HELLO
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TECHNICAL SPECIFICATIONS

SIZE
10.25" long x 8.0" high x 2.7" wide
(260mm x 190mm x 70mm)

WEIGHT
2.7 lbs (1.2 Kg)

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

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

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

MOTION DETECTION
Selectable, On/Off

ZERO ACCURACY
(0.005%/°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
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 indicator.
2. **HOLD** – holds displayed weight press to release.
3. **ON/OFF** – turns indicator on.
4. **ON/OFF** – turns indicator off.
5. **TARE** – temporary zero (Net Mode).
6. **PRINT** – records to memory or prints displayed weight.
7. **Display Window** – Displays current actions.
8. **NET/GROSS** – toggles between Net and Gross weights.
9. **FUNCTION** – performs task displayed by select.
10. **SELECT** – displays additional tasks.

*Note: See page 17-19 for installation instructions.*
11 Serial/Printer Port - optional, to communicate with computer and other digital input/output devices.

12 Remote Port – optional, for remote display.

13 Load Cell Port – for J-Box cord.

14 Power Port – for power cord.

15 Serial Number Plate – Serial Number of indicator.
OPERATION

Turn on Indicator

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

Zero Balance Indicator

1. Press and hold \( \text{ZERO} \) for 3 seconds to zero balance indicator.
2. Flashing arrow points to gross next to the display window, indicator ready to weigh.

Tare and Net/Gross

Tare is a temporary zero (Net Weight) to display total weight (Gross Weight)

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

1. Weight displayed, press \( \text{TARE} \) sets zero weight.
2. Pressing \( \text{TARE} \) displays zero weight and flashing arrow on side of display points to NET.

3. Add more weight.

4. To know total of original weight of 4000 pounds plus added 300 pounds, press \( \text{GROSS} \) to show 4300 pounds, flashing arrow points GROSS.

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

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

1. Press **PRINT**. Indicator sends data to printer or PC.

![Image of Digi-Star EZ2500V with 4300 LB GR on the display]

Weight

Gross (GR) or Net (NET)

Timer Option

Stopwatch for mixing time.

1. Repeatedly press **SELECT** until **TIMER** is displayed.

![Image of Digi-Star EZ2500V with TIMER on the display]

1. Press **FUNCTION** to displays hours, minutes and seconds (hh:mm:ss).

![Image of Digi-Star EZ2500V with 00:00:00 on the display]
Using the M+, RM and CM Options
Use these options to weigh truck or wagon one axle at a time.

1. Add weight on scale. Example: 500 pounds.
2. Repeatedly press \( \text{SELECT} \) until \( \text{M+} \) is displayed.
3. Press \( \text{SELECT} \) \( 500 \) pounds and \( \text{RM} \) briefly displayed 500 pounds added to indicator memory and indicator in gross weight mode.

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

6. Press \( \text{SELECT} \) indicator add 1000 pounds to 500 pounds in memory and \( RM \) flashes.

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

8. Press \( \text{SELECT} \).

9. Total of both weights, 1500 pounds, display, indicator switches to gross weight mode.
Printing Weight from Memory

Indicator must have optional printer port for printing.

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

2. Press \( \text{function} \) to show weight in memory. Example: 1500 pounds.

3. Press \( \text{print} \) while weight displayed.

Weight Averaging

1. Repeatedly press \( \Delta \) until \( RM \) is displayed.
2. Press \( \text{FUNCTION} \) twice within three seconds performs 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 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 is displayed.

Sample output format shown below:

```
Counts  Average Weight
  2CT    750LB AV
```
OTHER FUNCTIONS

Hold
Hold mode prevents displayed weight from changing while moving.

1. Press \( \text{\textcircled{II}} \) \( \text{\textcircled{HOLD}} \).
2. Press \( \text{\textcircled{II}} \) indicator normal.

If weight added in hold mode, press \( \text{\textcircled{ON/OFF}} \) to cancel hold.

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

Using Dimmer Option

1. Repeatedly press \( \text{\textcircled{\Delta}} \) until \( \text{DIMMER} \) is displayed.
2. Press \( \text{\textcircled{4}} \) \( \text{\textcircled{FUNCTION}} \) dims backlight.

