DIGITAL SCALES TM

DigiWeigh

Bench Shipping Scale

DWP-440

DWP-800

DWP-1100

User Manual

Content

Chapter 1 Main Specification

1. Model：   DWP-440 bench shipping/counting scale

2. Accuracy: GradeⅢ, n=3000

3. Sample Rate：   10 times / second

4. Load cell sensitivity： $1.5\sim3$mV / V

5. Scale interval：   1/2/5/10/20/50 for option

6. Display：   6 bits LCD，6 state indicating signals

7. Scoreboard interface (optional)：   In serial output mode：current loop signal, transmission distance≤50m，

8. Communication interface (optional)： RS232C；Baud rate 1200/2400/4800/9600 optional

9. Power supply: Battery DC6V/4AH

10. Operating temperature/humidity: $0\sim40$℃；≤90%RH

11. transporting temperature: $-20\sim50$□

Chapter 2 Installation

2.1 FRONT AND BACK VIEW OF THE INDICATOR
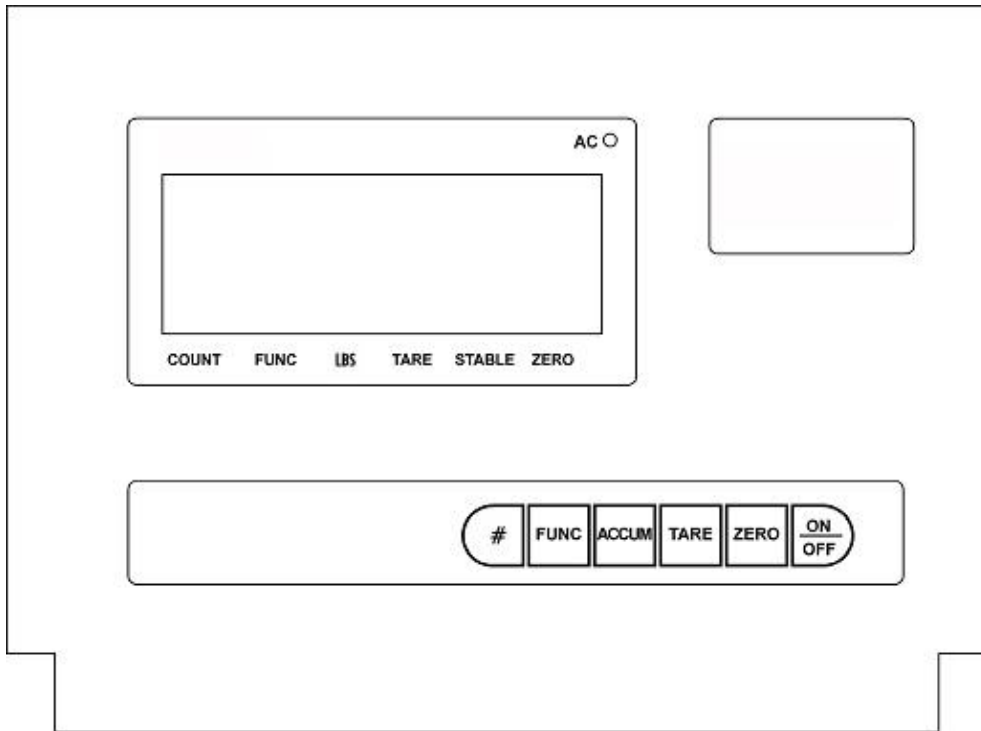
Front View
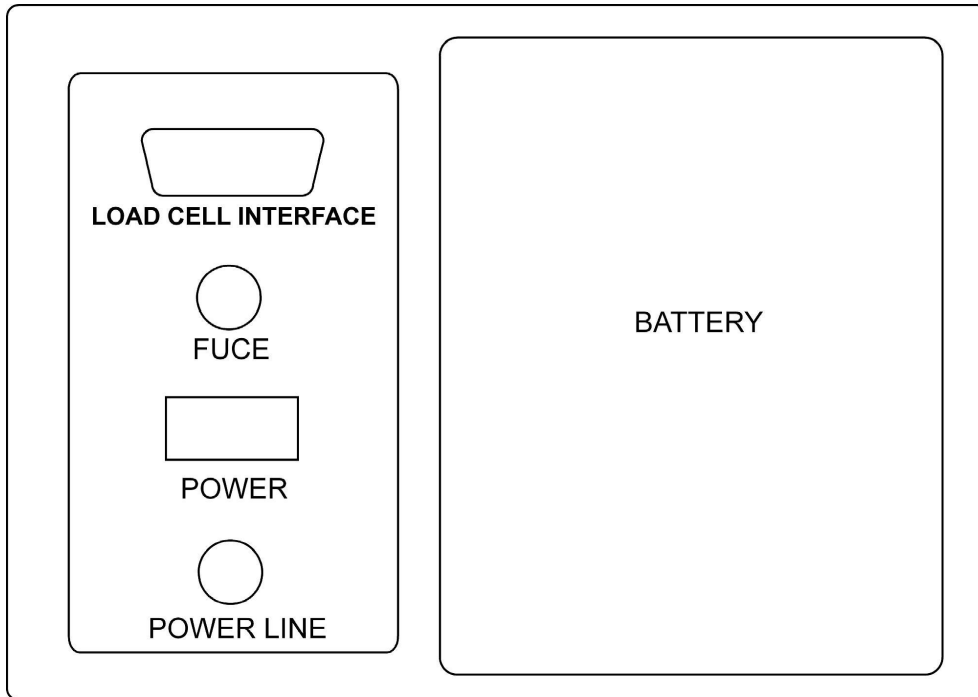
Back View

