



## ***Professional Weighing Equipment***

### **DCT SERIES**

#### **DUAL COUNTING SCALE**



## **Operating Manual**

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# Declaration of Conformity

Declaration of conformity for apparatus with CE mark


We hereby declare that the product to which this declaration refers conforms to the following standards.

Electronic scale:DCT Dual Counting Scale

Available Models:

DCT-50

DCT-100

Mark applied	EU Directive	Standards
	2004/108/EC	EN 61326-1: 2006

Signature:



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Date: 04/27/2014

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# Customer Service

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# Introduction

## **What you should know about these Operating Instructions:**

Tree® Professional Weighing Equipment products are simple to operate.

Nevertheless, you should read through these operating instructions in their entirety, so that you can make optimum use of the full potential and the diverse possibilities of the weighing scale in your daily work.

These operating instructions contain guidance in the form of pictograms and keyboard diagrams, which should help you in finding the required information:

For the labelling of potential hazards and advice, please see Safety below.

# Safety

## Representations and symbols

Important instructions, which involve safety, are highlighted with the appropriate mark:



## Safety recommendations

When using the weighing equipment in surroundings with increased safety requirements, the corresponding regulations must be observed.

The weighing scale may only be used with the power adapter supplied. Before connecting the power adapter to the scale, the user must ensure that the operating voltage stated on the power adapter is compliant with the mains voltage. If not, please contact Customer Service at the address above.

If the power adapter or its cable is damaged, the weighing scale must immediately be disconnected from the electricity supply (pull out the power adapter).

If there should be any reason to believe that it is no longer safe to operate the scale, it should be immediately unplugged from the electricity supply (pull out power adapter) and secured against inadvertent operation.

In carrying out maintenance work, it is essential to follow the recommendations set out in maintenance and servicing.

The weighing scale must not be operated in an area subject to explosion risks.

Care must be taken when weighing liquids to ensure that no liquid is spilled into the inside of the scale or into connections on the rear of the equipment or the power adapter. If liquid is spilled on the scale, it must immediately be unplugged from the main electricity supply (pull out power adapter).

The weighing scale may be operated after it has first been inspected by a service technician.

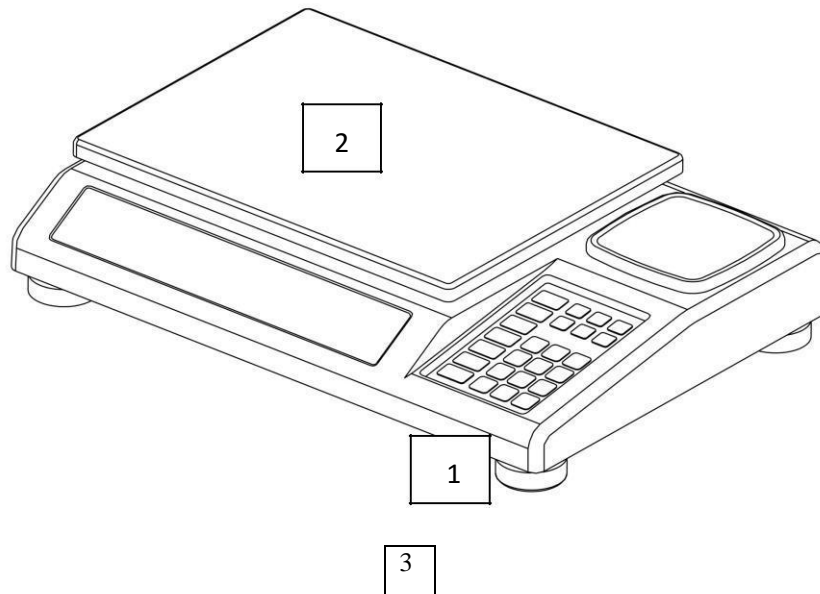
These operating instructions must be read by each user and should be easily accessible at the workplace at all times.

# Weight Scale

The weighing scale consists of these parts

- The weighing scale body (1)
- The scale-pan (2)
- The adapter (3)
- Operating manual.

Figure 2.1 your weighing scale



# Functions

The DCT Series are high-quality electronic precision weighing scales designed to function as counting scales with the following specifications.

