the hardwire, 12v or AC adapter supplied into the receiver (C).
- To eliminate multiple power sources, you may use the available power output (D) on the receiver to power the monitor.

**External Antennas**

**Wireless 3dBi Antenna (Included)**

Benefits

- Possible distance of 2,000 feet (Varies based on location and geography)
- Small
- No Extra Cost

Tips

- Short transmitter and receiver distance
- No add-on extension cable



**Wireless 5dBi Antenna (PN: DMAC-MA5)**

Benefits

- Possible distance of 2,600 feet (Varies based on location and geography)
- Magnet Mount is great for mobile applications
- 6-foot attached cable
- Low Cost

Tips

- Extra metal plate needed for plastic cabs
- No add-on extension cable



**Wireless 7dBi Antenna (PN: DMAC-MA7-PM)**

Benefits

- Possible distance of 2,600 feet (Varies based on location and geography)
- Permanent Mount
- 6-foot attached cable
- Low Cost

Tips

- No add-on extension cable



**Wireless 8dBi Omni-Directional Antenna (PN: DMAC-WA8)**

Benefits

- Possible distance of 1 mile (Varies based on location and geography)
- Sturdy Construction
- 20-foot Cable
- Additional extension cables available

Tips

- Omni-directional signal operates like a “fan” so that the signal will not be received/transmitted directly below or above



**Wireless 8dBi Directional Antenna (PN: DMAC-WA8P)**

Benefits

- Possible distance of 1 mile (Varies based on location and geography)
- 20-foot Cable
- Full transmission aimed in one direction
- Can be mounted on side of buildings

Tips

- Transmits and/or receives in one direction only



**Antenna Notes:** Line of sight is important with this wireless equipment. Use of wireless equipment in enclosed spaces drastically reduces signal strength. For best results, it is recommended to mount an antenna on the exterior of the structure. Dakota Micro does not support or recommend the use of third-party antennas. It is recommended to use antennas the same strength on both the transmitter and receiver

**Specifications**

<b>Transmitter</b>	
Power	12v 120mA (10/32v Min/Max)
Input Impedance	75ohm
Peak Deviation	3.0MHz
Waterproof Criteria	IP69
Transmission Frequency	Ch1:2.414GHz/ Ch2:2.432GHz/ Ch3:2.450GHz/ Ch4:2.468GHz
Tx Power	22dBm~26dBm
Modulation Type	FM
Construction	Anodized 6061 Aluminum Case
Operating Temp	14°F (-10°C) ~ 140°F (60°C)
Connections	5 Pin Female Switchcraft
<b>Receiver</b>	
Power	12v 55mA (10/32v Min/Max)
Output Impedance	75ohm
Output Level	0.6v
Waterproof Criteria	IP69
Receiving Frequency	Ch1:2.414GHz/ Ch2:2.432GHz/ Ch3:2.450GHz/ Ch4:2.468GHz
Receiving Sensitivity	-91dBm~95dBm
Modulation Type	FM
Construction	Anodized 6061 Aluminum Case
Operating Temp	14°F (-10°C) ~ 140°F (60°C)
Connections	5 Pin Male Switchcraft

## 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.

## Contact Us



8659 148½ Ave. SE.

Cayuga, ND 58013

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

Management System Registered to ISO 9001