

EAGLE-TRON II REMOTE CONTROL OPERATOR and MAINTENANCE

Remote Control Procedure

WARNING! DO NOT OPERATE REMOTE CONTROL UNLESS YOU HAVE A CLEAR VIEW OF THE REAR OF THE TRAILER.

WARNING! THE OPERATOR IS REQUIRED TO FOLLOW ALL OSHA www.osha.com SAFETY STANDARDS WHEN OPERATING THE EQUIPMENT.

WARNING! The hydraulic functions of this trailer are remotely controlled. It is the responsibility of the owner/operator to ensure that no persons or other obstructions are within 25 ft. of the rear of the trailer during remote operation.

WARNING! Damage to the rear door caused by improper operation of remote-control system will NOT BE COVERED UNDER WARRANTY.

Note: Power is obtained from center pin on 7-way plug.

Remote Control Functions (Fig. # 1)

- 1) POWER: Turns the handheld remote on/off
- 2) E-STOP: Will stop any active functions
- 3) UPPER DOOR OPEN: Initiates sequence to open top hinge door
- 4) UPPER DOOR CLOSE: Initiates sequence to close top hinge door
- 5) LWR DOOR OPEN: Raises lower door (flip-up or slider)
- 6) LWR DOOR CLOSE: Lowers lower door (flip-up or slider)
- 7) BELT FAST: Initiates conveyer operation and increases conveyer speed
- 8) BELT SLOW: Decreases conveyer speed
- 9) BELT STOP: Stops conveyer operation
- 10) AUX ON: (Optional Equipment or Not used)
- 11) AUX OFF: (Optional Equipment or Not used)

OPERATING PROCEDURES

NOTE: The remote-control system is configured to operate a dual function door and has some integrated timing sequences for that purpose. If your trailer is not equipped with all functions the system will still go through the timing of those functions and may seem to not be responding.

- 1) If using top hinge door release manual latches (if equipped) (*Figure #2 and #3*) before getting into position to unload.
- 2) Position trailer to unload.

- 3) Make sure the area behind the trailer is clear of personnel and obstructions. (At least 25 ft.)
- 4) Engage the hydraulic system to be used. (PTO, Electric Motor or Gas Engine)
- 5) To turn the Remote “ON”, push and hold the POWER button on the handheld unit for 1-2 seconds until the red and green LED lights appear. (Button 1)
- 6) Open the rear door. (*Procedures for opening the door are following this procedure*)
- 7) Discharge the load. (*Procedure for operating the conveyor are following the door procedures*)
- 8) Close the rear door. (*Procedure for closing the door are following this procedure*)
- 9) To turn the remote “OFF”, push the **POWER** button on the handheld unit for 3-4 seconds until the alternating red and green LED’s stop flashing. (Button 1)
- 10) Engage manual door latches if equipped.
- 11) Disengage the hydraulic system.

Top Hinge Door Procedure

CAUTION! The top hinge door w/slider lower door has (2) manual latches. They are located on each side of the lower door. These latches need to be released before any remote operation of the top hinge door is attempted! (Fig. # 2 & # 3)

Opening the Top Hinge Door

- 1) Push and release **UPPER DOOR OPEN** (button 3). The following sequence will initiate:
 - a) Lower door will open slightly. (0.75 seconds)
 - b) Pneumatic safety latches will release. (3 seconds)
 - c) Top hinge door will open completely. (6 seconds)

Closing the Top Hinge Door

- 1) Push and Release **UPPER DOOR CLOSE** (button 4). The following sequence will initiate:
 - a) Top hinge door will close. (9 seconds)
 - b) Pneumatic safety latches will engage the pins. (6 seconds)
 - c) The lower door will close partially. (0.25 seconds)
- 2) If equipped with lower door follow Closing Lower Door Procedure to fully close lower door.

Lower Door Procedure

CAUTION! Make sure that the manual latches are in place before attempting to unload thru slider door!

CAUTION! Only unload materials that flow easily and can be metered through slider door.

