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TECHNICAL SPECIFICATIONS

SIZE
10.25" long x 8.0" high x 4" wide (260mm x 190mm)

WEIGHT
4.5 lbs (2.04 Kg)

HELP MESSAGES
Context sensitive help messages in 10 languages
Long messages are scrolled

TRANSUDER EXCITATION
8 volts D.C. Nominal
Capable of driving ten 350 Ohms transducers
Short circuit proof

ATC
Auto Temperature Compensation of the internal circuitry for high accuracy weighing measurements

TRANSUDER SIGNAL
Compatible with transducers having full scale indicator transfer characteristics greater than 0.25 mv/v

“AUTO RANGE”
(Selectable) To increase display counts at weight values of 300 and 600 display counts.

CONNECTOR
AMP plastic weather resistant circular connector. Gold contacts

POWER REQUIREMENTS
10.5 to 16.0 V.D.C.
160 mA nominal with four 350Ω L.C.

SET UP AND CALIBRATION
Via front panel

GROSS RANGE
999,999 max display

LOW BATTERY WARNING
Enabled at 10.5V nominal

POUND/KILOGRAM
Selectable

DISPLAY
STD EZ 6 Digit LCD 1.0" high
EZ VIEW6 Digit LCD 1.7" high

DISPLAY RESOLUTION
.01, .02, .05, .1, .2, .5, 1, 2, 5, 10, 20, 50, 100

DISPLAY UPDATE RATE
Selectable: 1, 2, 3, 4 times/sec.

MAX. DISPLAY RESOLUTION
Adjustable to 40,000 counts max.

ZERO TRACKING
Selectable, On/Off

SPAN ACCURACY
±(1.1% + .005%/°F) or (.1% + 0.009% °C) full scale ± 1 output count

MOTION DETECTION
Selectable, On/Off

ZERO ACCURACY
(0.05%/°F.) or (0.009% °C) full scale ± 1 output count for 0.5 mv/v transducer

ENVIRONMENTAL ENCLOSURE
IP65, IEC 529

WEIGH ALGORITHM
4 internally selectable digital filters to optimize performance
(General, Slow, Fast and Lock-on)

HOLD MODE
Used in mobile applications to stabilize displayed weight while moving the scale

NON-VOLATILE MEMORY
EEPROM for balance

OPERATING TEMP
-29°C to 60°C -20°F to 140°F

REMOTE INPUTS
Tare / Advance Recipe / Re-enter Preset
SAFETY DURING USE

⚠️ Caution

Cleaning
Do not use running water (high pressure cleaners, hoses) to clean the indicator.

Charging Battery and Welding
Disconnect all cables from the weighing indicator before charging the battery or welding on the machine. If cables are left connected, the weighing indicator and connected load cells could be damaged.
INDICATOR OVERVIEW

1. **ZERO** – press and hold for 3 seconds to zero balance.
2. **Pre-Alarm Light** – Starts flashing and alarm sounds when weight is within preset limit. See page 17.
3. **HOLD** – holds displayed weight when moving machine.
5. **ON** – turns indicator on. Pressing while on will run self test.
6. **OFF** – turns indicator off.
7. **Display Window** – Displays current actions.
8. **TARE** – temporary zero (Net mode).
9. **PRINT** – records to memory or prints displayed weight.
10. **NET/GROSS** – toggles between Net and Gross weights.

Note: See page 38-40 for installation instructions.
11. **RECIPES** – selects recipes in memory, program recipes, see page 21.
12. **ADVANCE** – proceeds to next item.
13. **ENTER** – accepts change or proceed to next item.
14. **Keypad** – input numbers or letters as required.
15. **ID** – used to enter label numbers for weight value to be displayed and printed.
16. **CLEAR** – clear current command.
17. **SPACE** – add space in command.
18. **FUNCTION** – performs tasks displayed by select.
19. **SELECT** – displays additional tasks.
20. **HELP** – view for additional information.

21. **Serial/Printer Port** – optional, communicate with computer and other digital input/output devices.
22. **Remote Port** – optional remote display.
23. **Load Cell Port** – for J-Box cord.
24. **Power Port** – for power cord.
25. **Serial Number Plate** – Serial Number of indicator.
OPERATION

Turn on Indicator

1. Press \( \text{ON} \).

Zero Balance Indicator

1. Press and hold \( \text{ZERO} \) for 3 seconds to zero balance indicator.
2. Indicator ready to weigh when flashing arrow points to GROSS.

Tare and Net/Gross

Tare is a temporary zero (Net Weight) to display total weight (Gross Weight) Press \( \text{NET/GROSS} \).

1. Starting weight displayed.
   Example: 4000
2. Press \( \text{TARE} \) to set weight to zero. Flashing arrow points to NET.

3. Add more weight. Example: 300

4. Press \( \text{NET/GROSS} \) to show GROSS weight of starting weight of 4000 pounds plus added 300 pounds. Flashing arrow points to GROSS.

5. Press \( \text{NET/GROSS} \). 300 pounds displays; flashing arrow points to NET.
Print Key

**Note:** Optional serial port must be installed for printing.

![Image of Digi-Star operation screen showing the Print Key]

1. Press \( \text{Print} \) to send data to printer or PC.

   Date in ddmmyy format
   
   Time
   
   **10JA08** 12:01P
   
   Weight
   
   **4300 LB GR**
   
   Gross (GR) or Net (NET)

Using the M+, RM and CM Options

Use these options to weigh truck or wagon one axle at a time.