## **Specifications:**

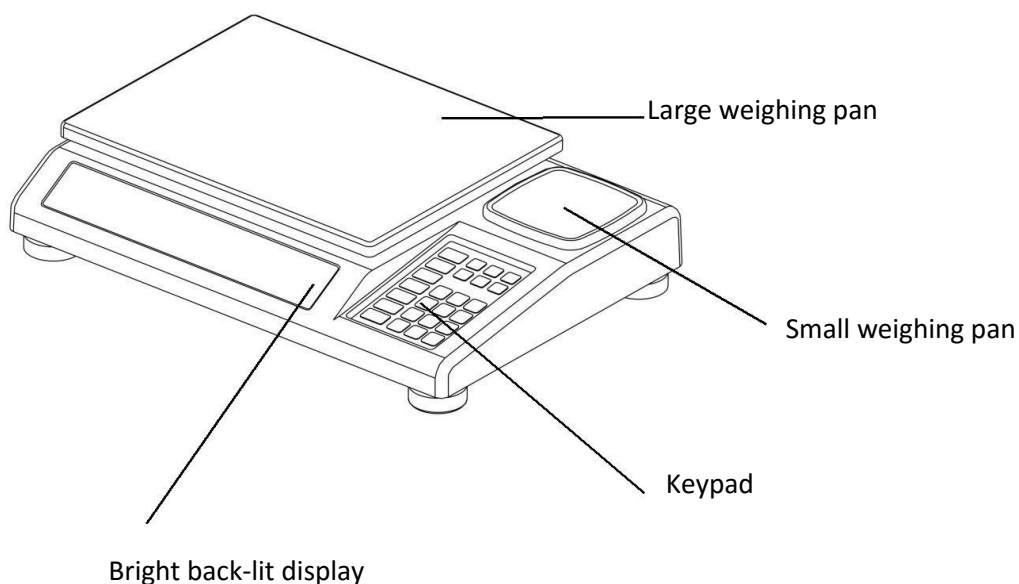
<b>Model number</b>	<b>Capacity</b>	<b>Division</b>	<b>Weighing pan Size</b>
DCT-50	50lb/2lb	0.001 lb./0.00005lb	345x260/114x114mm
DCT-100	100lb/4lb	0.002lb/0.0001lb	345x260/114x114mm
Package (Standard carton)	540x380x170mm		
Package (Master carton)	2 Units in one box: 555x395x370mm		
Operating Temperature	0°C - 40°C (32°F-104°F)		
Power source	Rechargeable batteries or AC/DC Adapter 10-12V/500mA		

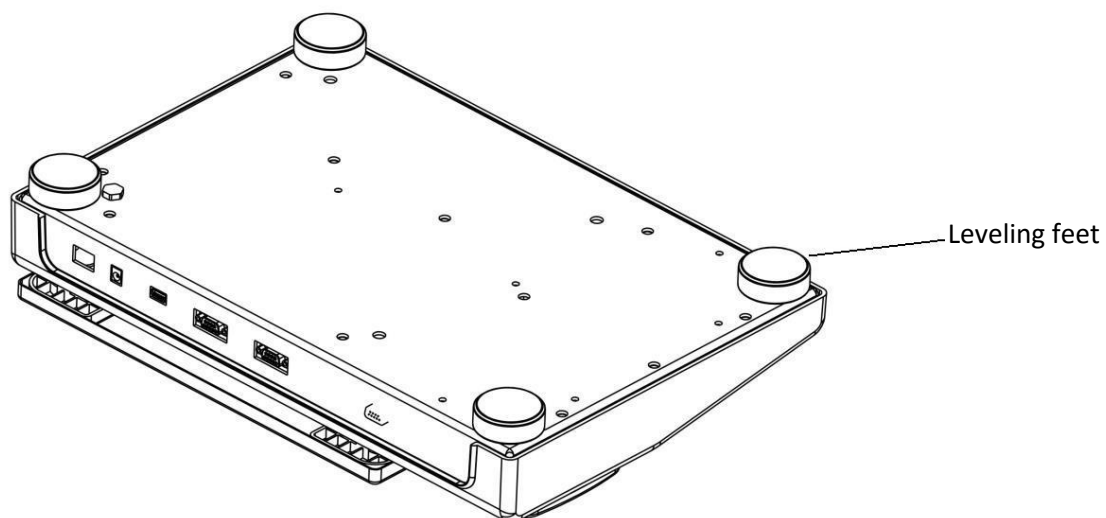
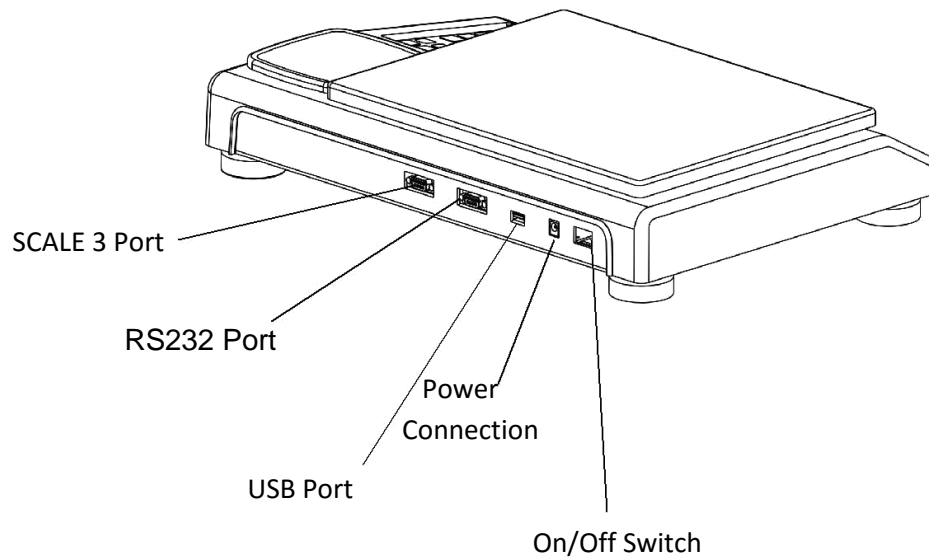
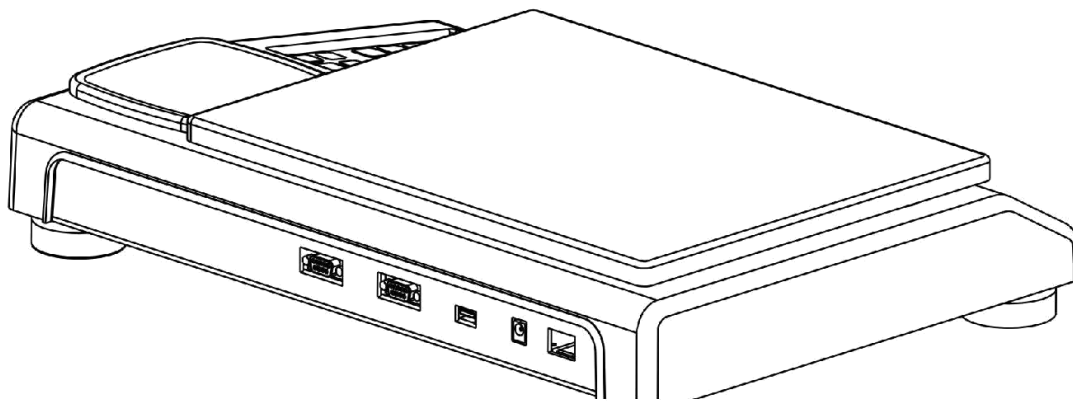


