

Welder Manufacturing LLC

PO Box 28

Kilgore, NE 69216

Phone: (402) 966-2251

weldermanufacturing.com

Manual for Your Welker Cake Feeder

Red Lion Digital Counter - Plug Kit



Mounting Your Caker on Your Bed

Flatbed Model:

- You will need four 3/8" x 1-1/2" bolts with large surface/fender washers and matching nuts, or four 1/2" x 1-1/2" bolts with large surface washers and matching nuts. We recommend four large fender washers on the underside of the flatbed to keep the bolts from pulling through.
- Place the caker on the flatbed to mark bolt-hole placement.
- Place the bolts on the inside of the caker's angle-iron runner. Mark hole placement accordingly.
- Drill four holes through the caker runner and the flatbed. Drop a bolt in each hole as you go so the caker does not shift while you drill.
- On the underside of the flatbed, attach the washers and nuts to each bolt, then tighten. (Washers and nuts can be tack-welded to the flatbed frame for easier removal and reinstallation later.) When the caker is off the flatbed, leave the bolts in place to keep the holes clean and dirt-free.

Mounting Your Caker in the Box of Your Pickup

Over-The-Side Caker:

- You will need four 3/8" x 1-1/2" bolts with large surface/fender washers and matching nuts, or four 1/2" x 1-1/2" bolts with large surface washers and matching nuts. We recommend four large fender washers on the underside of the pickup box to keep the bolts from pulling through.
- Place the caker in the desired position to mark bolt-hole placement.
- Drill four holes through the caker runner, the pickup box, and into the pickup frame. Drop a bolt into each hole as you go so the caker does not shift while you drill.
- On the underside, attach the washers and nuts to each bolt, then tighten. (Washers and nuts can be tack-welded to the frame for easier removal and reinstallation later.) When the caker is not installed, leave the bolts in place to keep the holes clean and dirt-free.

We offer two styles of mounting brackets to attach the plugs to the headache rack or box. A Plug Plate is included with the wiring harness for your new cake feeder. Plug Boxes are available from the office: (402) 966-2251.



Pickup-Side Big Plug Kit



When installing the cake feeder, you only need to wire the pickup side.

Mount the Plug Plate on your headache rack near the motor end of the caker so the male trailer plugs reach it easily. Weld or bolt the plate in place.

Run the Hot Wire along the pickup frame to the engine compartment and secure it in place. Strip back 3/8" of the Hot Wire and solder it to the eyelet on the breaker. Attach that eyelet to the breaker terminal marked "AUX." Connect the short wire on the "BAT" terminal to the pickup battery, and mount the breaker under the hood.

Run the push-button cord and counter sensor wire from the front of the cab back to the Plug Mount Plate. Connect the wires to the silver female 6-prong plug as shown in the wiring diagram on the next page. Then secure the female plugs in the Plug Plate.

Digital Counter - 6-Prong Male / Female Plug

<u>Digital Sensor Wire</u>	
Brown	TM or T
Black	GD or G
Blue	LT or L
<u>Push Button Wire</u>	
Black	AS or S
White	RT or R

DIGITAL COUNTER SECTION



Our Red Lion Counter is a small display with a bracket, mounted in the cab—typically on the dash. The digital readout is easy to read and has a reset button (RST on the right). You can change the display color from red to green. A power cord is already attached to the back of the counter box; plug it into the cigarette lighter along with the sensor wire. Run the other end of the sensor wire to the female 6-prong plug on the flatbed or box.

This counter only counts revolutions, so calibrate it to your feed output.

CALIBRATING THE COUNTER

Press the button to run the caker until feed starts down the spout.

1. Press the “reset” button on the counter. (Counter should read zero.)
2. Weigh an empty 5-gallon bucket or similar container (tare).
3. Place the bucket so the cake feeder dispenses feed into it.
4. Hold the feeder button until the bucket is full.
5. Weigh the filled bucket, then subtract the tare to get the feed weight.
6. Divide the feed weight (pounds) by the number on the counter.

The result is pounds of feed per revolution of the counting mechanism. For example:

You want to feed 300 cows 2.5 pounds each (750 pounds total). Your empty 5-gallon bucket weighs 3 pounds. After filling, it weighs 38 pounds, so the feed weighs 35 pounds. The counter shows 7 revolutions. Divide 35 by 7 to get a calibration number of 5 (5 pounds of feed per revolution). To feed 750 pounds, reset the counter to zero and run the caker until it reads 150.