![Image of Digi-Star operation screen showing the M+ option]

1. Add weight on scale. Example: 500 pounds.

![Image of Digi-Star operation screen showing the M+ option selected]

2. Repeatedly press \( \text{Select} \) until \( M+ \) is displayed.
3. Press \(\text{FUNCTION}\) 500 pounds and \(R\overline{M}\) briefly display. 500 pounds added to indicator memory and indicator in gross weight mode.


5. Repeatedly press \(\text{SELECT}\) until \(M+\) is displayed.

6. Press \(\text{FUNCTION}\). Indicator adds 1000 pounds to 500 pounds in memory and \(R\overline{M}\) flashes.
Printing Weight from Memory

1. Repeatedly press \( \Delta \) until \( RM \) is displayed.

2. Press \( \Theta \) to show weight in memory. Example: 1500 pounds

3. Press \( \Sigma \) while weight displayed.

(See page 11 to print weight in memory.)
Weight Averaging

1. Repeatedly press \( \text{SELECT} \) until \( RM \) is displayed.

2. Press \( \text{FUNCTION} \) twice within three seconds to perform weight average.

3. Display shows \( COUNT \ 2 \) if number of individual weights to average is two. Example weight of 1000 pounds and 500 pounds averaged.

4. Displays \( \text{AVERAG} \).

5. Display shows average of two weights in memory. After displaying average weight, indicator returns to gross weight mode.
Printing Average Weight

1. Press \( \text{PRINT} \) while average weight displayed.

Sample output format shown below:

<table>
<thead>
<tr>
<th>Date</th>
<th>Time</th>
<th>Counts</th>
<th>Average Weight</th>
</tr>
</thead>
<tbody>
<tr>
<td>10JA08</td>
<td>12:01P</td>
<td>2CT</td>
<td>750LB AV</td>
</tr>
</tbody>
</table>
ADVANCED COMMANDS

Preset

Enter amount to be loaded or unloaded, alarm sounds as zero is approached.

1. Enter desired preset weight.
2. Press **Enter** indicator rounds weight to nearest display count.
3. Once preset entered, display shows weight loaded or unloaded in one of three display modes shown on page 12.

Clear Preset Alarm

1. Press **Clear** to clear preset value.

Preset Displays Gross Mode

1. Press **NET/GROSS**

As ingredients load or unload display counts up or down to preset value alternates between flashing word \textit{PRESET} and amount, until 5 percent of weight is loaded or unloaded.
Load/Unload Mode

1. Press \( \text{ENTER} \).

Displays amount remaining to load or unload. As ingredients are loaded or unloaded, display counts down from entered weight to zero.

Net Mode

1. Press \( \text{NET/GROSS} \) twice.

Displays weight added since preset entered. As ingredients are loaded or unloaded, display counts up or down.

Preload A Tare Value

Weighing containers after already loaded. If weight of container is known, a tare weight is preloaded in indicator and only net weight displayed.

Pre-Tare: enter 405, press \( \text{SELECT} \), press \( \text{SELECT} \) to turn on.

1. Press and hold \( \text{ZERO} \) for 3 seconds to zero balance the indicator.

2. Add weight to container.

3. Enter known weight of unloaded container.

4. Press \( \text{TARE} \).

5. Press \( \text{NET/GROSS} \).
**Mixer Timer**

1. Press **TIME**.
2. Enter time, press **TIME**. Time runs down, alarm sound and timer shows negative for over mixing of set time.
3. Press **CLEAR**.

**Restart Mix Timer**

1. Press **TIME** twice without entering value starts timer using previous time.
To Clear Memory

1. Repeatedly press \( \Delta \) until \( CM \) displayed.
2. Press \( \text{SELECT} \).

Review Accumulation Values

See total amount of each feedline since last time values were erased.

1. Repeatedly press \( \Delta \) until \( ACCUM \) displayed.
2. Press \( \text{FUNCTION} \).
3. Press \( \text{ADVANCE} \) displays accumulation of other ingredients.
4. Press \( \text{ID} \) to change between ingredients and pens.
5. Press \( \text{NET/GROSS} \).

Erase Accumulation Values

1. Repeatedly press \( \text{ADVANCE} \) until ingredient displays.

Example: corn silage.
Print Accumulation Values
- One Feedline
1. Press **ID** to display first ingredient. Repeatedly press **ID** to display other ingredients.
2. Press **ID** to change between ingredients and pens.
3. Press **PRINT** to print accumulation value for that feedline.
4. Press **NET/GROSS**.

Print Accumulation Values
- All Feedlines
1. Press **ADVANCE** to display first ingredient.
2. Press **PRINT** to print ingredient currently displayed.
3. Press **PRINT** again to print all ingredients in memory.

1. Press **ID** to change between ingredients and pens.
2. Hold **CLEAR**. Indicator scrolls CLEAR TO ERASE. CLEAR/CLEAR TO ERASE ALL
3. Press **CLEAR** to erase ingredient accumulation for corn silage.
4. Press **CLEAR** again to erase all accumulations.
5. Press **NET/GROSS**.
COMMONLY USED DIRECT ACCESS NUMBERS

Ingredient Name Table
The Ingredient Name Table contains 99 entries made up of ingredients and pens that are used when programming a recipe.

Number Of Ingredients
Defines how many ingredients are in the Ingredient Name Table. The default is 30 ingredients and 69 pens.

1. Enter 473 press select.
2. Enter the number of ingredients.
3. Press enter to save.

Pre-Alarm
Select weight or percentage method, enter value to activate early warning indicator reaching preset.

1. Enter 401, press select.
2. Press select again to choose between WEIGHT and PERCENT.
3. Press enter to save.
4. Enter Pre-Alarm value. Press enter to save.
Auto Advance

Allows hands free operation of programmed recipes. When auto advance feature activated, indicator automatically advances to next ingredient once tolerance, and delay time requirements met.