## Features

- Auto zero tracking
- Intelligent applications: weight unit conversion, parts counting
- Low battery indication
- Large LED
- Large heavy gauge stainless steel square pan
- Second smaller heavy gauge stainless steel pan
- Stability indication
- Auto calibration
- Selectable auto back light
- Unit switching kg or lb.
- Variable kg or lb reference weight calibration software
- 1.3 million internal resolution
- Selectable display resolutions, 50000d, 25000d, 10000d, 6000d, 5000d and etc.
- 24 bit A/D processor
- Highest quality sensor used
- Die cast aluminum sub-support bottom sensor support and steel thread footing
- Able to enter unit piece weight on numeric keyboard
- Able to enter tare weight on numeric keyboard
- Print out change from kg to g.

### Details of your weighing scale





## Application & Conformity

The Following are instructions of how to correctly use the weight scale:

The weighing scale may only be used for the weighing of solid-materials and of liquids filled into secure containers.

The maximum capacity of the weighing scale must never be exceeded; otherwise the weighing scale may be damaged.

In using the weighing scale in combination with other devices as well as with devices produced by other manufacturers, the appropriate regulations for the safe use of the relevant attachments and their application in accordance with instructions must be observed.

The weighing scale has been manufactured and tested in accordance with the standards and recommendations set out in the declaration of conformity.

The power adapter produced for the operation of the weighing scale complies with the appropriate electrical protection class.

The following applies to all DCT series weighing scales

Power supply:

Input: 110V or 230V AC (+/-15-20%); 50Hz to 60Hz

Output: 10-12v DC 500mA

Allowable ambient conditions

Temperature: 0°C - 40°C

Relative humidity: 25% - 85%, non-condensing

If you have any questions on the technical data or require detailed technical information on your balance, please contact your technical representative.

## Getting Started

The scale is packaged in an environmentally-friendly carton, which provides optimum protection for the balance during transportation.

We suggest that you keep the original packaging in order to avoid damage if you are shipping or transporting the scale to a different location. It is also the best way to keep it in the best conditions if it will not be used for an extended period of time.

In order to avoid damage, please follow the instructions provided below, when unpacking the scale:

- Unpack the scale carefully.
- When outside temperatures are very low, the scale should be stored for a couple hours and kept in its box in a dry room at normal temperature, so that no condensation settles on the unit when opening the box.
- Check the scale immediately after unpacking for any external visual damage. If there is any damage on scale, contact customer service immediately.
- If the scale is not to be used immediately after purchase, it should be stored in a dry place where fluctuations in temperature are low. (Reference pg. 21).
- Read through these operating instruction, before you work with the unit and pay attention to the Safety recommendations (reference Safety pg. 6).

## Delivery

Inspect delivery for completeness immediately on unpacking all components.

### **Checklist for complete delivery**

	<b>Component delivered present yes / no</b>
Weighing unit body	
Weighing pan(s)	
Power adapter	
Operating manual	

# Assembly & Installation

The weighing scale is delivered in a partly dismantled condition. Assemble the individual components in the following sequence:

- Place your machine on a level, clean, and dry surface to obtain accurate readings.
- Place the stainless steel platters on top of the plastic platter with the flat side facing up.

## Connecting the AC Adapter

The following Safety recommendations must be observed when connecting the balance:



The Scale should only be connected to the mains voltage socket with the power adapter supplied. Check before connecting the power adapter to the mains socket, that the operating voltage stated on the power adapter complies with the local mains voltage. If the operating voltage is not the same as the mains voltage, the power adapter must not be connected to the mains socket and contact customer service.

## Placement of Scale

The location in which the scale is placed is very important in order for the scale to work to its full potential. Certain conditions can affect the capabilities of the scale, conditions like: the presence of air flow, variations in temperature, and direct sunlight. Please follow the recommendations given below in choosing a location to place your scale.

