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Feeder Controller Installation Manual

The controller is designed to communicate with and control equipment manufactured by WiseEye partner companies. The controller can operate in two different modes: Manual or Auto. Whether the controller is in Manual or Auto determines how it will transmit. The selected mode will determine if it transmits via BLE or LTE. The controller is only designed to transmit by one of these modes at a time. This allows the end user to use this controller however they see fit. The controller is for outdoor equipment that is in remote areas that seldom will need to be accessed. For this reason, there will be little interaction with the controller once it is activated. While it is active it will be placed in a metal housing with a metal door protecting it from the elements and ensuring that only qualified individuals have access.



Manual

On the controller's right-hand side there are two, 3 position switches. The bottom switch is a three-position latching switch. If this switch is toggled to the Manual mode (the up position), it will allow the controller to function in Manual mode. In Manual mode, using Bluetooth it will search for nearby mobile devices so that it can connect to them. Once connected, the controller will have access to the HuntControl 2.0 application. For in-depth review of how to use the HuntControl 2.0 application, please review the Feed I.D. user Manual.



When the controller is in Manual mode the momentary switch (top switch) can be used to actuate the actuators that are attached to the equipment. If the momentary switch is toggled to the open position the rams will retract opening the feeder door. If the momentary switch is toggled to the close position the rams will extend, closing the feeder door.



Auto

When the controller's latching switch (Bottom Switch) is toggled to Auto mode (the down position) the controller will use LTE to connect to MQTT. Once MQTT is connected then it can send information and receive commands from the HuntControl application.

Sensor-Based Operations

If the controller loses cellular connection while in Auto mode it will default to sensor-based operation. When in sensor-based operation, the controller will operate the feeder based on signals from the peripheral sensors. The controller will attempt to reconnect five times after LTE signal is lost. The reconnect attempts lasting no longer than a few minutes. For in-depth review of how to use the HuntControl 2.0 application, please review the Feed I.D. user Manual.

Antenna

At the base of the controller are two SMA antenna extension cables that lead back to the LTE module. The male SMA antenna connection connects to an external all-in-one GPS and 4G antenna.

GPS

At the base of the controller, the SMA connector nearest the lid of the controller is for GPS. This is used when the controller is in Auto mode to report the position of the controller.

LTE

Below the SMA connector for GPS is the LTE SMA connector. This allows the controller to connect to the local cellular network.

Wire Harness

Protruding from the base of the controller is five wire harness. Each harness has a specific function that is necessary for the operation of the controller. The connectors are: 16 pin female Molex connector, 8 pin female Molex connector, 3 pin female connector (2), 2 pin female connector.

1. 16 pin connector- The 16 pin connector connects the external sensors to the controller

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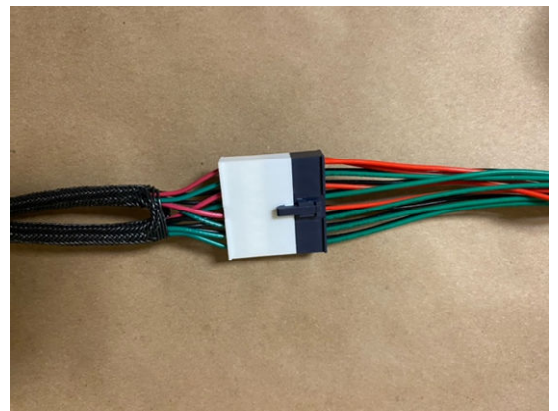
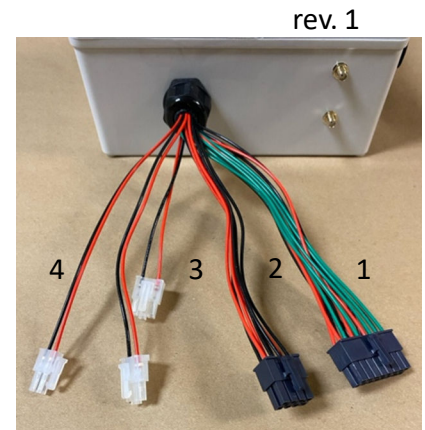




2. 8 pin connector- The 8 pin connector connects external safety features to the controller
3. 3 pin connector- The pair of 3 pin connectors connects the external battery source (12v 8Ah battery)
4. 2 pin connector- The 2 pin connector connects the pair of actuators to the controller