Tolerance

Sets Auto Advance to trigger prior to reaching preset weight by weight or percentage.

1. Enter 442 and press \(\Delta\) SELECT.
2. Press \(\Delta\) SELECT to choose tolerance method.
3. Press \(\leftrightarrow\) ENTER to save.
4. To change percentage, press \(\Delta\) until desired value is shown. To change weight, enter value.
5. Press \(\leftrightarrow\) ENTER to save.

**NOTE:** OFF setting always advances after preset amount reached.

Example: Preset = 1000 lbs. If tolerance is set to 5%, Auto Advance will activate at 950 lbs or 95% of preset weight.

Delay Time

Changes time indicator waits before automatically advancing to next feedline.

1. Enter 443 and press \(\Delta\) SELECT. Enter delay time in seconds.
2. Press \(\leftrightarrow\) ENTER to save.

**NOTE:** Set to 0 prevents automatic advance.
Rotate Counter
Indicator counts mixer auger rotations.

NOTE: Feature requires optional sensor kit.

1. Enter 421 press \( \Delta \text{ SELECT} \).
2. Press \( \Delta \text{ SELECT} \) picks REV option.
3. Press \( \text{ ENTER} \) to save.
4. Press \( \text{ TIMER COUNTER} \).
5. Enter number of rotations.
6. Press \( \text{ TIMER} \), rotation counter counts down. Counter reaches zero, alarm light and buzzer on.
7. Press \( \text{ CLEAR} \).

Restart Rotation Counter

1. Press \( \text{ TIMER COUNTER} \) twice to start rotation counter using previous count.

Drive Ratio
Drive ratio is number of turns seen by sensor divided by number of mixer rotations.

1. Enter 422 and press \( \Delta \text{ SELECT} \) to enter drive ratio value.
2. Press \( \text{ ENTER} \) to save.
MENUS AND ACCESS NUMBERS

Access To Menus

1. Press and hold NET/GROSS and ON.
2. Press SELECT to choose required menu.
3. Press ON to enter selected menu.
4. Press ON to scroll options.
5. Press SELECT to change options.
6. Press ON to save changes.
MANUAL PROGRAMMING OF RECIPES

There are three different entry methods for entering ingredients:

Amount Per Animal (this is the default setting)
Allows entry of ingredient amounts required for feeding one animal. Indicator calculates preset amounts required for each ingredient.

Percent (%) Per Load
Enter ingredient amounts in (%). Indicator calculates amounts for each ingredient. Total of all ingredients must equal 100% in this mode.

Amount Per Load
Allows entry of ingredient amounts required per load.

Change Entry Method

1. Enter 441 press \( \Delta \) \( \text{SELECT} \).
2. Repeatedly press \( \Delta \) \( \text{SELECT} \) to scroll following entry methods:
   
   1 = Amount per Animal
   2 = Percent (%) per Load
   3 = Amount per Load

3. Press \( \rightarrow \text{ENTER} \) to set entry method.

Ingredient Re-Name

Ingredient names are listed in a standard table and can be changed using the following 9 steps.

1. Repeatedly press \( \Delta \) \( \text{SELECT} \) until INGRNM displays.
2. Press \( \Delta \) \( \text{FUNCTION} \).
3. Press \( \boxed{1} \) to change between ingredients and pens.
4. Press \( \boxed{1} \) \( \text{ON} \) again to edit name. Display briefly shows EDIT and flashing cursor displayed.
**Manual Programming of Recipes**

5. Repeatedly press **CLEAR** to erase ingredient.

6. Press “1” key once enters 1, twice enters A, three times for B, other numbers on keypad work same.

7. Pause for one second after entering a number or letter and they shift to left so a new letter or number can be added.

8. Press **EXIT**.

9. Press **NET/GROSS** to exit.

**Print Ingredient Names**

1. Press **ADVANCE** to display first ingredient.

2. Press **PRINT** to print total accumulations for this ingredient.

3. Press **PRINT** again to print accumulations for all ingredients currently used in all recipes.

4. Press **PRINT** again to print names for all ingredients. Ingredients not used by recipe, show unused.

**Enter New Recipe**

1. Press and hold **RECIPE** until indicator beeps and displays **PROGRA** then displays either first recipe programmed or **REC__**. This indicates recipe number can be entered.

2. Press **CLEAR**.

3. Enter recipe number.

4. Press **ENTER** to enter number.
5. Press \( \text{SELECT} \) to scroll available ingredients.

6. Press \( \text{ENTER} \) to select ingredient on screen.

7. Enter amount of ingredient required. (see note)

8. Press \( \text{ENTER} \) to store amount.

Repeat steps 5-8 for each ingredient required.

Note: In percent/load entry mode a 75% ingredient, for example, should be entered as 75.00 on display. 5.75% ingredient entered as 5.75.

9. Press \( \text{ID} \) to change to pens.

10. Press \( \text{SELECT} \) to scroll available pens.

11. Press \( \text{ENTER} \) to select pen on screen.

12. Enter amount for pen.

13. Press \( \text{ENTER} \) to store amount.

Repeat steps 10-13 for each pen required.
14. Press ⏯ ENTER to complete recipe.

15. Indicator calculates and displays TOTAL amount of recipe.

Repeat steps 1 - 15 until all recipes programmed.

16. Press NET/GROSS to exit.

---

**Edit Recipe**

1. Press and hold 🔄 RECIPE until indicator beeps and displays PROGRAM.

2. Repeatedly press 🔄 RECIPE until recipe number displayed.

3. Press ⏯ ENTER to edit this recipe.

4. First ingredient name displayed followed by AMOUNT.

5. Enter new amount.

6. ⏯ ENTER stores and advances to next feedline.
7. Press \( \text{SELECT} \) to return to previous ingredient.
Repeat steps 5-6 for each feedline change.