- Place the scale on a solid, firm and preferably vibration-proof, horizontal base
- Make sure that the weighing machine cannot be shaken or knocked over
- Protect from direct solar radiation
- Avoid drafts and excessive temperature fluctuations
- Avoid placing the scale near or on any magnetic surfaces.

The balance is fitted with one bubble level, and adjustable feet for level-control that allow for small height differences or any unevenness in the surface on which the balance is placed.

The screw feet must be adjusted so that the air bubble is precisely in the center of the sight glass of the bubble level (see Fig.1)

Place the scale horizontally and keep the bubble inside the bubble level aligned with the circle (Fig.1). In order to get exact measurements, the balance must be carefully leveled after each re-location.

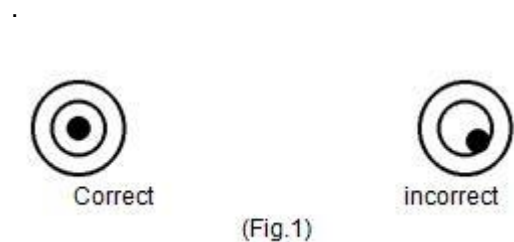
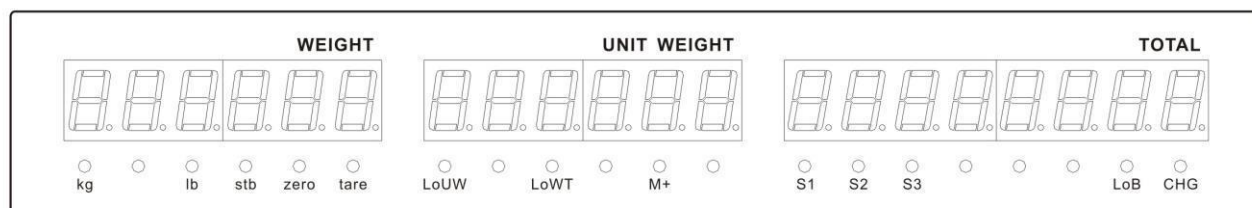
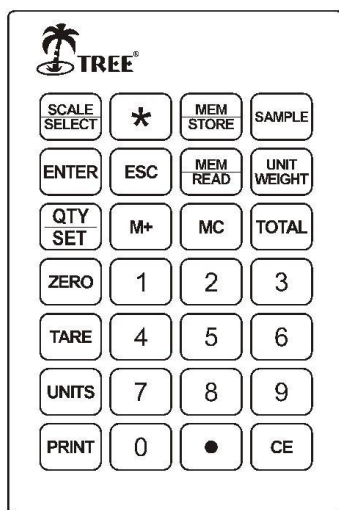


Fig. 1 Correct leveling with the aid of the bubble level and adjusting feet.

## Application Menu



## Display messages

- Kg- Unit of measure
- Lb.- Unit of measure
- Stb - Stable indication
- Zero: ZERO INDICATOR turns on when the scale is in the zero position
- Tare: TARE INDICATOR turns on when this function is used
- LoUW: turns on when sample unit weight is not heavy enough for accurate counting
- LoWT: turns on when sample number is not enough for accurate counting
- M+ is used when storing the counts data; this data is memorized by pressing this key and can be accumulated up to 99 times.
- S1: SCALE 1 working state
- S2: SCALE 2 working state
- S3: SCALE 3 working state
- LoB: low voltage, please charge battery
- CHG: charged state, red LED lights up when charging, when the battery is fully charged, Red and Green LED lights flash alternately.

## Key Functions

- SCALE/SELECT: Press this button to select available counting scale among scale 1, scale 2, and scale 3. You can only choose to use one of them at a time.
  - SCALE 1: Main counting scale, the bigger platform
  - SCALE 2: Smaller counting scale offers more accuracy
  - SCALE 3: Extra connection platform. When we get the sample weight from SCALE 2, we can use this platform to count more samples.Operation way: press "Scale/Select" key, a weight line will show flashed "SCALE 1" Press "Scale/ Select" key to select then press "Enter" key to confirm.
- "Unit" key changes the unit of measure between kg. and lb.
- "Zero" key sets display to zero or subtract the container weight. The zero range is <10% of full capacity. Zero LED indicator will illuminate when you active the zero function.
- "Tare" key subtracts the weight of a container placed on the weighing platform. The tare range is 100% full capacity. Press the Tare key to enable the Auto-Tare function, the Tare LED indicator will illuminate when you activate the Tare function.
  - Operation way 1: turn on the scale and wait for "Zero" mode then place container on the platform and press "Tare" key, Weight line will show flashed 0.0000, Tare LED indicator will light up when you activate it.
  - Operation way 2: (new version function) turn on the scale and wait for "Zero" mode key in the number of tare, press<TARE>key, WEIGHT line will show - X.XXX, ZERO LED indicator will light up when you activate it.
- PRINTER key is used to transmit data to a printer, computer, or other device. It should be connect to PC or printer by USB or RS232.
- ENTER key has the same function as it would on a computer keyboard.

