

EZII
SERIES
ELECTRONIC
SCALE INDICATORS



EZ 3200
EZ 3200 V
EZ 3200 V RC
(With Rotation Counter)

Digi-Star 

Leading The Way In Worldwide Weighing

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Always keep this manual by your scale indicator

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1. About the product

FEATURES OF MODELS EZ3200, EZ3200V AND EZ3200V RC

- Three recipe programming modes
 - Ingredient percentage of total
 - Amount per animal
 - Amount per ingredient
- Accumulation for tracking ingredient usage
- 200 Recipe memory locations
- 99 Programmable ingredient names to simplify loading & unloading
- Ingredients can be entered in any order
- Scrolling Help messages for easy recipe programming & operation
- Front panel calibration without simulator or weights
- [Select] and [Function] keys to simplify appearance and allow for future expansion
- A Hold feature to hold the weight stable while moving the scale system
- Large 1.7" display for greater readability (1" for Model 3200)
- Fiber-optic back lighting for extremely long life
- Expanded self diagnostic test capability
- New powerful microprocessor and expanded memory

OPERATING SPECIFICATIONS

- Temperature range: -28°C to 60°C (-20°F to 140°F)
- Power requirements: 10.2Vdc - 16Vdc
- Power on: 160mA, 4L.C. 350Ω
- Power off: 1mA

HOUSING

- Size (l×h×w): 10.3" × 7.2" × 5.0" (262 × 183 × 127 mm)
- Weight (unpacked): 4.5 lbs (2.04kg)
- Display EZ3200: 6-digit alpha numeric LCD, fiberoptic back lighting
Display height EZ3200 = 1" (25.4 mm)
Display height EZ3200V and 3200V RC = 1.7" (43.2 mm)
- Environmental enclosure: IP65, IEC529
- Connectors: AMP, gold plated contacts

2. Mounting and connection

INDICATOR MOUNTING

The indicator is easily attached to the Indicator Mounting Bracket by hooking the top over the plate and securing the bottom with two screws and nuts (size# 10 - 24 x 5/8" or M5 x 16mm).

POWER CONNECTION



Warning!

Always disconnect the indicator power cord before "jump starting" or fast charging a battery. Disconnect all indicator leads before welding on equipment. Failure to do so can cause surges which will damage the scale.

The power cable should be connected directly to a vehicle battery or regulated power supply. The scale end of the power cable is attached to the **J901** connector located on the bottom panel of the scale.

Connect the **RED** wire from the power cable to **+12VDC** and the **BLACK** wire to **GROUND**. The indicator is fused internally at 4 amps.

POWER CABLE CONNECTIONS

Wire Color	Wire Function
RED	Battery (+12Vdc)
BLACK	GROUND
ORANGE	Remote Alarm Out+
BLUE	Remote Input

REMOTE ALARM CONNECTION

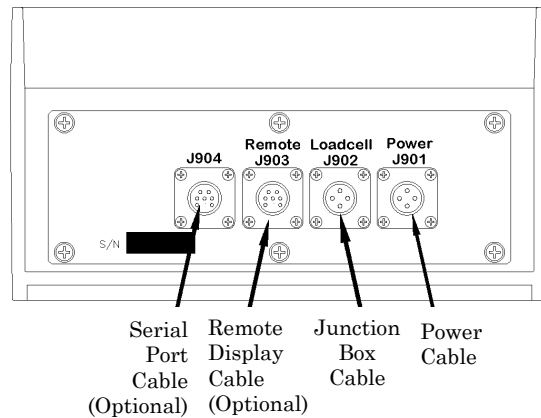
If a remote 12 Vdc alarm is to be used, connect the +12Vdc side of the alarm to the power cable **ORANGE** wire and the **GROUND** side of the alarm to the frame (= ground).

The alarm output is fused for a maximum drain of 10 amps. The remote alarm connection may also be used for motor control purposes when used with a relay.

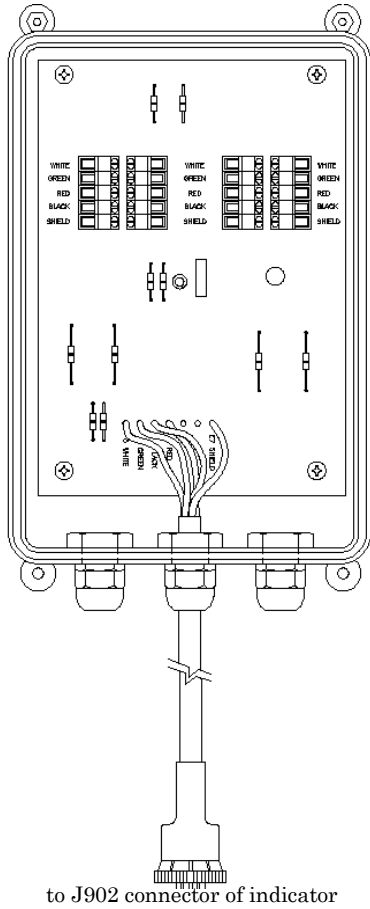
REMOTE INPUT CONNECTION

If the remote input is to be used, connect one side of the normally open momentary switch or relay contact to the power cable **BLUE** wire, and the other side to the frame or other **GROUND** connection. If your power cable does not contain a blue wire and you desire to use this feature, contact your dealer for a special cable. A process control box is available for motor control and remote *enter preset* capability.

INDICATOR BOTTOM PANEL CABLE CONNECTIONS



LOAD CELL CONNECTION



The indicator operates with strain gage load cells. The system is normally supplied with a J-BOX cable going between the scale indicator and the load cell junction box. Extension Kits are available from your dealer in various lengths.

To connect the load cells, attach the junction box cable to the **J902** connector on the bottom panel of the scale. Connect the load cell cables to the junction box as shown left.

Terminal Color	Description
WHITE	SIGNAL +
GREEN	SIGNAL -
RED	EXCITATION +
BLACK	EXCITATION -
SHIELD	SHIELD

☞ Follow color key on circuit board to insure proper connection of load cell wires.

LIGHTNING PROTECTION

Additional protection can be achieved with the proper installation of grounding rods. Please call (920) 563-1400 to request Digi-Star Form F3050.

TECHNICAL MANUAL

Technical Manual available upon request. Please call (920) 563-1400 to request Digi-Star Manual for New EZ3200.

3. Setup and Calibration Requirements



Warning!

This indicator was calibrated at the factory to weigh accurately with your system. Additional calibration is **not** necessary under normal conditions.

The *Short Form* Setup & Calibration procedure allows you to change the SETUP and CAL numbers of the indicator. You may want to perform this procedure if:


1. the indicator is being connected to different load cells, or
2. you want to adjust the calibration to match another scale system (chapter 4).

Before continuing, first write down the current SETUP and CAL numbers of your EZ indicator. These numbers are displayed during the Self Test.

TO RUN THE SELF TEST

1. With the indicator already ON, press **On** to start the Self Test.
2. Press **On** to "pause" the Self Test while numbers are displayed.
3. Press **On** again to "resume".

SETUP #		CAL #	
---------	--	-------	--

 Do **not** attempt to calibrate the scale if the indicator is not reading stable weights. The calibration procedure **will not fix** instability, inconsistencies, or flashing "RANGE" messages.

4. Matching EZ scale to another scale

Sometimes two different scales are used to weigh the same load. When this is done, the weight measured by each scale may not be the same. This can be caused by one or both of the two scales being slightly out of calibration. This indicator has the ability to match any other scale, even if that scale is not calibrated.

To match your EZ scale (Scale A) to another scale (Scale B) you must determine the Calibration Multiplier. To do this, place a load on Scale A (feed wagon, etc...) and write down the weight displayed. Repeat several times to determine the average weight. Next, place the same load on Scale B and again write down the weight displayed.

Repeat several times to determine the average weight. Use the following formula to determine the Calibration Multiplier for the EZ's "CAL" number:

☞ It is important to use an average of several weights before calibrating the scale.

SCALE MATCHING EXAMPLE

Original SETUP # 127060
CAL# 23980

	1 trial	2 trial	3 trial
Scale B	30,000	30,580	28,000
Scale A	29,440	29,800	27,500
B ÷ A	1.020 +	1.026 +	1.018 = 3.064
	3.064 ÷ 3 trials = 1.021 Cal. Multiplier		

$$\begin{matrix} \text{New EZCAL\#} & = & \text{Orig. EZCAL\#} & \times & \text{Cal.Multiplier} \\ 24484 & = & 23980 & \times & 1.021 \end{matrix}$$

☞ You should not modify your "SETUP" number. Only your "CAL" number.

Follow the instructions: TO CHANGE SETUP/CALIBRATION NUMBERS shown on the next page.

SCALE INFORMATION SHEET

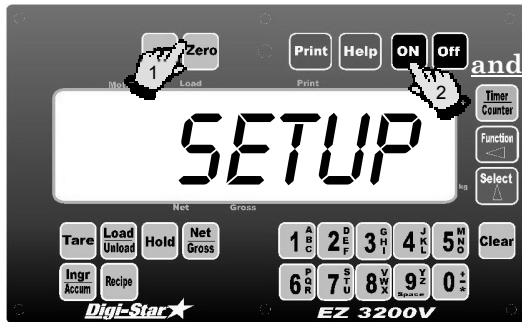
Original SETUP #
CAL#

SCALE MATCHING WORK SHEET

	1 trial	2 trial	3 trial
Scale B			
Scale A			
B ÷ A			
	÷ 3 trials = Cal. Multiplier		

$$\begin{matrix} \text{New EZCAL\#} & = & \text{Orig. EZCAL\#} & \times & \text{Cal.Multiplier} \\ \text{.....} & = & \text{.....} & \times & \text{.....} \end{matrix}$$

CONNECTING EZ INDICATOR TO OTHER LOAD CELLS



You will need the number and type of load cells used in the new scale system. You will also need the current "SETUP" and "CAL" as described above. Once you have written down this information, contact your nearest Scale Service Center for new "SETUP" and "CAL" numbers.

Follow the instructions "To Change the Setup / Calibration Numbers" shown below.

Press and hold the **Zero** key, then press the **On** key, to enter Short Form Setup & Calibration.

CHANGE SETUP AND CALIBRATION VALUES



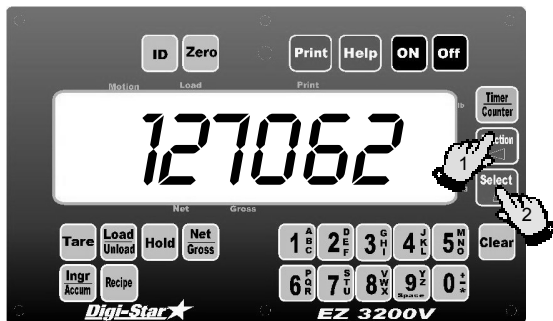
The first message displayed is SETUP.