Troubleshooting for Digital Counter

The counter monitor will not light up

- A wire on the monitor power cord may be loose. Check the connections on the back of the display for a loose or damaged wire. If that end is OK, check the other end at the 6-prong plug.
- Your power point may not have power. Check the pickup fuses, and test the cigarette lighter with a test light or multimeter.

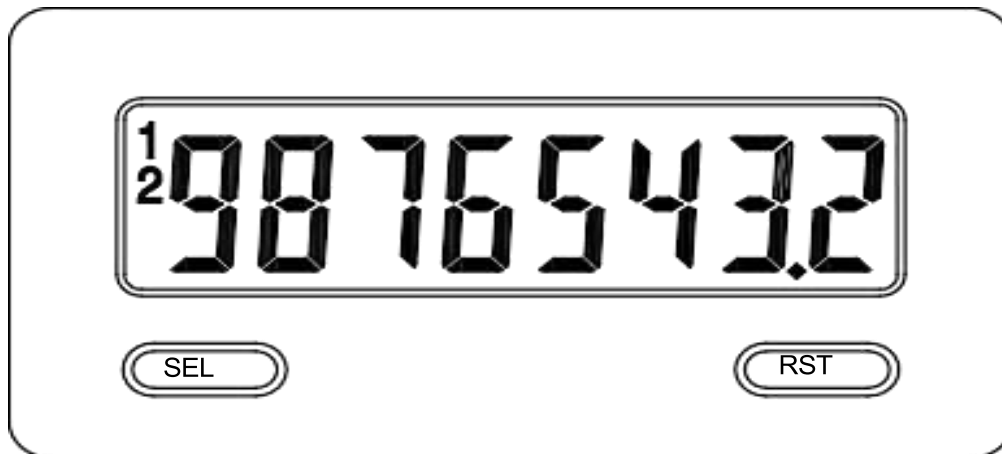
My counter display is fine but will not count

- The sensor must see the tab on the sprocket. Keep the gap between the sensor tip and the tab no wider than two credit cards.

Does the light on the back of the silver sensor on the cake feeder light up and blink each time the sprocket tab passes?

- **Constant Light:** The sensor is reading the sprocket hub instead of the tab. Adjust the Sensor Mount Bracket outward so the sensor sees the tab but not the entire hub.
- **No Light:** No power. Take the silver plugs apart and clean out dirt and cobwebs. Check that no bare wires are touching each other or the metal casing, and verify all wire connections.

Reviewing the Front Buttons & Display



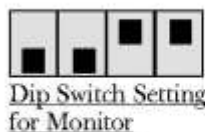
KEY	DISPLAY MODE OPERATION	ENTERING PROGRAM MODE	PROGRAMMING MODE OPERATION
SEL	Index display through enabled values	Press and hold for 2 seconds to activate	Store selected parameter and index to next parameter
RST	Resets count display(s) and/or outputs		Advances through the program menu/ selected parameter value or increments selection

OPERATING MODE DISPLAY DESIGNATORS

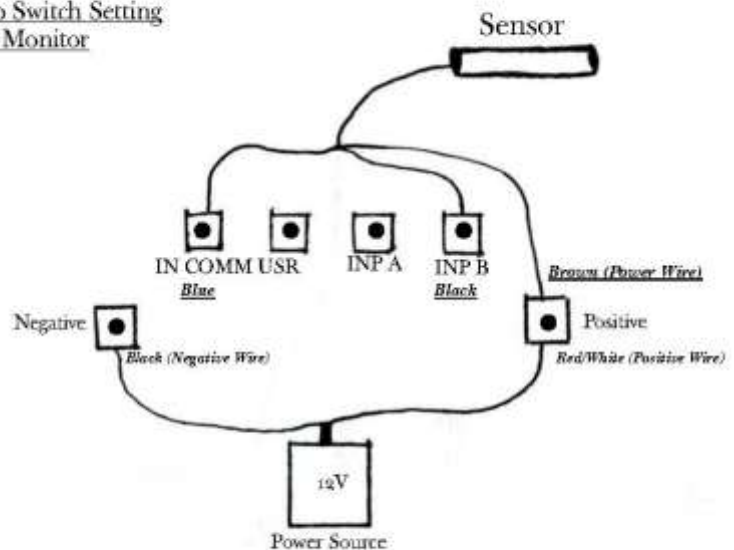
“R” — To the left of the display is the rate value.
— Counter A has no designator.

