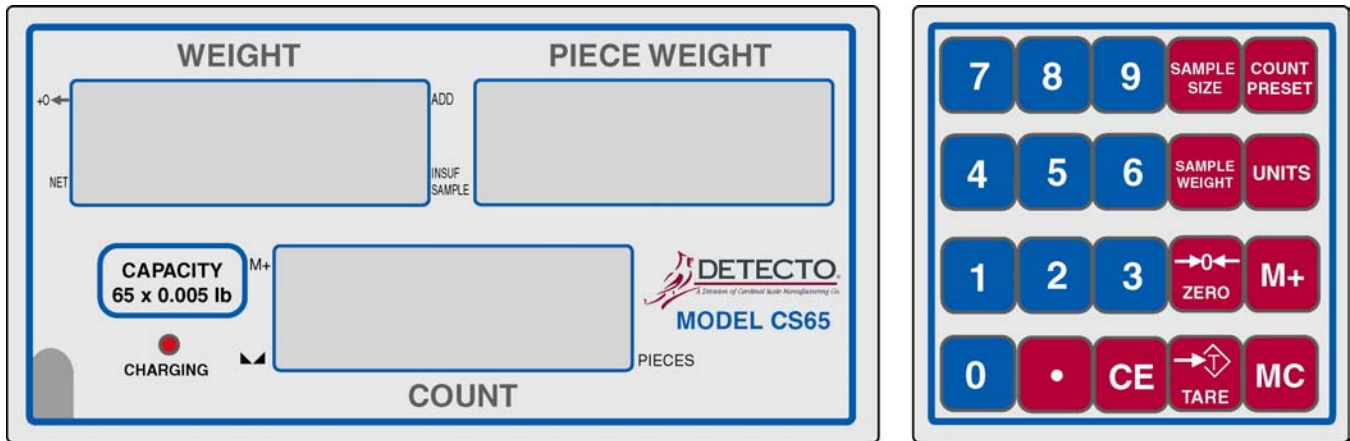


KEY FUNCTIONS

This section describes the use of each of the keys on the Digital Counting Scale. It will be helpful to refer to the scale keyboard or the figure below when reading this section.



The membrane keyboard is not to be operated with pointed objects (pencils, pens, fingernails, etc). Damage to keyboard resulting from this practice will **NOT** be covered under warranty.

SAMPLE SIZE This key is used to weigh a known number of pieces in preparation for a new counting operation. Sample quantities are entered using the numeric keypad in any quantity desired.

COUNT PRESET This key is used when setting the Quantity and Weight Preset limits. During a counting operation (with the limits set) if the quantity or weight exceeds the limits, the error beeper will sound and an error message will flash on the display.

SAMPLE WEIGHT Pressing this key will display the calculated average piece weight from the current sampling and counting operation. It will also allow the manual entry of a known average piece weight (using the numeric keys) to be used in the next counting operation.

UNITS Pressing this key will toggle the weighing units between pounds (lb) and kilograms (kg). **NOTE!** The currently selected weighing unit is indicated by illuminating either the lb or kg annunciator.

→0← ZERO The **ZERO** key is used to perform a variety of functions depending on the current mode of operation:

Weight Display Mode (lb or kg annunciator on): Pressing the **ZERO** key will set the weight display to zero and turn on the ZERO annunciator if the displayed weight is within $\pm 4\%$ of scale capacity.

Calibration and Operational Setup Mode: Pressing the **ZERO** key and then pressing the setup parameter number on the numeric keypad while **Enter** is displayed will enter that setup mode.

KEY FUNCTIONS, Cont.

M+ Pressing the **M+** key will cause the scale to display the contents of the accumulator (the number of pieces accumulated since the last time the accumulator was cleared).

The **M+** key is also used to add the current piece count value to the accumulator. The M+ annunciator will be selected to indicate the accumulation has taken place.



TARE

The **TARE** key is used to display the current tare weight (or zero if no tare has been entered) and/or using the numeric keypad, to enter a new tare weight. It is also used when entering a tare under a Preset number.

MC The **MC** key is used to clear the accumulator. The M+ and ADD annunciators will turn off to indicate the clearing has taken place.

0 ~ 9 These keys are used to enter numeric data during normal operations as well as during calibration and operational setup.

- This is the decimal point key. It is used to enter a decimal point where required when entering numeric data.

CE The **CE** key is used to perform different functions depending on the current mode of operation:

- *Data Entry:* The **CE** key is used to clear an incorrect entry from the display without processing the data. If an incorrect entry is made, press the **CE** key and re-enter the correct data.
- *Count Mode:* Pressing the **CE** key while in the Count mode will finish the counting operation, update the quantity and weight accumulators and return the scale to the Weight mode.

ANNUNCIATORS

The annunciators are turned on to indicate that the scale is in the mode corresponding to the annunciator label or that the status indicated by the label is active. The following describes the functions of each annunciator.