Next, the actual SETUP number is displayed.

Press the **Zero** key for additional help information during Setup and Calibration.

If the correct SETUP number is displayed, press the **On** key to advance to the CAL number.

1. Press the **Select** key to cause the "flashing" digit to count upward.
2. Press the **Function** key to select which digit is flashing.



When the correct SETUP number is displayed, press the **On** key to advance to the CAL number.

This displays the CAL message, followed by the CAL number.

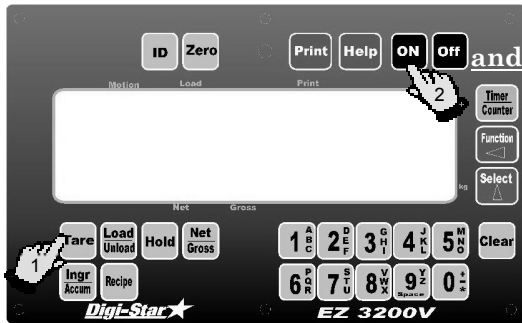


The CAL number is not a weight. It is a reference value the indicator uses to determine the weight. This number directly affects the accuracy of the scale system.

Change the CAL number using the same method described in Steps 1& 2. When the display shows the correct number, press the **On** key.

This causes the number to be stored permanently in the indicator and returns the indicator to the weighing mode.

TO RETURN TO WEIGH MODE

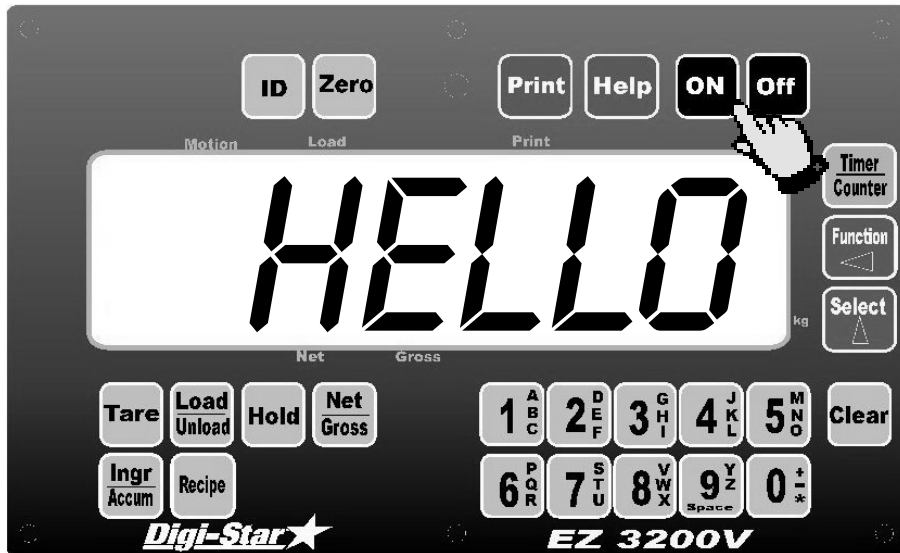


To exit setup without changing any values, press and hold the **Tare** key, then press the **On** key.

5. Getting started

To operate the scale, first attach the scale's power cord to connector J901 and the loadcell cable to connector J902 on the bottom panel of the scale.

Press the **On** key. A brief message is displayed (such as *HELLO*).



The scale enters the GROSS mode.

A *warm up period* of ten to fifteen minutes provides the most accurate readings. If the scale is holding a load for a long period of time (ex. overnight), the weight displayed may vary because of *zero shift* created by changes in temperature. This does not affect the accuracy of the scale.

For example, if the system was loaded with 1000lbs, it might read 1200lbs the following day. The change in temperature "*zero shifted*" the ZERO/BALANCE from 0 to 200lbs. When unloading the scale, the display will count from 1200 to 200lbs for a total of 1000lbs.

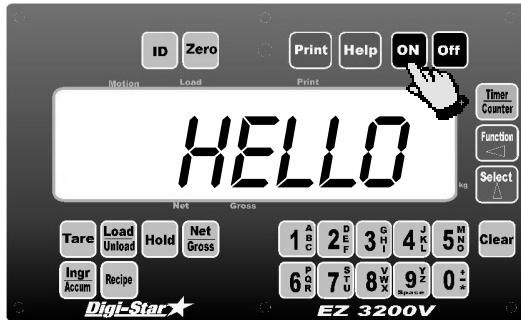
After this warm up period, press and release **Net Gross**. Then, within three seconds, press **Zero**. The word *ZERO* is displayed to show completion of the ZERO/BALANCE step.

Now the scale is ready to weigh!

6. System operation

- ☞ EZ3200 V shown - EZ3200 and ES3200V RC operations are the same.
- ☞ LB and KG annunciators are located along right hand edge of the 3200V display.

TURNING ON THE SCALE



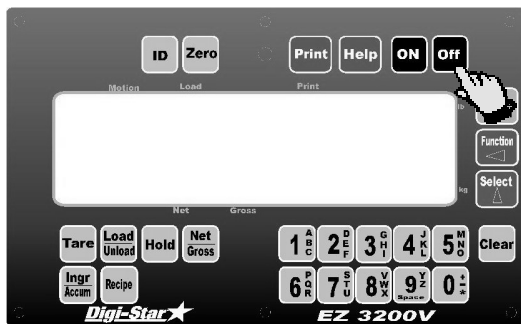
Press **On**.

A brief message will be displayed (such as *HELLO*). The scale then enters the GROSS weighing mode.

GROSS mode displays the weight change since the unit was last ZERO/BALANCED.

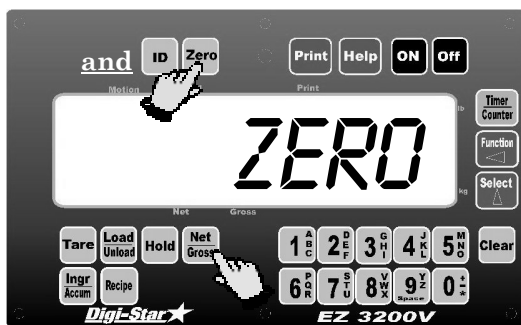
Pressing **On** a second time during normal system operation starts the self test.

TURNING OFF THE SCALE



Press **Off**.

TO ZERO BALANCE THE SCALE



Press **Net** and then within three seconds, press **Zero**.

The [Zero] key will "balance off" empty trailer, bin, or platform weight.

The message *ZERO* is displayed to show completion of the step and the scale is placed in the GROSS mode.

Pressing only **Zero** will cause the message: *TO ZERO/BALANCE PRESS NET/ GROSS - THEN ZERO* to be displayed.

If the supply power is below the low battery threshold (10.5 Volts), the message *CANNOT BALANCE -- LOW BATTERY VOLTAGE* is displayed. The message *LO BAT* will be periodically shown on the display (approx. every five seconds) to alert the operator of the low battery condition.

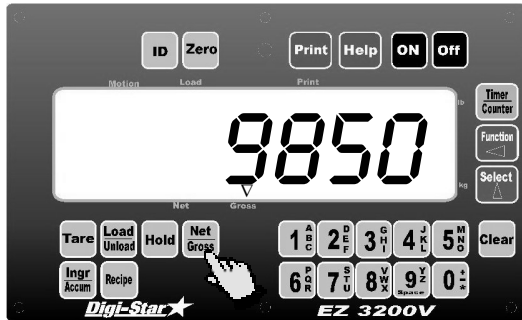
Loss of power does not affect the Zero/Balance or Setup/Calibration values.

USING THE HELP KEY

Help provides additional information about the weighing modes, setup/calibration, and recipe programming.

Pressing **Help** while displaying weight will display information about the last key pressed.

TO SELECT GROSS MODE

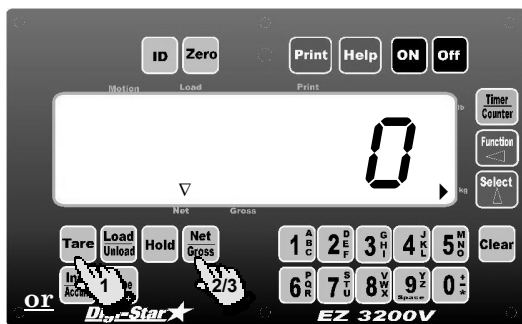


Gross Mode displays the weight change since the unit was last Zero/Balanced.

1. Press **Net/Gross**.

☞ The scale is in Gross Mode if there is a flashing arrow (∇) pointing toward the word **Gross**, next to the display.

TO SELECT NET MODE



Net Mode displays the weight change after a Tare has been performed. Tare creates a temporary zero at that weight value.

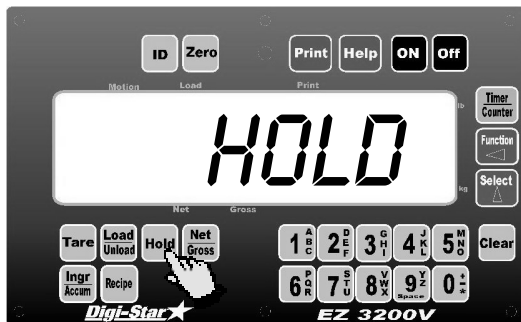
1. Press **Tare** to set a temporary "zero" point and enter the Net Mode.
- or
2. If in Gross Mode, press **Net/Gross**. The [Net/Gross] key is an alternating action key. If the scale is in the Gross Mode, pressing the [Net/Gross] key will place it in the Net Mode. If the scale is in the Net Mode, pressing the [Net/Gross] key will place it in the Gross Mode.

3. If in Load/Unload Mode, press **Net/Gross** two times to place the scale in Net Mode.

☞ If the Tare Function has not been previously performed, the unit will stay in the Gross Mode and the message *FOR NET MODE PRESS TARE* will scroll across the display.

The scale is in Net Mode if there is a flashing arrow (∇) pointing toward the word **Net**, just above the [Hold] and [Net/Gross] keys.

TO SELECT HOLD MODE

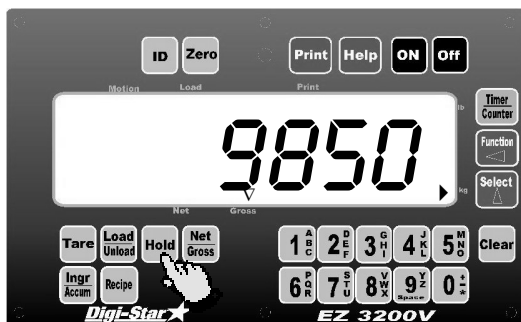


Hold Mode prevents the displayed weight from changing due to "zero shift" while moving the scale.