- MEM/STORE key is the SAMPLE WEIGHT MEMORY KEY. Press this key to memorize sample weight, scale can memorize up to 16 different sample weights.  
E.x.: if you want to store sample weigh 0.22047 (1/1000 lb) at place 7, please operate as below:  
Press “MEM/STORE”, WEIGHT line will show flashed [01], press [\* ] to select storage place 7 then press ENTER to confirm.
- MEM/READ key is the SAMPLE WEIGHT READ KEY. Press this key to recall the memorized sample weight, if more than one sample weight is memorized continue to press this key until the correct sample weight is selected.  
Second operation way: input unit weight storage place by number key then press “MEM/READ” key to catch unit weight.
- “M+” MEMORY KEY is used to store the counting data. This data is memorized by pressing this key and can be saved in the memory up to 99 times.  
Operation: place weight then press “M+”, WEIGHT line will show how many times =XX=,UNIT WEIGHT line shows flashed [Add], press <Enter> key to confirm it and back to counting mode. M+ LED indicator will light up when you activate it. Press [TOTAL] key to call out the total value of accumulation
- “MC” key is used to clear the stored counting data.  
Operation: press the “MC” key when the M+LED lights up, WEIGHT line will show how many times =XX =,when the UNIT WEIGHT line shows flashed “CLr”, press “Enter” to light off.
- “SAMPLE” key is used when setting the counted number of samples on the platter into the scale memory.
- UNIT WEIGHT is used when setting the known unit weight data into the scale during normal operation. (1/1000kg or 1/1000lb)
- “QTY/SET” key is used to switch between the pieces counting function and quantity check weighing function.  
Warning setting of minimum or maximum weight.  
Press “QTY/SET” key, the display will show CH=OFF, press the “Enter” key to select CH=ON. Then press [\*] key, UNIT WEIGHT line flashed, press number key to input minimum weight. Press [\*] key, TOTAL line flashed, press number key to input maximum weight. Press “QTY/SET” key to exit setting mode and back to weighing mode.  
If the weight placed on the scale is under the set minimum weight at counting mode, the scale will transmit a tone. Also, if the weight placed on the scale exceeds maximum weight, the scale will transmit another tone.
- NUMERIC (0-9) keys are used for setting numeric data for sample numbers, sample weights or to set a limit for the HI/LO settings.
- [\*] Key is used to change the division when the scale is in SCALE 3 mode.
- “TOTAL” key displays the accumulated total pieces on the scale
- “ESC” key is used to exit from the current menu
- “CE” key is used for cancelling the numeric setting data or cancels the previous unit weight data.



## Program options

Besides performing accurate simple weighing, your versatile weighing scale can also perform pieces counting

### Pieces counting

#### Counting pieces with known sample unit weight

- Turn scale on
- Wait for "0" to appear on the display. If necessary, press "Zero" key to set the display to "0" Key in unit weight, press "Unit Weight" key to confirm
- Store the unit weight by pressing "Mem/Store" key, the display will show a flashing number for example "01", this is the location where the stored sample unit weight can be found. Press [\*] key to toggle between 01-16, press the "Enter" key to confirm the selection.
- Press the "Scale/Select" key to select either SCALE 1 or SCALE 3, be sure to place the additional pieces on the scale that is selected.

\*\*\*NOTE: The items being weighed should be within the selected scales capacity.

#### Counting pieces without known sample unit weight

- Turn scale on
- Wait for "0" to appear on the display. If necessary, press "Zero" key to set the display to "0"
- Press "Scale/ Select" key to select SCALE 2, press "ENTER" to confirm
- Put a pre-known number of samples onto SCALE 2, key-in the known number using the numeric keypad.
- Press "Sample" to get the sample unit weight
- Press the "Scale/Select" key to select either SCALE 1 or SCALE 3, be sure to place the additional pieces on the scale that is selected, it will display the total number of items.

\*\*\*NOTE: The items being weighed should be within the selected scales capacity.

## Select a pre-stored unit weight

Key in the number of the pre-stored weight (01-16) using the numeric key pad, press "MEM/READ" key and select the pre-stored sample unit weight, press ENTER to confirm.

## High/Low Check Weighing with Counting

- Turn scale on
- Wait for "0" to appear on the display. If necessary, press "Zero" key to set the display to "0"
- Press "Qty./Set" key, display will show CH=OFF or CH=ON
- Press the "Enter" key to select "ON"
- Press [\*] key, display will show a flashing "0" at UNIT WEIGHT, key in the lower limit using the numeric key pad, press [\*] gain, display will show a flashing "0" at TOTAL, key in the upper limit using the numeric keypad.
- Press "Qty/Set" key to confirm the setting and return to weighing mode.
- Press the "Scale/Select" key to select either SCALE 1 or SCALE 3, be sure to place the additional pieces on the scale that is selected.

\*\*\*NOTE: When adding items onto the scale, the scale will beep in a particular tone if the weight (number of items) is less than the lower limit and beep in another tone if it is higher than the upper limit.

# Calibration

Using an External Calibration Weight:

Calibration is required when the weighing scale is initially installed or if the scale is moved to a substantial distance from the original location.

