



# DC-688

*Counting Scale*

# Operation Manual

Discontinued



## DC- 688 SERIES OPERATING MANUAL

<u>SECTION</u> <u>NUMBER</u>	<u>INDEX</u>	<u>PAGE</u>
<b>1.0.</b>	<b><u>GENERAL</u></b>	
	1.1. Unlocking Procedure and location of span (calibration) switch	2
<b>2.0.</b>	<b><u>DC-688 USER'S TECHNICAL GUIDE</u></b>	<b>3</b>
	2.1. Display & Keyboard Panels	3
	2.1.1. Location of Keys	3
	2.1.2. Location of Indicator Lamps	3
	2.2. Setting up	3
	2.3. Indicator Lamps	4
	2.4. Key Functions	5
<b>3.0.</b>	<b><u>OPERATION MODE</u></b>	<b>6</b>
	3.1. One Touch Tare	6
	3.2. Digital Tare	6
	3.3. Unit Weight Entry	6
	3.3.1. Unit Weight Entry By Sampling	6
	3.3.2. Digital Unit Weight Entry	7
	3.3.3. Assign Unit Weight To Preset Key	7
	3.4. Clearing Unit Weight	7
	3.5. Gross Weight Operation	7
	3.6. Counting And Accumulation	8
	3.7. Operation Example	8
<b>4.0.</b>	<b><u>MAINTENANCE MODE</u></b>	<b>9</b>
	4.1. Specification List	9-11
	4.2. Specification Setting	12-13
	4.3. Internal Count	13
	4.4. Span Adjustment	14
	4.5. Maintenance, Calibration, Test Procedure & Service	15
	4.6. Shop Notes	16
<b>5.0</b>	<b><u>QUICK GUIDE</u></b>	<b>17-18</b>

The DC-688 counting scale offers a practical solution to a full range of precision counting applications. There is a variety of models available ranging from a weight capacity of 6 lb. through 60 lb.

This manual will provide the user with information necessary to operate and program the DC-688. Included in this manual are examples, descriptions, specifications, operating instructions and service guide.