Press **Hold** to "hold" the displayed weight and enter the Hold Mode.

The scale is in Hold Mode if the word *HOLD* is flashing on the display and the flashing *HOLD WEIGHT* is only displayed for a brief time.

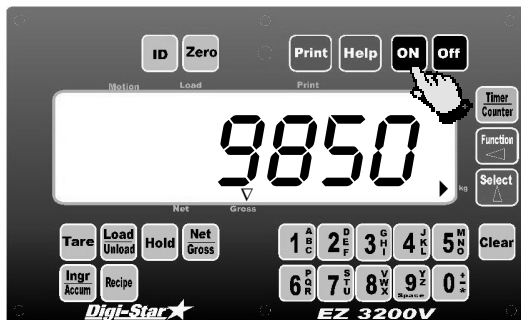
TO EXIT HOLD MODE



Press **Hold**.

At this time the scale reactivates and adjusts the Zero/Balance to maintain the gross weight displayed. Small changes in weight can occur while moving the scale system to new locations for loading or unloading. This change is called "zero shift" and is due to several factors including terrain changes and mechanical stresses.

TO CANCEL HOLD MODE

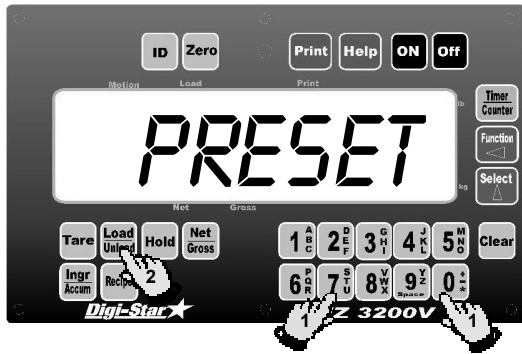


Press **On**.

Cancelling the Hold Mode prevents the scale from adjusting the Zero/Balance and returns the system to the normal weighing mode.

Use this if weight is accidentally added while scale is still in Hold Mode.

TO ENTER A PRESET



A Preset is a weight amount that can be set in the scale.

1. Use the numeric keypad to enter the desired preset weight value.
2. Press **Load/Unload**. The indicator will round the preset amount to the nearest display count size.
3. Add or remove weight. The scale alternates between flashing the word *PRESET* and the preset amount, until 5 percent of the preset weight is either loaded or unloaded.
4. While weight is being added or removed, press **Net/Gross** to display weight data in Gross Mode or, press **Load/Unload** to display weight data in Load/Unload Mode.
5. To display weight added since the preset was entered, press **Net/Gross** two times if in Load/Unload Mode or one time if in Gross Mode.

Once the preset has been entered, the display shows the weight data in one of three different Display Modes:

1. Gross Mode

As ingredients are loaded, the weight display counts upward toward the preset value. As ingredients are unloaded the weight display counts down to the preset value.

2. Load/Unload Mode

Display the amount remaining to be loaded or unloaded. As ingredients are loaded or unloaded, the display counts down from the entered preset weight until it reaches zero.

3. Net Mode

Display the weight added since the preset has been entered. As ingredients are loaded, the weight display counts upward, as they are unloaded the weight display counts down.

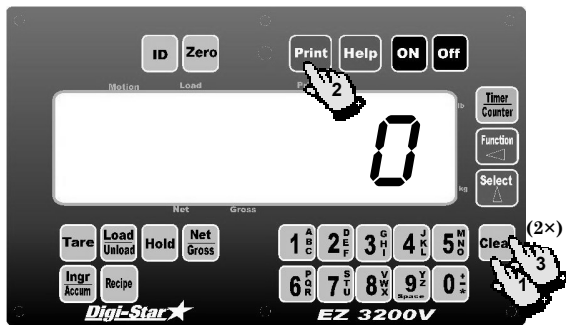
Switching between these display modes is possible at any time.

Before the preset weight is reached, the **pre-alarm** is activated. This causes the preset display annunciator, the front panel alarm light, the output relay, and the alarm horn all to pulse in sequence with the alarm light. A **pre-alarm** provides an early warning before reaching the preset.

Set the pre-alarm value to 0 (zero) to prevent the alarm output from pulsing. See page 15: *To change the pre-alarm value.*

Once the preset weight amount has been added or removed, the scale will activate an alarm. The front panel alarm light, the output relay, the preset display annunciator, and the alarm horn will all be held ON. See page 13: *To clear the preset alarm.*

TO CLEAR THE PRESET ALARM



1. Press **Clear** once to clear the preset alarm and re-enter a new preset weight using the numeric keypad.
2. Press **Print** once to print the weight and clear the preset.
3. Press **Clear** twice to clear the preset alarm and return to Net Mode. This sets the display to 0 (zero) and returns the scale to Net Mode.

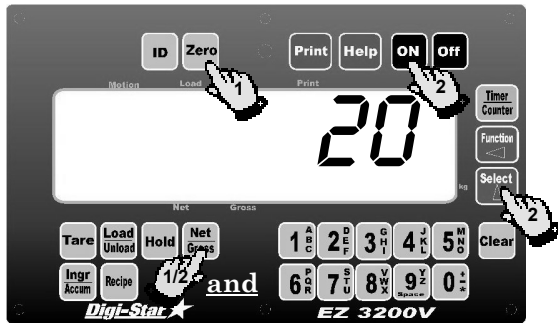
TO CLEAR THE PRESET ALARM USING THE TR OPTION

If you are reloading a preset amount and the preset alarm is activated, the alarm can be cleared using the Remote Enter Preset Feature.

This feature is set in the Long Form Setup by setting Remote Input to *PRESET*. It is activated by using the handheld TR (Transmitter/Receiver) option or by momentarily connecting the Remote Input line in the power cord to 0.0 Vdc (Ground).

Using the Remote Zero feature of the TR option or Remote Input line in the power cord will also clear the preset.

TO PRELOAD A TARE VALUE

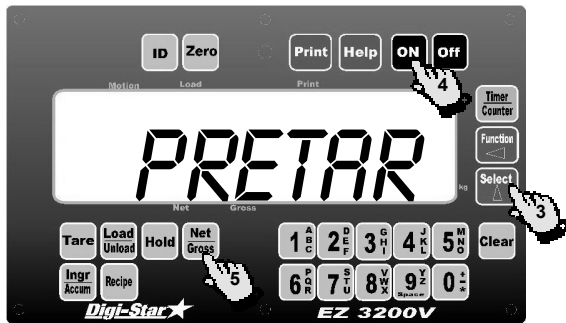


The Preload Tare Feature (*PRETAR*) is useful for weighing containers after they have already been loaded. If the weight of the container is known, a Tare Weight is preloaded in the scale and only the Net Weight is displayed.

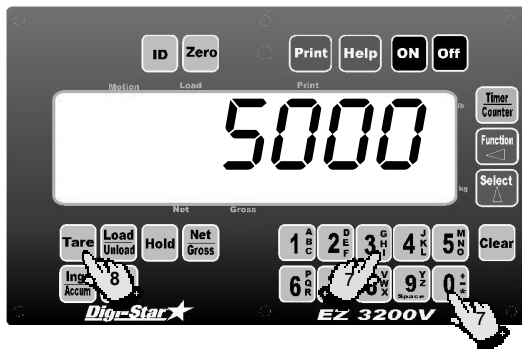
1. Balance the indicator (**Net Gross** and **Zero**).
2. Make sure the Preload Tare setting is set to *ON* (Long Form Setup → Menu 4).

TO ENTER MENU 4 OF THE LONG FORM SETUP

- Press and hold **Net Gross** and then press **On** .
- Press **Select** four times to select Menu 4.
- Press **On** repeatedly until *PRETAR* is displayed.



3. Press **Select** to set the Pretar Option to *ON*.
4. Press **On** to store the setting.
5. Press and hold **Tare** and then press **On** to return to normal Weighing Mode.
6. Add weight to the container.
7. Using the numeric keypad, enter the known weight value of the unloaded container.
8. Press **Tare** .



The following example demonstrates a feed wagon on a platform scale:

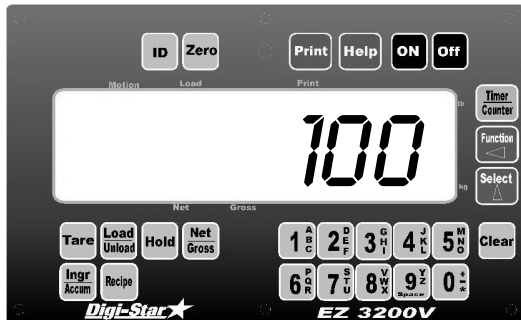
- a) Balance the scale (**Net Gross** and **Zero**).
- b) Weigh and record the weight of the unloaded wagon.
- c) Pull the wagon off the scale and load the wagon.
- d) Using the numeric keypad, enter the known wagon's weight in the Indicator.
- e) Place loaded wagon back on the scale to see the net weight.

The Tare Weight can also be automatically printed by setting *TAREAP* (Tare Auto-Print) to *ON* in Menu 2 of the Long Form Setup.

TO ENTER MENU 2 OF THE LONG FORM SETUP

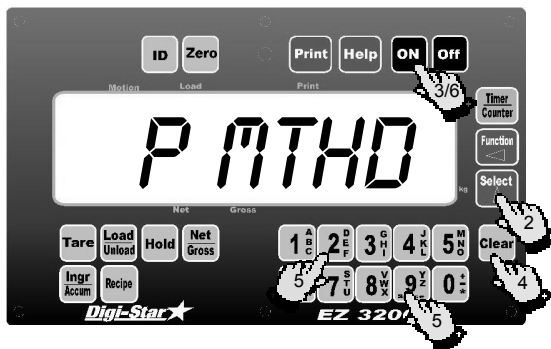
- Press and hold **Net Gross** and then press **On** .
- Press **Select** two times to select Menu 2.
- Press **On** repeatedly until *TAREAP* is displayed.

TO USE THE PRE-ALARM



The Pre-Alarm feature is an "early warning" for the preset. For example, if the Pre-Alarm is set for Weight with a value of 100 and the preset is 1000, the preset alarm will flash during the last 100 lbs/kgs of the preset. The Pre-Alarm can also be set to activate at a percentage of the preset instead of a specific weight value. The alarms are continuous once the preset is active. A Pre-Alarm provides an early warning *before reaching the preset* which allows the operator to be more accurate.