“b” — To the left of the display is the Counter B value (dual count or batch). “1” and “2” indicate setpoint 1 and 2 output status.

Press SEL to cycle through the selected displays. If display scroll is enabled, the meter switches automatically every four seconds between rate and count.



Wiring Diagram for Red Lion Counters



Programming the Display

PLEASE NOTE:

Do not program the counter without reading this entire guide first. If you make a mistake—especially if you are unsure how to fix it—reset the counter settings and start fresh.
Questions? Email weldermanufacturing@gpccom.net or call (402) 966-2251. The full programming guide is also on our website: welkermanufacturing.com

When the counter and rate indicator powers up, it enters display mode and is ready to use. To make changes, enter programming mode: press and hold "SEL" for two seconds, or until the screen shows "NO."

If you enter this mode by accident and the screen still says "NO," press "SEL" to return to normal operation. If it shows a number followed by a word instead of "NO," press "RST" until "NO" appears, then press "SEL" to exit.

To change the color of the backlit display:

1. Enter programming mode by holding "SEL" for two seconds or until the screen shows "NO."
2. Press "RST" three times, or until the display reads "3-dsplay," to open the display menu.
3. Press "SEL" four times, or until the display reads "d-Color," to reach the backlight color setting.
4. Choose your backlight color: red shows as "rEd," green as "Grn."
5. Press "SEL" until you exit programming mode and return to normal operation.

I Need a New Belt!

Standard belt lengths are 102" and 126". All belts are 9-7/8" wide.

Here's what we need to know before we can help:

Do You Have a Flatbed Cake Feeder or an Over-The-Side Cake Feeder?

Do You Have a Square-Tube Cake Feeder or a Round-Tube Cake Feeder?



Square Tube Feeder



Round Tube Feeder



Over-the-Side (OTS) Feeder

Belt-Splicing



What size/type of belt do I need?

Do you have a flatbed, over-the-side, or UTV cake feeder? Is it square-tube or an older round-tube model?

Over-the-side square-tube feeders use a standard 102" belt, cleated for the incline.

Over-the-side round-tube feeders also use a standard 102" belt—but measure anyway (see below).

On the left side of the feeder, measure from the center of the front roller bearing to the center of the rear roller bearing.

Formula: (distance between roller bearings $\times 2$) + 6 inches.



Chute End

to

Motor End

Can I splice my broken belt?

We do not recommend splicing your belt.

Square-tube and round-tube belt splices both need a special tool to install properly.

You also may not have enough length after a splice unless you add material—and that means setting two new splices instead of one.

My cake feeder is full—how do I change or fix a broken belt?

If you can reach the splice at the chute end, attach the new belt to that splice point and carefully feed it through to the other side.

Belt is Tracking Off-Center! (not running straight)

Your belt was aligned at installation, but it may shift to one side with use.

Keep the drive roller clear of twine and other obstructions so the belt does not track off.

Note which side the belt is moving toward—it shifts away from the tight side. Loosen or tighten the bearing cages' adjustment nuts on opposite sides to bring the belt back to center.

Use a 1-1/8” wrench on the 3/4” ready bolts on the bearing cages. Loosen the nut on the side the belt is moving toward, then tighten the nut on the opposite side.

With the right adjustment, the belt should center and run straight.

My motor is losing power, running slowly, and lugging down.

Check the roller bearings—they should be free of twine, wire, and dirt. If they turn freely, what are you using for a hot wire?

You really need the heavy welding cable that originally came with the cake feeder to carry proper voltage to the motor.

