Precise Counting Scale – GC

User Manual

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SRGC 20100415

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Specifications

Basic specification

Display Digit	LCD, height 17mm, 5/6/6(WEIGHT/PIECE WEIGHT/PIECES)
Pan Size(mm)	280 x 200 (WxL)
Dimensions(mm)	280x300x110(WxLxH)
Net Weight(kg)	3.6kg
Operating Temperature	0° C to +40° C
Relative Humidity	Less than 85%
Power	DC9V / 500mA, AC adapter; Built in 6V Rechargeable Battery
Interface	RS-232C (optional)

Series specification(EC TYPE/OIML APPROVED)

Model	**GC-6D**	**GC-15D**	**GC-30D**
Max_1 / Max_2=	3kg / 6kg	6kg / 15kg	15kg / 30kg
Min_1 / Min_2=	20g / 3kg	40g / 6kg	100g / 15kg
e_1 / e_2=	1g / 2g	2g / 5g	5g / 10g
Accuracy	1/3000(Dual)	1/3000(Dual)	1/3000(Dual)

Series specification(NON-APPROVED)

Model	**GC-3H**	**GC-6H**	**GC-15H**	**GC-30H**
Max. Capacity	3kg	6kg	15kg	30kg
d =	0.1g	0.2g	0.5g	1g
Accuracy	1/30000	1/30000	1/30000	1/30000

Display and keypad

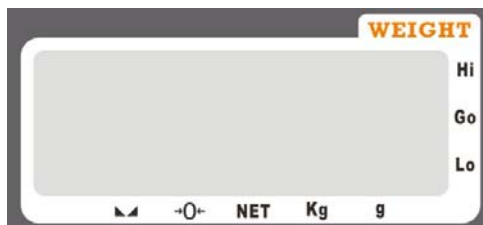## LCD Display

Displays

The display panel consists of three display windows and a set of function keypad.

Display	DESCRIPTION
WEIGHT	Displays the weight or the tared weight in g/kg.
PIECE WEIGHT	Displays the average piece weight either by sampling or direct input.
PIECES	Display the counts on the weighing pan.

ICON	INDICATOR	DESCRIPTION
Hi	Upper bound indicator	When the ALARM function is activated, if the weight is over the upper bound, ► is positioned on the left of Hi icon and starts flashing.
Go	Range indicator	When the ALARM function is activated, if the weight is between HI and LO range, ► is positioned on the left of Go icon and starts flashing.
Lo	Lower bound indicator	When the ALARM function is activated, if the weight is under the lower bound, ► is positioned on the left of Lo icon and starts flashing.
◣◢	Stable indicator	▼ is positioned above of the icon when scale is stabilized.
→0←	Zero indicator	▼ is positioned above the icon when weight on the pan is zero.
NET	Tare indicator	▼ is positioned above the icon when the tare function is ON.
kg	kg indicator	▼ is positioned above the icon when kilogram is selected as the unit of weight.

g	gram indicator	▼ is positioned above the icon when gram is selected as the unit of weight.

ICON	INDICATOR	DESCRIPTION
LIGHT SAMPLES	LIGHT SAMPLES indicator	▼ is positioned above the icon when the sample weight is too light.
LIGHT WEIGHTS	LIGHT WEIGHTS indicator	▼ is positioned above the icon when the piece weight is too light.
g	Gram indicator	▼ is positioned above the icon when gram is selected as the unit of weight.

| ICON	INDICATOR	DESCRIPTION
MEMORY	Memory indicator	When the memorized and aggregated counting results and weights are shown on the display, ► is positioned above the icon.
Hi	Upper bound indicator	When the ALARM function is activated, if the PIECES are over the upper bound, ► is positioned on the left of Hi icon and starts flashing.
Go	Range indicator	When the ALARM function is activated, if the PIECES are between HI and LO range, ► is positioned on the left of Go icon and starts flashing.
Lo	Lower bound indicator	When the ALARM function is activated, if the PIECES are under the lower bound, ► is positioned on the left of Lo icon and starts flashing.