TO CHANGE THE PRE-ALARM VALUE



1. Go to Menu 4 of the Long Form Setup and locate the P-MTHD Feature (see page 14: *To enter the Long Form Setup*).
2. Press **Select** to select either *WEIGHT* or *PERCNT*. The indicator will flash the CAL annunciator.
3. Press **On** to store the setting. The Pre-Alarm Feature (*P-ALM*) is displayed next.
4. Press **Clear** to erase the current weight value. The [Clear] key erases one digit at a time. Continue to press the [Clear] key until 0 (zero) is displayed.
5. Use the numeric keypad to enter a Pre-Alarm Weight.
 - ☞ Set the pre-alarm value to 0 (zero) to prevent the alarm output from pulsing!
6. Press **On** to store the setting.
7. Press and hold **Tare** and then press **On** to return to normal Weighing Mode.

TO START THE MIX TIMER



There are two ways to start the Mix Timer.

Method 1

1. Press **Timer** to see the time currently set.
2. Press the **Select** and **Function** keys to change the displayed value. The [Select] key increments the "flashing" digit and the [Function] key selects which digit of the display is flashing.

3. When the correct time has been entered or if the number displayed is acceptable, press **Timer** or **On** to set the time and start the Mix Timer.

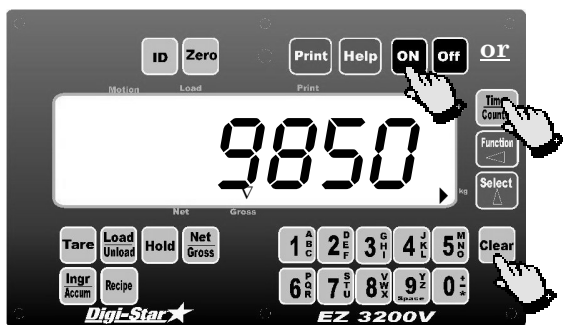
The display now reads HOURS, MINUTES, and SECONDS (HH:MM:SS), separated by colons that flash every second.



Method 2

1. Use the numeric keypad to enter the amount of time.
2. Press **Timer** to enter the time and start the Mix Timer. The display now reads HOURS, MINUTES, and SECONDS (HH:MM:SS), separated by colons that flash every second.

TO CLEAR THE MIX TIMER



Press either **Clear**, **Timer** or **On** to select the amount of time.

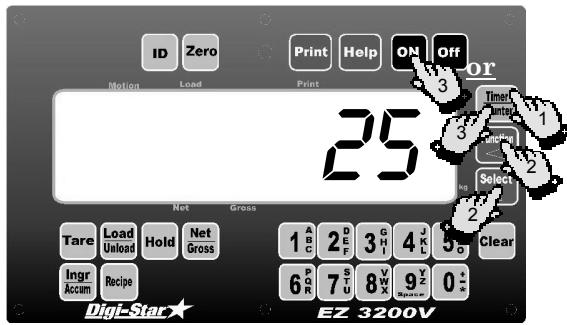
The scale clears the mix timer alarms and enters the Weighing Mode.

TO RESTART THE MIX TIMER



Press **Timer** twice without entering a numeric value to start the mix timer using the time previously entered.

TO START THE ROTATION COUNTER



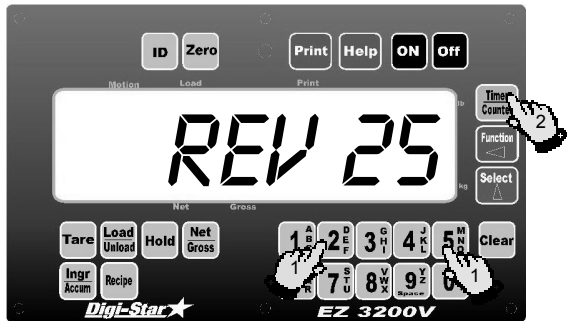
There are two ways to start the Rotation Counter.

Method 1

1. Press **Timer** to see the rotation count currently set.
2. Press the **Select** and **Function** keys to change the displayed value. The [Select] key increments the "flashing" digit and the [Function] key selects which digit of the display is flashing.

3. When the correct count has been entered or if the number displayed is acceptable, press **Timer** or **On** to set the count and start the Rotation Counter.

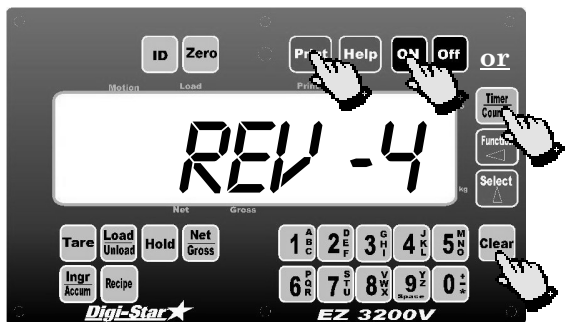
The display now reads *REV XX*, showing the number of rotations remaining. The Motion annunciator will flash when pulses from the Rotation Sensor are detected.



Method 2

1. Use the numeric keypad to enter the number of rotations to count.
2. Press **Timer** to enter the count and start the Rotation Counter. The display now reads *REV XX*, showing the number of rotations remaining. The Motion annunciator will flash when pulses from the Rotation Sensor are detected.

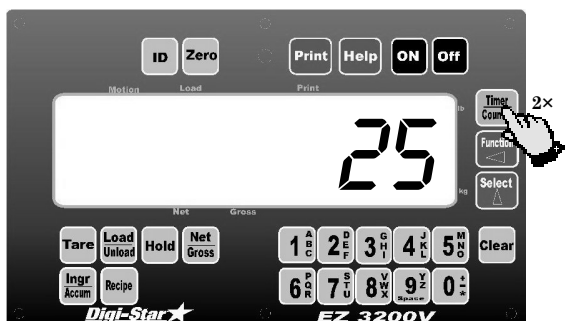
TO CLEAR THE ROTATION COUNTER



Press either **Clear**, **Timer**, **Print** or **On**.

The scale clears the Rotation Counter alarms and enters the Weighing Mode. The Rotation Counter will continue to count rotations past 0 (*REV -4*, negative numbers) until it is cleared.

TO RESTART THE ROTATION COUNTER



Press **Timer** twice without entering a numeric value to start the Rotation Counter using the count previously entered.

PROGRAMMING RECIPES

There are three different methods for programming recipes:

- 1 - Amount per Animal
- 2 - Percent (%) per Load
- 3 - Amount per Load

☞ Recipes programmed in one method will not be converted when a new entry method is selected. To convert a recipe to a new method, erase and then re-program the recipe. See page 20: *To change the entry method.*

Entry Method #1 - Amount per Animal

Allows entry of ingredient amounts required for feeding one animal. The scale calculates the preset amounts required for each ingredient.

Example: A recipe had been programmed for 18lbs of haylage and 16lbs of shell corn for one animal. The recipe was then loaded for 100 animals. The scale calculated presets for 1800lbs of haylage and 1600lbs of shell corn.

Entry Method #2 - Percent (%) per Load/Animal.

Allows entry of ingredient amounts in percentages (%).The scale calculates the preset amounts required for each ingredient.

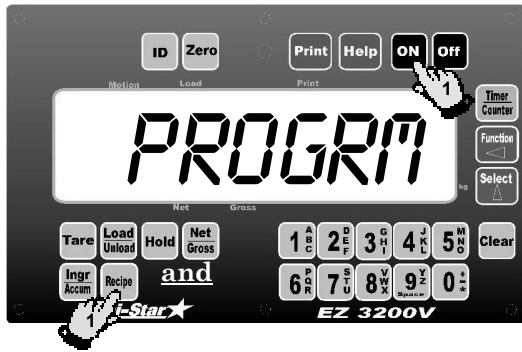
Example: A recipe had been programmed with 55% of haylage and 45% of shell corn. The recipe was then loaded for a *TOTAL* of 10,000lbs. The scale calculated presets for 5500lbs of haylage and 4500lbs of shell corn.

Entry Method #3 - Amount per Load.

Allows entry of ingredient amounts required per load..

Example: A recipe had been programmed with 5500lbs of haylage and 4500lbs of shell corn. The recipe was then loaded for a *TOTAL* of 10,000lbs. The scale calculated presets for 5500lbs of haylage and 4500lbs of shell corn. This same recipe could have been changed the *TOTAL* to 9,000lbs and the scale would have calculated presets for 4950lbs haylage and 4050lbs of shell corn. See *Appendix 2.*

TO PROGRAM A NEW RECIPE

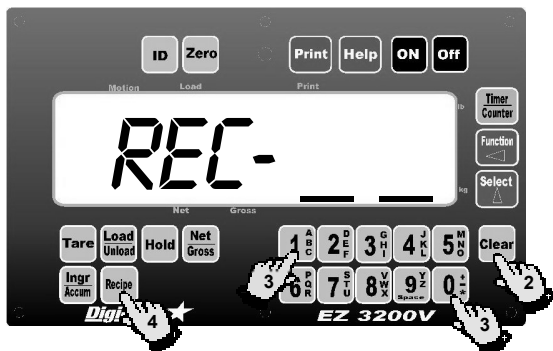


Before programming a new recipe:

- Set the desired entry method (see page 20: *To change the entry method*).
- Rename ingredients as needed (see page 29: *To rename ingredients*).

1. Press and hold **Recipe** and then press **On**. Continue holding both keys until the indicator beeps and the scale displays the message *PROGRAM*.

The scale then displays either the first recipe number programmed *REC-01* or *REC-* indicating that a recipe number can be entered.

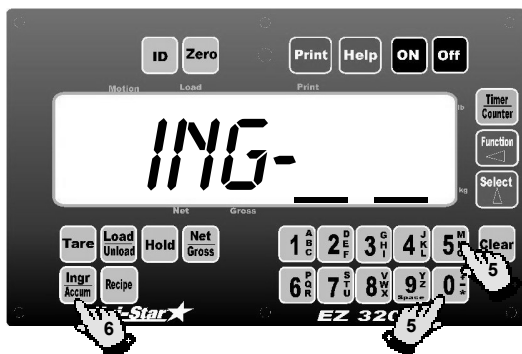


2. Press **Clear**.
3. Use the numeric keypad to select the recipe number.
4. Press **Recipe** to enter the recipe number.

The EZ3200 then displays a message indicating the entry method to be used:

- ENTER VALUES IN AMOUNT PER ANIMAL
- ENTER VALUES IN PERCENT PER LOAD
- ENTER VALUES IN AMOUNT PER LOAD

The message *ING-* is displayed immediately following the entry method message.

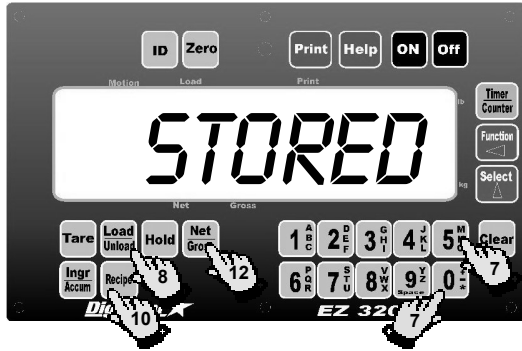


5. Use the numeric keypad to select the ingredient number. See Appendix 1 for ingredient look up table with alpha names.
6. Press **Ingr Accum**.