2.2 KEY FUNCTIONS

[FUNC]   Hold for more than 5 seconds when in weighing mode, it will enter setup mode; less than 5 seconds, it will enter counting mode.

[ACCUM]   Press to accumulating the weight in weighing mode.
Press for sample taking in counting mode

[TARE]   Press to tare in weighing mode.

[ZERO]   Press to zero in weighing mode.

[ON/OFF]   Press to turn on the scale when it is off; and vice versa.

2.3 CONNECTING LOAD CELL TO INDICATOR
1. The 9-pin socket is used to hook up load cell, please refer to graph 2-3.
2. The 4-pin shielded cable is used, and the indicator does not have the function of long distance compensation.
3. Indicator must be reliably connected to Load cell and shielded-cable of load cell must be reliably grounded.
4. Sensor and indicator are static sensitive devices. Sodering operation is prohibited.
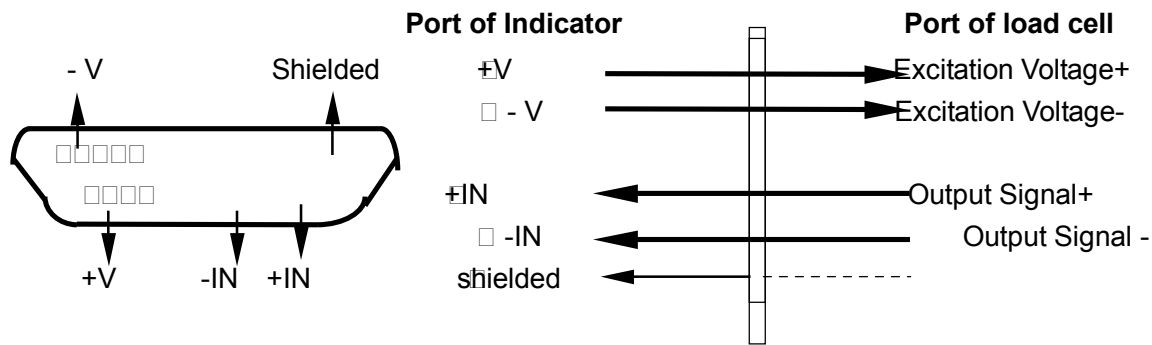
(Graph 2-3)   Drawing of connecting of load cell

Chapter 3 Operation

3.1 POWER ON AND AUTO ZERO-SETTING

3.1.1 The indicator will perform countdown self-checking when turned on. Then it will enter weighing mode.

3.1.2 When powered on, if loading weight on the scale deviates from the zero point, but still within zero set range, the indicator will set zero automatically; if it is out of range, it is necessary to adjust the zero point or recalibrate or reset.

3.1.3 Press # button to select your weighing unit.   When an arrow shows up pointing LB, it is in LB mode; while no arrow shows above the LB sign, it is in KG mode.

3.2 MANUAL ZERO SETTING (AUTOMATICALLY)

3.2.1 In weighing mode, you can press **[Zero]** anytime to make the indicator return to zero.

3.2.2 If the displayed value deviates from zero point, but still within zero-range, pressing **[Zero]** key is available. Otherwise, **[Zero]** key is invalid. (In this status, please recalibrate or reset zero parameters)

3.2.3 Only when stable sign is on, zero operation can be available。

3.3 TARE FUNCTION

When Indicator is in weighing mode, press **[Tare]** key, indicator will deduct the displayed weight value as tare weight. Then indicator displays net weight as "0 ", and Tare sign is on.