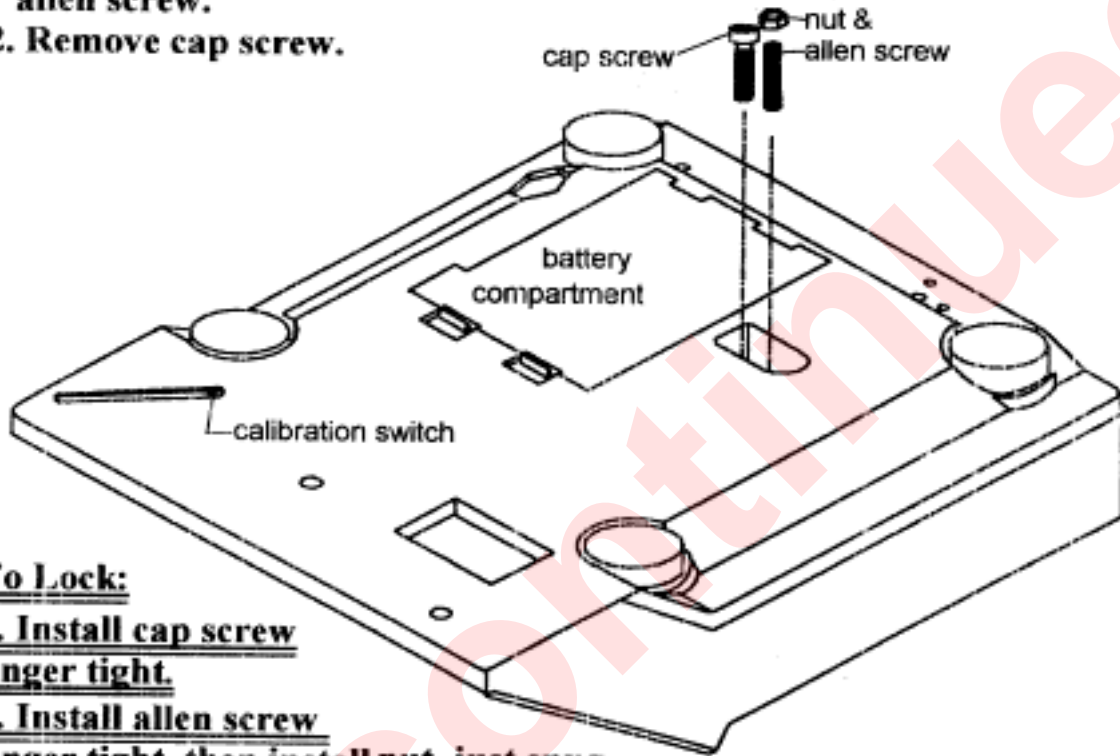
## **1.0. GENERAL**

### **1.1. UNLOCKING PROCEDURE & SPAN SWITCH LOCATION:**

**NOTE: Turn Scale On Side, Do Not Turn Scale Upside DOWN!**

#### **To Unlock:**

- 1. Loosen nut & remove allen screw.**
- 2. Remove cap screw.**

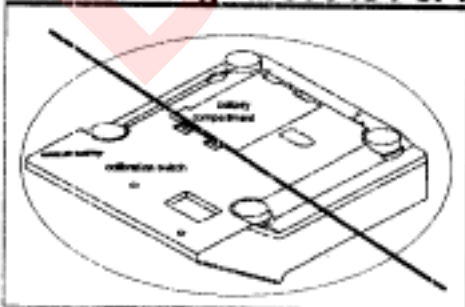


#### **To Lock:**

- 1. Install cap screw**  
**finger tight.**
- 2. Install allen screw**  
**finger tight, then install nut, just snug.**

**NOTE: FAILURE TO LOCK SCALE PROPERLY MAY RESULT IN DAMAGE TO THE LOAD CELL.**

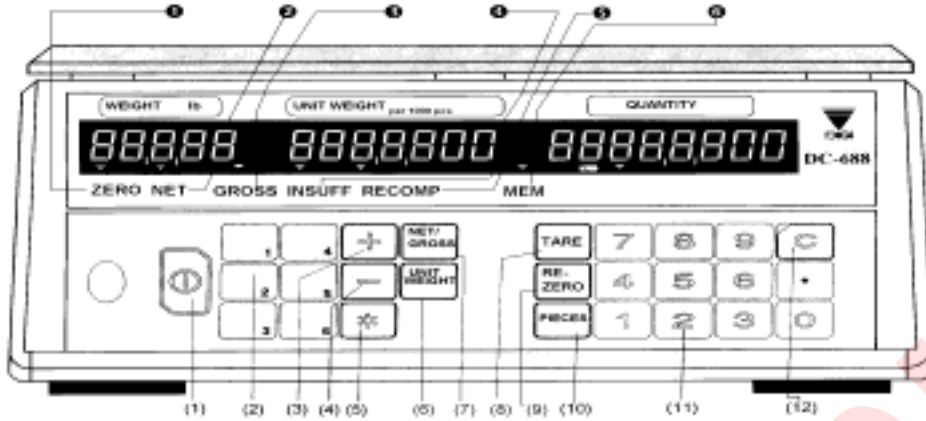
**Warning : Do Not Turn Scale Upside down!**  
**The Drawing Above Is For Illustration Purpose Only!**





# DC-688 USER'S TECHNICAL GUIDE

## 2.1. DISPLAY & KEYBOARD PANELS:



### 2.1.1. LOCATION OF KEYS:

(1) ON/OFF key	: Turn display ON/OFF.	(7) Net/Gross Key	: Switch between Net and Gross weight display.
(2) Preset Keys	: Recall Unit Weight data.	(8) Re-zero Key	: Reset weight display to zero.
(3) Plus Key	: Add parts in total accumulation.	(9) Tare Key	: Set or clear tare value.
(4) Minus Key	: Subtract parts in total accumulation.	(10) Pieces Key	: Enter unit weight by sampling.
(5) Enter Key	: Clear data in total accumulation.	(11) Numeric Keys	: Input Numeric data.
(6) Unit Weight Key	: Set unit weight after numeric data entry.	(12) Clear Key	: Clear the entry data or unit weight.

### 2.1.2. LOCATION OF INDICATOR LAMPS:

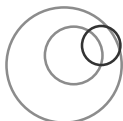
① Zero Lamp	: Light on when zero point is adjusted and weight is stable.	④ Insufficient Lamp	: Light on when sampling quantity is too small
② Net Lamp	: Light on when tare weight is present	⑤ Recomputing Lamp	: Light on when Unit Weight may be Recalculated by pressing PIECES key.
③ Gross Lamp	: Light on when Gross weight is displayed.	⑥ Memory Lamp	: Light on when accumulated data is in memory.