Keypad

ICON	KEYS	DESCRIPTION
0 ~ 9	Numerical Keys	Press to input digit data, e.g. piece weight and numbers of samples.
·	Decimal Key	Press to set decimal point when taring and sampling
→0←	Zero Key	Press to set the scale to zero.
→T→	Tare Key	Press to subtract out the mass of the weighing container.
▲	Sample Count Key	After setting the sample count number, press to save the sample count data.
x1	Piece Weight Key	After setting the sample piece weight, press to set the given piece weight..
C	Clear Key	Press to clear the input data or reset the piece weight.
ALARM ↑ ↑	Alarm Key	Press to set up the upper and lower bounds of weights and pieces.
M+	Subtotal Key	Press to memorize and aggregate the counting results and weights.
MR	Replay Memory Key	Press to view the accumulated weights and pieces in memory.
F	Function Key	This is a compound key whose function varies according to the Pr settings. When Pr is set as LP50-1, press to print out LP-50 label format. Press and hold the function key to enter printer menu and change setting.

Using the Digital Counting Scale

Zero function

When there is no weight loaded and the scale shows trivial weight, press the [→0←] to clear the weight and set the scale to zero.

1. Press the [→0←] key to clear the trivial weight. The WEIGHT display should be cleared.

2. ▼ should show above the →0← icon.

Tare function

The Tare Function subtracts out the mass of the weighing container.

Push [→⊕] key to tare the current weight

1. Place sample container on the weighing pan.

2. Press [→⊕] key to turn on the Tare function. ▼ is displayed above the **NET** icon and the WEIGHT display shows zero.

3. If the sample container is removed after the tare operation, the WEIGHT display should show a negative value.

Clearing the tare weight:

1. Remove the sample container from the pan and press the [→⊕] key. ▼ on the **NET** indicator is turned off. The WEIGHT display again shows zero.

Sampling method:

The two methods are covered below:

A. Piece Count setting (If the piece weight of the sample is not known)

1. Place certain number of the sample parts on the scale pan, the weight value should shows on the WEIGHT display.

2. Enter the number of the sample parts, it will show and flash on the PIECE WEIGHT display.

3. Press the ⬚ key. Now the average piece weight shows on the PIECE WEIGHT display. The sampling number will show on the PIECES display.

B. Piece Weight setting (If the piece weight of the sample is known)

1. Enter the piece weight value by numerical keys. It will show and flash on the PIECE WEIGHT display.

2. Press the ⬚ key. The piece weight will fix on the PIECE WEIGHT display. Place samples on the scale pan directly and the PIECES display will show the number.

Clearing input data, piece weight, and accumulated weights

1. Press the ⬚ key to clear the numerical input or the previous piece weight.

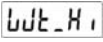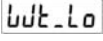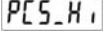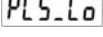2. In Memory mode, press the ⬚ key to clear the subtotal amount in memory.

Alarm function

A. Piece weight and sample weight are not enough:

1. When average piece weight or pre-set piece weight is deficient, the ▼ signal of LIGHT WEIGHTS will show and flash, the operator may continue working. However slight inaccuracy may occur.

2. When the sample weight is deficient, the ▼ signal of LIGHT will show and flash, the operator may continue working. However slight inaccuracy may occur when sampling. Using more samples for sampling is suggested under such condition.

B. Quantity and weight alarm:

It can set both high and low limit or specific value alarm of the quantity and weight as well.

`Wt_Hi` -->Establish the current keyed-in value as upper bound of weight.

`Wt_Lo` --> Establish the current keyed-in value as lower bound of weight.

`PCS_Hi` --> Establish the current keyed-in value as upper bound of quantity.

`PCS_Lo` --> Establish the current keyed-in value as low bound of quantity.

When weight alarm is set, the ► indicator left to **Go** icon on the **WEIGHT Display** will show.

When the weight is higher than upper bound, the ► indicator left to **Go** icon will disappear while the ► indicator left to **Hi** icon will flash and the beep will sound.

If the weight is lower than lower bound, the ► indicator left to **Lo** icon will flash and start beep sounds.

When pieces alarm is set, the ► indicator left to **Go** icon on the **PIECES Display** will show.

When the pieces are higher than upper bound, the ► indicator left to **Go** icon will disappear while the ► indicator left to **Hi** icon will flash and the beep will sound.

If the pieces are lower than lower bound, the ► indicator left to **Lo** icon will flash and start beep sounds.

