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**TECHNICAL SPECIFICATIONS**

**SIZE**
7.33" long x 5.25" high x 3.38" wide (186mm x 133mm x 85mm)

**WEIGHT**
2 lbs (.91 Kg)

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

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

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

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

**“AUTORANGE”**
(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

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

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

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

**ZERO TRACKING**
Selective, On/Off

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

**MOTION DETECTION**
Selective, On/Off

**ZERO ACCURACY**
(.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)

**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

Note: See page 20 for installation instructions.

1. **ZERO** – press and hold for 3 seconds to zero balance indicator.

2. **TARE** – temporary zero (Net Mode) (Standard EZ400).

   Optional: (EZ400 with serial port)
   - temporary zero (Net Mode)
   - printer records to memory or prints displayed weight

3. **NET/GROSS** – toggles between Net and Gross weights.

4. **ON/OFF** – turns indicator on/off. Press while on runs self test.

5. **Display Window** – Displays current actions.
6. **Power Cord Connection** – +12 VDC.

7. **Load Cell Connection** – Connect cable from the J-Box.

8. **Serial/J905** – Optional, to communicate with computer and other digital Input/Output devices.

9. **Remote Port** – Optional, for remote display

<table>
<thead>
<tr>
<th>Pin</th>
<th>J905 Connector Signals</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>+5VDC</td>
</tr>
<tr>
<td>2</td>
<td>Com #1 Out (Tx) - Computer</td>
</tr>
<tr>
<td>3</td>
<td>Com #1 In (Rx) - DDL &amp; Computer</td>
</tr>
<tr>
<td>4</td>
<td>Com #2 Out (Tx) - Printer</td>
</tr>
<tr>
<td>5</td>
<td>+12 VDC</td>
</tr>
<tr>
<td>6</td>
<td>Gnd – Available for any Com device</td>
</tr>
<tr>
<td>7</td>
<td>Com #2 In (Rx)</td>
</tr>
<tr>
<td>8</td>
<td>Ground</td>
</tr>
</tbody>
</table>
OPERATION

Turn on Indicator

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

Zero Balance Indicator

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

1. Weight displayed, press the Tare button to set zero weight.

2. Pressing the Tare button 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 \( \text{NET/GROSS} \) to show 4300 pounds, flashing arrow points GROSS.

5. Press \( \text{NET/GROSS} \) 300 pounds displayed flashing arrow points NET.
Store Data to DDL
(Serial Option Only)

1. Connect the DDL to the SERIAL port on the bottom panel. See page 4.
2. Press and hold \[ \text{PRINT} \] to save print data to the DDL.

Printing Gross Weights

\textit{Note:} Optional serial port must be installed for printing.

1. Press and hold \[ \text{PRINT} \] 3 seconds to send displayed weight to serial port. Each time this command is executed the value displayed is added to the “PRTACC” which is the accumulated weight. Weight is accumulated until cleared.
Print Formats

Three print formats are available to output \textit{PRTACC} value and \textit{SCALE ID} to DDL or printer.

\begin{itemize}
  \item \textbf{PRTAC1:} \textit{FIELD ID, \texttt{4856}, GR, 274575, PA, 05FE08, 1:44P}
  \item \textbf{PRTAC2:} \textit{FIELD ID, 05FE08, 1:44P}
    \begin{itemize}
      \item \texttt{4856, GR, 274575, PA}
    \end{itemize}
  \end{itemize}

  Includes following information:
  \begin{itemize}
    \item Scale ID (\textit{SCALID})
    \item Weight
    \item Weight Tag (Net, Gross, Load/Unload)
    \item Accumulated Weight
    \item Print Accumulator Tag
    \item Date and Time
  \end{itemize}

\begin{itemize}
  \item \textbf{PRTAC3:} \textit{FIELD3, \texttt{5977}, LB, GR, 309719, PA, 05FE08, 4:42P}
  \end{itemize}

  Includes above and adds “Unit of Measure” and “Lock-On Status” (for animal weighing).

See “Setting Options” (page 13) to change print format (\textit{PRTFMT}).
Changing Indicator ID Name & Clearing Accumulated Weight

1. Press and hold \( \text{NET}/\text{GROSS} \) 3 seconds. \( \text{SCALID} \) is displayed followed by current ID name.

2. Use \( \text{ZERO} \) and \( \text{SCALE} \) to enter new Scale ID.

3. Press \( \text{ON/OFF} \) to view accumulated weight.

4. Press \( \text{ON/OFF} \) to resume weighing.

Or

5. Press \( \text{ZERO} \) to clear accumulated weight total.

Turning Off the Indicator

1. Press \( \text{ON/OFF} \) until “BYE” is displayed.
WEIGH METHODS

Select weigh method #1 for general weighing.