8. Press and hold \( \text{RECIPE} \) to insert a new ingredient. This will insert just before the current ingredient on the screen.

9. Press \( \text{ID} \) to switch between ingredients and pens.

10. Press \( \text{SELECT} \) to scroll available ingredients or pens.

11. Press \( \text{ENTER} \) to select ingredient or pen.

12. Enter amount required.

13. Press \( \text{ENTER} \) to store amount.

14. Press and hold \( \text{ZERO} \) to erase an ingredient. Message \( \text{ZERO TO ERASE} \) scrolls.

15. Press \( \text{ZERO} \) to erase the current ingredient or pen displayed on the screen.

16. Press \( \text{NET/GROSS} \) to exit.
**Erase A Recipe**

1. Press and hold \( \text{REC} \) until indicator beeps and displays `PROGRAM` followed by first recipe number.

2. Repeatedly press \( \text{REC} \) until desired recipe number displayed.

3. Press and hold \( \text{ZERO} \) message `PRESS ZERO TO ERASE RECIPE OR NET/GROSS TO EXIT` scrolls.

4. Press \( \text{ZERO} \) to erase recipe.

5. Press \( \text{NET/GROSS} \) to exit.

**Review A Recipe**

1. Repeatedly press \( \text{REC} \) until recipe shown.

2. Press \( \text{ADVANCE} \) to display each ingredient, weight or % and total for recipe.

3. Press \( \text{NET/GROSS} \) to exit.
Printing Single Recipe

NOTE: Optional serial port must be installed for printing.

1. Press to display first recipe.
   Repeatedly press to display other recipes.
2. Press to print recipe.
3. Press .

Printing All Recipes

1. Press to display first recipe.
2. Press to print recipe.
3. Press again to print all recipes in memory.
4. Press .
RUNNING A RECIPE

Using Amount Per Animal

1. Repeatedly press \( \text{RECIPES} \) until recipe displayed.
2. Press \( \text{ENTER} \) to accept recipe.
3. Indicator displays \text{LOADING RECIPE}.

4. Indicator displays \text{RESIZE} followed by \text{PEN}.
5. Indicator displays flashing number. Change number to amount of animals to feed.

\textbf{NOTE:} If using percent/load, change number to weight amount for pen.

6. Press \( \text{ENTER} \).

7. After \text{RESIZING} all pens, indicator displays ingredient to load and how much to load. As ingredient loaded indicator counts down to zero.
8. Press \( \text{ADVANCE} \) to next ingredient.

(See page 18 for auto advance)
9. After last ingredient loaded, indicator displays *START DELIVERIES*.

10. Indicator displays pen to unload and how much to unload. As pen is unloaded indicator counts down to zero.

11. Press **ADVANCE** to progress to next pen.

12. After last pen unloaded, indicator displays *RECIPE COMPLETE TOTAL*.
OTHER FUNCTIONS

Hold
Hold mode prevents displayed weight from changing while moving.

1. Press $\text{Hold}$.
2. Press $\text{Hold}$ indicator normal.
3. If weight added in hold mode, press $\text{On}$ to cancel hold.

**Note:** This feature is disabled on all legal for trade systems.

Using Dimmer Option

1. Repeatedly press $\text{Select}$ until $\text{Dimmer}$ is displayed.
2. Press $\text{Function}$ to dim backlight.
 Function and Select Keys

1. Repeatedly press \( \Delta \) \( \text{SELECT} \) to give following options:

   - **Ingrnm:** Rename ingredient.
   - **Menu:** View menus 1, 2, 3, 4 and calibrate. See page 32.
   - **Setup:** Change setup and calibration numbers. See page 37.
   - **M+:** Adding weight to weight memory.
   - **RM:** Recall weight memory.
   - **CM:** Clear weight memory.
   - **Dimmer:** High/Low backlight control. Toggle between high/low using \( \downarrow \) \( \text{FUNCTION} \).
   - **Accum:** Displays amount of recipe ingredients loaded or unloaded.
   - **Help:** Explains operation of select and function key.

2. Once desired option displayed, press \( \downarrow \) \( \text{FUNCTION} \) to activate.
**Menus and Calibration**

Enter D.A.N. press △ to display setting name, allows value change. 
Press ON to save setting.

<table>
<thead>
<tr>
<th>SETTING [display]</th>
<th>D.A.N NO.</th>
<th>OPTIONS [displayed]</th>
<th>DESCRIPTION</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>LANGUAGE (LANGAG)</strong></td>
<td>101</td>
<td>English Dutch French German Italian Portuguese Spanish Danish Hungarian Spanish</td>
<td>Select language to be displayed.</td>
</tr>
<tr>
<td><strong>DISPLAY RATE (O RATE)</strong></td>
<td>102</td>
<td>1.2.3.4</td>
<td>Update display times per second.</td>
</tr>
<tr>
<td><strong>MOTION (MOTION)</strong></td>
<td>103</td>
<td>ON/OFF</td>
<td>If ON -motion arrow flashes for unstable weight and will prevent Ingredient or pen advancing.</td>
</tr>
<tr>
<td><strong>WEIGH METHOD (W MTHD)</strong></td>
<td>105</td>
<td>1=General, 2=Fast, 3=Slow, 4=Lock-On</td>
<td>Select weigh method</td>
</tr>
<tr>
<td><strong>TR HOLD (TR HLD)</strong></td>
<td>107</td>
<td>ON/OFF</td>
<td>Display gross weight if TR key is held for 3 seconds.</td>
</tr>
<tr>
<td><strong>SCALE ID SETUP (SCALID)</strong></td>
<td>108</td>
<td>NEW EZ</td>
<td>Identity of scale location (truck id or Mixer number).</td>
</tr>
<tr>
<td><strong>1 PRESS ZERO (1 ZERO)</strong></td>
<td>115</td>
<td>ON/OFF</td>
<td>If ON -press and hold the Zero key to Zero/Balance scale.</td>
</tr>
</tbody>
</table>