☞ Ingredient numbers do not have to be in sequence.

The ingredient name (e.g. *CORN- 1*) will be displayed followed by *AMOUNT*. Next the prompt for the ingredient amount is displayed-*YY:XXXX* (e.g. *01: 5.00*).

The first two digits, *YY* represent the ingredient number. The last four digits, *XXXX* represent the amount for this ingredient.

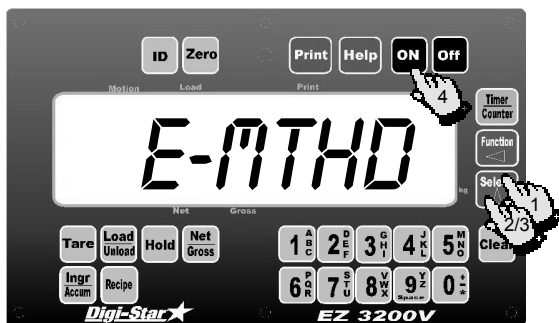


7. Use the numeric keypad to select the four digit ingredient value.
8. Press **Load/Unload** to enter the value.

The scale will display the message *STORED* indicating that the ingredient has been saved into *non-volatile memory*.

9. Continue steps 5 through 8 until all ingredients have been entered.
10. Press **Recipe** to complete the recipe. The scale will now calculate and display the *TOTAL* value of the recipe.
11. Repeat steps 1 through 10 until all recipes have been programmed.
12. Press **Net/Gross** to exit the Recipe Programming Mode and enter Weighing Modes.

TO CHANGE THE ENTRY METHOD

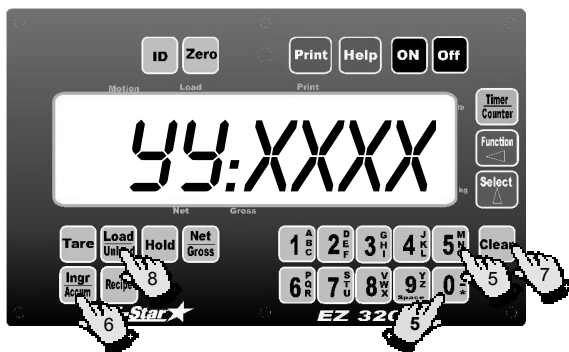
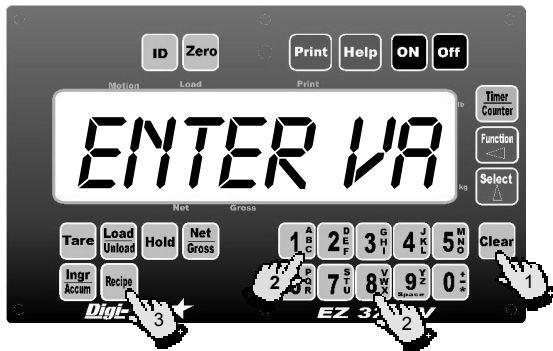
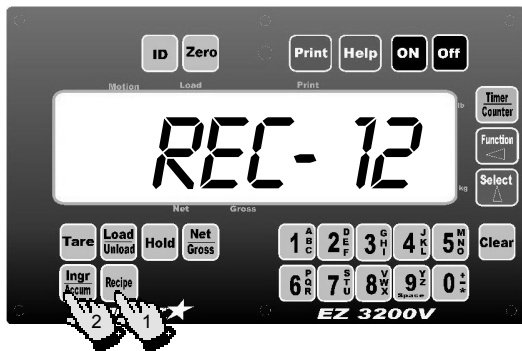
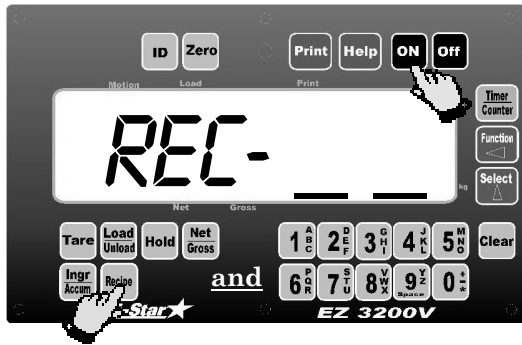


1. In Menu 4 of the Long Form Setup, select *E-MTHD*. (see page 14: *To enter the Long Form Setup*).
2. Press **Select**. The indicator will beep, flash the CAL annunciator and display the message *E-MTHD* followed by the number 1, 2 or 3.
3. Press **Select** again if you want to change the Entry Method.

- 1 = Amount per Animal
- 2 = Percent (%) per Load
- 3 = Amount per Load

4. Press **On** to save the setting.
5. Press and hold **Tare** and then press **On** to return to normal Weighing Mode.

TO EDIT A RECIPE



Press and hold **Recipe** and then press **On**.

Continue holding both keys until the indicator beeps and the scale displays the message *PROGRM*. The scale then displays the first recipe number programmed *REC-XX*. Use one of the following methods to select the recipe to edit:

Method 1

1. Press **Recipe** until the desired recipe number is displayed.
2. Press **Ingr Accum** to edit this recipe. Go to step 4 of method 2 below.

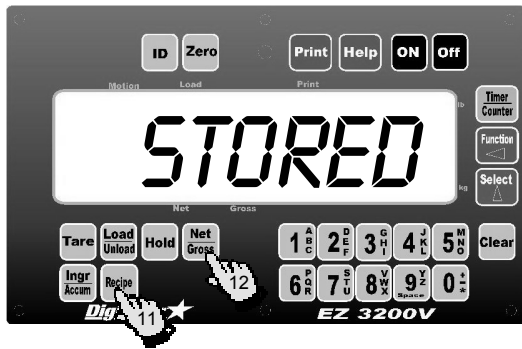
Method 2

1. Press **Clear**.
2. Use the numeric keypad to select the recipe number.
3. Press **Recipe** to enter the recipe number.

The EZ3200 will then display a message indicating the "entry method" to be used:

- ENTER VALUES IN AMOUNT PER ANIMAL
- ENTER VALUES IN PERCENT PER LOAD
- ENTER VALUES IN AMOUNT PER LOAD

4. The ingredient name will be displayed followed by *AMOUNT*. Next the prompt for the ingredient amount is displayed-*99.XXXX*.
5. Enter the new amount.
6. Press **Ingr Accum** to advance the scale to the next ingredient of the recipe.
7. Press **Clear** and use numeric keypad to select the four digit ingredient value.
8. Press **Load Unload** to enter the value.



9. The scale will display the message *STORED* indicating that the ingredient has been saved into *non-volatile memory*. *Non volatile memory* is a special type of memory that allows the power to be removed from the scale without losing any of the recipes.
10. Continue steps 5 through 8 until the desired changes have been made.
11. Press **Recipe** to complete the recipe. The scale will now calculate and display the *TOTAL* value of the recipe.
12. Press **Net Gross** to exit the Recipe Programming Mode and enter weighing mode.

Ingredient **amounts** can be changed, but to add ingredients to a recipe, first erase that recipe and then re-program the recipe.

TO ERASE A RECIPE



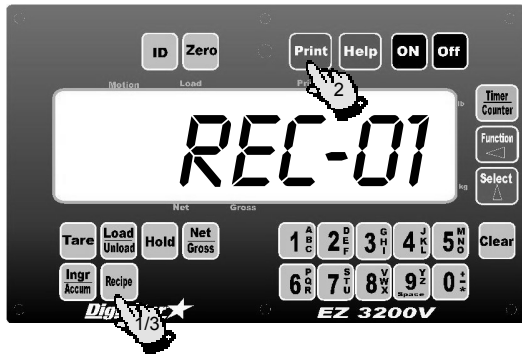
1. Press and hold **Recipe** and then press **On**. Continue holding both keys until the indicator beeps and the scale displays the message *PROGRAM*. The scale then displays the first recipe number programmed *REC-XX*.

2. Press **Recipe** until the desired recipe number is displayed or, press **Clear** and use numeric keypad to enter the recipe number to be erased (e.g. *REC-11*).



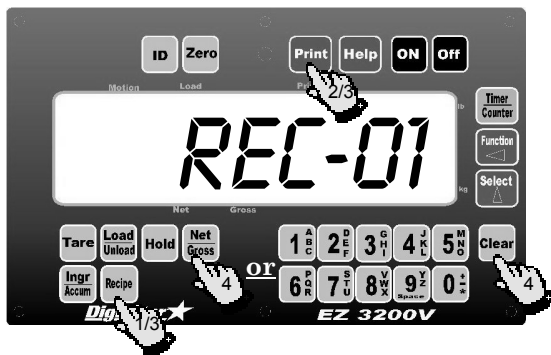
3. Press and hold **Zero**, then press **On** to erase the recipe.
4. Continue holding both keys until the indicator beeps and displays the message *PLEASE WAIT - PRINTING RECIPES*. To reprint the recipe, simply press **Print**.
5. Press **Zero** to erase the recipe. The message *RECIPE 11 ERASED* will be displayed.
6. Press **Net Gross** to exit the Recipe Programming Mode and enter the Weighing Mode.
7. To erase all recipes, continue steps 1 through 4 until all the recipes have been erased.

TO PRINT A SINGLE RECIPE



1. Press **Recipe**. The scale will display the first recipe in memory.
 2. Press **Print**.
- This prints the ingredients of this recipe.
3. Press **Recipe** to advance onto the next recipe.

TO PRINT ALL RECIPES



1. Press **Recipe** to review recipes.
2. Press **Print**. This prints the recipe number currently displayed.
3. Press **Print** again. All recipes currently residing in the recipe memory will be printed.
4. Press **Net Gross** or **Clear** to exit, or continue to press **Recipe** until all recipes have been displayed.

USING THE AUTO ADVANCE FEATURE

The auto advance feature allows for *hands free* operation of programmed recipes. When the auto advance feature is activated, the indicator automatically prints and advances to the next ingredient once the Motion, Tolerance, and Delay Time requirements have been met. Motion, tolerance, and delay time requirements are explained below.