**General Weigh Method #1**
All purpose weigh method for stable loads.

**Slow Weigh Method #2**
Higher accuracy for weighing stable loads.

**Fast Weigh Method #3**
Determines new weight quickly when weighing stable loads.

**Lock-on Weigh Method #4**
Weighing active animals and displays stable accurate weight. Set to “OFF” for weighing stable weights. Lock-On sensitivity can be adjusted using “LOCKON” menu.

Once weight displayed, scale “Locks-On” to weight. Weight does not change, even if motion never stops. Small ‘L’ appears on left side of the display indicating weight “Locked-On.” Animal’s weight must be greater than 2.5% of scales “capacity” weight before system “Lock-On.”

Break lock, 50% of displayed weight added or removed from scale. “Locked-On” weight can be “rechecked” by pressing [0]. This breaks “lock” and scale recalculates weight.
WEIGHING ERRORS

Over-Capacity Limit \((\text{OVRCAP})\)

The display shows the message "OVRCAP" if the weight on the scale system exceeds the capacity limit. The capacity value is entered in SETUP to warn of overloading the scale system.

Over Range \((+\text{RANGE})\)

The display shows the message "+RANGE" if the weight on the scale system exceeds the maximum weight measurable by the scale system. The over range value is always the system’s maximum A/D counts multiplied by the scaling factor. The actual weight at which over range occurs depends on the calibration, zero, and display count size.

Under Range \((-\text{RANGE})\)

The display shows the message "-RANGE" if the weight on the scale system is less than the minimum weight measurable by the scale system. The under range value is always the system’s minimum A/D counts multiplied by the scaling factor. The actual weight at which under range occurs will depend on the; calibration, zero, and display count size.

Low Battery Indication \((\text{LO BAT})\)

If the supply voltage drops below the (10.5 Volts), the message "RECHARGE BATTERY - TURNING OFF" and "LO BAT" will periodically show on the display to alert the operator of the low battery condition.

RUN SELF TEST

1. Press \(\text{NET}/\text{GROSS}\) then \(\text{ON/OFF}\) during normal system operation to start self-test.
MENUS AND CALIBRATION

The Indicator has optional settings that allow flexibility in the way that the scale is used and data is collected.

Changing Options Using Long Form Setup

Enter Long Form Setup by holding \( \text{NET/GROSS} \) and \( \text{ON/OFF} \) for three seconds.

Press \( \text{ON/OFF} \) to select menu 1, 2, 3 or 4.

Press \( \text{ON/OFF} \) to advance to desired parameter.

Press \( \text{ON/OFF} \) to select proper setting.

Press \( \text{ON/OFF} \) to save setting and advance to next parameter.

Hold \( \text{ON/OFF} \) and press \( \text{ON/OFF} \) to return to indicator operation.

Default settings from the factory vary with options and due to customer preferences.

<table>
<thead>
<tr>
<th>SETTING [display]</th>
<th>OPTIONS [displayed] BOLD=DEFAULT</th>
<th>DESCRIPTION</th>
</tr>
</thead>
<tbody>
<tr>
<td>MENU 1. BASIC FEATURES IN MOST INDICATORS</td>
<td></td>
<td></td>
</tr>
<tr>
<td>LANGUAGE ( \text{LANGAG} )</td>
<td>English ( \text{(ENGLSH)} ) Dutch ( \text{(NEDERL)} ) French ( \text{(FRANCS)} ) German ( \text{(DEUTSH)} ) Italian ( \text{(ITAL)} ) Portuguese ( \text{(PORT)} ) Spanish ( \text{(ESPAN)} ) Danish ( \text{(DANSK)} ) Hungarian ( \text{(MAGYAR)} ) Spanish ( \text{(VESTA)} )</td>
<td>Select language to be displayed.</td>
</tr>
<tr>
<td>DISPLAY RATE ( \text{Q RATE} )</td>
<td>1, 2, 3, 4</td>
<td>Update display times per second.</td>
</tr>
<tr>
<td>ZERO TRACK ( \text{ZTRACK} )</td>
<td>ON/OFF</td>
<td>If ON-zero track adjust balance for buildup of snow &amp; mud.</td>
</tr>
<tr>
<td>WEIGH METHOD ( \text{W MTHD} )</td>
<td>1=GENERAL, 2=FAST, 3=SLOW, 4=LOCK-ON</td>
<td>Select weigh method</td>
</tr>
<tr>
<td>SETTING</td>
<td>OPTIONS [displayed]</td>
<td>BOLD=DEFAULT</td>
</tr>
<tr>
<td>--------------</td>
<td>---------------------</td>
<td>--------------</td>
</tr>
<tr>
<td>LOCK-ON</td>
<td>I-7, 8, 9</td>
<td></td>
</tr>
<tr>
<td>SCALE ID SETUP</td>
<td>NEW EZ</td>
<td></td>
</tr>
<tr>
<td>LOCK-N-HOLD</td>
<td>ON/OFF</td>
<td></td>
</tr>
<tr>
<td>AUTO OFF</td>
<td>15, 30, 45, 60, OFF</td>
<td></td>
</tr>
<tr>
<td>LOCK-ON-STORE</td>
<td></td>
<td></td>
</tr>
<tr>
<td>LOCK-ON-STORE SEND</td>
<td></td>
<td></td>
</tr>
<tr>
<td>1 PRESS ZERO</td>
<td>ON/OFF</td>
<td></td>
</tr>
</tbody>
</table>