Opening the Lower Door

- 1) Push and hold **LWR DOOR UP** (button 5) to open the lower door desired amount. (The door will move as long as button is pressed.)

Note: The lower door will automatically open slightly when conveyor is started.
- 2) The lower door can be adjusted to a more open position while the conveyor is moving.

Closing the Lower Door

- 1) Push and hold **LWR DOOR DOWN** (button 6) until door seals on chain. (The door will move as long as button is pressed)
Note: Pressing LWR DOOR DOWN (button 6) while the conveyor is in motion will stop the conveyor.

Conveyor Operation

- 1) Push and hold **BELT FAST** (button 7) for three (3) seconds to initiate the following:
 - a) The lower door will open slightly (0.75 seconds)
 - b) Continuing to hold **BELT FAST** (button 7) after door opens will ramp conveyor speed 10% every 1/3 second (full speed in approximately 3 seconds)
 - c) Releasing **BELT FAST** (button 7) while door is moving the conveyor speed can be ramped up 10% with each subsequent push and release of **BELT FAST** (button 7).
- 2) To decrease conveyor speed, you can push and hold the **BELT SLOW** (button 8) until desired speed is reached (belt will decrease speed about 10% every 1/3 second) or speed will decrease 10% for each momentary press of **BELT SLOW** (button 8).
- 3) Do not use **BELT SLOW** (button 8) to stop the belt operation. The belt may stop moving prior to valve being fully closed allowing belt to move after sufficient oil has built up.
- 4) **BELT STOP** (button 9) should be used to stop the conveyor operation. Pressing the **E-STOP** (button 2), **BELT STOP** (button 9), **LWR DOOR CLOSE**, (button 6) or both the **BELT FAST** (button 7) and **BELT SLOW** (button 8) at the same time will turn the conveyor belt off.

Notes:

- 1) The conveyor will time out and **stop** after 20 minutes without operation of BELT FAST or BELT SLOW.
- 2) If trying to meter a load pressing LOWER DOWN will stop conveyor operation, try using belt speed to meter load.

Manual override of system

The remote system has a manual over ride system in case of a dead or lost controller. The valves for the system are located at the left rear corner of the trailer. The system consists of a (3) valve manifold with built in pressure relief and gauge, and an electric air valve to operate the pneumatic safety latches (if equipped). (Figure # 5 & #6)

The first valve on the left end of the manifold is the belt speed control (Figure #5). To start the belt, rotate the knob on top of the valve clockwise until the desired speed is reached. To stop the belt, rotate the knob counter clockwise. **Never operate belt without a door open!**

The valve on the right end is the lower door control (Figure #5). To open the lower door, rotate the handle towards the front of the trailer and hold until door is open desired amount. To close the lower door, rotate the handle towards the rear of the trailer and hold until fully closed.

The middle valve operates the top hinge door (Figure # 5). **Never operate the top hinge door without manually releasing the manual safety latches (if equipped) and manually overriding the pneumatic latches!** The manual over ride for the pneumatic safety latches is located below the hydraulic valves (Figure #6).

Manual Operation of Top Hinge Door

Open:

- 1) Release manual safety latches (if equipped) on each side of the trailer.
- 2) Open lower door a few inches (see procedure above).
- 3) Release pneumatic safety latches, push and release the gold button on the right-hand side of the valve (Figure#6).
- 4) Open top hinge door, rotate the handle (Figure #5) towards the front of the trailer and hold until the door is open desired amount.

Close:

- 1) Close top hinge door, rotate handle (Figure #5) towards the rear of the trailer and hold until the door is fully closed.
- 2) Latch pneumatic safety latches, push and release the gold button on the left-hand side of the valve (Figure #6)
- 3) Close lower door (see procedure above).
- 4) Latch manual latches (if equipped) on each side of trailer.

E-STOP Button (Emergency Stop)

The **E-STOP** button (button 2) will stop any/all functions regardless of timing sequence. To restart a function, follow above procedures.

