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**8501
PLATFORM SCALE
INSTRUCTION MANUAL**

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VIDEO OF PRODUCTS.



1. Attentions

- ⟨1⟩ Avoid high temperatures, and do not place it in direct sunlight and vents.
- ⟨2⟩ Avoid humid environments and prevent rust.
- ⟨3⟩ Avoid direct contact with water body. Do not let the scale body get wet or put in water.
- ⟨4⟩ Please fix the meter on a solid horizontal platform to avoid affecting its accuracy.
- ⟨5⟩ Keep the meter clean.
- ⟨6⟩ Do not stack items on the scale when the scale is not in use.
- ⟨7⟩ Please fully charge the battery before use

2. Instrument installation

- ⟨1⟩ Please fix the meter to its bracket first and lock it so that it will not shake. Pass the sensor cable through the bracket used to fix the meter and connect it to the interface on the back of the meter. You can place excess cables under the bracket. Then fix the bracket on the weighing platform and lock it with screws.
- ⟨2⟩ Adjust the four feet of the weighing platform so that the weighing platform reaches the level, that is, adjust the air bubbles in the horizontal bubbles on the tube base to their central position.
- ⟨3⟩ If you use an adapter to supply power, connect the adapter plug to the connector on the back of the meter, and then plug it into an AC power source to power it.

3. Instrument power

- ⟨1⟩ The meter is powered by a lead-acid battery and can be used continuously for about 70 hours (without backlight).
- ⟨2⟩ When charging, the power indicator on the left of the display window is red. When the power indicator turns green, it indicates that the battery is fully charged. It takes about 12 hours to fully charge the battery.
- ⟨3⟩ When obtaining this product for the first time, please fully charge the battery before using the battery.
- ⟨4⟩ If you do not use this product for a long time, please charge it every three months.
- ⟨5⟩ If the battery is not fully charged after a long period of use, or if it can only be used for a short time even after being fully charged, please replace the battery with a new one according to the battery specifications.

4. Key description

Operation keys	Operation function
G/N Net/Gross weight key	<ul style="list-style-type: none"> ⟨1⟩ The net weight and gross weight display can be switched in the net weight mode. ⟨2⟩ Exit key, press this key to return to normal weighing mode in parameter mode. ⟨3⟩ Press and hold the unit switch key.
PRINT Print key	<ul style="list-style-type: none"> ⟨1⟩ Press this key to send the result to a PC or printer connected via RS-232 interface. ⟨2⟩ Press this key during the self-test to enter the setting mode. ⟨3⟩ In setting mode, this key is used to clear the setting number.

Operation keys	Operation function
M+ Accumulation key	<1> Store the current weighing value. <2> Left key. In the setting mode, this key is used to move the setting number to the left.
MR Accumulation display key	<1> Display the total accumulated weight in memory. <2> Right key. In setting mode, this key is used to move the setting number to the right.
TARE	<1> Set the current weighing value to the tare value, and the result will be subtracted from this tare value when weighing. The result is net weight. <2> Add keys, to change the current value when setting parameters or other functions.
ZERO	<1> After weighing is completed, press the zero key, and "0" (ZERO) will be displayed. <2> Enter key. It is the enter key when setting parameters or other functions.
ON / OFF	Power On Key

5. Key operation

■ Basic operation:

<1> Power on and off

Press the **ON / OFF** key to turn on the machine. After the machine is turned on, the monitor performs a self-test. After the test, it enters the weighing state. When entering the weighing display state, the weighing display will automatically reset to zero and the **ZERO** indicator will light up.

* If the screen flashes **BAT LO** after power-on, the machine will automatically power off. This is because the auto power-off function set by the machine to protect the battery in the machine is activated. You can continue to use it after plugging in AC power.

<2> Overload warning

Please do not load items that exceed the maximum weighing value set by the weighing indicator. When "--OL--" is displayed and a buzzer beeps, immediately remove the items from the weighing platform to avoid damage to the load cells.

<3> Zeroing instructions

When there is no item on the weighing platform and the display is non-zero, you can press **ZERO** to reset to zero.

This function is invalid when the displayed reading exceeds the set zero (the factory default is 2%).

<4> Weight Remarks

Put a weight on the scale. After the **STABLE** indicator lights up, press the **TARE** key to deduct the weight. The **TARE** mark lights up. Then load the weight and display the net weight. When no-load, press **TARE** key to release the weight state, the display value is 0, and the **GROSS** mark is on.

<5> Net / Gross weight switch

This function is only effective when using the tare function. In the state of taring weight reduction, pressing **G / N** will switch the net weight and gross weight. (The net weight indicator **NET** is on in the net weight mode, and the gross weight indicator **GROSS** is on in the gross weight mode).

<6> Switching of weighing unit

Press and hold the **G / N** key to switch the weighing unit.