## 2.2. SETTING UP:

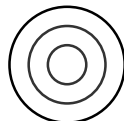
### 2.2.1. See Page 2 For Unlocking Procedure

### 2.2.2. Level Adjustment:

- a. Place scale on firm and flat base.
- b. Level the scale by turning adjusting legs until air bubble is at the center of the Level Indicator.



Not Level



Level

### 2.2.3. Place the platter onto scale:

- a. Place the platter on the scale. Ensure that the platter is properly aligned.

### 2.2.4. Power Supply:


- a. Connect to power supply. Or install 6 pcs of "D" cell Battery (DC1.5V)
- b. With nothing placed on the platter, depress ON/OFF key.
- c. Scale is ready for operation after segment checking.

### 2.3. INDICATOR LAMPS:

---

LAMP	"ON"
<b>Zero</b>	When the gross weight is zero.
<b>Tare</b>	When tare weight is set.
<b>Gross</b>	When [Gross/Net] key is pressed.
<b>Insuff</b>	When the net weight is below a specific percentage of capacity weight.
<b>Recomp</b>	When unit weight recomputing is possible.
<b>Memory</b>	When quantity is being accumulated or when memory overflows.
<b>Batt</b>	When battery's power level is low.

## 2.4. KEY FUNCTIONS:

KEY	FUNCTIONS
	For turning the machine ON and OFF.
<b>[0] to [9]</b>	Numeric Keys.
<b>[.]</b>	Decimal Point.
<b>[RE-ZERO]</b>	Used to reset the scale to zero. Used to enter the maintenance mode along with other keys
<b>[TARE]</b>	Used for setting and clearing tare weight and used to exit SPEC setting mode and save spec changes.
<b>[C]</b>	Used to clear the key entries and unit weight.
<b>[NET/GROSS]</b>	Used to change between Gross and Net.
<b>[UNIT WEIGHT]</b>	Used to enter the unit weight using numeric key board.
<b>[+]</b>	Used for Accumulation function and for incrementing SPEC numbers (without changing the spec data) in SPEC setting mode.
<b>[-]</b>	Used for Subtraction function and for decrementing SPEC numbers in SPEC setting mode.
<b>[↻]</b>	Used for clearing accumulated quantity and for storing new specification data when making spec changes .
<b>[PIECES]</b>	Used for computing unit weight by sampling.

### **3.0. OPERATION MODE:**

---

#### **3.1. TARE SUBTRACTION:**

---

##### **3.1.1. One Touch Tare:**

---

Display in the weighing mode

1. Place the container on scale.
2. Press **[TARE]** key to subtract the container (tare) weight.

Note  $\cancel{2}$ ) To clear tare value, press **[TARE]** key after removing the tare.

##### **3.1.2. Preset (Digital) Tare:**

---

Display in the weighing mode

1. Enter the known weight of the container. Example: Press **[0][.][2][3]**
2. Press **[TARE]** key.

#### **3.2. UNIT WEIGHT ENTRY:**

---

##### **3.2.1. Unit Weight Entry by sampling:**

Display in the weighing mode

1. Place sample on scale. example. 45 pcs.
2. Enter a sample number with numerical keys. **[4][5]**
3. Press **[PIECES]** key. To compute Unit weight.

When sample pieces are not sufficient, step 4 & 5 are required.

*The number of pieces to be added appears in display. \* $\cancel{2}$*

4. Add the required sample.

Press **[PIECES]** key. To compute Unit Weight with sufficient sample

The accuracy of the computation can be improved by increasing the sample size with the following procedure.

5. Re-compute Unit Weight. (note \* $\cancel{3}$ ) Add approximately double the number of pieces on the scale. Press **[PIECES]** key.

Note \*1 $\cancel{2}$ ) If using a sample of 10 pcs., press **[PIECES]** key without entering a number of sample pieces.

Note \*2 $\cancel{2}$ ) This procedure can be skipped by pressing **[PIECES]** key without adding additional parts. However, it may affect counting accuracy to use an insufficient number of samples.