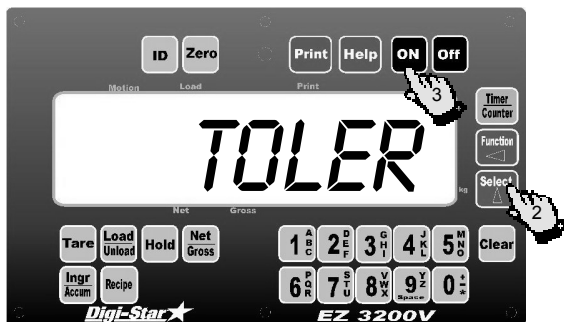
The Tolerance feature is a “tolerance window” for the preset ingredient during batching. For example, if the tolerance is set to 5% and the preset is 1000, the “tolerance window” is ± 50 . The scale is in the “tolerance window” when the display is between 50 and -50.

The auto-advance circuitry of the recipe function activates the Delay Time counter while the weight is in the tolerance window. The Delay Time allows the operator to slightly “under or over shoot” an ingredient amount and still automatically advance to the next ingredient. The auto-advance circuitry resets the Delay Time counter every time the weight moves out of the tolerance window. If enabled, Motion Detection also resets the Delay Time Counter.

If the tolerance for that ingredient is exceeded, the message *OVER* is displayed alternately with the weight value. If this occurs, the scale **will not** auto-advance until the excess weight is removed. If the operator determines that the additional weight for that ingredient is acceptable, pressing **Print** or **Ingr Accum** will advance to the next ingredient.

If the tolerance is set to *OFF*, the scale will always auto-advance after the ingredient amount has been loaded regardless of any additional weight.

TO CHANGE THE TOLERANCE



1. Go to Menu 4 of the Long Form Setup and choose *TOLER* (see page 14: *To enter the Long Form Setup*).
2. Press **Select** to choose the amount (by percentage) that an ingredient can be under/over-loaded and still automatically advance.

Tolerance Percentage Settings

OFF, 0.5, 1, 2, 3, 4, 5, 7, or 10

☞ Set to *OFF* to always advance after the ingredient amount has been reached.

3. Press **On** to store the setting.
4. Press and hold **Tare** and then press **On** to return to normal Weighing Mode.

USING DELAY TIME

The Delay Time Feature allows an operator to select the amount of time the scale should wait before automatically advancing to the next ingredient of the recipe. This helps insure accuracy for the ingredient amount. For example, if the delay time is set to 10 (seconds) and the preset alarms are activated continuously, the auto-advance circuitry starts the Delay time Counter. If the preset *de-activates*, the delay time counter is *reset*, therefore assuring that the preset weight amount has to be met for the *total delay time amount*.

Setting Delay Time to *MANUAL* prevents the scale from EVER auto-advancing, regardless of the weight.

If loading a batch using a recipe, **Ingr** **Accum** or **Print** must be pressed twice to advance the recipe to the next ingredient. See page 25: *To load a batch using a recipe*.

TO CHANGE THE DELAY TIME



1. Go to Menu 4 of the Long Form Setup and select *DELAY* (see page 14: *To enter the Long Form Setup*).
2. Press **Select** to select the delay time (in seconds) to wait before automatically advancing.

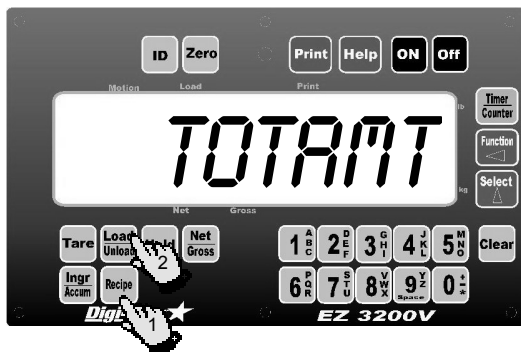
Delay Time Selections in Seconds

MANUAL, 1, 2, 3, 5, 7, 10, 20, 30, or 60

☞ Set to *MANUAL* to prevent automatic advance after the ingredient amount has been reached.

3. Press **On** to store the setting.
4. Press and hold **Tare** and then press **On** to return to normal Weighing Mode.

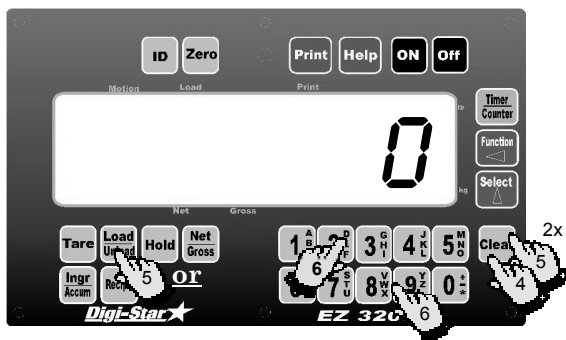
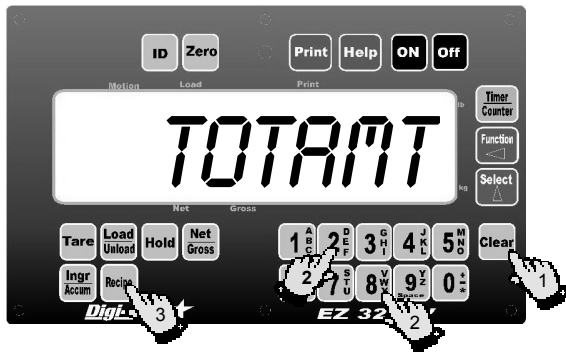
TO LOAD A BATCH USING A RECIPE



Either of the following methods can be used to load a recipe while in the weighing modes:

Method 1

1. Press **Recipe** until the desired recipe number is displayed.
2. Press **Load/Unload** to accept the recipe. Go to Step 4 (method 2).



Method 2

1. Press **Clear** .
2. Use the numeric keypad to select the recipe number.
3. Press **Recipe** .
4. The scale displays the message *LOADING RECIPE XX* and *TOTAMT*. The message *TOTAMT* represents either the *Total amount to be loaded* or the *Total amount of animals* for that recipe.

To change the *TOTAMT* press **Clear** until the value is *g* (zero).

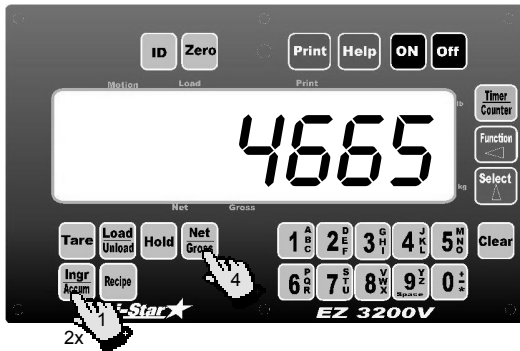
5. Press **Load Unload** to accept the amount displayed or, Press **Clear** twice to exit.
6. Use the numeric keypad to enter a new total amount value.

The display alternates between the first *ingredient* to be loaded and the *ingredient amount* to be loaded. These two values are alternately displayed until 5% of the ingredient is either loaded or unloaded.

If the Delay Timer is set to manual (see page 25: *To change the delay time*), the recipe will not automatically advance. The message *PRESS INGR TO ADVANCE TO INGR-XX* will be displayed (see page 27 *To manually advance to the next ingredient*).

If using the *Auto-advance feature* (delay timer is not set to *MANUAL*), and the weight is within the Tolerance range (See page 24: *To change the tolerance*), the alarms will activate. This causes the Delay timer to start and to automatically advance.

TO MANUALLY ADVANCE TO THE NEXT INGREDIENT

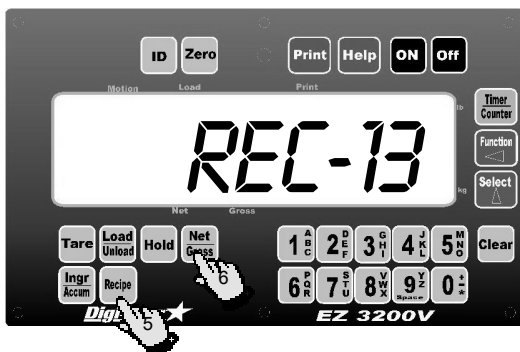
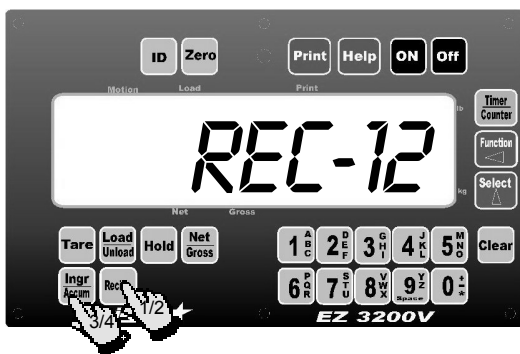


1. If loading a batch using a recipe and the Delay Timer is set to manual, you must press **Ingr Accum** twice to advance to the next ingredient when loading a recipe.
2. The first **Ingr Accum** press, completes the current ingredient and enters a Hold Weight Mode. This allows the scale system to be moved to a new location without affecting the weight amount of the next ingredient. The second press, advances the scale recipe to the next ingredient!
3. After all ingredients have been loaded, the scale displays the message: *RECIPE COMPLETE TOTAL = XXXXXXLB (XXXXXXXKG)*.
4. Press **Net Gross** to go back to normal Weighing Mode.

NOW THE RECIPE IS LOADED !

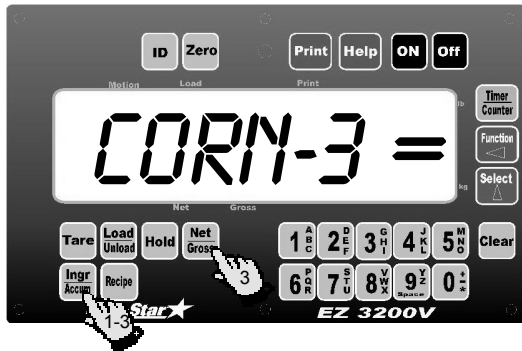
All ingredient amounts are automatically recalculated to provide the new total amount. This new total will be used the next time this recipe is loaded.

TO REVIEW A RECIPE



1. Press **Recipe** . The scale displays the first recipe loaded in memory.
2. Continue pressing **Recipe** until the desired recipe number is displayed.
3. Press **Ingr Accum** . This displays the ingredients of the recipe and the amounts for each ingredient that should be loaded.
4. Continue pressing **Ingr Accum** to display each ingredient.
5. Press **Recipe** again to display the next recipe.
6. Press **Net Gross** to exit the Recipe Review Mode.

TO REVIEW INGREDIENT ACCUMULATION



Review ingredient accumulations (the total amount of each ingredient that has been loaded) by following these steps.

1. Press **Ingr Accum**. The scale displays the first ingredient used by the recipes and the total amount that has been loaded/unloaded.
2. Continue to press **Ingr Accum** to display accumulations of other ingredients.
3. Continue to press **Ingr Accum** until all ingredients have been displayed or,
press **Net Gross** to exit Ingredient Review Mode.