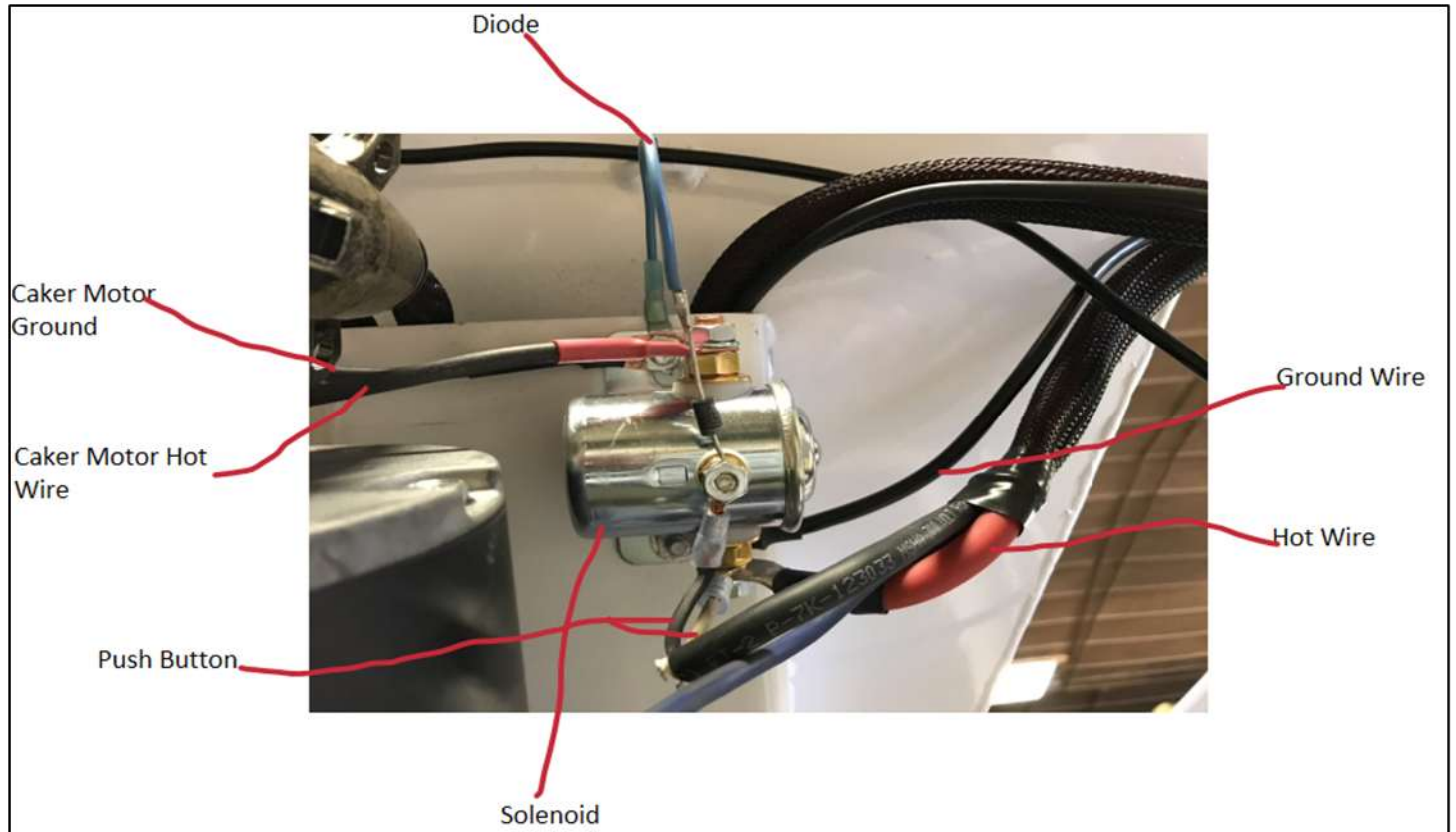


The diode is an electrical shock absorber attached to the solenoid. We recommend one on every caker.

Installing the cake feeder for the season—and I can't get it to run.

First, confirm the motor works. Disconnect the Hot Wire on the caker from the solenoid and touch it to the hot-wire post on the motor. If the motor runs, it is fine—the issue may be the solenoid or the push button. Reconnect the hot wire to its original post.

Next, test the push button: jump from the smallest solenoid post to the post where the battery hot wire connects.



