



MPB SERIES Electronic Balances

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Operation Manual

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1. INTRODUCTION

The MPB series of electronic balances offers an accurate, fast and versatile range of general purpose balances with counting, and % weighing functions.








There are 6 models within the MPB series, with capacities up to 6000g.


They have stainless steel weighing platforms placed on an ABS base assembly.

The keypads are light touch switches and the displays are large and easy to read liquid crystal type displays (LCD). The LCD has a backlight.

All units include automatic zero tracking, automatic tare, and an accumulation facility that allows the count to be stored and recalled as an accumulated total.

2. KEY AND DISPLAY

Symbol	Key	Function
	ZERO	Set the zero point for all subsequent weighing. The display shows zero
	ENTER	Enter when setting parameters or other functions.
	TARE	Tares the scale. Stores the current weight in memory as a tare value, subtracts the tare value from the weight and shows the results. This is the net weight.
%	PERCENT	To enter <i>percent weighing function</i> . When in percentage mode, press this key to return normal weighing mode
	SMPL	To enter <i>Counting Mode</i> . Also use it to return normal weighing mode when counting mode.
	MODE	Allows for selection of different weighing units, such as; kilograms, pounds, ounce or other units can change the current value for parameters or other functions When in counting mode, it allows the weight, unit weight, and count to be seen when parts counting
	PRINT	To print the results to a PC or printer using the optional RS-232 interface. It also adds the value to the accumulation memory if the accumulation function is not automatic
	ON/OFF	Turn on or turn off the power.

MPB	Description
○	Stable indicator. Ensure it stable indicator is on before pressing tare, sample, percentage, or accumulation.
	Low battery; charge immediately.
>T	Tare indicator when in net weight mode.
>0	Zero indicator

3. OPERATION

3.1 Before use

To ensure that measurements are precise, turn on the scale 10 minutes prior to use. Recalibrate the balance when the operating environment has been changed.

3.2 Zero the display

You can press the **ZERO** key at any time to set the zero point from which all other weighing and counting is measured. This will usually only be necessary when the pan is empty. When the zero point is obtained the zero indicator will show. The scale has an automatic re-zeroing function to account for minor drifting or accumulation of material on the platform. If small amounts of weight are shown when the platform is empty, press the **ZERO** key to re-zero the scale.

3.3 Taring

Ensure the display shows zero, and that the zero indicator is on. If needed, press the **ZERO** key.

Place a container on the platform, its weight will be displayed.

Press the **TARE** key to tare the scale. The weight that was displayed is stored as the tare value and that value is subtracted from the display, leaving zero on the display. The "TARE" indicator will be on. As items are added only the weight of the product will be shown.

When the container is removed a negative value will be shown. If the scale was tared just before removing the container this value is the gross weight of the container plus all product that was removed. The zero indicator will also be on because the platform returns to the condition it was when the **ZERO** key was last pressed.

3.4 Percentage weighing

The scale will show a sample weight as 100%. Any other weight placed on the scale after, will be displayed as a percentage of the original.

sample. E.g. If a 350g object is placed on the scale and the **%** key is pressed the display will show as 100.00%. If you remove the 350g weight and put a 300g weight on the scale the display will show 85.71%, as 300g is 85.71% of 350g.

Note: the scale may jump by large numbers unexpectedly if small weights are used to set the 100% level. For example if only 23.5g is on a scale with 0.5g increments and the scale is set to 100%, the display will show 100.00%, however a small change of weight will cause the display to jump to 102.13% as one scale division (0.5g) increase to 24.0g will be equivalent to a 2.13% increase.

Pressing the **%** key will return the scale to weighing.

3.5 Parts counting

Tare the weight of any container that will be used, leaving the empty container on the scale. Place the number of samples on the scale. The number should match the options for parts counting, 10, 20, 50, 100 or 200 pieces. When the scale is showing weight, pressing the **SMPL** key will start the parts counting function.

Press the **SMPL** key to begin. The scale will show "SP 10" asking for a sample size of 10 parts. You can press **MODE** key to select sample quantity: 10, 20, 50, 100, 200 and back to 10.

Press the **ZERO** key when the number shown matches the number of parts used for the sample. As more weight is added the display will show the number of parts (pcs).