■ Accumulation operation:

<1> Accumulation precautions

Please make sure that the scale returns to zero before each accumulation operation, and the **ZERO** and **STABLE** indicators light up.

Enter the function menu and select "P 2 Com"; "mode"; "ACC on"; the weight of the load must be greater than 20d.

⟨2⟩ Accumulation operation

Put the weight on. After the **STABLE** indicator lights up, press the **M+** key to display "ACC n" (n: the current number of accumulations), display the total weight after 1 second, and return to the weighing state after 1 second. After the **ZERO** mark is lit, the next accumulation can be performed. This scale can accumulate up to 99 times.

⟨3⟩ Accumulation display operation

When the machine is at the zero position (**ZERO** mark is on), press **MR** key to display "ACC n" (n: current accumulation times), the accumulated total weight will be displayed after 1 second, and the weighing state will be restored after 1 second.

⟨4⟩ Accumulation clear operation

During the accumulation display, press the **M+** and **MR** keys simultaneously to perform the accumulation clear operation.

⟨5⟩ Automatic accumulation operation

During the power-on self-test, press the **PRINT** key to enter the function setting, enter the password pn, that is, press the **M+**, **G / N**, and **TARE** keys to enter, press the **TARE** key until the screen displays "P2 COM", press the **ZERO** key to confirm, and select "P AUTO", Press **ZERO** key to confirm, press **G / N** key to return, auto indication **AUTO** will light up. Put the weight on the scale, wait for stabilization, you will hear two beeps. At this time, you can put on or remove the measuring weight.

After the stabilization, the buzzer will sound again. Press the **M+** key at no load to display **ACC x x** (current total accumulation times), the accumulated total weight is displayed after 2 seconds, and the weighing state is restored after another 2 seconds.

6. Weighing operation

■ Checkweighing function description

This weighing indicator can set two kinds of check weights and two warning methods, which are described as follows:

⟨1⟩ Area check: The upper and lower limits are set to different values, and the upper limit is greater than the lower limit.

⟨2⟩ Key point checkweighing: The upper and lower limits are set to the same value and are non-zero.

⟨3⟩ Warning mode P1:

When the area is checked, the buzzer beeps when the current weighing is within the upper and lower limits. When the key point is checked, the current weighing amount tweets at the key point.

⟨4⟩ Warning mode P2:

During the area check, the buzzer beeps when the current weighing is outside the upper and lower limits. When the key point is checked, it will beep when the current weighing is outside the key point.

Note: The checkweighing function is invalid when the current weighing is less than 20d and greater than full scale.

■ Set upper and lower limit operation

Pressing the **PRINT** and **G / N** keys at the same time will display "SET H", use the **TARE** key to select the set upper limit "SET H" or the set lower limit "SET L", press the **ZERO** key to confirm, use the **M+** and **MR** keys to move to change for the position of the value, change the value with the **TARE** key, and clear the value with the **PRINT** key. After entering the value, press **ZERO** key to confirm, press **G / N** key to exit. To cancel the upper and lower limits, set the upper and lower limits to zero.

■ Set checkweigh warning mode

Press the **PRINT** and **G / N** keys at the same time to enter the function setting state, press the **TARE** key until the screen displays "**bBEEP**", press the **ZERO** key to enter the alarm mode setting, press the **TARE** key to cycle to display "**no (no tweet)**" "**ok (warning mode 1)**" "**nG (warning mode 2)**", press **ZERO** key to confirm, press **G / N** key twice to return to weighing state.

■ Backlight operation:

Press and hold the **ZERO** key, the screen displays "**SEt bL**", press the **ZERO** key to enter the backlight mode setting, press the **TARE** key to select **AU** (automatic backlight, turn on the backlight after the current weighing is greater than 20d), **ON** (the backlight is always on) or **OFF** (the backlight is always off), Press **ZERO** key to confirm, press **G / N** key twice to return to weighing state.

Note: In the state of power failure, the backlight function is invalid.

■ Automatic shutdown operation:

Press and hold **ZERO** key to display "**SEt bL**", press **TARE** key to select "**SEt oFF**", press **ZERO** key to confirm, press **TARE** key to select automatic shutdown time, (of 0: always on, of 5: automatic shutdown after 5 minutes of standby, of 15: Automatic shutdown after 15 minutes of standby), press **ZERO** key to confirm, and press **G / N** key twice to return to weighing state.

■ Counting operation:

Press and hold the **MR** key, the screen displays "**P 10**", press the **TARE** key to select the number of counts (p10 / p 20 / p 50 / p100 / p 200), load the object, press the **ZERO** key to confirm, the screen displays "-----", 2 seconds after the number is displayed, continue to load objects, and the numbers on the screen will update automatically. Pressing the **MR** key in the counting mode will return to the weighing mode.