Motor runs: Bad push button, or damaged push-button cord

Solenoid clicks: Bad ground

Nothing happens: Bad solenoid, or no ground

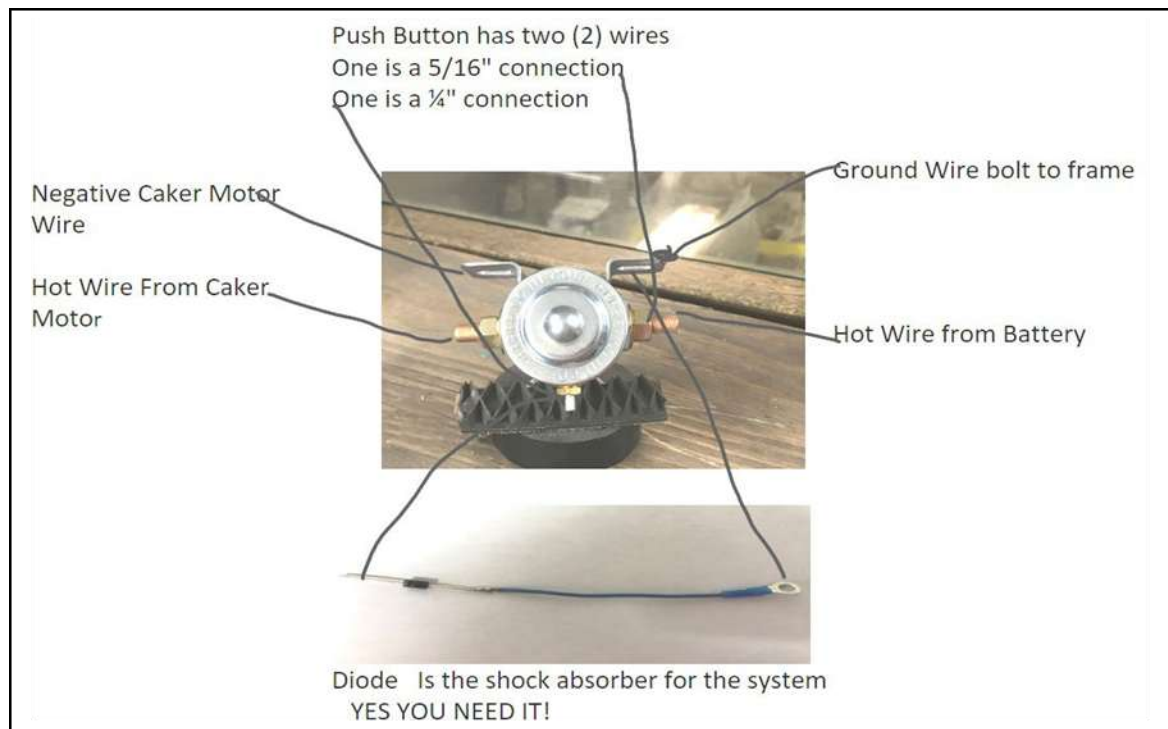
Cake feeder won't start—solenoid only clicks!

You most likely have a bad or incomplete ground. Test with jumper cables: clamp both ends of one side to a clean, rust- and paint-free spot on the caker, and the other side to the pickup frame. If the caker then works normally, the ground is bad.

Make sure the plugs are bolted securely at the mount. Loose plugs can cause an incomplete ground. Also check for ice, mud, or rust that could block the ground path.

If you have a plug kit, fix a bad ground with a jumper on the female gold plug: add a ground wire with an eyelet, bolt it with the mounted plug, and connect the other end to the pickup frame. When the plugs are connected, they ground back to the pickup.

My push button gets hot when I use it! All the system power is going through the push button!



- Connect the solenoid to the caker with two ¼” bolts.
- Top 5/16” bolt on the solenoid: caker motor hot wire (RED HEAT SHRINK ON EYELET).
- Bottom 5/16” bolt on the solenoid: heavy red wire from the gold plug and the 5/16” eyelet from the push-button wire.
- Small ¼” connection on the solenoid: diode wire end and the small eyelet from the push button.
- Top solenoid frame bolt: diode eyelet and caker motor ground wire (BLACK HEAT SHRINK ON EYELET).



This is the breaker we find works best.

My breaker keeps tripping!

That can mean a bare wire in the pickup wiring or the caker wiring. We use a 100-amp breaker on these feeders. We can send the breaker alone, or the breaker with 24” of wiring and eyelets included.

Frequent Q&A:

Our cake feeders are not painted on the inside.

We keep sirens on hand in the office. Follow the suggested on/off intervals so you do not burn out the siren.

Questions? Give us a call. Check our website for details, deals, and other products we stock.

**See more of our troubleshooting and parts
pictures on our website:**

www.weldermanufacturing.com

**Thank you for your business with our small-
town operation!**

We work HARD for you!



**See more of our troubleshooting and parts
pictures on our website:**

www.weldermanufacturing.com

**Thank you for your business with our small-
town operation!**

We work HARD for you!