Other Functions

- 1) The Remote Control is equipped with an AUX ON (button 10) and an AUX OFF (button 11). These buttons are used to control Optional Equipment and Lighting (if equipped).
- 2) To save battery life the transmitter will turn off after 15 minutes if no buttons are pressed. The user must press POWER (button 1) to restore transmitter operation.
 - a) **Note:** The transmitter will NOT shut down as long as receiver has power applied to it.
 - b) **To Change and Program Sleep Time Default:**
 - i. With the transmitter off, press and hold UPPER DOOR CLOSE, LOWER DOOR CLOSE, BELT SLOW, and POWER. Wait a few seconds and release the buttons. The green and red LED's will start blinking together slowly.
 - ii. Press one of the following buttons for desired sleep time:
 1. UPPER DOOR OPEN – 15 minutes
 2. UPPER DOOR CLOSE – 30 minutes
 3. LOWER DOOR CLOSE – 60 minutes
 4. LOWER DOOR CLOSE – 120 minutes
 5. E-STOP – sleep time disabled
- 3) **Indicator LEDs:** The transmitter has two indicators; a red BATTERY indicator and a green TRANSMIT indicator.
 1. The green TRANSMIT indicator flashes whenever there is a communication between the transmitter and the receiver.
 2. The red BATTERY indicator starts blinking once every second when the battery voltage is low and the batteries need charging. (See Battery Charging) Also the red LED will be steady red when charging and will turn off when the charge is complete.
 3. The receiver module can identify problems with the system in the form of an error code. Check the red indicator or display window on the receiver to diagnose system problems. Then, refer to the ERROR CODE CHART in this manual for explanation of the error codes. The green LED indicator will blink on the receiver during active operation.

4) Battery Charging:

- a) Place the transmitter onto the charging pad button side up. A solid red LED indicates battery is charging. Once the internal battery is fully charged, the LED will change from red to green. A fully discharged unit will take up to 10 hours to charge.
- b) Use only approved Trinity Trailer chargers and Charging devices.
- c) Note: The transmitter will take longer to charge if it is "on" during charging, and may not complete the charge before timing out.
- d) **IMPORTANT BATTERY INFO**
- e) When the battery is new, the run-time of the transmitter will be shorter until it has gone through the drain/charge cycle several times. After this point, the unit's current drain should allow at least 20 hours of run-time before a recharge is needed.
- f) The temperature that the transmitter battery is exposed to affects performance and useful life. It is strongly recommended you keep within the following limits:
 1. Charging: -4 to +86°F
 2. Operating: -20 to +122°F
 3. Storing: -4 to +86°F (lower is better)

5) Transmitter and Receiver Synchronization:

- a) Each radio remote system is designed to operate with a unique radio ID code and RF channel sequence. Each receiver is programmed to respond only to the transmitter with the correct ID code/RF channel sequence for which it is set. This feature allows multiple systems to work in close proximity to one another without interference.
- b) In the event that a transmitter becomes damaged and a new one is needed, the receiver can be reprogrammed to respond to the new transmitter. To teach the ID code to the receiver, use the following procedure.
 1. **Note:** If this procedure is interrupted before it has completed, the system may have intermittent operation.
 2. Press and hold the POWER button for more than 10 seconds. LEDs should blink at this point.
 3. Apply power to the receiver and press any switch. Green LED stays on when teaching is in progress and it turns off when teaching is complete.
 4. Teach complete.

6) Routine Maintenance:

- a) Clean transmitter regularly with a damp cloth and mild detergent.
- b) Inspect electrical wiring for wear points or other damage. Repair as required.
- c) Inspect all connections for looseness or corrosion. Tighten and/or "seal" as necessary.

7) Maintenance Precautions:

- a) When performing any inspection or maintenance work on the remote system, always exercise care to prevent injury to yourself and others or damage to the equipment. The following are general precautions, which should be closely followed in carrying out any maintenance work.
- b) Do not have hydraulic power available to the valves when performing electrical tests.
- c) Never operate or test any function if any person is in an area where they could be hurt by being hit or squeezed by the hydraulic equipment.
- d) Turn power off before connecting or disconnecting valve coils or other electrical loads.