Note \*3 $\cancel{2}$ ) Re-computing function is available when RECOMP lamp is on.

Note 4 $\cancel{2}$ ) A unit weight up to 4 decimal places is determined by sampling. To display the complete unit weight, press **[UNIT WEIGHT]** key.



### **3.3.2. Digital Unit Weight Entry:**

---

Display in the weighing mode

1. Press [ 1 ] [ • ] [ 7 ] [ 2 ] [ 6 ] [ 6 ] to enter Unit Weight.
2. Press [ UNIT WEIGHT ] key

**Note** ✎: Unit weight per 1,000 pieces should be entered and displayed in the Unit Weight display window.

### **3.3.3. ASSIGN UNIT WEIGHT TO PRESET KEY:**

---

Unit weight can be assigned to each preset key. The programmed value can be re-called in Operation Mode by pressing the preset key. Assign unit weights, which will be used frequently.

Display in the weighing mode

1. Enter Unit Weight by any means. (see 3.21. & 3.2.2.)
2. Press [ UNIT WEIGHT ] key. to store displayed Unit Weight.
3. Press [ P1 ] to assign the data to Preset key. e.g. P1

### **3.4. Clearing Unit Weight :**

---

Display in the weighing mode

1. Press [ 1 ] [ • ] [ 7 ] [ 2 ] [ 6 ] [ 6 ] to Enter Unit Weight. Example only 1.7266
2. Press [ UNIT WEIGHT ] key.
3. Press [ C ] key to Clear Unit Weight.

### **3.5. GROSS WEIGHT OPERATION:**

---

Display in the weighing mode

1. Place the empty container on scale.
2. Press [TARE ] key to subtract the tare weight of the container
3. Place Sample on platter.Example: 1.00 lb.
4. Press [NET/GROSS] key to change to Gross display.
5. Press [NET/GROSS] key to return to Net weight display.

**Note** ✎: Counting operation is not available in Gross Weight display.

### **3.6. COUNTING AND ACCUMULATION:**

#### **3.6.1. Single counting:**

Display in the weighing mode

1. Enter the unit weight by any methods in section 3.
2. Place parts on platter, the quantity will be displayed.

#### **3.6.2. Quantity Accumulation:**

Display in the weighing mode

1. Enter the unit weight by any methods in section 3.
2. Place parts on platter, the quantity will be displayed.
3. Press [ + ] key to accumulate the data.
4. Remove the parts, the display will clear the total display.
5. Place parts on platter, the quantity will be displayed.
6. Press [ + ] key to accumulate the data.
7. Remove the parts, the display will clear the total display.
8. Place parts on platter, the quantity will be displayed.
9. Press [ - ] key to subtract the data.
10. Press [ \* ] key clear total quantity.

Note: See spec 16 page 11, **Exit From Accumulate Mode**, for the method that fits the application.

### **3.7. OPERATION EXAMPLE:**

TASK	PROCEDURE
1. <u>Enter Tare value</u> ,	Place an empty container on platter and press [TARE] key.
2. <u>Compute Unit Weight</u> ,	Place a number of pieces on platter, enter the quantity of samples and press [PIECES] key.
3. <u>Re-compute Unit Weight</u> ,	Add a number of pieces to the samples and press [PIECES] key.
4. <u>Accumulate quantity</u> ,	With the first quantity on platter, press [ + ] key. Remove them and the display returns to the weighing mode. Place the second quantity on platter , press [ + ] key and count them. Repeat the same procedure until all items have been counted. If a mistake is made during the accumulation, press [ - ] key with the over count on the scale.
5. <u>Clear Accumulated data</u> ,	Press [ * ] key.

## 4.0. MAINTENANCE MODE:

### 4.1.1. For The Customer - (1 4 1)

SPEC No.	BIT 3	BIT 2	BIT 1	BIT 0
0  0 0 0 0	<b>Power Auto Off function</b> (for no key operation & weigh operation) 0000 - Auto power off disable when scale is not in use 0001 - 3 minute 0010 - 10 minutes 0011 - 30 minutes 0100 - 1 hour 0101 - 3 hours 0110 ~ 1111 - Not used			
1  0 0 0 0	<b>Buzz</b> 0 - On 1 - Off	<b>Error Beep</b> 0 - On 1 - OFF	Not used  0	Not used  0
2  1 1 0 0	<b>Sampling time for Unit Weight Calculation</b> 0 - 10 times 1 - 5 times	<b>Negative Counting</b> 0 - NO 1 - YES	<b>Unit Weight Rounding</b> 0 - NO 1 - YES	Not used  0
3  0 0 0 0	Not used  0	Not used  0	Not used  0	Not used  0