## Scale 1 Calibration

- Turn on the scale and let it warm up for about 1 minute.
- As the scale is counting down, press the following buttons in order [1], [3], [1], [1] then press "ENTER".
- Display will show the following: 'WEIGHT DISPLAY' shows SCALE 1, 'UNIT WEIGHT' shows CAL-0, 'TOTAL DISPLAY' will show A/D value.
- Press the "Unit" key to select a unit of measure (kg. or lb.)
- Press "Enter" to set zero point (UNIT WEIGHT will show CAL-0 flashing for a few seconds and then changes to XXXX to set the calibration weight)
- Press the "CE" key and then press the corresponding number buttons based off the weight you are using to calibrate (example: if you are using 5lbs to calibrate the scale you would key in 5lbs).
- Calibration weight will show in the UNIT WEIGHT display, put the corresponding weight on scale.
- Press the "Enter" key, and the UNIT WEIGHT display will show flashing XX and then changes to XX.XXX lb. Once this occurs the calibration process is complete.

\*\*\*Note: Make sure nothing is loaded on the platform before you are asked to place the calibration weight. Once calibration is complete you will need to reboot the scale and place the sample test weight on the platter to assure the calibration was completed correctly.

## Linearity Calibrations

### Scale 1 linearity calibration

- Turn on the power at the left back side of the scale
- Press the following buttons in order [1], [3], [1], [4] then press the "Enter" key when the scale examining itself.
- **MENU SETTING:**
  - 'WEIGHT DISPLAY' shows LINE 1
  - 'UNIT WEIGHT display' shows 0.0000,
  - 'TOTAL display' will show A/D value.
  - Then press (UNIT) button to select calibration units between kg and lb.
- **CALIBRATION:**
  - Make sure nothing loaded on the bigger platform.

- Press (ENTER) button to set zero point. (UNIT WEIGHT display will show 0.0000 flashing for few seconds and then changes to XX.XX to set the calibration weight).
- Press the “Enter” key button, the UNIT WEIGHT display will show flashing XX and then put the accordingly weight on the platform and it will change to XX.XXX lb.
- Once this occurs the calibration process is complete.

## Scale 2 Calibration

- Turn on scale
- As the scale is counting down, press the following buttons in order [1], [3], [1] and [2] then press the ENTER key.
- Display will show the following: ‘WEIGHT DISPLAY’ shows SCALE 2, ‘UNIT WEIGHT’ shows CAL-0, ‘TOTAL DISPLAY’ will show A/D value.
- Press ENTER to set zero point (UNIT WEIGHT will show CAL-0 flashing for a few seconds and then changes to XXXX to set the calibration weight).
- Press “CE” key and then press corresponding number buttons based off of the amount of weight you are using to calibrate (example: if you are using 1lb to calibrate the scale you would key in 1lb).
- Calibration weight will show in the UNIT WEIGHT display, put the corresponding weight on the scale.
- Press the “Enter” key button, the UNIT WEIGHT display will show flashing XX and then put the accordingly weight on the platform and it will change to XX.XXX lb.
- Once this occurs the calibration process is complete.

\*\*\*Note: Make sure nothing is loaded on the platform before you are asked to place the calibration weight. Once calibration is complete you will need to reboot the scale and place the sample test weight on the platter to assure the calibration was completed correctly.

## Scale 2 linearity calibration

- Turn on the power at the left back side of the scale
- Press the following buttons in order [1], [3], [1], [5] then press the “Enter” key when the scale examining itself.
- **MENU SETTING:**
- ‘WEIGHT DISPLAY’ shows LINE 1
- ‘UNIT WEIGHT display’ shows 0.0000,
- ‘TOTAL display’ will show A/D value.
- Then press (UNIT) button to select calibration units between kg and lb.
- **CALIBRATION:**
- Make sure nothing loaded on the bigger platform.
- Press (ENTER) button to set zero point. (UNIT WEIGHT display will show 0.0000 flashing for few seconds and then changes to XX.XX to set the calibration weight).

- Press the “Enter” key button, the UNIT WEIGHT display will show flashing XX and then put the accordingly weight on the platform and it will change to XX.XXX lb. Once this occurs the calibration process is complete.

### Scale 3 Calibration

First make a connection to SCALE 3 through DB9

SCALE 3 DB9	Load Cell DB9
1 S-	1 S-
2 S+	2 S+
3/6 V+	3/6 V+
4 V-	4 V-
5 GND	5 GND
7-9 NC	7-9 NC

- Turn on scale
- As the scale is counting down, press the following buttons in order [1], [3], [1], [3] then press “Enter”
- The following must be completed before beginning the calibration process for SCALE 3:
  - WEIGHT DISPLAY shows SCALE 3
  - UNIT WEIGHT shows “xxxx” (this is the full capacity of SCALE 3)
  - TOTAL DISPLAY will show “d=xx” (this is the division of SCALE 3)
  - Press UNIT key to select full capacity in a unit of measure (kg. or lb.)
  - Press the “CE” Key to set the full capacity, key in the number through the numeric keypad
  - Press (\*) to set the division and key in the number through the numeric keypad
  - Press “Enter” to confirm
- Now begin the Calibration process:
  - Press “Unit” key to select a unit of measure (kg. or lb.)
  - Press “Enter” to set zero point (UNIT WEIGHT will show CAL-0 flashing for a few seconds and then changes to XXXX to set the calibration weight)
  - Press “CE” key and then press the corresponding number buttons based off the weight you are using to calibrate (example: if you are using 1lb to calibrate the scale you would key in 1lb).
  - Calibration weight will show in the UNIT WEIGHT display, put the corresponding weight on scale.
  - Press the “Enter” key, the UNIT WEIGHT display will show flashing XX and then changes to XX.XXX lb. Once this occurs the calibration process is complete.