**Menu 2. Clock, Printer, Communications Features**

<p>| TIME FORMAT (TIME F) | 201 | 24 HR AM/PM | Select time format - AM/PM or 24 hour |</p>
<table>
<thead>
<tr>
<th>SETTING [display]</th>
<th>D.A.N NO.</th>
<th>OPTIONS [displayed] BOLD=DEFAULT</th>
<th>DESCRIPTION</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 TIME (TIME)</td>
<td>202</td>
<td>XX:XX:XX</td>
<td>Select key changes time, function key chooses hh:mm:ss.</td>
</tr>
</tbody>
</table>
| DATE FORMAT (DATE F) | 203   | 1-mm-dd  
2-mm/dd/yy  
3-mm/dd/yyyy  
4-dd-mm  
5-dd/mm/yy  
6-dd/mm/yyyy  
7-ddmoyy  
8-ddmoyyyy. | Select date format |
| DATE (DATE)       | 204       | Enter XXXXXX                      | Select key changes date -function key chooses mm/dd/yy. |
| ONE LINE PRINT (IL PRT) | 212 | ON/OFF                           | If ON -indicator data will be printed on one line. |
| PRINT FORMAT (PRTFAT) | 216 | AUTO  
WONLY  
DOWNLD  
DT+TM  
ID+TM  
IDWTTM  
ANIMAL  
3200-A  
3200-B  
32-TMR  
DATCH1  
FDINFO  
WTRCTM  
EIDINF  
EID  
EIDVID | Select alternate & comma (CSV) formats. |
<p>| REMOTE (REMOTE)  | 218       |                                  | If ON indicator communicates with cab control display. |
| ZERO OUTPUT (ZEROUT) | 219 |                                  | Perform the Zero/Balance for the SCOREM #11 weight output and the analog output (4-20mA) |
| SCALE NUMBER (SCL NO) | 231 |                                  | Select scale number for cab control communication |</p>
<table>
<thead>
<tr>
<th>SETTING [display]</th>
<th>D.A.N NO.</th>
<th>OPTIONS [displayed]</th>
<th>DESCRIPTION</th>
</tr>
</thead>
<tbody>
<tr>
<td>REMOTE DISPLAY (RMDISP)</td>
<td>234</td>
<td>BOLD=DEFAULT</td>
<td>Select type of remote display</td>
</tr>
<tr>
<td>ANALOG LOW WEIGHT (LOW WT)</td>
<td>241</td>
<td></td>
<td>Enter analog weight value to equal 4mA or 0 volts</td>
</tr>
<tr>
<td>ANALOG HIGH WEIGHT (HIGH WT)</td>
<td>242</td>
<td></td>
<td>Enter analog weight value to equal 20mA or 5 volts</td>
</tr>
<tr>
<td>ANALOG SELECT (ANAOIT)</td>
<td>243</td>
<td></td>
<td>Select 0-5V, 4-20mA or 0-20mA output</td>
</tr>
</tbody>
</table>

**MENU 3. SCALE CALIBRATION SETTINGS**

<table>
<thead>
<tr>
<th>SETTING</th>
<th>D.A.N NO.</th>
<th>OPTIONS [displayed]</th>
<th>DESCRIPTION</th>
</tr>
</thead>
<tbody>
<tr>
<td>DISPLAY COUNT (COUNT)</td>
<td>301</td>
<td>.01,.02,.05,.1,.2,.5,1,2,5,10,20,50,100</td>
<td>Select display count size of weigh values.</td>
</tr>
<tr>
<td>DISPLAY UNIT (LB-KG)</td>
<td>303</td>
<td>LB/KG</td>
<td>Display pounds -lb or kilograms -kg</td>
</tr>
<tr>
<td>CAPACITY (CAP)</td>
<td>304</td>
<td>40000</td>
<td>Enter MAXIMUM weight measurable on scale.</td>
</tr>
</tbody>
</table>