TO PRINT ACCUMULATION FOR ONE INGREDIENT



1. Press **Ingr Accum** to review the ingredient accumulations. The scale displays the first ingredient used by the recipes and the total amount that has been loaded/unloaded.
2. Press **Print**. This prints the total accumulation for this ingredient.
3. Press **Ingr Accum** to advance onto the next ingredient.

TO PRINT ACCUMULATION FOR ALL INGREDIENTS



1. Press **Ingr Accum** to review the ingredient accumulations.
2. Press **Print**. This prints the total accumulation for this ingredient.
3. Press **Print** again. Accumulations for all ingredients currently used in all recipes will be printed.
4. Press **Net Gross** to return to weighing.

TO PRINT THE INGREDIENT TABLE



1. Press **Ingr Accum** to review the ingredient accumulations.
2. Press **Print**. This prints the total accumulation for this ingredient.
3. Press **Print** again. Accumulations for all ingredients currently used in all recipes will be printed.
4. Press **Print** a third time. Now the entire Ingredient table will be printed. This shows the names for all 99 ingredients in the table. Ingredients not currently used by a recipe print *UNUSED* for their accumulation value
5. Press **Net Gross** to return to weighing.

The ingredient table shows which ingredient name will be displayed while load/unloading ingredients during batching or feeding (see [Appendix 1: Ingredient names](#)).

TO RENAME INGREDIENTS

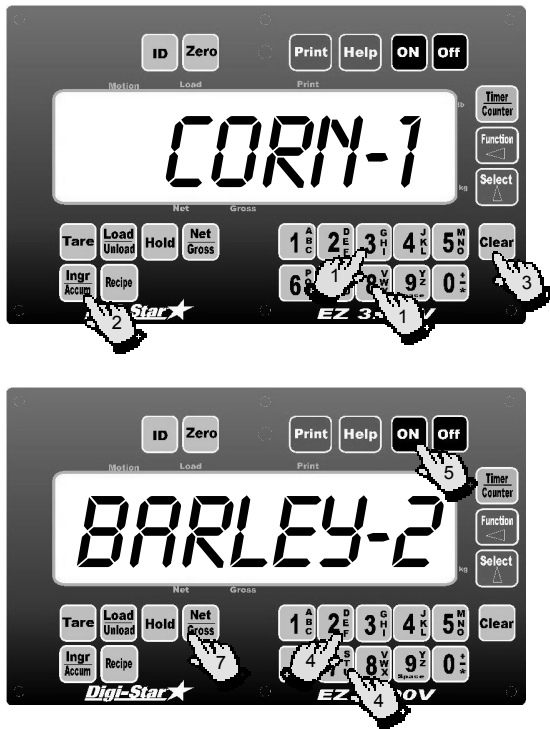


1. Enter Ingredient Program Mode by pressing and holding **Ingr Accum** and then pressing **On**.
2. Continue holding both keys until the indicator beeps and the scale displays the message *PROGRAM*.
3. The scale then displays the first ingredient number in the table *ING-01*. Use one of the following methods to select the ingredient name to edit:

Method 1

1. Press **Ingr Accum** until the desired ingredient number is displayed.
2. Press **On**. Go to Step 3 of method 2 below.





Method 2

1. Use the numeric keypad to enter the ingredient number.
2. Press **Ingr Accum**. The ingredient name will be displayed: *CORN-1*.
3. Press **Clear** to backspace or press & hold the [Clear] key to delete the entire name.
4. Use the alpha-numeric keypad to enter the six character/number ingredient name.
5. Press **On** to store the new name and advance to the next ingredient.

☞ To cancel your changes and restore the original name, simply press **Net Gross**.

☞ A blank name " _" cannot be saved, instead the original name will be restored.

The ingredient names are saved into *non-volatile memory*. *Non-volatile memory* is a special type of memory that allows the power to be removed from the scale without losing any of the ingredient names.

6. Continue steps 2 through 5 until the desired changes have been made.
7. Press **Net Gross** to exit the *Ingredient programming mode* and enter the weighing modes

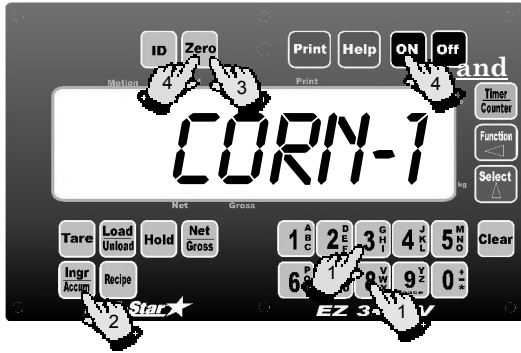
TO ERASE ACCUMULATION FOR ONE INGREDIENT



1. Enter Ingredient Program Mode by pressing and holding **Ingr Accum** and then pressing **On**.
2. Continue holding both keys until the indicator beeps and the scale displays the message *PROGRAM*.
3. The scale then displays the first ingredient number in the table *ING-01*. Use one of the following methods to select the ingredient name to erase:

Method 1

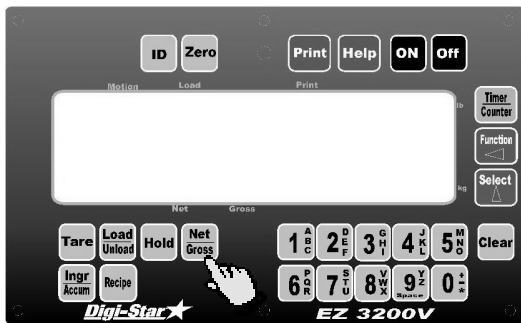
1. Press **Ingr Accum** until the desired ingredient number is displayed. Go to step 4 of method 2 below.



Method 2

1. Use the numeric keypad to enter the ingredient number to be erased.
2. Press **Ingr Accum**. The ingredient name will be displayed - *CORN-1*.
3. Press **Zero**.
4. Press and hold **Zero**, then press **On** to erase the recipe. Continue holding both keys until the indicator beeps and displays the message *PLEASE WAIT - PRINTING ACCUMULATION VALUES*.
5. Press **Zero** to erase or **Print** to re-print accumulation value.
6. Press **Net Gross** to exit the *Ingredient programming mode* and enter the weighing modes.

TO ERASE THE ACCUMULATION VALUES FOR ALL INGREDIENTS



To erase the accumulation values for ALL ingredients, repeat steps 1 through 5 listed above, but then repeat steps 3, 4 & 5 for the same ingredient.

Press **Net Gross** to exit the Ingredient Programming Mode and return to Normal Weighing Mode.

7. Optional features

Optional features are installed in the indicator if the corresponding keys are on the front panel or if additional connectors are on the bottom panel.

REMOTE DISPLAY

A Remote Display is available for viewing weight data at convenient locations. The Remote Display includes a visual alarm light which can be used with the TR option listed below.

TR: RADIO CONTROL OPERATION

The TR option allows the operator to remotely control the scale from a distance up to 100 feet away (depending on the environment). The TR option allows the operator to perform TARE and GROSS or “Ingredient Advance” functions.

PRINT WEIGHT DATA

Weight data can be sent to a printer by pressing the PRINT key. An auto-print feature can be selected in Menu #2 of the Long Form Setup.

CLOCK OPTION

ID# OPTION

TO ENTER ID NUMBER



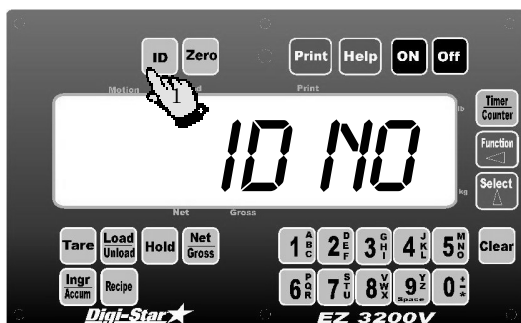
1. Use the numeric keypad to enter an identification number.

2. Press **ID** to enter the identification number.

The identification number is also printed on every weight printout. Printing automatically clears the identification number so that a new value can or must be entered.

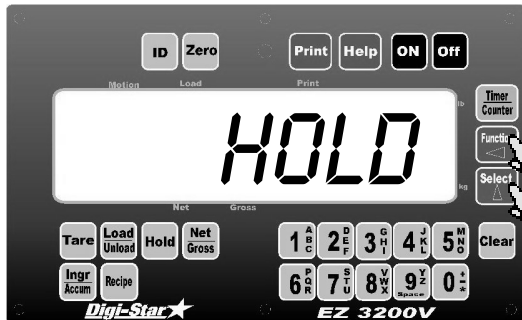
3. The identification number can be cleared by pressing **Clear** and then pressing **ID**.

TO DISPLAY ID NUMBER



1. Press **ID**.

TO USE FUNCTION & SELECT KEYS



The [Function] key provides additional features for operating the scale. The [Function] key is similar to the F1 key of a computer. It provides **Help** and additional functionality. The [Select] key is used to determine what operation will occur when the [Function] key is pressed.

The [Select] key is used to determine what operation will occur when the [Function] key is pressed.

1. Press the [Function] key to display the current operation of the [Function] key.
2. Press the [Select] key to change the current operation. Continue to press the [Select] key until the desired operation is displayed.

The [Function] key maintains the selected operation until the [Select] key is pressed again.

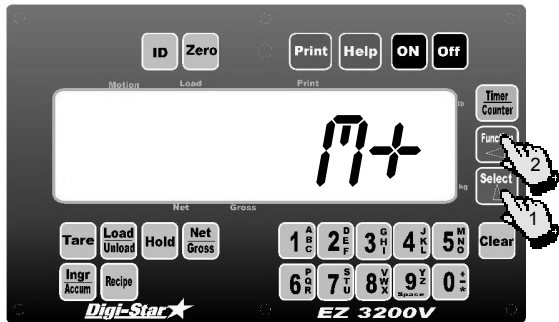
3. Press the [Function] key at any time to perform the selected operation.
4. Press the [Select] key once to display the operation assigned to the [Function] key.




For example, if the word *TIMER* is displayed, then pressing the [Function] key will activate the Rotation Counter. If the message *M+* is displayed, then pressing the [Function] key will cause the scale to perform the Memory Plus (M+) operation.

The [Function] key operation is stored in non-volatile memory. This allows the scale to remember the operation of the [Function] key even when the unit is turned OFF.

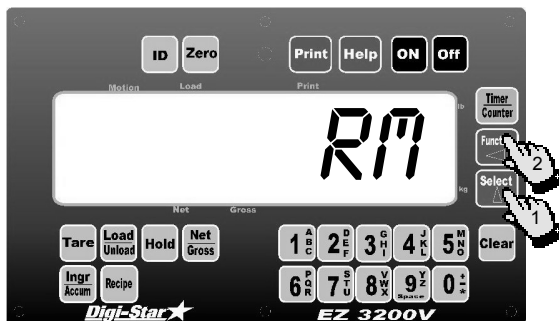
Press the [Select] key once to display the operation currently assigned to the [Function] key.