- \*\*\*Note: Make sure nothing is loaded on the platform before you are asked to place the calibration weight. Once calibration is complete you will need to reboot the scale and place the sample test weight on the platter to assure the calibration was completed correctly.

## **CHANGE CAPACITY/DIVISION**

- Turn on the power at the left back side of the scale.
- Then button (1), (4), (1), (1) then press ENTER button when the scale is examining itself.
- WEIGHT show Scale 1
- UNIT WEIGHT shows capacity 50 lb.
- TOTAL show division 0.002
- Press <scale/select> button
- Select from Scale 1 or Scale 2.
- Press ENTER to change settings
- Scale 1 TOTAL will show division (0.001, 0.01, 0.005, 0.002) 1/1000lb.
- Scale 2 TOTAL will show (0.0001, 0.00005, 0.0005, 0.0002) 1/1000lbs.
- REBOOT after change

## **CHANGE CAPACITY (DO NOT USE THIS FUNCTION UNLESS NECESSARY) ONLY FOR PRODUCTION IN FACTORY**

- Turn on the power at the left back side of the scale.
- Then button (1), (4), (1), (2) then press ENTER button when the scale is examining itself.
- WEIGHT will show F=
- UNIT WEIGHT shows capacity 2 lb.
- Total will show 50 lb.
- Press <scale/select> button
- UNIT WEIGHT will show 5lbs.
- TOTAL will show 100lbs.
- REBOOT after change.

### **DCT V 1.1 version manual (replaces U12 SM8958 DIP)**

1. Version number (dct V1.1) would be displayed when the power is on.
2. New Function: capacity selectable (must be matched with load cell capacity)
  - Turn on the scale
  - As the scale is counting down, press the following buttons in order (1), (4), (1), (2) then press ENTER
  - Display will show the following 'WEIHT DISPLAY' shows F=,
  - 'UNIT WEIGHT' shows 2lbs.
  - 'TOTAL DISPLAY' will show 50 lbs.
  - Press SCALE/SELECT
  - Display will show the following: 'WEIGHT DISPLAY' shows F=

- 'UNIT WEIGHT' shows 5 lbs.
- 'TOTAL DISPLAY' will show 110lbs.

Reset the scale after modification

3. New Function: division selectable

- Turn on the scale
- As the scale is counting down, press the following buttons in order (1), (4), (1), (1) then press ENTER
- Display will show the following 'WEIGHT DISPLAY' Scale 1,
- 'UNIT WEIGHT' shows 50lbs.
- 'TOTAL DISPLAY' will show 0.002
- Press SCALE/SELECT
- To select available counting scale among SCALE 1, SCALE 2
- Press ENTER
- Modify the division of SCALE1 TOTAL line (0.001, 0.01, 0.005, 0.002) 1/1000lbs.
- Modify the division of SCALE 2 TOTAL line (0.0001, 0.00005, 0.0005, 0.0002) 1/1000lbs.

Reset the scale after modification

4. New Function: input tare weight by button in advance

- Operation way 2: turn on the scale
- Input the container weight by number key
- Press TARE key
- WEIGHT LINE will show Zero
- LED indicator will light up when you activate it

5.

Modify the single weight unit error from RS232/USB. (replace U5 CSU825 SMD)

WT:1.1024lb.

UW: 0.05000lb/1000

TOT: 22048QTY

WT:0.5000kg

UW: 0.02268kg/1000

TOT: 22048QTY

### **DCT V 1.2 version manual (replaces U12 SM8958 DIP)**

1. Version number (dct V1.2) would be displayed when the power is on.
2. New Function: capacity selectable (must be matched with load cell capacity)
  - Turn on the scale

- As the scale is counting down, press the following buttons in order (1), (4), (1), (2) then press ENTER
- Display will show the following 'WEIHT DISPLAY' shows F=,
- 'UNIT WEIGHT' shows 2lbs.
- 'TOTAL DISPLAY' will show 50 lbs.
- Press SCALE/SELECT
- Display will show the following: 'WEIGHT DISPLAY' shows F=
- 'UNIT WEIGHT' shows 5 lbs.
- 'TOTAL DISPLAY' will show 110lbs.

Reset the scale after modification

3. New Function: division selectable

- Turn on the scale
- As the scale is counting down, press the following buttons in order (1), (4), (1), (1) then press ENTER
- Display will show the following 'WEIGHT DISPLAY' Scale 1,
- 'UNIT WEIGHT' shows 50lbs.
- 'TOTAL DISPLAY' will show 0.002
- Press SCALE/SELECT
- To select available counting scale among SCALE 1, SCALE 2
- Press ENTER
- Modify the division of SCALE1 TOTAL line (0.001, 0.01, 0.005, 0.002) 1/1000lbs.
- Modify the division of SCALE 2 TOTAL line (0.0001, 0.00005, 0.0005, 0.0002) 1/1000lbs.