**MENU 2. CLOCK, PRINTER, COMMUNICATIONS & ESTIMATED WEIGHT FEATURES**

<table>
<thead>
<tr>
<th>TIME FORMAT</th>
<th>24 HR</th>
<th>AN/PM</th>
<th>Select time format -AM/PM or 24 hour</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 TIME</td>
<td>XX:XX:XX</td>
<td></td>
<td>Select key changes time, function key chooses hh:mm:ss.</td>
</tr>
<tr>
<td>DATE FORMAT</td>
<td>1-mm-dd</td>
<td>2-mm/dd/yy</td>
<td>3-mm/dd/yyyy</td>
</tr>
<tr>
<td>DATE</td>
<td>Enter XXXXXX</td>
<td></td>
<td>Select key changes date-function key chooses mm/dd/yy.</td>
</tr>
<tr>
<td>TARE AUTO PRINT</td>
<td>ON/OFF</td>
<td></td>
<td>If ON -tare auto-prints displayed weight.</td>
</tr>
<tr>
<td>ONE LINE PRINT</td>
<td>ON/OFF</td>
<td></td>
<td>If ON -indicator data prints on one line.</td>
</tr>
<tr>
<td>SETTING [display]</td>
<td>OPTIONS [displayed]</td>
<td>DESCRIPTION</td>
<td></td>
</tr>
<tr>
<td>------------------</td>
<td>--------------------</td>
<td>-------------</td>
<td></td>
</tr>
<tr>
<td>(SCOREN)</td>
<td>1,2,3,4,5,6.</td>
<td>Select scoreboard output mode 1-1/sec 2-2/sec 3-3/sec 4-every conversion 5-display rate 6-display weight change 7-send status 1/sec, 8-send status 1/5sec, 9-Reserved &amp; 10-send EID 1/2 sec.</td>
<td></td>
</tr>
<tr>
<td>AUTO PRINT (APRINT)</td>
<td>ON/OFF</td>
<td>If ON -pressing keys auto-prints weight values.</td>
<td></td>
</tr>
<tr>
<td>(COM IN)</td>
<td>DOWNLD, EZ CMD, EZ2CMD</td>
<td>Com port interface selections DOWNLD for Data Down Loader, EZ CMD = Original EZ Commands, EZ2CMD = EZII Escape Commands.</td>
<td></td>
</tr>
<tr>
<td>PRINT FORMAT (PRTFMT)</td>
<td>AUTO, WTONLY, DOWNLD, DT+TM, ID+TM, IDWTN, ANIMAL, 3200-A, 3200-B, 32-TMR</td>
<td>Select alternate &amp; comma (CSV) formats.</td>
<td></td>
</tr>
<tr>
<td>(ZEROUT)</td>
<td></td>
<td>Choose the number of seconds the printer will delay before advancing to the next print line.</td>
<td></td>
</tr>
<tr>
<td>(CLI DLY)</td>
<td>OFF, I0, .25, .50, .75, 1-5</td>
<td>Choose the number of seconds the printer will delay before advancing to the next print line.</td>
<td></td>
</tr>
<tr>
<td>(C2 DLY)</td>
<td>OFF, I0, .25, .50, .75, 1-5</td>
<td>Choose the number of seconds the printer will delay before advancing to the next print line.</td>
<td></td>
</tr>
<tr>
<td>(PRTACC)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>(TARPRT)</td>
<td>TARE</td>
<td>Allows operator to adjust Gross weight of scale by changing the zero/balance.</td>
<td></td>
</tr>
<tr>
<td>ESTIMATED WEIGHT (ESTWT)</td>
<td>0,1,2,3,4,5,6,7,8,9</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**MENU 3. SCALE CALIBRATION SETTINGS**