**MENU 4. PRESET, BATCHING & COUNTER FEATURES**

<table>
<thead>
<tr>
<th>SETTING</th>
<th>D.A.N NO.</th>
<th>OPTIONS [displayed]</th>
<th>DESCRIPTION</th>
</tr>
</thead>
<tbody>
<tr>
<td>PRE ALARM (P NTHD) &amp; {P-ALN)</td>
<td>401</td>
<td>WEIGHT PERCNT</td>
<td>Select weight or percentage method, then enter a value to activate an early warning that indicator is reaching the preset.</td>
</tr>
<tr>
<td>REMOTE INPUT (RM INP)</td>
<td>402</td>
<td>MIXCTR INGRED PRESET</td>
<td>Set function of remote input line on the power cord.</td>
</tr>
<tr>
<td>ALARM OUTPUT (AL OUT)</td>
<td>403</td>
<td>PRESET TR</td>
<td>Select preset or TR to control relay, horn &amp; lamp.</td>
</tr>
<tr>
<td>BUZZER (BUZZER)</td>
<td>404</td>
<td>1-4, ON/OFF</td>
<td>ALARM BUZZER - allows user to turn off alarm horn.</td>
</tr>
<tr>
<td>PRELOAD TARE (PRETAR)</td>
<td>405</td>
<td>ON/OFF</td>
<td>If ON -tare weights can be entered using the numeric keypad</td>
</tr>
<tr>
<td>TIMER/COUNTER (TMRCTR)</td>
<td>421</td>
<td>REV TIME</td>
<td>Select time or mixer revolutions to decrement mix timer/counter.</td>
</tr>
<tr>
<td>SETTING [display]</td>
<td>D.A.N NO.</td>
<td>OPTIONS [displayed]</td>
<td>DESCRIPTION</td>
</tr>
<tr>
<td>------------------</td>
<td>-----------</td>
<td>---------------------</td>
<td>-------------</td>
</tr>
<tr>
<td>DRIVE RATIO (DRATIO)</td>
<td>422</td>
<td>0001.00</td>
<td>Enter the number of input pulses that equal 1 mixer revolution.</td>
</tr>
<tr>
<td>GROSS SET POINT (SETPNT)</td>
<td>423</td>
<td>5000</td>
<td>Set a gross weight in long form that will activate +12VDC Alarm Output on Power cord.</td>
</tr>
<tr>
<td>GROSS SET POINT CHNG (SETCHG)</td>
<td>424</td>
<td>500</td>
<td>Set required weight change to turn off +12VDC Alarm Output.</td>
</tr>
<tr>
<td>GROSS SET POINT DELAY (SETDEL)</td>
<td>425</td>
<td>0-10</td>
<td>Set the time delay that must expire before the +12VDC Alarm Output can Turn On/Off.</td>
</tr>
<tr>
<td>GROSS SET PNT OUTPUT (SETPNT)</td>
<td>426</td>
<td>OVER/UNDER</td>
<td>Select when the +12VDC Alarm Output becomes active.</td>
</tr>
<tr>
<td>SET POINT COUNT (SETCTR)</td>
<td>427</td>
<td>0-9</td>
<td>Counts activation of Code 423</td>
</tr>
<tr>
<td>ENTRY METHOD (EMTHD)</td>
<td>441</td>
<td>1,2,3</td>
<td>Select batch 1-amount/animal 2-percent/load 3-amount/load</td>
</tr>
<tr>
<td>TOLERANCE (TOLER)</td>
<td>442</td>
<td>OFF,.5,1-5,7,10</td>
<td>Select tolerance weight percentage to accept ingredient.</td>
</tr>
<tr>
<td>INGR. ADVANCE DELAY (DELAY)</td>
<td>443</td>
<td>MANUAL, 1-3,5,7,10,20,30,60</td>
<td>Select seconds to delay before advancing to next ingredient.</td>
</tr>
<tr>
<td>INGREDIENT NAMES (INGRNM)</td>
<td>444</td>
<td>ON/OFF</td>
<td>If ON displays ingredient names while batching</td>
</tr>
<tr>
<td>ACCUMULATION (ACCUM)</td>
<td>445</td>
<td>ON/OFF</td>
<td>If ON ingredient weights are accumulated while batching</td>
</tr>
<tr>
<td>INGREDIENT RE-SIZING (INGSIZ)</td>
<td>449</td>
<td>1-ING/OFF</td>
<td>Selects automatic ingredient re-size mode</td>
</tr>
<tr>
<td>PISPLAY SCOOP % (SCOOP%)</td>
<td>452</td>
<td>ON/OFF</td>
<td>If ON displays scoop % to load</td>
</tr>
<tr>
<td>SETTING [display]</td>
<td>D.A.N NO.</td>
<td>OPTIONS [displayed]</td>
<td>BOLD=DEFAULT</td>
</tr>
<tr>
<td>-----------------------------------</td>
<td>----------</td>
<td>---------------------</td>
<td>--------------</td>
</tr>
<tr>
<td>DOUBLE KEY PRESS PREV {DBKEY}</td>
<td>465</td>
<td>ON/OFF</td>
<td></td>
</tr>
<tr>
<td>NUMBER OF INGREDIENTS {NUMING}</td>
<td>473</td>
<td>30,0-99</td>
<td></td>
</tr>
</tbody>
</table>

## CALIBRATION

<table>
<thead>
<tr>
<th>SETTING [display]</th>
<th>D.A.N NO.</th>
<th>OPTIONS [displayed]</th>
<th>BOLD=DEFAULT</th>
<th>DESCRIPTION</th>
</tr>
</thead>
<tbody>
<tr>
<td>DEAD WEIGHT CAL {CRL}</td>
<td>802</td>
<td></td>
<td></td>
<td>Calibration method using weights</td>
</tr>
<tr>
<td>SETUP NUMBER {SETUP}</td>
<td>871</td>
<td></td>
<td></td>
<td>Quick entry method selects weigh method 1-4lbs, 5-8 kg, gain 1-9, display counts 1-9 and capacity *1000</td>
</tr>
<tr>
<td>CALIBRATION NUMBER {CRL}</td>
<td>872</td>
<td></td>
<td></td>
<td>Weight displayed at 0.4mV/V for these load cells</td>
</tr>
</tbody>
</table>
Change Setup And Calibration Numbers

1. Enter 871 press SELECT.

2. Indicator shows SETUP briefly then show a 6 digit number. Enter new number.

3. Press ON

Follow same procedure to change calibration number, except use 872.
## INSTALLATION