4. New Function: added numeric tare function

- Operation way 2: turn on the scale
- Key in the known weight of container (example: gross weight is 200lb. and container is 40lbs., put the 200lb. on scale, key 40 then press tare, scale will show 160lbs.

5. Modify the single weight unit error from RS232/USB. (replace U5 CSU825 SMD)

WT:1.1024lb.

UW: 0.05000lb/1000

TOT: 22048QTY

WT:0.5000kg

UW: 0.02268kg/1000

TOT: 22048QTY



### **DCT V 1.3 version manual (replaces U12 SM8958 DIP)**

1. Version number (dct V1.3) would be displayed when the power is on.
2. New Function: capacity selectable (must be matched with load cell capacity)
  - Turn on the scale
  - As the scale is counting down, press the following buttons in order (1), (4), (1), (2) then press ENTER
  - Display will show the following 'WEIHT DISPLAY' shows F=,
  - 'UNIT WEIGHT' shows 2lbs.
  - 'TOTAL DISPLAY' will show 50 lbs.
  - Press SCALE/SELECT
  - Display will show the following: 'WEIGHT DISPLAY' shows F=
  - 'UNIT WEIGHT' shows 5 lbs.
  - 'TOTAL DISPLAY' will show 110lbs.

Reset the scale after modification

3. New Function: division selectable
  - Turn on the scale
  - As the scale is counting down, press the following buttons in order (1), (4), (1), (1) then press ENTER
  - Display will show the following 'WEIGHT DISPLAY' Scale 1,
  - 'UNIT WEIGHT' shows 50lbs.
  - 'TOTAL DISPLAY' will show 0.002
  - Press SCALE/SELECT
  - To select available counting scale among SCALE 1, SCALE 2
  - Press ENTER
  - Modify the division of SCALE1 TOTAL line (0.001, 0.01, 0.005, 0.002) 1/1000lbs.
  - Modify the division of SCALE 2 TOTAL line (0.0001, 0.00005, 0.0005, 0.0002) 1/1000lbs.

Reset the scale after modification

4. New Function: added numeric tare function during sample counting
  - Operation way 2: turn on the scale

- Put the parts with the container on the scale
- Key in the unit weight of container (example: gross weight is 1.1024lb. and unit weight is 0.05000lb/1000, key in 0.05 then press unit weight, scale will show WT: 1.1024lb, UW: 0.05000lb/1000, TOT 22048 QTY, if known weight of container is 1 lb., key in 1 then press tare, scale will show WT: 0.1024lb, UW: 0.05000lb/1000, TOT 2048 QTY.

5. Modify the single weight unit error from RS232/USB. (replace U5 CSU825 SMD)

WT:1.1024lb.

UW: 0.05000lb/1000

TOT: 22048QTY

WT:0.5000kg

UW: 0.02268kg/1000

TOT: 22048QTY

## Maintenance & Service



**DANGER**

For maintenance-work, the balance must be disconnected from the power supply (remove power adapter plug from socket). Also ensure that the balance cannot be connected to the power supply during the work by a third party.

Make sure that no liquid spills into the scale while performing maintenance work. If liquid is spilled on the scale, it must be inspected by a service technician.

Regularly perform maintenance to the weighing pan and the weighing pan holder by removing any dirt or dust from under the weighing pan and on the weighing scale housing. Use a soft brush or a soft, lint-free cloth, moistened with a mild soap solution.

Never use solvents, acids, alkalis, paint thinners, scouring powders or other aggressive or corrosive chemicals for cleaning; these substances can cause damage to the surfaces of the scale housing.

## Transport & Storage

Your weighing machine is a precision instrument, treat it carefully. Avoid shaking, severe impacts and vibration during the transportation. Make sure that there are no marked temperature fluctuations during the transportation and that the weighing machine does not become damp (condensation).

If you would like to take the weighing machine out of service for an extended period, disconnect it from the electricity supply, clean it thoroughly (refer to Maintenance & Service) and store it in a place which meets the following conditions:

- No violent shaking, no vibrations
- Minimum temperature fluctuations
- No direct solar radiation
- Minimum moisture

## Warranty

The products are under warranty against factory defects for a period of two (2) years from the date of shipment.

For Customers within the lower 48 states of the continental United States. LW Measurements will pay for freight both ways for the first 30 days after purchase. After 30 days expire the customer is responsible for shipping the product back to us. After the product is received we will inspect it and as necessary we will repair or replace and will ship the product back to the customer at our expense.

Any new scales returned for warranty must be properly packaged in the original box. If they are not properly packed an in the original box, the customer pays for shipping cost. If we determine there is a factory defect, we will pay for the shipping back. If we determine that it is not a factory defect, the customer will pay shipping.

For Customers outside the lower 48 States, including Mexico, Canada, Puerto Rico, Hawaii, Alaska and all other countries, customers must pay for shipping.

Our warranty does not cover misuse or neglect including but not limited to battery or water damage, overloading, and chewed or cut wires. If the product is found to have been misused or damaged by the customer, LW measurements is not responsible for the cost of return.

For warranty claims please go online to [lwmeasurements.com](http://lwmeasurements.com) and fill out the warranty submission form or call your customer service representative.