3.4 ACCUMULATING FUNCTION

In weighing mode, when the displayed value is positive and stable as well, press **[Accum]** key to accumulate the present weight and display the accumulated weight, the accumulate sign will be on. Press this key again, it will go back to weighing mode and the accumulate sign will be off.

The next accumulating operation must be performed after the weight return to be zero. When the accumulated weight displayed, press **[Func]** key to clean the accumulated weight in Memory and press **[Accum]** to return weighing mode. If the accumulated weight needs to be checked, please keep

the load of platform to be zero, then press **[Accum]** to display the accumulated weight.

3.5 COUNTING FUNCTION

In weighing mode, press **[Func]** to enter the counting mode, it will display "count", and press **[Accum]** it will display "C00000", then press **[Tare]** to move the digit corresponding with the small triangle, the number corresponding with the small triangle will be increased one by one each time after pressing **[Zero]** key; and it will enter counting function after the sample number inputted and **[Accum]** pressed. "0" will be displayed and the counting sign will be on. Press **[Func]** key to return weighing mode. After entering counting mode, "count" will be displayed, press **[Accum]** twice times to enter counting mode directly, indicator will display according to the result of the sampling last time. (In this process, if the ERR4 appears, it means sampling failed, the indicator will keep the result from the last sampling)

3.6 USER'S FUNCTION SETTING

In weighing mode, keep pressing **[Func]** for 5 seconds or more, it will enter setup mode (mode P), there are 10 modes from P1 to P10 for option, press **[Accum]** to choose the mode and press **[Tare]** to choose the parameter. The description of parameter as follows:

    1、P1   x   kg   Lb change
      X=1:   kg mode
      X=2:   Lb mode
    2、P2   x   automatically power off
      X=1:   No this function
      X=2:   Power off 10 minutes later
      X=3：   20 minutes
      X=4：   30 minutes
   3、P3   x   Baud rate setting
      X=1:   9600
      X=2:   4800
      X=3:   2400
      X=4:   1200
    4、P4   x   RS232 Net/Gross weight output option
      X=1:   Net weight output
      X=2:   Gross weight output
    5、P5   x   RS232 output mode option
      X=1:   No transmission (RS232 stop)
      X=2:   Continuous transmission
      X=3:   Continuous transmission when stable
      X=4:   Command mode（Z：zero，T：tare，R：transmit weight data once time）
      X=5:   Current loop output
      X=6:   Keep（Printer）
    6、P6   x   Backlight setting
      X=1:   No backlight
      X=2:   Automatic backlight

X=3:   Keep lighting
    7、P7   x   Zero-tracking scope
        X=1:   0.5e
        X=2:   1.0e
        X=3:   1.5e
        X=4:   2.0e
        X=5:   2.5e
        X=6:   3.0e
        X=7:   5.0e
    8、P8   x   Zero key scope
        X=1:   2%FS
        X=2:   4%FS
        X=3:   10%FS
        X=4:   20%FS
    9、P9   x   Zero scope upon starting
        X=1:   2%FS
        X=2:   4%FS
        X=3:   10%FS
        X=4:   20%FS
    10、P10   x   Digital filtering intensity
        X=1:   high
        X=2:   middle
        X=3:   low

    11. P11   X   Stable time
        X=1:   high
        X=2:   middle
        X=3   low

    12. P12   X   Stable extent
        X=1:   low
        X=2:   middle
        X=3:   high

3.7 CONNECT SCOREBOARD TO INDICATOR (FUNCTION OPTIONAL)

3.7.1. Electric current or RS232 interface is used for scoreboard signal, which is transmitted in
        serial binary code style. The baud rate is 600.。

■ Make sure that scoreboard and output lead are connected correctly. If there is something wrong
   with connection, damage will happen to output port of instrument and input port of scoreboard,
   sometimes, the damage is so big to influence the instrument and scoreboard. Only specially
   provided connecting cable is allowed to be used.

3.8 SERIAL COMMUNICATION AND INDICATOR CONNECTION

■ Make sure that communication interface output lead and computer are correctly connected, if there is something wrong with connection, damage will happen to output port of instrument and input port of computer, sometimes, the damage is so big that instrument, computer and corresponding peripherals are got involved.

■ Necessary computer technology and programming expertise are required for computer communication, which should be participated and instructed by professionals.