+0← (Center-of-Zero)

The Center-of-Zero annunciator is located to the left of the WEIGHT display and is selected to indicate that the weight is within +/- 1/4 division of the center of zero.

NET

The NET annunciator is selected to show that the weight displayed is the net weight. Net weight is determined by subtracting the stored tare weight from the gross or scale weight. The tare weight, usually the weight of the container, is entered using the tare key. Note that the NET annunciator is only active when a zero tare weight or tare weight value is stored and the display is in the weight mode as shown by the illumination of the lb or kg annunciator.



(Low Battery)

The Low Battery annunciator is used with the battery operation and will turn on to indicate that the internal battery requires charging. No change in operation will occur until just before the battery voltage drops to a level where operation is affected. At this level, the scale will automatically turn itself off.

NOTE! When the battery needs to be recharged, the CHARGING LED will turn Red. After the battery has been recharged, the CHARGING LED will turn Green.

kg

The kg annunciator is turned on to show that the weight displayed is in kilograms. The **UNITS** key may be used to select kilogram as the weighing units.

lb

The lb annunciator is turned on to show that the weight displayed is in pounds. The **UNITS** key may be used to select pounds as the weighing units.

ADD

The ADD annunciator is located between the WEIGHT and PIECE WEIGHT display and is selected to show that the sample is too small to calculate an accurate piece weight. Increase the sample size to turn off the ADD annunciator.

INSUF SAMPLE

The INSUF SAMPLE annunciator is located between the WEIGHT and PIECE WEIGHT display and is selected to show that the sample is too small to calculate an accurate piece weight. If the counting function is continued without increasing the sample size, the scale will still operate even though accuracy will be affected.

M+

The M+ annunciator is selected to show that the display is in the Accumulator mode and that the value displayed is the current contents of the accumulator. Individual counts are adjusted via the (M+) and (MC) keys or optionally, any count may be entered using the numeric keypad. Note that when both the M+ and ADD annunciators are selected, the current count has been added to the accumulator.

▲▲ (Stable)

The (Stable) annunciator is located to the right of the COUNT display and is selected when the weight display is stable.

OPERATION

Power Switch

The Power Switch is located on the bottom left side panel towards the front of the scale. Place the power switch in the on position. The scale will perform a brief lamp test. This test consists of illuminating all display segments and annunciator LED's to allow the operator to make a visual verification that the display is operational. After completion of the lamp test, the scale will display the model number and software revision level, then the weight display will show zero weight, indicating the scale is ready for use.

Display Backlight

Backlight On

Press the **ZERO** key. The Piece Weight display will show $\llcorner \text{Enter}$. With $\llcorner \text{Enter}$ displayed, press the **4** key on the numeric keypad. The backlight will be ON continuously.

Auto Backlight

Press the **ZERO** key. The Piece Weight display will show $\llcorner \text{Enter}$. With $\llcorner \text{Enter}$ displayed, press the **5** key on the numeric keypad. When the weight is over 10 divisions or any key is pressed, the display backlight will be switched on. When the weight returns to zero or the weight on platform is less than 10 divisions, the display backlight will switch off after 5 seconds.

Backlight Off

Press the **ZERO** key. The Piece Weight display will show $\llcorner \text{Enter}$. With $\llcorner \text{Enter}$ displayed, press the **6** key on the numeric keypad. The backlight will be OFF.

NOTE! The backlight mode is stored in memory and will be restored when the scale is switched off and back on again.

Metric Conversion

To change weighing units, simply press the **UNITS** key to toggle between pounds and kilograms. Note that either the lb or kg annunciator will illuminate to indicate which weighing unit is selected.



Before using the scale, it should be “warm up” (turned on and unloaded for approximately 15 to 20 minutes).

Weight Display

Displaying Weight

1. With the scale in the Weight mode (0 will be displayed on the Piece Weight and Count displays), place the item to be weighed on the scale platform.
2. The display will show the weight on the scale platform. The lb or kg annunciators will illuminate to indicate which unit of weight has been selected and that the scale is in the Weight mode. Note that the Piece Weight and Count display will remain at 0 (zero).

Zero the Weight Display

1. With the scale in the Weight mode (0 will be displayed on the Piece Weight and Count displays), press the **ZERO** key.
2. The Piece Weight display will show $\llcorner \text{Enter}$.
3. The weight display will return to zero. The ZERO annunciator will illuminate, indicating a center-of-zero gross weight condition.

OPERATION, Cont.

Counting

Weight of Sample is Unknown

1. With the scale in the Weight mode (0 is displayed on all displays), place the sample on the scale platform.
2. On the numeric keypad, enter the number of pieces in the sample.
3. While the display is blinking, press the **SAMPLE SIZE** key.
4. Add the pieces to be counted and read the total count on the Count display.
5. Remove the pieces from the scale.
6. Press the **CE** key to complete the counting operation and return to the Weight mode.