8) Troubleshooting:

- a) This next section provides basic operator level troubleshooting for the MACRO REMOTE system. If, after following these instructions, the system still does not function, contact your KAR-TECH representative for further instructions or servicing

Troubleshooting Chart

Problem: No functions work

Solution:

1. Verify transmitter power source – battery, CAN cable, external supply, etc
2. Verify that receiver or control module power source is present at its input connector
3. Check for proper system ground
4. Check the receiver or control module LED status display for functionality or errors
1. 5. Check the hydraulic system

Problem: Certain functions do not work

Solution:

1. Check the wiring and connections from the receiver or control module to the valve coil for the particular function that does not work
2. Check the receiver or control module LED status display for possible fault or error indication (see below)
3. Check the hydraulic system
4. Check the electrical system

Problem: Functions operate intermittently

Solution:

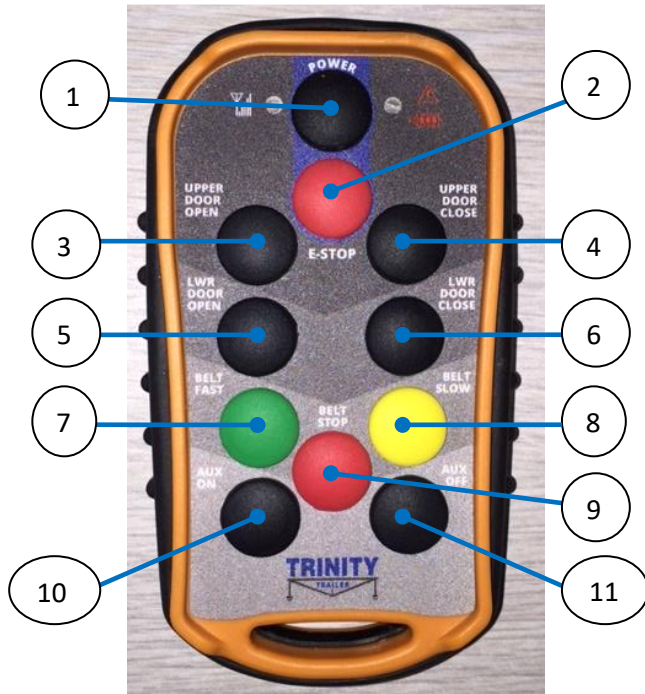
1. Check for loose connections at the valve coil
2. Check the receiver or control module LED status display for functionality or errors
3. Check the receiver antenna for damage and possible obstructions
4. Check the hydraulic system

Error Code	Possible Cause
1	RF Communication
2	Low Voltage
3	Belt Speed Output Error
4	Upper Door Open Error
5	Upper Door Close Error
6	Lower Door Open Error
7	Lower Door Closed Error
8	Aux Output Error
9	Air Latch Open Output Error
10	Air Latch Closed Output Error
11	TX Not in Neutral

Error Code Explanations:

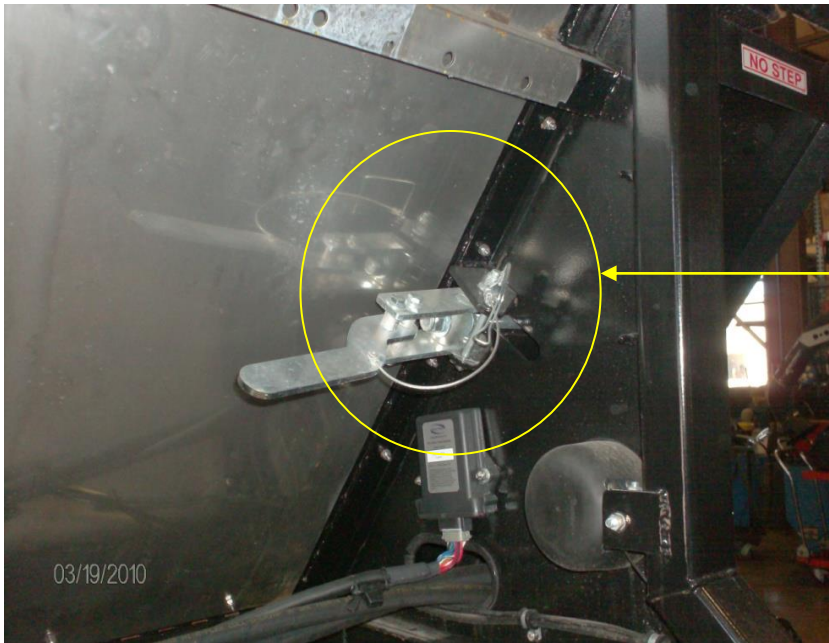
1. Transmitter is off
Transmitter went to sleep mode
Interference in RF communication link
2. System voltage is below 10.5V (12V system)
- 3-10. Short or open load/coil on output
11. Transmitter did not start in neutral mode

Figure #1 - Remote Control



- 1) Power
- 2) Emergency Stop
- 3) Upper Door Open
- 4) Upper Door Close
- 5) Lower Door Up
- 6) Lower Door Down
- 7) Belt Fast
- 8) Belt Slow
- 9) Belt Stop
- 10) Auxiliary On
- 11) Auxiliary Off

Figure #2 - Manual Latch

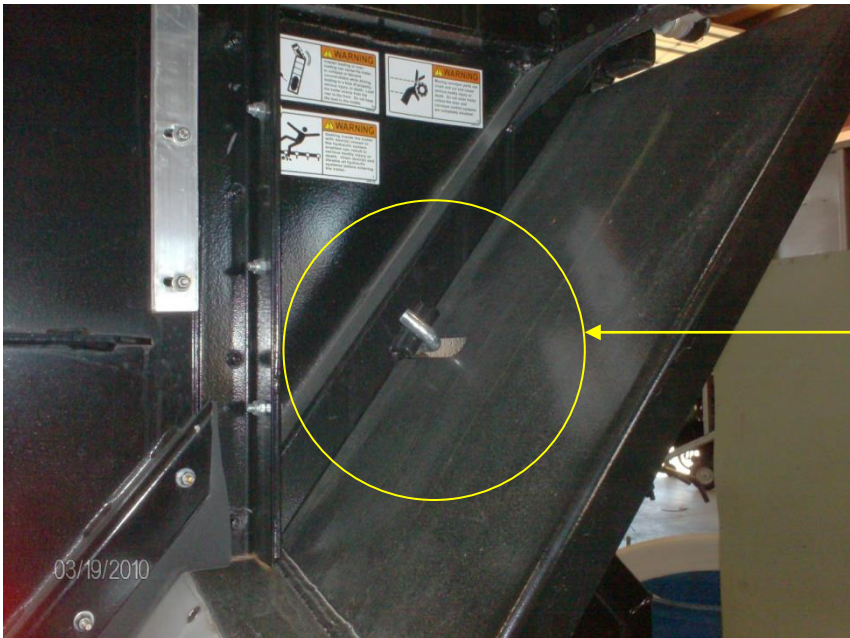


Manual Latch Backside

Remove the pin and release the latch handle. Make sure the hook is below the surface of the tail fin when operating the top hinge door.

There is a manual latch on both sides of the door.

Figure #3 - Manual Latch



Manual Latch Door Side

Hook should be below the surface of the tail fin when operating the top hinge door.