With RS232 (optional) serial communication interface, the indicator can be connected to PC communication.

1. All data are ASCII code, every set of which is composed of 10 bits: the 1st is starting bit, the 10th is stop bit, the middle in between are 8 data bits.

Communication mode as follows:

(1). In continuous mode:

The data transmitted is weight (Gross weight or net weight)

The format of G.W.：ww000.000kg or ww000.000lb

The format of N.W： wn000.000kg or wn000.000lb

Note：The position of above decimal is decided by the decimal set on the indicator.

(2). In command mode:

The indicator performs the corresponding operation according to the command transmitted from the indicator.

Command R The indicator receives and sends weight data once time (the format is the same as the continuous mode)

Command T The indicator receive the command and tare (the same as tare key); if no receipt of the command. The indicator returns CR LF

Command Z The indicator receives the command and zero (the same as zero key); if no receipt of the command, the indicator returns CR LF.

Chapter 4 Calibration

4.1   Connect load cell properly, then turn on the indicator, press [#] key while it is initialization, it will enter into the calibration mode and calibrate as following:

STEP	OPERATION	DISPLAY	NOTES
1	Press **[TARE]** for selection of division	[d X]	Select division optional(1/2/5/10/20/50),press **[#]** for confirm Example: 20
2	Press **[TARE]** for selection of DECIMAL	[P X]	Select decimal point optional: 0~3, press **[#]** for

	POINT selection		confirm Example:3
3	Set the full range	**[FULL]**	Press **[TARE]** for selection of the digit bit; Press **[ZERO]** for selection of the digit; Press **[#]** for confirm the input of full range
4	Zero point calibration: Press **[#]** when the stable signal is on	**[nOLOAD]**	Assure there is no load
5	Full range point calibration: Press **[#]** when the value input is the same as the loaded weight and the stable signal is on	**[AdLOAD]**	While inputting the loaded weight, Press **[TARE]** for selection of the digit bit; Press **[ZERO]** for selection of the digit; when the input value is the same as the loaded weight and the digit bit is at the highest bit, press **[#]** when the stable signal is on
6		**[End]**	
7	Press the calibration switch under the lead sealing board at the back of the indicator		It saves the calibration parameter and back to the weighing status. Attention: if no pressing the calibration switch, all the parameters won't be saved.

4.2 FAST CALIBRATION FOR ZERO POINT AND FULL RANGE POINT

Press [#] while it is initialization, it enters into the calibration mode.

4.2.1 Fast calibration for zero point:

At any time before it shows [nOLOAD], press [FUNC], it keeps the original division, decimal point, full range and enter into the zero point calibration mode. Press [ZERO] when the stable signal is on, it displays [End] and keeps the original full range point calibration. Press the calibration switch under the lead sealing board at the back of the indicator, it saves the setting and back to the weighing status.

4.2.2 Fast calibration for full range point:

At any time before it shows [AdLOAD], press [ACCU], it keeps the original division, decimal point, full range, zero point calibration and enter into the full range point calibration mode. When it is finished, press the calibration switch under the lead sealing board at the back of the indicator, it saves the setting and back to the weighing status.

Chapter 5 Error Indication

EER 1	The AD value is too small when calibrated.
EER 2	The zero point is out of range when calibrated.
EER 3	The zero point is out or range upon starting
EER 4	The imputed sample number is zero when sampling n counting mode.
EER 5	The imputed weight is zero when full scale calibrated in calibrating mode.
EER 6	The unit weight is less than 0.25e when sampling in counting mode
bAt-lo	Low power

Chapter 6 Recharge Battery

6.1 Turing on the AC power, the indicator will recharge the battery automatically. So if you don't use battery frequently, you should take battery out.
■ Note: red end is +, black end is -. Wrong connection will destroy indicator.
■ Note: The built-in battery should be fully charged before it is used for the first time.
6.2 Only when you turn off the AC power, and push start key, battery works. Displaying [LouoL] means the insufficient of voltage, it needs charge.
6.3 When you use the battery first time, you should charge the battery for 20 hours in order to prevent low voltage resulted from the self leakage of the battery.
6.4 If you don't use battery for a long time, you should charge the battery for 10-12 hours for each 2 month to prolong using life of battery.
6.5 The battery is easily exhausted products. And it is not granted free guarantee.

