T-Scale

Operation Manual

NB/NHB

Precision Balance

T-Scale

5 232: RS-232   U5b; USB

6. WEIGHING 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	dut	penny weight	=1.55517384g
10	mom	momme	=3.749996g
11	tLt	tael twn	=37.49995g
12	tLH	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

* NB/NHB no this weighing unit.

7. CALIBRATION

      To enter calibration mode press the **MODE** key during self checking, the display will show the first function, "F 1 Unt", press the **MODE** key will until display show "tECH", press **ZERO** key to enter, display shows "P in", 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.

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CONTENT

1. INTRODUCTION

The NB/NHB series of electronics balances provides an accurate, fast and versatile series of general purpose balances with counting, % weighing functions.

There are 6 models in each series, with capacities up to 6000g.

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

All the keypads are light touch switches and the displays are large easy to read liquid crystal type displays (LCD). The LCD's are supplied with 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

2.1 key function

Zero or —◯—

Set the zero point for all subsequent weighing. The display shows zero.

A secondary function ⏎, of "Enter" key when setting parameters or other functions.

Tare or ◆T

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.

% Enters the percent weighing function.

When in percentage mode and current value is zero, press this key to return normal weighing mode.

SMPL or ▲

Use this key to enter counting mode when normal weighing mode, also use this key to return normal weighing mode when counting mode.

When charge the battery, the battery indication will be flicker, when it stop flicker and show full battery, charge finished.

As the battery is used it may fail to hold a full charge. If the battery life becomes unacceptable then contact your distributor.

5. PARAMETER SETTING

5.1 Enter parameter setting

Press **MODE** key during selfchecking 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 escape.

5.2 Set weighing unit

After enter parameter setting, display shows "*F 1 Unt*", press **ZERO** key to enter setting, press **MODE** key to set ON/OFF, press **ZERO** key to set next unit, after all weighing unit setted, back to F1 UNT, press **PRINT** key to escape.

5.3 Set backlight

After enter parameter setting, display shows "*F 1 Unt*", press **MODE** key until display show "*F2 EL*", press **ZERO** key to enter setting, press **MODE** key to select backlight mode, press **ZERO** key to sure, press **PRINT** key to escape.

AU: auto backlight, when load weight on the pan, backlight will turn on
ON: always turn on / OFF: always turn off
*when battery low, backlight function not available.

5. 4 set communication mode (OnlyNB/NHB)

After enter 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 sure, press **PRINT** key to escape.

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 is at zero. The display will show the total number of items "ACC   ΞΞ" 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 and then press 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, display will show "LOAD",   put the calibrate weight on, after STABLE indicator on, The window show "pass ". After selfchecking, Calibration finished.

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

4. BATTERY OPERATION

When the battery needs change the battery indicator will turn on. Please change battery or use AC adapter after this indicator on.

For NB/NHB, when battery indication show ⊏▭ , please charge the battery immediately.

The scales can be operated from the battery if desired. The battery life is approximately 40 hours.

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

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

MODE or ⬚

This key will select either kilograms, pounds, ounce or other unit for the weighing unit when weighing mode.

A secondary function, change current value for parameters or other functions.

When counting mode, allows the weight, unit weight, and count to be seen when parts counting.

Print or ⊙

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.

Secondary function (**ESC**), is to return to normal operation when the scale is in a parameter setting mode.

ON/OFF or (|)

turn on or turn off the power.

Display

NB/NHB	description
◯	stable indication, before do zero, tare, sample, percentage, accumulation operate, please confirm this indication on
▥	battery low, when this indication on, please charge battery immediately. For NB/NHB, also used to indicate battery status
→T←	Tare indication, when in net weight mode, this indication on.
→0←	zero indication

3. OPERATION
3.1 Before operate

To assure the measure precision, please turn on power 10 minutes every time before you want to use the balance, and please calibrate the balance again when the operate entirnoment 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, within 2% of power up zero. This will usually only be necessary when the pan is empty. When the zero point is obtained the display will show indicator for zero.

The scale has an automatic rezeroing function to account for minor drifting or accumulation of material on the platform. However you may need to press the **ZERO** key to rezero the scale if small amounts of weight are shown when the platform is empty.

3.3 Taring

Zero the scale by pressing the **ZERO** key if necessary. The zero indicator will be on.

Place a container on the platform, a value for 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 product is 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 is back to the same condition it was when the **ZERO** key was last pressed.

3.4 Percentage weighing

The scale will allow a sample weight to be shown as 100%. Then any other weight placed on the scale will be displayed as a percentage of the original sample. For example is 350g is placed on the scale and the **%** key is pressed the display will show 100.00%.

Removing the 350g weight and putting 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

When the scale is showing weight, pressing the **SMPL** key will start the parts counting function.

Before beginning, 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.

Press the **SMPL** key to begin. The scale will show "5P   ID" 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 again when the number 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 return to normal weighing.

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   I" and then the total in memory for 2 seconds before returning to normal. If the optional RS-232 interface is installed the weight will be output to a printer or PC.