Default Specs

[re-zero] [1] [4] [1]

[re-zero] [1] [4] [2]

		Capacity	6 lb.	15 lb.	30 lb.	60 lb.
Spec 0	0 0 0 0 to 0 1 0 1	Spec 8	0 0 0 1			
Spec 1	0 0 0 0	Spec 9		1 1 0 1	1 1 0 1	1 1 0 1
Spec 2	0 1 1 0	Spec 10		0 0 0 1	0 0 1 1	0 1 0 1
Spec 3	0 0 0 0	Spec 11	1 1 0 0			
		Spec 12	0 0 0 0			
		Spec 13	0 0 0 0			
		Spec 14	1 0 0 0			
		Spec 15	0 0 1 1			
		Spec 16	1 1 1 0			
		Spec 17	0 1 0 0			
		Spec 18	0 0 0 1			
		Spec 19	0 0 0 0			

### 4.1.2. FOR WEIGHT & MEASURE - (1 4 2)

\* NOTE: It can only work when the SPAN Switch is on (Enable)

SPEC NO.	BIT 3	BIT 2	BIT 1	BIT 0
8  0 0 0 1	<b>ZERO Lamp "ON"</b>  0 - Gross 0 1 - Net 0	<b>Scale Start</b>  0 - Automatic 1 - Manual	<b>Selection Of Segment-Check Style</b>  0 - Fast 1 - Standard	<b>Selection Of Model</b>  0 - DC-685 1 - DC-688
9	<b>Decimal Point Position On Weight Display</b>  00 - No decimal point 01 - Not used 10 - 3rd digit (000.00) 11 - 4th digit (00.000)		<b>Negative Weight Display Mask</b>  00 - Minus gross > 9e 01 - Minus gross Weight 10 - Minus Net Weight 11 - Not used	
10	<b>Selection Of Capacity</b>			
	B3 B2 B1 B0	Capacity	Increment (Single/Multi-Interval)	
	0 0 0 1	(6.000lb, 60.00lb)	1	
	0 0 1 1	(15.000lb)	2	
	0 1 0 1	(30.000lb)	5	
11  1 0 0 0	<b>Selection Of Resolution</b>  00 - Single Interval 01 - Multi Interval 10 - 1/7500 Or 1/6000 11 - Not Used		<b>Multi-Interval Setting</b>  0 - Net Multi-Interval 1 -Gross Multi-Interval	<b>View Internal Count Protected By SPAN SW</b>  0 - NO 1 - YES
12  0 0 0 0	<b>Manual Tare Cancellation</b>  1 - NO 0 - YES	<b>Tare Subtraction</b>  1 - NO 0 - YES	<b>Tare Accumulation</b>  1 - NO 0 - YES	<b>Tare Value Exchange</b>  1 - NO 0 - YES

### 4.1.3. WEIGHT & MEASURE - (1 4 2) CONTINUED

SPEC NO.	BIT 3	BIT 2	BIT 1	BIT 0
13  0 0 0 0	<b>Digital Tare</b>  1 - NO 0 - YES	<b>Accumulation When Tare</b>  1 - NO 0 - YES	<b>Zero Tracking When Tare</b>  1 - NO 0 - YES	<b>Weight Reset When Tare</b>  1 - NO 0 - YES
14  1 0 0 0	<b>AUTO Tare Clear When Rezero</b>  0 - NO 1 - YES	<b>Tare AUTO Clear</b>  0 - NO 1 - YES	<b>Unit Weight AUTO Clear</b>  0 - NO 1 - YES	<b>AUTO Clear Condition</b>  0 - $\geq$ Gross 21e & $\geq$ Net 5e 1 - $\geq$ Net 1e & Quantity > 10
15  0 0 1 1	<b>Accumulation Using [+] Key</b>  1 - NO 0 - YES	<b>Subtraction Using [-] Key</b>  1 - NO 0 - YES	<b>Accumulation Number Display</b>  0 - NO 1 - YES	<b>WT Data Synchronization (+ Key only)</b>  0 - NO 1 - YES
16  1 1 1 0	<b>Exit From Accumulation Mode After 15 Sec Time Out</b>  0 - NO 1 - YES	<b>Exit From Accumulation Mode When Weight Change</b>  0 - NO 1 - YES	<b>NO Quantity Accumulation Without Removing Weight</b>  0 - NO 1 - YES	<b>NO Quantity Accumulation Without Change Weight for <math>\geq</math> +/- 10e</b>  0 - NO 1 - YES
17  0 1 0 0	<b>Gross Mode</b>  1 - NO 0 - YES	<b>Tare Range</b>  0 - 50% of F.S. 1 - 100% of F.S.	Not used  0	Not used  0
18  0 0 0 0	Not used 0	Not used 0	Not used 0	Not used 0
19  0 0 0 0	Not used 0	Not used 0	Not used 0	Not used 0