Function and Select keys

1. Repeatedly press \( \text{\textcircled{\Delta}} \) gives following options:
   - **Timer**: Stopwatch for mixing time
   - **M+**: Adding weight to weight memory
   - **RM**: Recall weight memory
   - **CM**: Clear weight memory
   - **Dimmer**: Dimming backlight
   - **Menu**: View menus 1, 2, 3, 4 and calibrate. See page 13.
   - **Setup**: Change setup and calibration numbers. See page 16.
   - **Help**: Explains operation of select and function key

2. Desired option displayed, press \( \text{\textcircled{4}} \) \( \text{\textcircled{FUNCTION}} \) to activate.
Menus and Calibration

Options changed by user. To display menus 1, 2, 3, 4 and calibrate:

1. Repeatedly press \( \text{SELECT} \) until \textit{MENU} is displayed.
2. Press \( \text{FUNCTION} \).
3. Repeatedly press \( \text{SELECT} \) selects Menu 1, 2, 3, 4 or calibrate.
4. Press \( \text{ON/OFF} \) displays setting name and allows value changes.
5. Press \( \text{NET/GROSS} \) selects options for each setting/display.
6. Press \( \text{ON/OFF} \) saves setting and next option for menu displays.

<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>LANGUAGE (LANGAG)</td>
<td>101</td>
<td>\textbf{English} Dutch French German Italian Portuguese Spanish Danish Hungarian Spanish</td>
<td>Select language to be displayed.</td>
</tr>
<tr>
<td>DISPLAY RATE (O RATE)</td>
<td>102</td>
<td>1, 2, 3, 4</td>
<td>Update display times per second.</td>
</tr>
<tr>
<td>ZERO TRACK (ZTRACK)</td>
<td>104</td>
<td>ON/OFF</td>
<td>If ON - zero track adjust balance for buildup of snow &amp; mud.</td>
</tr>
<tr>
<td>WEIGH METHOD (W MTHD)</td>
<td>105</td>
<td>1=General, 2=Fast, 3=Slow, 4=Lock-On</td>
<td>Select weigh method</td>
</tr>
<tr>
<td>SCALE ID SETUP (SCALID)</td>
<td>108</td>
<td>NEW EZ</td>
<td>Identity of scale location (truck id or Mixer number).</td>
</tr>
<tr>
<td>1 PRESS ZERO (1 ZERO)</td>
<td>115</td>
<td>ON/OFF</td>
<td>If ON - press and hold Zero key to Zero/Balance scale.</td>
</tr>
</tbody>
</table>
## Menus and Calibration