Operation of M+

1. Load the weight on the scale after sampling.

2. Press [M+] to accumulate the weighing result including weights and pieces in memory. When a beep sounds, Memory indicator appears on the LCD.

3. Clear the load on the weighting pan and place another load on the weighing pan.

4. When the scale is stable, press [M+] again. After a beep sound, the second data has been recorded. (The user may re-sample or not)

● After each recording, if the load on the weighing pan is not cleared, pressing [M+] will result in the long beep and the scale will not be able to record the next weighing result.

● The scale can save up to 180 weighing results.

Operation of MR

1. In weighing mode, press [MR] to recall the accumulated weighing results. "WT" is displayed in WEIGHT Display. The Total Weight is displayed in the PIECE WEIGHT Display and the total accumulation is displayed in the PIECES Display.

2. Press [MR] again. The WEIGHT column is cleared and displays "PCS" and the total piece count is displayed in the PIECE WEIGHT Display. The total accumulation is displayed in the PIECES Display.

3. Press [C] to clear the stored data from the memory, and the scale will return to normal weighing mode.

4. If the user doesn't clear the stored data, press [MR] again, the scale will return to normal weighing mode, too.

Programme Setting

You can modify the settings for Zero Tracking, Tare Function, Auto Off Time, Backlight, Print-out Format and Baud Rate. (*shows the default setting)

To enter the programme setting mode, do the following

1. Press and hold any key while powering on. The Weight Display will shows `CAL`.

2. Press `C` to choose CAL 1 and press `⊕` to get into programming sequence.

3. In programming sequence, press `C` to choose parameter numbers.

4. And then press `⊕` for confirmation and going to next step.

A. Zero Tracking

A0	0	0d
A0	1	1d *
A0	2	2d
A0	3	3d
A0	4	4d

B. Auto Power Off

AoFF	0	None
AoFF	1	in 10 minutes
AoFF	2	in 20 minutes
AoFF	3	in 30 minutes *
AoFF	4	in 60 minutes

C. Backlight

bL	0	None
bL	1	Active
bL	2	Auto lighting while loading *

D. Print Out-put

Pr	0	Print function off *
Pr	1	Print weight in a row continuously
Pr	2	Print weight in a row continuously when stabilized
Pr	3	Print out total weight, piece weight, and pieces
Pr	4	Print out total weight, piece weight, and pieces when stabilized
Pr	5	Print out MR weight in report format
Pr	6	Print out MR weight in label format

Pr	LP50-1	Print label using LP printer with preset format
Pr	LP50-2	Auto print label using LP printer w/ preset format when stabilized

E. Baud rate

br	1200	
br	4800	
br	9600	*
br	19200	
br	38400	
br	57600	
br	115200	

F. Linearity   **linear**   **0**   Disable default linearity calibration values

          linear   **1**   *   Enable default linearity calibration values

In weighing mode, press [F] for 2 seconds and then press [F] again to choose the following settings:

In. Id   Set the ID no. on label
In PAGE   Modify the print out label format
In CN   Set the serial no. on label

Use the numeric keys to enter ID no., print out format, or serial no. Press [F] again to save your settings and exit Programme setting mode. To exit without changing the settings, press the [⏻] key.

Note: **In PAGE** *and* **In CN** *settings are only available for when Print Output Setting is on LP50-1 or LP50-2.*

Calibration

Note:

♦   To enter calibration menu, you have to remove the jumper JP3 first. Put the jumper back after the calibration is complete.

♦   The calibration procedures are to be performed by engineers only.

1. Press and hold any key while powering on. The Weight Display will show `[RL`.

2. Press **C** to choose CAL 2 and press ⊕ to get into Calibration mode. Displays show: `22222` `0` `22222`.

3. Press the →0← key to make WEIGHT Display zero. Displays show: `0` `0` `22222`.

4. Put on the calibration weight, Displays show: `322222` `0` `222222`.

5. Input the weight value of calibration weight.
   (For example, if the WEIGHT Display shows that the unit is "kg", put on one calibration weight of 6 kg. and then enter "6". If the WEIGHT Display shows that the unit is "g", put on one calibration weight of 6 kg. and then enter "6000".)

6. When the scale is stable, press ⊕ to finish calibration.