### **4.2.1. Spec 141 Setting:**

---

Spec 141 Setting: Spec 141(Customer Specifications)  
can be accessed from the weighing mode.

- 1 Display in the weighing mode
- 2 Enter **[1] [4] [1]** while pressing the **[REZERO]** Key.
- 3 Press the **[+]** Key increases to the next SPEC number without changing spec data.
- 4 Enter 1011 as the new value for SPEC01 using the **[Numeric]** Keys  
*as example only enter : 1011*
- 5 Press the **[C]** Key clears the **[Numeric]** Entry.
- 6 Press the **[\*]** Key increases to the next SPEC number. and also stores temporarily the SPEC data in the RAM location.
- 7 Press the **[-]** Key decreases to the previous SPEC number.
- 8 Press the **[-]** Key decreases from SPEC 01 to SPEC 00.
- 9 Press the **[-]** Key decreases the SPEC number from SPEC00 to SPEC03
- 10 Press the **[TARE]** Key stores the new SPEC values to the EEPROM and exits from the SPEC setting mode.
- 11 Scale returns to Weighing Mode.

#### **4.2.2. SPEC 142 SETTING:**

---

☞: Spec 142 Setting: To access the Spec 142 (W & M Spec) mode the **[SPAN]** Switch must be "ON". The rest of the procedure is the same as Spec 141 setting.

- 1 Display in the weighing mode
- 2 Press the **[SPAN]** Switch. The S-On message comes on.
- 3 Enter **[1] [4] [2]** while depressing the **[REZERO]** Key.
- 4 **[\*]** Key increases to the next SPEC number and also stores temporarily the SPEC data in the RAM location.
- 5 Enter **[1][0][1][1]** as the new value for SPEC09 using the **[Numeric]** Keys  
*as example only enter : 1011*
- 6 Press the **[C]** Key clears the **[Numeric]** Entry.
- 7 Press the **[+]** Key increases to the next SPEC number without making any changes to spec data.
- 8 Press the **[-]** Key decreases to the previous SPEC number.
- 9 Press the **[-]** Key decreases from SPEC 09 to SPEC 08.
- 10 Press the **[-]** Key decreases the SPEC number from SPEC08 to SPEC19
- 11 Press the **[TARE]** Key stores the new SPEC values to the EEPROM and exits from the SPEC setting mode.
- 12 Scale returns to the Weighing Mode.

#### **4.3. INTERNAL COUNT AND A/D COUNT DISPLAY :**

---

☞:If the SPEC 11, bit 0 is set to 1, then the **[SPAN]** Switch must be "ON" to enter this mode.

- 1 Display in the weighing mode
- 2 Enter **[0] [0] [9]** while pressing the **[REZERO]** Key. *Unit Weight Window* will display the Internal Count and the *Quantity Window* will display the A/D Count.
- 3 Press **[TARE]** Key to exit from Internal Count Mode.

#### **4.4. SCALE CALIBRATION :**

---

Prior to the calibration of the scale, please note that the SPEC settings corresponding to Minimum Display, Weight Decimal Point Position for that particular scale have to be correctly set. Ensure that the **[SPAN]** Switch is ON.