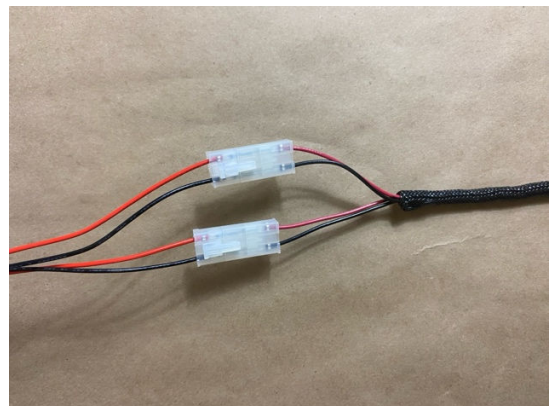
Main Wire Harness

Protruding from the base of the controller is the main wire harness tasked with connecting the peripheral sensors to the controller. These sensors are used to indicate different environmental factors that can influence the behavior of the feeder. For in-depth review of the peripheral sensors please review the Feed I.D. user Manual. (Harness #1)



PCB Power and Actuator Power

Protruding from the base of the controller is two 3-pin connectors. These connectors are responsible for connecting the controller to an exterior power source. The exterior power source brings power to both the PCB and the actuators. (Harness #3)

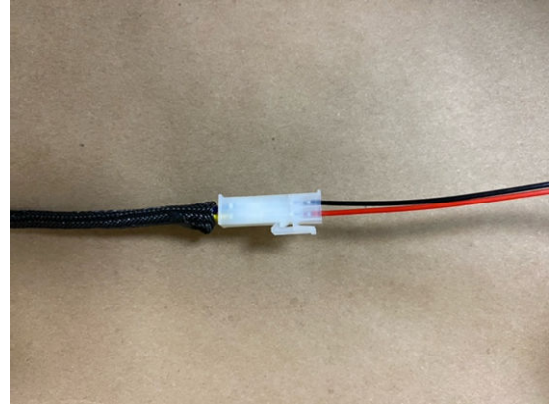




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Actuator Connector

Protruding from the base of the controller is a Molex 2-pin connector. This connector connects the controller to the actuator allowing the actuator to receive action commands. When the actuator is under load and extending to its fullest length it will pull 15.71 Ap. (Harness #4)



Peripheral Device and Sensor connector

Protruding from the base of the controller is a Molex 8-pin connector. This connector connects the controller to any peripheral devices or sensors that may need an in-line relay.

Installation steps

When installing the controller there is a few steps that are necessary to bolt the controller to the feeder.

Step One (Controller Mounting)

1. Install the mounting bracket in a vertical position
2. Using a tape measure measuring from the floor of the controller cabinet making at 4 5/8" . This marks the bottom horizontal alignment line for the controller. Once again taking a tape measure and measuring from the right inside wall of the inner controller cabinet make a mark at 1 3/4". With these alignment marks in place, press the controller against the mounting surface and align it with the mounting marks and then mark the holes for the mounting brackets.
3. Once the holes are marked for the mounting brackets, predrill the holes with a 5/32" drill bit.
4. After the holes are drilled place the controller in the controller cabinet and start the 10-16x3/4" self-drilling screw in the top-right conner and tighten it. Once that has been accomplished repeat the process in the opposite corners.

Step Two (Cable Routing)



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1. After the controller is installed as well as the GPS/LTE antenna and external sensors use a magnet cable tie wrap mounts for cable management.
2. Once the cables have been routed down to the bottom of the cabinet connect the antenna cables (see the section named antenna) and the Molex connectors to the appropriate Molex connector (see the separate section on Molex connectors).





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FCC Statement:

This device complies with part 15 of the FCC Rules. Operation is subject to the following two conditions:

- (1) This device may not cause harmful interference, and
- (2) this device must accept any interference received, including interference that may cause undesired operation.

This equipment has been tested and found to comply with the limits for a Class A digital device, pursuant to part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference when the equipment is operated in a commercial environment. This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instruction manual, may cause harmful interference to radio communications. Operation of this equipment in a residential area is likely to cause harmful interference in which case the user will be required to correct the interference at his own expense.

FCC Caution:

Any changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate this equipment.

This equipment complies with FCC radiation exposure limits set forth for an uncontrolled environment.

This equipment should be installed and operated with minimum distance of 20cm between the radiator & your body.

This device contained FCC ID: XMR201909EG91NAX