TO ADD WEIGHT TO WEIGH MEMORY



1. Press  until $M+$ is displayed. This assigns the Memory Plus (M+) operation to .
2. Press  to perform the Memory Plus (M+) option and this stores the new weight data in memory.

RECALL WEIGH MEMORY






1. Press  until RM (Recall Memory) is displayed.
2. Press  to perform the Recall Memory (RM) operation.

The weigh memory will be temporarily displayed.

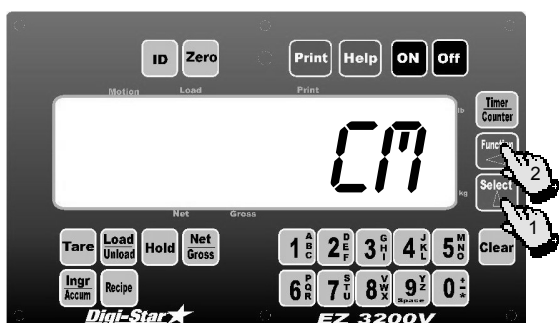
PRINT WEIGH MEMORY (OPTION)





1. Press  until RM (Recall Memory) is displayed.
2. Press  to display the weigh memory.
3. Then press the  key while the weigh memory is still displayed.

The PRINT key causes the unit to print the weigh memory and return to the normal weighing modes.



CLEAR WEIGH MEMORY




1. Press  to assign the CM operation to the [Function] key.
2. Press  to perform this Clear Memory (CM) operation.

WEIGH AVERAGING




1. Press  to assign the RM operation to the [Function] key.
2. Press  twice within three seconds to perform the weigh averaging operation.

The *COUNT* or number of weight values added to the weigh memory will be displayed first. Then the message *AVERAG* is displayed, followed by the average weight value.


3. To print the average weight value, press  while the average weight is still displayed.

BLACK OUT

-  The Clock Option is required as part of the Black Out option. The Clock records the time, date, and preset remaining before the power outage (blackout).

The Black Out option is a preset enhancement that maintains the “preset amount left to go” in *non-volatile*, permanent memory. This insures that the correct weight can be delivered even after a power outage.

For example, a system loaded with 2000 lbs unloads a preset of 100 lbs. After unloading the first 500 lbs, a power outage occurs. When the power is restored and the scale turned back On, the message *POWER OUTAGE - PRESS START ON CONTROL BOX TO FINISH PRESET - CLEAR TO CANCEL MO/DA/UR 12:00A*. At this time, press START on the control box (or press the NET/GROSS key on the indicator). This loads the preset amount remaining **before** the black out (500 lbs in this example).

Pressing  cancels the preset and the scale displays the GROSS weight.

PULSED OUTPUT

☞ The Clock Option is required as part of the Pulsed Output option.

The Pulsed Output option provides one output line to indicate decreasing weight.

Pulsed Output pulls the connected signal line to ground through a 330 Ohm resistor for 150 milliseconds every time the scale decreases one display count.

☞ 1 Display Count = 1 Output Pulse

The scale will not pull the line to ground more than twice (2 times) a second – **2 Hz**.

For example, if the weight decreased from 8000 lbs to 7500 lbs, using a display count of 10 lb counts:

$8000 - 7500 = 500$ (lbs weight change)

$500 / 10$ (Display Count) = 50 Pulses

There would be 50 output pulses taking about 25 seconds to output all 50 pulses. In this example, 7500 lbs represents the Gross Weight Reference Point. The scale resets the Gross Weight Reference Point if the weight increases 100 or more pounds for at least one(1) minute. The scale starts pulsing outputs as weight decreases from the new Gross Weight Reference Point.

There are two (2) ways to “reset” or “abort” the internal pulse counter of the scale. Either Zero Balance the scale **or** turn the scale OFF and back On again then press the [ZERO] key when the scale shows the power outage message.

The Clock records the time, date, and Gross Weight Reference Point before the power outage. When power is restored, the scale will display the message *POWER OUTAGE - PRESS NET/GROSS TO CONTINUE PULSED OUTPUT - ZERO TO RESET MO/DA/YR 12:00A*. This provides the opportunity to start other equipment in the proper sequence.

APPENDIX 1: Ingredient names

This list shows the number and name of the ingredients as shipped from Digi-Star.

☞ Each name can be changed. See the section *To Rename Ingredients* to change an ingredient name.

INGR. NO.	NAME
ING-01	CORN-1
ING-02	CORN-2
ING-03	CORN-3
ING-04	HAY
ING-05	HAY-1
ING-06	HAY-2
ING-07	HAY-3
ING-08	BARLEY
ING-09	CANOLA
ING-10	COTTON
ING-11	DISTLR
ING-12	DRYPUL
ING-13	DRYBET
ING-14	EARLAG
ING-15	GRASS
ING-16	MOLASS
ING-17	WETPUL
ING-18	SOY
ING-19	TALLO
ING-20	WATER
ING-21	TRACE1
ING-22	TRACE2
ING-23	TRACE3
ING-24	TRACE4
ING-25	TRACE5
ING-26	TRACE6
ING-27	TRACE7
ING-28	TRACE8
ING-29	TRACE9
ING-30	HAYLAG
ING-31	HYLG-1
ING-32	HYLG-2
ING-33	HYLG-3

INGR. NO.	NAME
ING-34	HYLG-4
ING-35	HYLG-5
ING-36	HYLG-6
ING-37	HYLG-7
ING-38	HYLG-8
ING-39	HYLG-9
ING-40	CSILAG
ING-41	CSLG-1
ING-42	CSLG-2
ING-43	CSLG-3
ING-44	CSLG-4
ING-45	CSLG-5
ING-46	CSLG-6
ING-47	CSLG-7
ING-48	CSLG-8
ING-49	CSLG-9
ING-50	SILAGE
ING-51	SILO-1
ING-54	SILO-4
ING-55	SILO-5
ING-56	SILO-6
ING-57	SILO-7
ING-58	SILO-8
ING-59	SILO-9
ING-60	BUNKER
ING-61	BUNK-1
ING-62	BUNK-2
ING-63	BUNK-3
ING-64	BUNK-4
ING-65	BUNK-5
ING-66	BUNK-6
ING-67	BUNK-7
ING-68	BUNK-8

INGR. NO.	NAME
ING-69	BUNK-9
ING-70	MISC
ING-71	MISC-1
ING-72	MISC-2
ING-73	MISC-3
ING-74	MISC-4
ING-75	MISC-5
ING-76	MISC-6
ING-77	MISC-7
ING-78	MISC-8
ING-79	MISC-9
ING-80	PREMIX
ING-81	PRMIX1
ING-82	PRMIX2
ING-83	PRMIX3
ING-84	PRMIX4
ING-85	PRMIX5
ING-86	PRMIX6
ING-87	PRMIX7
ING-88	PRMIX8
ING-89	PRMIX9
ING-90	MIXTUR
ING-91	MIX- 1
ING-92	MIX- 2
ING-93	MIX- 3
ING-94	MIX- 4
ING-95	MIX- 5
ING-96	MIX- 6
ING-97	MIX- 7
ING-98	MIX- 8
ING-99	MIX- 9

APPENDIX 2: Examples of programming recipes

These examples are shown to illustrate the three different program entry methods available. Each method can be used to obtain the same results, the choice is yours. Note that Recipe #5 includes some of the same ingredients as Recipe #12, but are loaded in a different sequence to illustrate the flexibility of programming to match actual loading sequence.

to program						
recipe#12		program entry methods available (choose one)				
ingredient name	ingredient number	amt. per animal	or	% per load	or	amount per load
(1) Haylage	3	18.0				34.62
(2) High Moisture Corn	9	10.0	or	19.23	or	1000
(3) Corn Silage	5	24.0		46.15		2400
Total		52 lbs		100.00		5200

to load						
recipe#12		amt. per animal	or	% per load	or	amount per load
ingredient name	ingredient number	enter # of animals		enter load size		accept 5200 or enter new size
		100 animals		5200		5200
(1) Haylage	3	1800	or	1800	or	1800
(2) High Moisture Corn	9	1000		1000		1000
(3) Corn Silage	5	2400		2400		2400
Total		5200		5200		5200

to program						
recipe#5		program entry methods available (choose one)				
ingredient name	ingredient number	amt. per animal	or	% per load	or	amount per load
(1) Corn Silage	5	15.0				37.50
(2) Haylage	3	14.5		36.25		1740
(3) Soy Bean	10	2.3		5.75		276
(4) Cotton Seed Hulls	12	8.2		20.50		984
Total		40 lbs		100.00		4800

to load						
recipe#5		amt. per animal	or	% per load	or	amount per load
		enter # of animals		enter load size		accept 4800 or enter new size
ingredient name	ingredient number	120 animals		4800		4800
(1) Corn Silage	5	1800		1800		1800
(2) Haylage	3	1740		1740		1740
(3) Soy Bean	10	276		276		276
(4) Cotton Seed Hulls	12	984		984		984
Total		4800		4800		4800

1: Amount per animal

Recipe programmed for one animal		Ingredient presets for a 100 animal load	
Haylage	18 lbs	Haylage	1800 lbs
Corn Silage	10 lbs	Corn Silage	1000 lbs
HM Shell Corn	16 lbs	HM Shell Corn	1600 lbs
Soy Hulls	02 lbs	Soy Hulls	200 lbs
Soybeans	06 lbs	Soybeans	600 lbs
Total	52 lbs	Total	5200 lbs

2: Percent per Load - %

Recipe programmed in % for total load		Ingredient presets for 5200 lb load	
Haylage	34.60%	Haylage	1800 lbs
Corn Silage	19.23%	Corn Silage	1000 lbs
HM Shell Corn	30.77%	HM Shell Corn	1600 lbs
Soy Hulls	03.85%	Soy Hulls	200 lbs
Soybeans	11.55%	Soybeans	600 lbs
Total	100.00%	Total	5200 lbs

3: Amount per load - lb/kg

Recipe programmed in total lbs/load		Ingredient presets for 5200 lb load	
Haylage	1800 lbs	Haylage	1800 lbs
Corn Silage	1000 lbs	Corn Silage	1000 lbs
HM Shell Corn	1600 lbs	HM Shell Corn	1600 lbs
Soy Hulls	200 lbs	Soy Hulls	200 lbs
Soybeans	600 lbs	Soybeans	600 lbs
Total	5200 lbs	Total	5200 lbs

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