- 1 Display in the weighing mode
  - 1 Press the **[SPAN]** Switch which is located at the bottom of the machine.  
See page 2 for details.
  - 2 Enter **[8] [7] [1] [5]** while depressing the **[REZERO]** Key. The display will show CAL00
  - 3 Press the **[\*]** Key in order to compute the zero point. It takes a few seconds for the zero calibration.
  - 5 After computing the zero point, the Weight *Window* shows CALSP
- 7.1.
- Place capacity weight of 60 lb on the platter. In this illustration, capacity weight of 60 lb is taken as an example.
- OR ---
- OR
- 7.2. Using less than capacity weight .Enter the weight placed on the platter using the **[Numeric]** Keys. Example: enter **[5][0][.][0][0]**
  - 8 Press the **[\*]** Key to start span calibration.



#### **4.5. MAINTENANCE, CALIBRATION, TEST PROCEDURE & SERVICE**

---

This section contains information and instructions concerning maintenance of the DC-688 Counting Scale. Preventive maintenance consists of periodically cleaning the external surfaces of the instrument and should be performed as often as operating conditions warrant. The calibration procedure is designed to be an aid in maintaining the scale accuracy within specifications. The calibration procedure may also serve as a performance test procedure.

**CAUTION: DO NOT ATTEMPT ANY SERVICE WHILE THE INSTRUMENT IS CONNECTED TO THE POWER LINES.**

##### **4.5.1. MAINTENANCE PROCEDURES**

###### **4.5.1.1. EXTERIOR MAINTENANCE**

The exterior surfaces of the counting scale can be easily cleaned using soap and water. However, extreme caution should be used so that there is no possibility of water penetration into the scale electrical or mechanical sections. A damp cloth or sponge is suggested. NEVER USE ACETONE, MEK, OR SIMILAR SOLVENTS ON THE PLASTIC HOUSING AS THEY WILL ETCH THESE SURFACES. For grease or other difficult spots, a chlorothane or naptha based cleaner may be used. Never use any solvents on the front or rear panels. Accumulations of dust or direct particles between the pins of the connectors may be removed by using dry forced air or a small dry brush.

###### **4.5.1.2. INTERNAL MAINTENANCE**

Internal maintenance is not normally required and if it is, should not be attempted except by a qualified, authorized service technician.

##### **4.5.2. CALIBRATION**

The following procedure should be followed periodically (every six to twelve months is suggested) to determine that the scale is functioning in all modes.

a. **Electrical**

Follow section 4.0 through all its steps

b. **ACCURACY**

**Weighing:** The scale weighing accuracy can be determined by applying various known weights to the platform. Because of the scale's very high accuracy, only weights that are certifiably more accurate than the scale's specifications should be used in testing for accuracy. (NBS class "F" or higher) Since the scale owner does not normally have such certifiable weights available to him, it is suggested that the customer call their authorized DIGI dealer.

##### **4.5.3. SERVICE & REPAIR**

No service or repair should be attempted except by qualified personnel, and not until it has been positively determined that the counting scale requires such service. All service should be done in a clean, dry, dust-proof area.

## 5.0.

## QUICK GUIDE

<u>OPERATION</u>	<u>PROCEDURE</u>
Tare out an empty container	Place an empty container on the scale, press <b>[TARE]</b> key
Enter a known tare	Enter the tare weight as it would appear in the window, press <b>[TARE]</b> key.
Change to gross weight display Change back to net wt.	Press <b>[NET/GROSS]</b> key Press <b>[NET/GROSS]</b> key again
Compute a unit weight	Place 10 pieces on scale, press <b>[PIECES]</b> key or Place an arbitrary number of pieces on the scale, enter the number of pieces and press the <b>[PIECES]</b> key.
Re-compute a unit weight (only as long as the RECOMP light is on after pcs. are added)	Add a number of pieces to the sample and press the <b>[PIECES]</b> key.
Enter a known unit weight	Enter the weight /1000 pcs, press <b>[UNIT WEIGHT]</b> key.
Accumulate a quantity (temporary memory)	With first quantity on the scale, press <b>[+]</b> key. When display returns to normal, remove parts from the scale and count second quantity. Repeat until all items have been counted. Press <b>[*]</b> key to end accumulation. ⚡ If a mistake is made during accumulation, press <b>[-]</b> key to delete that quantity.
Clear a unit weight in the display	Press <b>[CLEAR]</b> key. or Enter <b>[0]</b> , then press the <b>[UNIT WEIGHT]</b> key.
Clear a tare weight in the display	Press <b>[TARE]</b> key. or Press the <b>[REZERO]</b> key. ⚡1 (See note 1 below.)