<p>| DISPLAY COUNT (COUNT) | .01,.02,.05,.1,.2,.5,1,2,5,10,20, 50,100 | Count set too small, readings unstable and indicator not accurate |
| AUTO-RANGE (RANGE)    | ON/OFF            | Scale increases display count size for weights over 300 again at 600 lbs/kgs. |</p>
<table>
<thead>
<tr>
<th>SETTING [display]</th>
<th>OPTIONS [displayed]</th>
<th>BOLD=DEFAULT</th>
<th>DESCRIPTION</th>
</tr>
</thead>
<tbody>
<tr>
<td>DISPLAY UNIT</td>
<td>.01,.02,.05,.1,.2,.5,1,2,5,10,20,50,100</td>
<td>.01,.02,.05,.1,.2,.5,1,2,5,10,20,50,100</td>
<td>Select display count size of weight values.</td>
</tr>
<tr>
<td>CAPACITY</td>
<td>LB/KG</td>
<td>LB/KG</td>
<td>Display pounds -lb or kilograms -kg</td>
</tr>
<tr>
<td>WM1 ADJUST 1</td>
<td></td>
<td></td>
<td>Enter MAXIMUM weight measurable on scale.</td>
</tr>
<tr>
<td>WM1 ADJUST 2</td>
<td></td>
<td></td>
<td>0=OFF Use values less than WMA1-1 for quick weight response.</td>
</tr>
<tr>
<td>WM1 ADJUST 3</td>
<td></td>
<td></td>
<td>Enter weight to activate quick weight response.</td>
</tr>
<tr>
<td>WM2 ADJUST 1</td>
<td></td>
<td></td>
<td>Increase number to smooth weighing</td>
</tr>
<tr>
<td>WM2 ADJUST 2</td>
<td></td>
<td></td>
<td>0=OFF Use values less than WMA2-1 for quick weight response.</td>
</tr>
<tr>
<td>WM2 ADJUST 3</td>
<td></td>
<td></td>
<td>Enter weight activate quick weight response.</td>
</tr>
</tbody>
</table>

**MENU 4 – NOT USED**
SHORT FORM CALIBRATION

The Short Form Setup & Calibration procedure allows you to change “SETUP” and “CAL” numbers of indicator. Do not attempt to calibrate scale if indicator is not reading stable weights. Calibration procedure will not fix instability, inconsistencies, or flashing "RANGE" messages.

Obtain Current Set-up and Calibration Number

Write down current SETUP and CAL numbers of your EZ 400 indicator. These numbers are displayed during Self Test.

To run self test with indicator ON:
1. Press \( \text{NET} \) \( \text{GROSS} \) then \( \text{ON/OFF} \) to start Self Test.  
2. Press \( \text{ON/OFF} \) to “pause” the Self-Test while numbers are displayed.  
3. Press \( \text{ON/OFF} \) again to allow self-test to complete normally.

SETUP NUMBER

Following is a list of functions that are controlled by the “SETUP” number:

- Weigh Method (\( W \text{MTHD} \))
- Display Units (\( LB-KG \))
- Display Counts (\( \text{COUNT} \))

CAL # __ __ ___ ___ ___ ___
Calibrating Scale For Maximum Accuracy

Note: To accurately calibrate scale, you need a large amount of weight that has a known value. For best results you should have at least as much weight as largest load you plan to weigh.

Determining New Setup and Calibration Numbers

1. Press \( \text{Zero-Balance} \) to Zero-Balance. See page 5.

2. Put KNOWN WEIGHT on scale platform and write down WEIGHT DISPLAY.

Perform following equation to find ACCURATE CAL #.

\[
\text{Known Weight} \times \text{Displayed Weight} = \text{Existing Calibration Number} = \text{Accurate Calibration Number}
\]

The setup number does not change.
Enter A New Setup And Calibration Number

1. Press and hold \(\text{\textbullet} \text{\textbullet} \text{\textbullet} \text{\textbullet} \text{\textbullet} \text{\textbullet} \text{\textbullet} \text{\textbullet} \) then press \(\text{\textbullet} \text{\textbullet} \text{\textbullet} \text{\textbullet} \text{\textbullet} \text{\textbullet} \text{\textbullet} \text{\textbullet} \) for 3 seconds to enter short form calibration.

2. The display will flash “SETUP” and then display the 6-digit setup number with the right digit flashing.

3. Press \(\text{\textbullet} \text{\textbullet} \text{\textbullet} \text{\textbullet} \text{\textbullet} \text{\textbullet} \text{\textbullet} \text{\textbullet} \text{\textbullet} \text{\textbullet} \text{\textbullet} \text{\textbullet} \text{\textbullet} \) several times to increment digit to its proper value.