Chapter 7 Maintenance

7.1 To guarantee indicator clarity and using life, the indicator shouldn't be placed directly under sunshine and should be set in the plain space.
7.2 The indicator can't be placed into the place where the dust pollution and vibration are serious.
7.3 Load cell should connect with indicator reliably, and the system should be well connected into ground. The indicator must be protected from high electrical field and high magnetic field.
■ In order to protect the operator, indicator and relevant device, you should mount lightning rod in thunderstorm frequently happening area.
■ Load cell and indicator are static sensitive device, you must adopt anti static measures.
7.4 It is strictly forbidden to clean the case of indicator with intensive solvents (for example: benzene and nitro oils)
7.5 Liquid and conducting particle should not be poured into the indicator, otherwise the electronic

components will be damaged and electric shock is likely to happen.

7.6 You should cut off power supply of indicator and relevant device before you pull-in and out the connecting line of indicator and external device.

■You must cut off power supply of indicator, before pulling out connecting line of load cell.

7.7 During operation, if trouble occurs, operator must pull off the power supply plug immediately, and user should return this indicator to our company for repair. Non-weighing manufacturer should not repair it, or by yourself, otherwise further destruction may happen.

7.8 The storage is not granted the free repair guarantee, because it is easily exhausted products.

■ In order to prolong using life, please charge the cell fully before using it. If you don't use the indicator for a long time, you must charge the cell every two month and for eight hours/each charging time.

■ Moving or installation must be carefully taken and must avoid strong vibration, impact and bump in order to protect the storage cell from being damaged.

7.9 From invoice date, the indicator has a one-year free repair period. If any non-artificially obstacle about the indicator happens under correct using conditions within this period, the user is allowed to send the product with its guarantee card (of the correct number) back to our corporation for free repair. The indicator shouldn't be taken apart, otherwise free guarantee will be cancelled.

WARRANTY INFORMATION

THIS IS YOUR DIGIWEIGH ONE YEAR LIMITED WARRANTY (VALID IN THE CONTINENTAL UNITED STATES, ALASKA AND HAWAII). YOU MUST PRESENT THIS FORM TOGETHER WITH PROOF OF PURCHASE WITH PURCHASE DATE TO OBTAIN WARRANTY SERVICE.

This scale is warranted by DIGIWEIGH to be free from defects in material and workmanship for one (1) year from the date of purchase.

During this period if this product is found to be defective in material or workmanship, DIGIWEIGH or one of its authorized service facilities will at its option, either repair or replace this product without charge, subject to the following conditions, limitations and exclusions:
1. This warranty extends to the original consumer purchaser only and is not assignable or transferable.
2. This warranty shall not apply to any product which has been subjected to misuse, abuse, abnormal use, negligence, alteration or accident.
3. This warranty does not apply to any defects or damage directly or indirectly caused by or resulting from the use of unauthorized replacement parts and/or service performed by unauthorized personnel.
4. This warranty does not apply to the batteries and software driver that accompanies this product.

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DIGIWEIGH HEREBY DISCLAIMS ANY AND ALL LIABILITY FOR CONSEQUENTIAL AND INCIDENTAL DAMAGES ARISING OUT OF OR IN CONNECTION WITH ANY BREACH OF THIS WARRANTY OR ANY OTHER CLAIM WITH RESPECT TO THIS PRODUCT, INCLUDING BUT NOT LIMITED TO, CLAIMS OF NEGLIGENCE, STRICT LIABILITY IN TORT OR BREACH OF CONTRACT. SOME STATES DO NOT ALLOW (A) LIMITATIONS ON HOW LONG AND IMPLIED WARRANTY LASTS OR (B) THE EXCLUSIONS MAY NOT APPLY TO YOU. THIS WARRANTY GIVES YOU SPECIFIC LEGAL RIGHTS AND YOU MAY HAVE OTHER RIGHTS WHICH VARY FROM STATE TO STATE.

In order to obtain performance of the warranty obligations, the original consumer purchaser must return this warranty form and this DIGIWEIGH product together with proof of purchase showing purchase date either in person or addressed to the appropriate service department of DIGIWEIGH.

For repair service, kindly contact us by email support@digiweighusa.com or by fax 1-909-385-2428 to get an RMA number;

When you get the RMA number, please send your equipment to:

DIGIWEIGH Service Center
15830 El Prado Road, Unit B, Chino, CA 91708

In returning this product for repair or replacement under this warranty, the original consumer purchaser must prepay all postage, shipping transportation, insurance and delivery costs, and the product must be delivered in its original carton affording an equal

degree of protection. DIGIWEIGH will not be responsible for any loss or damage incurred in connection with the return of this product.

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