Press the **MODE** key to display unit weight (g/pcs), total weight (kg) or the count (pcs). Press the **SMPL** key to exit parts counting mode.

3.6 Accumulation

The weight displayed will be stored in memory when the **PRINT** key is pressed and the weight is stable, the display will show "ACC 1", then the total in memory for 2 seconds before returning to normal. If the RS-232 interface is installed, the weight will be sent to a printer or PC.

Remove the weight, allowing the scale to return to zero and put a second weight on. Press **PRINT**, the display will show "ACC 2" and then show the new total.

To view the totals in memory, press the **PRINT** key when the scale shows zero. The display will show the total number of items "ACC xx" and the total weight before returning to zero. The totals will also be printed via the RS-232 interface.

To erase the memory press **PRINT** to view the totals, followed by the **SMPL** key to clear the memory.



3.7 Calibration

In normal weighing mode, empty the pan, hold the **MODE** key for 3 second, display will show "unload". Wait for several seconds until the display shows "LOAD". Put the calibrate weight on the pan. After **STABLE** indicator turns on, the window will show "pass". After self-checking, the calibration will be complete.

Note: you can use half capacity or full capacity calibrate weight to calibrate the balance. You don't need key in the weight value, as the balance will automatically detect the weight.

4. BATTERY OPERATION

When the battery is low, the indicator will light up. Change the battery or use an AC adapter after it turns on.

When battery indication show  , charge  battery immediately.

The battery life is approximately 40 hours.

To charge the battery simply plug it into the mains power. The balance does not need to be turned on.

The battery should be charged for 12 hours for full capacity.

The battery indicator flickers when it is charging. When the battery is full, the light stops flickering. Over time, the battery may fail to hold a full charge. If the battery life becomes unacceptable then contact your distributor.

5.1 PARAMETER SETTING

5.1 Enter parameter setting

Press **MODE** key during self-checking to enter *parameter setting* mode, after enter setting mode, press **MODE** key to change setting, press **ZERO** key to confirm setting. Press **PRINT** key to exit mode

5.2 Setting the weighing unit

After entering *parameter setting*, the display will show "f1 unt". Press **ZERO** key to enter setting. Press **ZERO** key to set the weighing unit. To return back to F1 UNT, press **PRINT** key to exit mode.

5.3 Setting the backlight

After entering parameter setting, the display will show "f1 unt". Press **MODE** key until display show "F2 EL". Press **ZERO** key to enter setting. Press **MODE** key to select backlight mode, then press **ZERO** key to confirm selection. To exit mode, press the **PRINT** key.

AU: auto backlight, when load weight is on the pan, backlight will turn on

ON: always turn on

OFF: always turn off

Note: when battery is low, the backlight will not function

5. 4 Setting the communication mode

After entering parameter setting, display shows "f1 unt", press **MODE** key until display show "F3 com". Press **ZERO** key to enter setting. Press **MODE** key to select communication mode, press **ZERO** key to confirm selection. To exit mode, press the **PRINT** key.

6. CALIBRATION

To enter calibration mode, press the **MODE** key while it is self-checking. The display will show the first function, "F1 UNT", press the **MODE** key until display show "TECH", press **ZERO** key to enter, display will show "PIN", press **SMPL**, **PRINT**, **TARE** key, and press **ZERO** key to enter technical parameters setting mode.

Press **MODE** key until display show "P2 CAL", press **ZERO**, the display will show "unLoAd". Remove all weight from the pan and then press the **ZERO** key to set the initial zero point. Then put the calibration weigh on pan, after stable, calibration finished.

7. Weight Unit Listing

	Unit mark	Unit name	Conversion (g)
1	g	gram	
2	g	gram (hi resolution)	
3	ct	net carat	=0.2g
4	lb	lb	=453.59237g
5	oz	ounce	=28.349523125g
6	d	dram	=1.7718451g
7	gn*	grain	=0.06479891g
8	ozt	troy ounce	=31.1034768g
9	dwt	penny weight	=1.55517384g
10	mOm	momme	=3.749996g
11	tl.T	tael twn	=37.49995g
12	tl.h	tael chn	=37.799375g
13	Tlj	troy tael	=37.4290018g
14	t	tola	=11.6638039g
15	bt	Bangladeshi tola	1bt=11.6638039g 1bt=16Ana=96Roti
16	N	newton	1N=101.916g