4. Press \(\text{\textbullet} \text{\textbullet} \text{\textbullet} \text{\textbullet} \text{\textbullet} \text{\textbullet} \text{\textbullet} \text{\textbullet} \text{\textbullet} \text{\textbullet} \text{\textbullet} \text{\textbullet} \text{\textbullet} \) to advance digit left.

Repeat steps 3 and 4 for each digit as required.

5. Press \(\text{\textbullet} \text{\textbullet} \text{\textbullet} \text{\textbullet} \text{\textbullet} \text{\textbullet} \text{\textbullet} \text{\textbullet} \text{\textbullet} \text{\textbullet} \text{\textbullet} \text{\textbullet} \text{\textbullet} \) to enter new setup number and display calibration number.

6. Repeat steps 3 and 4 to modify the calibration number.

7. Press \(\text{\textbullet} \text{\textbullet} \text{\textbullet} \text{\textbullet} \text{\textbullet} \text{\textbullet} \text{\textbullet} \text{\textbullet} \text{\textbullet} \text{\textbullet} \text{\textbullet} \text{\textbullet} \text{\textbullet} \) to enter new calibration number and display will go back to normal.

8. Verify the accuracy of scale.
### INSTALLATION

#### Indicator Mounting

<table>
<thead>
<tr>
<th>Key</th>
<th>Part Number</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>A</td>
<td>403769</td>
<td>Bracket – STR TOP MOUNT</td>
</tr>
<tr>
<td>B</td>
<td>403980</td>
<td>Bracket – ROBO MOUNTING</td>
</tr>
<tr>
<td>C</td>
<td>403770</td>
<td>Bracket – WING MOUNT</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>403771</td>
<td>MODIFIED PLASTIC WEDGE MOUNT</td>
</tr>
<tr>
<td>F</td>
<td>405124</td>
<td>WEDGE MOUNT BRACKET, INCLUDES U-BOLTS &amp; NUTS</td>
</tr>
<tr>
<td>G</td>
<td>405084</td>
<td>NUT, 1/4-20 TOP LOCKING FLANGE</td>
</tr>
</tbody>
</table>

#### Optional Ram Mounting

<table>
<thead>
<tr>
<th>Key</th>
<th>Part Number</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>A</td>
<td>403180</td>
<td>RAM MOUNT</td>
</tr>
<tr>
<td>B</td>
<td>403179</td>
<td>MOUNT BASE-1&quot; BALL U-BOLT</td>
</tr>
<tr>
<td>C</td>
<td>404230</td>
<td>RAM SUCTION CUP W/TWIST LOCK</td>
</tr>
</tbody>
</table>
**Cable Connection**

**Indicator Connection Diagram**

- **Scale Indicator**
- **Power Cord**
- **Remote Indicator (Optional)**

**Pin To 12VDC Power Supply**

<table>
<thead>
<tr>
<th>Pin</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Red + Terminal</td>
</tr>
<tr>
<td>2</td>
<td>Black - Terminal</td>
</tr>
<tr>
<td>3</td>
<td>Orange Alarm Out</td>
</tr>
<tr>
<td>4</td>
<td>Blue Remote Input</td>
</tr>
</tbody>
</table>

**See J-Box Connections**

**Bottom Panel Cable Connections**

- **Remote Port (Optional)**
- **Power Cord Connection**
- **Serial/J905 (Optional)**
Connect Load Cells to J-Box

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

<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>

Tighten Nuts

Load Cell Cable

Connect to Indicator bottom Panel.

J-Box Connections

Load Cell Direction

BENDING DIRECTION

DIRECTION DE FLEXION

BIEGERICHTUNG

Observe direction of arrow when installing load cell.

Indicator Calibration

If you connect an indicator to a different weighing implement, the calibration and setup number may need to change. Refer to calibration procedures (see pages 17-19) or contact your Digi-Star representative for assistance.
OPTIONAL EQUIPMENT

Data Transfer Options

Kit Data Down Loader

Allows transfer of data from indicator to PC. (Optional Serial/J905 port must already be installed in indicator)

Remote Indicators

RD440 small remote display
RD2400V backlit remote display with 1.7” high numbers
RD2400V backlit remote display w/transmitter and installed receiver
RD4000 remote display
TROUBLESHOOTING

FLOW CHART

START

Does the indicator come on?

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

No

Poor Connection: Take them apart and clean connections. (Rust or paint should be wire brushed.) Then reconnect and tighten securely.

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

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 (pos) 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.

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

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

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.

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.

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.

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.