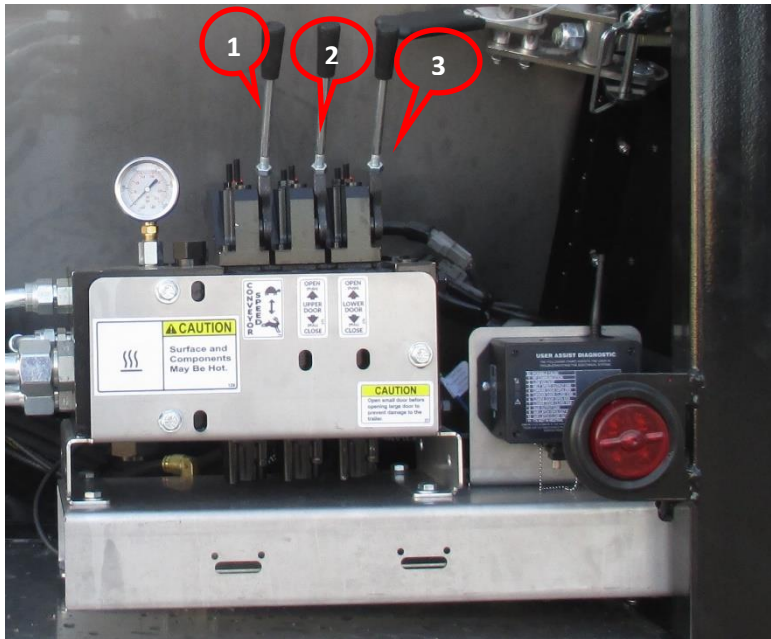
Figure #4 - Chain Bar



The chain bar should be at the 5 o'clock position on the rear shaft.

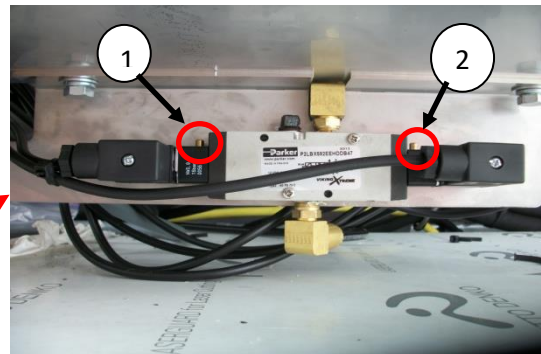
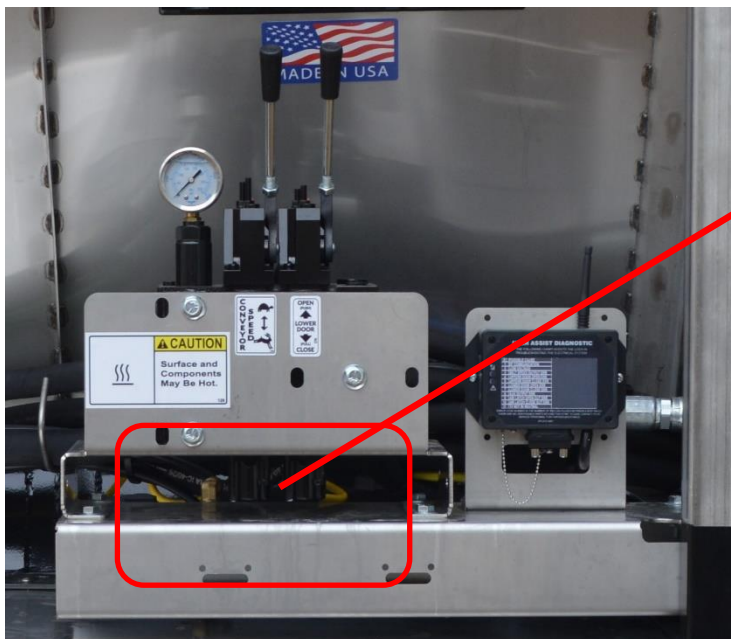
This locates the chain bar underneath the door seal.

Figure #5 - Manual Override System



- 1) Belt Control: Pull to start the belt, hold handle at desired speed and release to stop.
- 2) Top Hinge Door Control: Pull open the door and push to close the door.
- 3) Lower Door Control: Pull to open the door and push to close the door.

Figure #6 - Air Valve



Air Valve for Pneumatic Safety Latches

Located on backside of mount

Yellow Override Buttons

- 1) Close
- 2) Open