Sample Weight is Known

1. With the scale in the Weight mode (0 is displayed on all displays), using the numeric keypad, enter the piece weight of the sample.
2. Press the **SAMPLE WEIGHT** key.
3. Add the pieces to be counted and read the total count on the Count display.
4. Remove the pieces from the scale.
5. Press the **CE** key to complete the counting operation and return to the Weight mode.

Counting With An Insufficient Sample

1. With the scale in the Weight mode (0 is displayed on all displays), place the sample on the scale platform.
2. On the numeric keypad, enter the number of pieces in the sample.
3. While the display is blinking, press the **SAMPLE SIZE** key.
4. If the sample weight is too small, the INSUF SAMPLE and ADD annunciators will be turned on and the Count display will show the number of pieces to be added.
5. Add the number of pieces requested. Note that if the pieces are not added the INSUF SAMPLE annunciator will stay on to show the out-of-tolerance count.
6. Add the pieces to be counted and read the count.
7. Press the **CE** key to complete the counting operation and return to the Weight mode.

OPERATION, Cont.

Accumulator

Adding to the Count Accumulator

1. With the display showing the current count, press the **M+** key to add to the value of the Count Accumulator.
2. The Piece Weight display will display *Red*, then change to show the accumulator values (to indicate the addition to the accumulator has taken place). After 3 seconds, the scale will return to the counting mode.
3. Remove the pieces from the scale.
4. Press the **CE** key to complete the counting operation and return to the Weight mode.



Additional Count Accumulator additions cannot take place until the current counting operation has been completed and the scale weight returns to zero. Refer to Operational Setup, M+ Key Continuous Operation (1, 5).

Adding to the Weight Accumulator

1. With the scale in the Weight mode (*0* is displayed on all displays), place the item on the scale platform.
2. Press the **M+** key to add to the value of the Weight Accumulator.
3. The Piece Weight display will flash *Red*, then change to show the accumulator values (to indicate the addition to the accumulator has taken place). After 3 seconds, the scale will return to the weight mode.
4. Remove the item from the scale.
5. The scale is ready for the next counting or weight operation.



Additional Weight Accumulator additions cannot take place until the current weighing operation (scale weight returns to zero) has been completed. Refer to Operational Setup, M+ Key Continuous Operation (1, 5).

Displaying the Accumulators

With the scale in the Weight mode (*0* is displayed on all displays), press the **M+** key to display the content of the accumulators. The values of the accumulators will be displayed for 3 seconds, then return to the Weight mode display.

Clearing the Accumulators

Press the **MC** key. The accumulators will be reset to zero.

OPERATION, Cont.

Tare Weight Entry

Push Button Tare

1. With the scale in the Weight mode (0 is displayed on all displays), place the empty container on the scale platform.
2. Press the **TARE** key. The weight display will change to zero and the NET annunciator illuminates, indicating net weight is being displayed. The empty container's weight has been entered as "tare weight".

Pre-set Tare with Known Weight of Container

1. With the scale in the Weight mode (0 is displayed on all displays), press the **TARE** key. The display will flash *P r E t A*.
2. Using the numeric keypad, enter the desired tare (container) weight.
3. After the desired tare value has been entered, press the **TARE** key. The display will show the Net weight (Gross minus tare) and the NET annunciator will illuminate.
4. Proceed with the counting or weighing operation.

Pre-set Tare with Container on Scale

1. With the scale in the Weight mode (0 is displayed on all displays), place the container on the scale.
2. Read the weight of the container.
3. Using the numeric keypad, enter the container weight.
4. After the container weight has been entered, press the **TARE** key. The display will show the Net weight (Gross minus tare) and the NET annunciator will illuminate.
5. Proceed with the counting or weighing operation.

To Clear the Tare

To return to a zero tare, simply remove all material from the scale platform and press the **TARE** key, which will reset the tare weight to zero.

OPERATION, Cont.

Quantity Preset Hi Limit

The scale can store a Quantity Preset Hi Limit value. The scale will beep and the unit weight window will display a blinking *-Q.L.Y-* if the quantity is over the Hi limit value set.

1. Press the **COUNT PRESET** key (items can be on scale or platform can be empty).
2. The Weight display will change to show dashes (- - - -).
3. Using the numeric keypad, enter the Quantity Preset Hi Limit.
4. Press the **SAMPLE SIZE** key, followed by the **COUNT PRESET** key.
5. The scale will return to the Weight mode.

Weight Preset Hi Limit

The scale can store a Weight Preset Hi Limit value. The scale will beep and the unit weight window will display a blinking *-LWPST-* if the weight is over the Hi limit value set.

1. Press the **COUNT PRESET** key (items can be on scale or platform can be empty).
2. The Weight display will change to show dashes (- - - -).
3. Using the numeric keypad, enter the Weight Preset Hi Limit.
4. Press the **SAMPLE WEIGHT** key, followed by the **COUNT PRESET** key.
5. The scale will return to the Weight mode.

Clear the Quantity and Weight Preset Hi Limits

To clear the Quantity and/or Weight Preset Hi Limit, simply enter a "0" for the limit value.