## 5.1.

## OPERATION

### QUICK GUIDE DC-688

#### Sample & Count

##### **A. Sampling Procedure** *(To develop the Unit Weight with Negative Counting)*

1. Press **[REZERO]** & **[TARE]** keys to set up the procedure.
2. Press **[CLEAR]** key to clear unit weight.
3. Place full container onto scale platform; press **[TARE]** key.  
(The weight display will zero)
4. Remove 10 piece sample from container; press **[PIECES]** key.  
The unit weight will be computed, and shown in the unit weight window.
5. For increased sampling accuracy, you can re-compute unit weight by removing additional pieces (about 10-20 at a time) from the container. If the "RECOMP" indicator is "on", then pressing **[PIECES]** key will recalculate the unit weight. It is not necessary to hand count the additional pieces. (You may re-compute again and again if the parts are not very uniform. )
6. Place the sample pieces back into the container.

##### **B. Counting Procedure** *( To count the in parts the full container)*

7. Key in the known tare weight. Press the **[TARE]** key.

The net weight of the container will be displayed, and the total Quantity in the container will be shown in the quantity window.

# DC-688 Limited Warranty

---

Rice Lake Weighing Systems (RLWS) warrants that all RLWS equipment and systems properly installed by a Distributor or Original Equipment Manufacturer (OEM) will operate per written specifications as confirmed by the Distributor/OEM and accepted by RLWS. All systems and components are warranted against defects in materials and workmanship for one year.

RLWS warrants that the equipment sold hereunder will conform to the current written specifications authorized by RLWS. RLWS warrants the equipment against faulty workmanship and defective materials. If any equipment fails to conform to these warranties, RLWS will, at its option, repair or replace such goods returned within the warranty period subject to the following conditions:

- Upon discovery by Buyer of such nonconformity, RLWS will be given prompt written notice with a detailed explanation of the alleged deficiencies.
- Individual electronic components returned to RLWS for warranty purposes must be packaged to prevent electrostatic discharge (ESD) damage in shipment. Packaging requirements are listed in a publication, "Protecting Your Components From Static Damage in Shipment," available from RLWS Equipment Return Department.
- Examination of such equipment by RLWS confirms that the nonconformity actually exists, and was not caused by accident, misuse, neglect, alteration, improper installation, improper repair or improper testing; RLWS shall be the sole judge of all alleged non-conformities.
- Such equipment has not been modified, altered, or changed by any person other than RLWS or its duly authorized repair agents.
- RLWS will have a reasonable time to repair or replace the defective equipment. Buyer is responsible for shipping charges both ways.
- In no event will RLWS be responsible for travel time or on-location repairs, including assembly or disassembly of equipment, nor will RLWS be liable for the cost of any repairs made by others.

**THESE WARRANTIES EXCLUDE ALL OTHER WARRANTIES, EXPRESSED OR IMPLIED, INCLUDING WITHOUT LIMITATION WARRANTIES OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE. NEITHER RLWS NOR DISTRIBUTOR WILL, IN ANY EVENT, BE LIABLE FOR INCIDENTAL OR CONSEQUENTIAL DAMAGES.**

**RLWS AND BUYER AGREE THAT RLWS'S SOLE AND EXCLUSIVE LIABILITY HEREUNDER IS LIMITED TO REPAIR OR REPLACEMENT OF SUCH GOODS. IN ACCEPTING THIS WARRANTY, THE BUYER WAIVES ANY AND ALL OTHER CLAIMS TO WARRANTY.**

**SHOULD THE SELLER BE OTHER THAN RLWS, THE BUYER AGREES TO LOOK ONLY TO THE SELLER FOR WARRANTY CLAIMS.**

No terms, conditions, understanding, or agreements purporting to modify the terms of this warranty shall have any legal effect unless made in writing and signed by a corporate officer of RLWS and the Buyer.

© 2002 Rice Lake Weighing Systems, Inc. Rice Lake, WI USA. All Rights Reserved.

**RICE LAKE WEIGHING SYSTEMS • 230 WEST COLEMAN STREET • RICE LAKE, WISCONSIN 54868 • USA**