■ Animal scale operation:

First enter the function menu and select "**p 4 otH**" »"**Anm**". Press the **ZERO** key to confirm. Place the animal on the weighing pan. After a few seconds, if the reading range is stable, the reading value will be locked. After the reading is locked, if you place or remove a large scale weight, the displayed reading will be updated and locked again. Press the **TARE** key and **ZERO** key at the same time to enter or exit the animal scale mode. In the animal scale mode, the "**HOLD**" mark will be displayed on the screen.

■ Keyboard lock:

First enter the function menu and select "**p 4 otH**" »"**LoCk**". In weighing mode, if no operation is performed for 10 minutes, the keys on the screen will be automatically locked. When entering the locked state, press any key to display "**k-Lok**" on the screen, and then return to the weighing mode after 2 seconds, but it cannot be operated. Simultaneously press and hold the **PRINT**, **MR**, **ZERO** keys, the screen displays "**u lck**", return to weighing mode, and can be used normally.

7. Parameter setting

The meter has 9 parameters that can be set by the user. During the power-on self-test, press the **PRINT** key to enter the parameter setting mode. "**Pn**" is displayed, you need to enter the password. The passwords are **M+**, **G / N**, and **TARE**. Now enter the parameter setting, and the first function "**P0 CHK**" is displayed. Press the **TARE** key to cycle through other functions. Press the **ZERO** key again to set the selected function. Exit with **G / N**.

■Function setting table:

Menu	Submenu	Description	
P 0 CHk	SEt H	Set higher limit	
	SEt L	Set lower limit	
	bEEP	no	Buzzer off
		ok	Work between higher and lower limits
	nG	Work outside higher and lower limits	
P 1 rEF	A Zn 0	Set the zero tracking range: off, 0.5d, 1d, 2d, 4d	
	0Auto	Setting the auto-zero range: 0, 2, 5, 10, 20, 50,100	
P 1 rEF	0RanGE	Set manual zero range: 0, 2, 4,10, 20, 50,100	
	SPEEd	Set ADC conversion rate: 7.5/15/ 30 times / second	
	Zero	Set the zero value. After setting this value, when the scale shows zero, the display will show -xxx.xxx	
P 2 Com	ModE	Set RS-232 communication mode Options: Cont (send continuously) St 1 : Send data once after stabilization STC : Send data continuously after stabilization PR1 : print mode, press print key to send data once Pr2 : Press the accumulation key to print and accumulate simultaneously AUTO : Automatic print mode, when stable and return to zero, print and accumulate simultaneously	

Menu	Submenu	Description	
P 2 Com	ModE	ASK : Q & A mode, two-way Command R : read data Command T : Tare Command Z : Zero	
	BAUd	Used to select the baud rate: 600/1200/ 2400/4800/9600	
	Pr	Used to set parity: 7E1/7O1/8N1	
	PtyPE	Used to select printer: tPU P /Lp50	
	L Ab	Print format for selecting gross weight / accumulation: LAB 0/LAb 1/LAb 2/LAb 3	
	Prt	Date and time for selecting print format: Prt 0 / Prt 1 / Prt 2 / Prt 3 / Prt 4 / Prt 5 / Prt 6 / Prt 7	
	L AnG	For selecting the print language: EnG English; CHn Chinese	
P3 CAL	ACC	ON: accumulation function is on OFF: accumulation function is off	
	dECi	Used to select the number of decimal places : 0 / 0. 0 / 0. 00 / 0. 000/ 0. 0000	
	dUAL	oFF	r1 inC is used to select the sense value Options: 1/2/5/10/20/50 r1 CAP is used to set the range Press G/N key to set r2 inC; r2 CAP
		on	
	CAL	noL in	Ordinary calibration
		LinEr	Linear calibration
	CoUnt		Used to display internal code xxxxxx
GrA		Used to set the acceleration of gravity	

Menu	Submenu	Description	
P4 otH	LoCk	ON: key lock is on; OFF: key lock is off	
	Anm	ON :Animal weighing mode; OFF: Normal weighing mode	
P5 Unit	KG / G / Lb Lb-oZ / tJ / HJ	To use the desired unit, turn it on. Among them, Taiwan jin and Hong Kong jin can not be used at the same time. When using Taiwan jin, you need to turn off Hong Kong jin. When using Hong Kong jin, you need to turn off Taiwan jin.	
P 6 XCL		External calibration	
P7 rSt		Restore factory parameter settings	
P8 Uw b	Anm	on	Set the Bluetooth function on or off. When the Bluetooth function is turned on, RS-232 cannot be used.
		oFF	

8. Calibration

During the power-on self-test, press the **PRINT** key to enter the parameter setting mode. "Pn" is displayed, you need to enter the password. The passwords are **M +**, **G / N**, and **TARE**. Now enter the parameter setting, and the first function "**P0 CHK**" is displayed. Press the **TARE** key until the display: "**P3 CAL**", press the **ZERO** key to confirm, the screen displays "**CoUnt**", press the **TARE** key to select "**CAL**", and press the **ZERO** key to confirm.