<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>TARE AUTO PRINT</strong> <em>(TAREAP)</em></td>
<td>211</td>
<td>ON/OFF</td>
<td>If ON - tare auto-prints displayed weight.</td>
</tr>
<tr>
<td><strong>ONE LINE PRINT</strong> <em>(IL PRT)</em></td>
<td>212</td>
<td>ON/OFF</td>
<td>If ON - indicator data prints on one line.</td>
</tr>
<tr>
<td><strong>AUTO PRINT</strong> <em>(APRINT)</em></td>
<td>214</td>
<td>ON/OFF</td>
<td>If ON - pressing keys auto-prints weight values.</td>
</tr>
<tr>
<td><strong>PRINT FORMAT</strong> <em>(PRTF/N)</em></td>
<td>216</td>
<td>AUTO, WTONLY, DOWNLD, DT+TM, ID+TM, IDWTTM, ANIMAL, 3200-A, 3200-B, 32-TMR, DATCH1, FDINFO, WTRCTM, EIDINF, EID, EIDVID</td>
<td>Select alternate &amp; comma (CSV) formats.</td>
</tr>
<tr>
<td><strong>REMOTE</strong> <em>(REMOTE)</em></td>
<td>218</td>
<td>ON/OFF</td>
<td>If ON indicator communicates with cab control display</td>
</tr>
<tr>
<td><strong>ZERO OUTPUT</strong> <em>(ZEROOUT)</em></td>
<td>219</td>
<td></td>
<td>Perform Zero/Balance for SCOREM #11 weight output and analog output (4-20mA)</td>
</tr>
<tr>
<td><strong>SCALE NUMBER</strong> <em>(SCL NO)</em></td>
<td>231</td>
<td></td>
<td>Select scale number for cab control communication</td>
</tr>
<tr>
<td><strong>REMOTE DISPLAY</strong> <em>(RMDISP)</em></td>
<td>234</td>
<td>EZ3MUX, EZ2</td>
<td>Select type of remote display</td>
</tr>
<tr>
<td><strong>ANALOG LOW WEIGHT</strong> <em>(LOW WT)</em></td>
<td>241</td>
<td></td>
<td>Enter analog weight value to equal 4mA or 0 volts</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>ANALOG HIGH WEIGHT [HIGHWT]</td>
<td>242</td>
<td></td>
<td>Enter analog weight value to equal 20mA or 5 volts</td>
</tr>
<tr>
<td>ANALOG SELECT [ANAOUT]</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 [display]</th>
<th>D.A.N NO.</th>
<th>OPTIONS [displayed]</th>
<th>DESCRIPTION</th>
</tr>
</thead>
<tbody>
<tr>
<td>DISPLAY UNIT [LB-KG]</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>CAPACITY [CAP]</td>
<td>303</td>
<td>LB / KG</td>
<td>Display pounds -lb or kilograms -kg</td>
</tr>
<tr>
<td>WM1 ADJUST 1 [WM1-I]</td>
<td>304</td>
<td>40000</td>
<td>Enter MAXIMUM weight measurable on scale.</td>
</tr>
</tbody>
</table>

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

Does not apply to 2500 indicator

<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>DEAD WEIGHT CAL [CAL]</td>
<td>802</td>
<td></td>
<td>Calibration method using weights</td>
</tr>
<tr>
<td>SETUP NUMBER [SETUP]</td>
<td>871</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 [CAL]</td>
<td>872</td>
<td></td>
<td>Weight displayed at 0.4mV/V for these load cells</td>
</tr>
</tbody>
</table>
Change Set up and Calibration Numbers

1. Repeatedly press \( \Delta \) until \textit{SETUP} is displayed.

2. Press \( \text{FUNCTION} \).

3. Six digit setup number displayed. Change number, press \( \text{FUNCTION} \) moves flashing position left. Press \( \Delta \) changes number.

4. Press \( \text{ON} \) stores setup number. Indicator displays \textit{CAL}, change number by pressing \( \Delta \) and \( \text{FUNCTION} \).

5. Press \( \text{ON} \) to exit.
## INSTALLATION

### Indicator Mounting

<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

Scale Indicator

Remote Indicator (Optional)

Power Cord

Pin To 12VDC Power Supply
1 Red +Terminal
2 Black -Terminal
3 Orange Alarm Out
4 Blue Remote Input

See J-Box Connections

Indicator Connection Diagram

J-Box Connection

Digital Input/Output Connection (Optional)

Remote Indicator Connection (Optional)

Power Cord Connection

Bottom Panel Cable Connections
Connect Load Cells to J-Box

Connect load cell wires to terminal blocks. See Wire Color Key.

Load Cell Direction

Observe direction of arrow when installing load cell.
OPTIONAL EQUIPMENT

Remote Indicators

- RD440 small remote display
- RD2500V backlit remote display with 1.7” high numbers
- RD2500V backlit remote display w/transmitter and installed receiver
- RD4000 remote display
TROUBLESHOOTING

FLOW CHART

START

YES

Does the indicator come on?

NO

Is the reading on the Indicator stable?

NO

If your display is unstable, or flashes "±RANGE" disconnect the j-box cord from Indicator. Is display still unstable?

YES

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.

NO

Are the readings all positive? If not Load Cell is upside down.

YES

Put your weight on each load cell. Does the indicator respond to your weight?

NO

Check all J-Box and Load Cell cables for cuts or pinched/flat spots.

YES

Remove the cover from your J-Box

NO

Is there moisture inside the box?

YES

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

NO

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.

YES

Did the J-Box have a bad connection or loose wire?

NO

Fix or replace the J-Box

See next Page
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.)

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.)

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)

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.