### Indicator Mounting

**RAIL MOUNT**

**WING MOUNT**

**WEDGE MOUNT**

<table>
<thead>
<tr>
<th>KEY</th>
<th>PART NUMBER</th>
<th>DESCRIPTION</th>
</tr>
</thead>
<tbody>
<tr>
<td>A</td>
<td>404353</td>
<td>BRACKET-EZ3 PLASTIC RAIL *</td>
</tr>
<tr>
<td>B</td>
<td>403780</td>
<td>SCR-#10 X 5/8 FHSTS BLACK ZP</td>
</tr>
<tr>
<td>C</td>
<td>840459</td>
<td>SUPPORT-HAT BRACKET</td>
</tr>
<tr>
<td>D</td>
<td>405069</td>
<td>U-BOLT 1/4-20 X 3.25 ZP</td>
</tr>
<tr>
<td>E</td>
<td>405084</td>
<td>NUT-1/4-20 TOP LOCKING FLANGE</td>
</tr>
<tr>
<td>F</td>
<td>403770</td>
<td>BRACKET- WING MOUNT *</td>
</tr>
<tr>
<td>G</td>
<td>405124</td>
<td>PACK-WEDGE MOUNT BRACKET WITH U-BOLTS &amp; FLANGE NUTS</td>
</tr>
<tr>
<td>H</td>
<td>405244</td>
<td>EZ3 WEDGE MOUNT</td>
</tr>
</tbody>
</table>

**RAM MOUNT**

<table>
<thead>
<tr>
<th>KEY</th>
<th>PART NUMBER</th>
<th>DESCRIPTION</th>
</tr>
</thead>
<tbody>
<tr>
<td>I</td>
<td>404799</td>
<td>RAM MOUNT FOR EZ III INDICATOR WITH HARDWARE</td>
</tr>
<tr>
<td>J</td>
<td>404230</td>
<td>RAM SUCTION CUP W/TWIST LOCK</td>
</tr>
</tbody>
</table>
**Cable Connection**

**Indicator Connection Diagram**

**Bottom Panel Cable Connections**
Connect Load Cells to J-Box

Connect load cell wires to terminal blocks.

<table>
<thead>
<tr>
<th>Wire Color Key</th>
<th>Color</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>White</td>
<td>Signal +</td>
</tr>
<tr>
<td>2</td>
<td>Green</td>
<td>Signal -</td>
</tr>
<tr>
<td>3</td>
<td>Red</td>
<td>Excitation +</td>
</tr>
<tr>
<td>4</td>
<td>Black</td>
<td>Excitation -</td>
</tr>
<tr>
<td>5</td>
<td>Shield</td>
<td>Shield</td>
</tr>
</tbody>
</table>

Load Cell Direction

BENDING DIRECTION
DIRECTION DE FLEXION
BIEGERICHTUNG

141815

Observe direction of arrow when installing load cell
OPTIONAL EQUIPMENT

Cab Control (Wireless)

- Wireless remote with full key control of indicator on mixer
- Mount remote in easy view of loading
- Improves loading accuracy

Functions
- Communicates with multiple mixers
- Easily call-up recipes without leaving loader

Specification
- Internally mounted 2.4 GHz radios
- Up to 1000 foot range
- 24 channels
- 12 or 24 volt DC system

Rotation Counter Sensor

Use with indicators equipped with rotation counter port. Sensor allows operator to program indicator to count auger or PTO rotations for accurate mix.

Transmitter/Receiver

Transmitter (shown) with factor installed receiver in indicator. Use to zero indicator from remote location. Operating range about 90 feet
Remote Indicators

- RD440 small remote display with 1” high numbers
- RD2400V backlit remote display with 1.7” high numbers
- RD2400V backlit remote display w/transmitter and installed receiver
- RD2400 backlit remote display with 1” high numbers
- RD2400 backlit remote display w/transmitter and installed receiver
- RD4000 remote display
Troubleshooting

FLO\text{W CHART}

\text{START}

\text{YES} \quad \text{Does the indicator come on?} \quad \text{NO}

\text{NO} \quad \text{If your display is unstable, or flashes "xRANGE" disconnect the j-box cord from Indicator. Is display still unstable?}

\text{YES} \quad \text{Poor Connection: Take them apart and clean connections. (Rust or paint should be wire brushed.) Then reconnect and tighten securely.}

\text{Bad Battery: Replace battery (weak battery may test good if tested with no load on battery)}

\text{Bad Power Cord: Make sure red wire is connected to (+) positive side and black wire is connected to (-) negative side. When using a multimeter to check for voltage, measure between pin 1 (pcs) and pin 2 (neg). Meter should read between 10.5 and 14.5 volts DC if using a tractor power cord. Black wire is positive and white wire is negative.}

\text{Bad Indicator: Try another Indicator. (Even a different model or set-up should come on.)}

\text{YES} \quad \text{Did the J-Box have a bad connection or loose wire?} \quad \text{NO}

\text{YES} \quad \text{Fix or replace the J-Box}

\text{NO} \quad \text{Removal the cover from your J-Box}

\text{YES} \quad \text{Is there moisture inside the box?} \quad \text{NO}

\text{YES} \quad \text{Dry out your J-Box (use a hairdryer). Check cable strain reliefs for tightness. Cables have drip loops. Is lid gasket damaged?}

\text{NO} \quad \text{Look for loose connections. Watch your Indicator display while moving the wires and pressing on the circuit board inside the J-Box. You will see if there is a loose connection or bad solder joint.}

\text{YES} \quad \text{Your Indicator is probably not set-up and calibrated correctly. Check the decal on the bottom of Indicator. It shows what type of Load Cells the Indicator was calibrated to. By pressing the on key while the Indicator is already on, you will get the Indicator’s “Set-up” and “Cal” numbers. See if they compare to the set-up and calibration numbers on the Indicator. Contact Dealer for further information.}