⟨1⟩ Normal calibration

Press **ZERO** key to enter, the screen displays "**UnLoAd**". Please empty the items on the weighing platform, and press the **ZERO** key to confirm after the stability indicator lights up. At this time, the window displays the weight value used for the last calibration.

You can also modify the calibration weight value (shift with **M +** key, change the number with **TARE** key), press **ZERO** key to confirm the weight value. When the window displays "**LoAd**", please put the corresponding weight on the weighing platform, press the **ZERO** key after the stability indicator lights up, and the machine removes the weight during the self-test and returns to the weighing state

⟨2⟩ Linear calibration

Press the **TARE** key to select "**LinEr**". Press **ZERO** key to enter. The screen displays "**Load0**". Please empty the items on the weighing platform. After the stability indicator is on, press the **ZERO** key to confirm. The screen displays "**Load1**" and puts on the 1/3 range calibration point weight. After the stability indicator lights up, press **ZERO** key to confirm. The screen displays "**Load2**" and puts on the 2/3 span calibration point weight. After the stability indicator lights up, press the **ZERO** key to confirm. The screen displays "**Load3**" and put on the full-scale weight. After the stability indicator is on, press the **ZERO** key to confirm. After the calibration is completed, return to normal mode. If an error message is displayed, please recalibrate as described above or permit the calibration to succeed.

⟨3⟩ External calibration

The external calibration can be performed only after the linear calibration is completed. Enter the parameter setting and press the **TARE** key to select "**P6 xCL**". Press **ZERO** key to enter, the screen displays "**UnLd**". Please empty the items on the weighing platform, and press the **ZERO** key to confirm after the stability indicator lights up. At this time, the window displays the weight value used for the last calibration. You can also modify the value of the calibration weight (shift with the **M +** key and change the number with the **TARE** key). Press the **ZERO** key to confirm the weight value.

When the window displays “LoAd”, please Put the corresponding weight on the weighing platform, press the **ZERO** key after the stability indicator lights up, remove the weight when the machine is self-testing, and return to the weighing state.

9. Error code

Err 1	Wrong setting date
Err 2	Wrong set time
Err 3	Weight is less than 10% of range when external calibration
Err 4	Zeroing is outside the zeroing range
	The zero point at startup is compared with the internally calibrated zero point. (OMIL ≤10%)
	Press ZERO key, the current weight is compared with the zero point when the machine is turned on.(OMIL ≤ 4%)
Err 5	Bad keyboard or a key pressed for more than 30 seconds
Err 6	A / D conversion sensor is broken or sensor is not connected
Err 7	Percent sampling error. 0.01% weight less than 0.5d
Err 8	The weight is out of tolerance (external calibration). The difference between the weight of external calibration and weight obtained by the internal calibration exceeds 4%.
Err 9	Zero and Tare key pressed when the scale is unstable
Err 10	No data input in serial port continuous receiving mode
Err 11	When serial port is continuously received, the protocol of serial port communication is not detected.
Err 12	Accumulation error (accumulation number exceeds 999 or accumulated weight cannot be displayed)
	The accumulated weight cannot be displayed when the accumulated score weight is greater than 99999, and the 5-digit LCD is 99999

Err 13	Zeroing is outside the zeroing range
Err 14	Sampling sample weight is too light <20d (counting sampling, percentage sampling)
Err 15	The gravity acceleration ratio is set incorrectly. (Range 0.96-1.04), gravity acceleration at both poles is 9.8322, and gravity acceleration at the equator is 9.7804
Err 16	Printer out of paper
Err 17	The weight is negative, or a tare operation is performed when the full scale is exceeded
Err 18	The preset tare is set incorrectly. (Out of range, negative value)
Err 19	Initial zero error
Err P	The printer does not respond for more than 2 seconds, which means that the printer must be able to print before sending data to the printer (such as a BUSY signal, etc.)
OK	The password is set successfully. The commands (T, R, etc.) sent by the serial port have taken effect. The commands sent back
PASS	Calibration successful
FAIL	Unsuccessful calibration, wrong password setting, mainly to prevent empty calibration during internal calibration
nG	The commands sent by the serial port (T, R, etc.) did not take effect. The commands sent back
--oL--	Overload (> range + 9d) NTEP standard, 105% of the overweight is also overload
--Lo--	Too light (-5%) (compared to the zero point of linear calibration)
bAt Lo	Lack of power (five segments shown as BatLo)
	Lead-acid batteries lack power when the voltage is lower than 5.95V (with errors, specifically between 5.75v-5.95v)