\text{NO} \quad \text{Are the readings all positive? If not Load Cell is upside down.}

\text{YES} \quad \text{Check all J-Box and Load Cell cables for cuts or pinched/fat spots.}

\text{NO} \quad \text{Your Indicator is probably defective. Try another Indicator to verify. Note: Be aware of electrical interference that might affect Indicator, such as mobile phones, CB radios, radio towers, electrical motors, etc. Make sure Load Cell cables are not attached to hydraulic lines or reservoir.}

\text{YES} \quad \text{Put your weight on each load cell. Does the indicator respond to your weight?}

\text{NO} \quad \text{Does the scale weigh you approx. the same over all Load Cells? (Weight will not be accurate)}

\text{YES} \quad \text{Remove the cover from your J-Box}

\text{NO} \quad \text{Does the reading on the Indicator stable?}

\text{YES} \quad \text{Is the indicator come on?}

\text{NO} \quad \text{Check all J - Box and Load Cell cables for cuts or pinched/flat spots.}

\text{YES} \quad \text{Your Indicator is probably defective. Try another Indicator to verify. Note: Be aware of electrical interference that might affect Indicator, such as mobile phones, CB radios, radio towers, electrical motors, etc. Make sure Load Cell cables are not attached to hydraulic lines or reservoir.}
Troubleshooting

FLOW CHART

1. Disconnect all the Load Cell wires from the terminal blocks inside the J-Box (leave the Indicator on while connecting and disconnecting the wires, it will not damage Load Cells or Indicator if wires are shorted during this step). Is reading on Indicator stable?

   YES
   
   2. Zero balance the Indicator. (Press "NET/GROSS" then "ZERO"). Indicator should display "0".

   Note: Hook up the Load Cells to the J-Box one at a time (only one Load Cell connected at a time). This will get a reading for each Load Cell. While performing this test, watch for any other symptoms such as erratic/unstable display, Indicator flashing "±RANGE", negative reading, etc. If the Indicator reading should ever appear abnormal with any Load Cell connected then it is probably bad.

   NO
   
   Replace J-Box (be aware of electrical interference that might affect your scale such as: mobile phones, CB radios, radio towers, electric motors, etc.).

3. Connect one Load Cell back into one of the terminals in the J-Box. (The reading you get for each Load Cell is dependent on the size and type of each Load Cell and how much weight is over each Load Cell. In general, the number should be positive and stable.)

   Note: If the scale responded to your weight, that’s verification on the J-Box is OK. If the scale did not respond, either that Load Cell is bad or the J-Box is bad. Try the other Load Cells. If the Indicator still shows no response, the J-Box is bad. (Replace J-Box)

4. Record the Indicator reading with the Load Cell connected.

5. Stand or hang your weight over the connected Load Cell. Record how much the weight increased with your weight over the Load Cell. (A scale with only one Load Cell will weigh heavy.)

6. Disconnect the first Load Cell and reconnect a second one. Record the Indicator reading. Stand or hang your weight over the connected Load Cell. Record how much the weight increased.

7. Repeat step 6 for the remaining Load Cells. Remember to record your readings.

8. Bad Load Cells will have a reading that is either unstable, makes the indicator flash "±RANGE" or is more than three times greater or less than the average of the others. Also the readings of your weight over each Load Cell should be similar. (Probably 4 times your actual weight). Any differences could be an indication of a bad Load Cell or a structural problem.

Do not expect the Load Cells to give the same reading. It is common for Load Cells to have readings that vary by hundreds, even thousands. Especially when one is carrying more weight.
LEGAL-FOR-TRADE CERTIFICATION

United States
In the US, the Legal-for-Trade certification is regulated by the National Type Evaluation Program (NTEP). The NTEP certificate number is 08-40.

Canada
Measurement Canada is the Canadian agency that regulates Legal-for-Trade scales. The approval number from Measurement Canada is AM-5678C.

Legal for Trade Features
Digi-Star Legal-for-Trade indicators are modified to comply with US and Canadian regulatory agencies. Some of these modifications are:

Load Cell Disconnect Sensor
Indicator displays \(+RANGE\) or \(-RANGE\) without flashing load when cells are disconnected.

Hold Function
The Hold function has been disabled. (EZ3400, EZ3600 and EZ4600)

Printing
Printing weight values is not allowed while in motion, during self-calibration, or if any error conditions such as \(+RANGE\), \(OVRCAP\) or \(OVRFLW\), are active.

Lock-On Weigh Method
Lock on weigh method (for animal weighing) cannot be enabled.

Tare
Cannot tare a negative weight.

Labeling
The capacity and division information is shown on the front of the indicator.
Sealed to Prevent Un-authorized Modifications

The scale indicator is sealed by a Category 1 Audit Trail. To access the audit trail in the normal weighing mode, press and hold the “ON” key. This will display the current parameter and calibration event count values. Pressing any key will return the indicator to the weighing mode. The audit trail system is always active and cannot be altered. Audit trails are stored in flash memory and do not require batteries to maintain the audit trail values.

Changing any of the following parameters will change the Calibration event count value or parameter audit event count value. This will void your Legal-for-Trade certification unless performed by properly trained personnel.

- Setup
- Calibration
- Capacity
- Display Count
- Display Units
- Weigh Method
- Motion
- WMA1-1 through WMA2-3
- LFT Option Setting

On Legal-For-Trade Units Only

Perform the following procedure on an empty and clean machine before the unit is to be “site-certified”.

- Install the LFT indicator on the machine and connect all load cells.
- Zero/balance the scale with no load on the machine.
- Enter “871” and press \( \text{SELECT} \) Press \( \text{ON} \) to accept.