globalindustrial.com

244241, 244242

Operation Manual

Contents subject to change without notice

Version 1.0

Issue AA

CONTENTS

1. INTRODUCTION

General and Safety Information

- Risk of Electrical Shock: Disconnect all power sources before making cable connections to the floor scale platform or indicator.
- For use in dry environments only.
- Read and understand all operating instructions before using this product. Keep this manual for future reference.
- Record the weight shortly after placing a load on the platform. After extended periods, the load cell's output signal may result in a less accurate reading.
- Avoid extended exposure to extreme heat or cold. Optimum operation is at normal room temperature. See operating temperature range in the specifications table. Allow the scale to acclimate to room temperature before using.
- Allow sufficient warm up time. Turn the scale on and allow up to 2 minutes for internal components to stabilize before weighing.
- Electronic scales are precision instruments. Do not operate near cell phones, radios, computers or other electronic devices that emit radio frequencies that may cause unstable readings.
- This equipment has been tested and found to comply with the limits for a Class A digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference when the equipment is operated in a commercial environment. This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with this manual, may cause harmful interference to radio communications. Operation of this equipment in a residential area is likely to cause harmful interference, in which case the user will be required to correct the interference at his own expense.
- Avoid using in heavy vibration or heavy airflow conditions. This also applies when the floor scale is integrated into conveying systems.

2. TECHNICAL SPECIFICATIONS

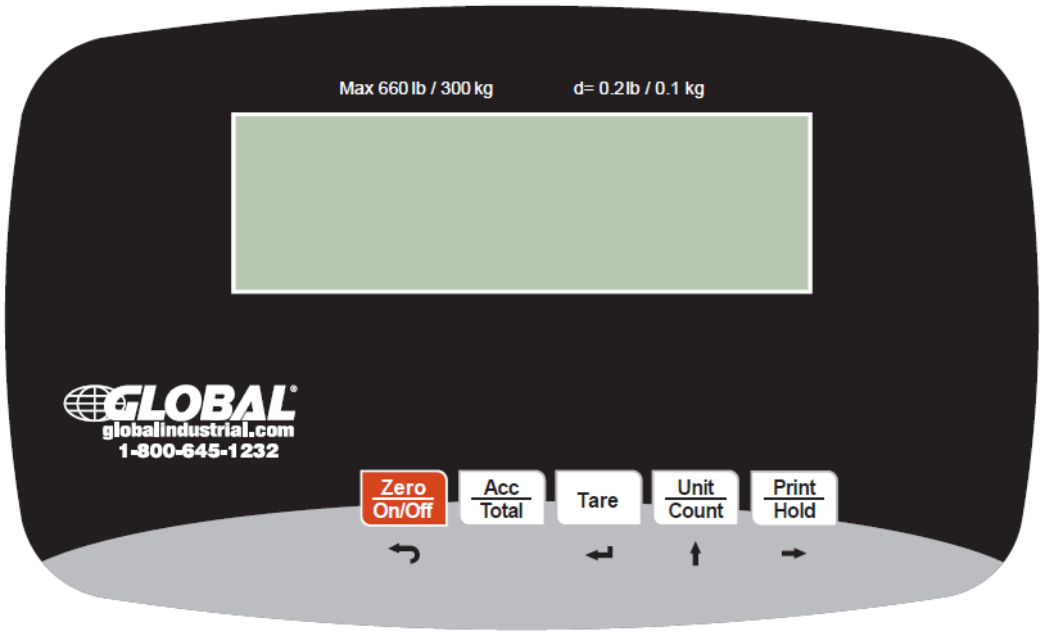
Model	244241	244242
Maximum capacity	330lb / 150kg	660lb / 300kg
Minimum capacity	2lb / 1kg	4lb / 2kg
Scale division	0.1lb / 0.05kg	0.2lb / 0.1kg
Size of platform	11.81"x15.75" / 300 x 400 mm	15.75"x19.68" / 400 x 500 mm
Scale height	18.11" – 41.93"	18.11" – 51"
Display	1" high LCD display	
Environment for Use	Temperature: 5ºC-40ºC; Humidity: <85% RH	
Power	12V 500mA adapter	
Battery	Internal, lead-acid re-chargeable battery 6V 4Ah	
Calibration	External calibration through the keypad.	
Communication port	Bi-directional RS232, USB (Virtual RS232)	

3. DISPLAY AND KEY DESCRIPTIONS

3.1 Indicator Display Character Definitions

ASCII	LCD/LED Show	ASCII	LCD/LED Show	ASCII	LCD/LED Show
0		A		N	
1		B		O	
2		C		P	
3		D		Q	
4		E		R	
5		F		S	
6		G		T	
7		H		U	
8		I		V	
9		J		W	
		K		X	
		L		Y	
		M		Z	

3.2 Overlay and key functions



KEYS		FUNCTIONS
Zero On/Off	Weighing mode	To turn the scale on or off. To zero the scale if the display drifts from zero.
	Parameter setting or Calibration mode	To exit the current mode
Tare	Weighing mode	To tare the scale, if necessary.
	Parameter setting or Calibration mode	To confirm the input data or confirm the operation
Acc Total		To active accumulation function To review the total accumulated value
Unit Count	Weighing mode	To toggle the weighing unit between Kg and Lb. Enter Counting mode
	Parameter setting or Calibration mode	To increase the digit in the flashing data entry position by 1
Print Hold	Weighing mode	To print the weight details out to a PC or printer. To lock the reading even if the person to be weighed is moving.
	Parameter setting or Calibration mode	To shift the flashing data entry position from left to right
Zero On/Off + Unit Count	Weighing mode	To enter parameter setting mode
Zero On/Off + Tare	Weighing mode	To enter calibration mode

3.3 Symbol meanings

DISPLAY	DESCRIPTIONS
Kg	Indicates when the scale is weighing in Kilograms.
Lb	Indicates when the scale is weighing in Pounds.
	Indicates when the scale reaches zero.
NET	Indicates when the Net weight is displayed, Tare weight is at zero.
	Indicates when the reading is stable
Hold	Indicates when the scale has held the weight reading shown on the display.
TOTAL	Indicates when the scale is display an accumulated value
PCS	Indicates when the scale is in counting mode

4. SETTING UP THE SCALE

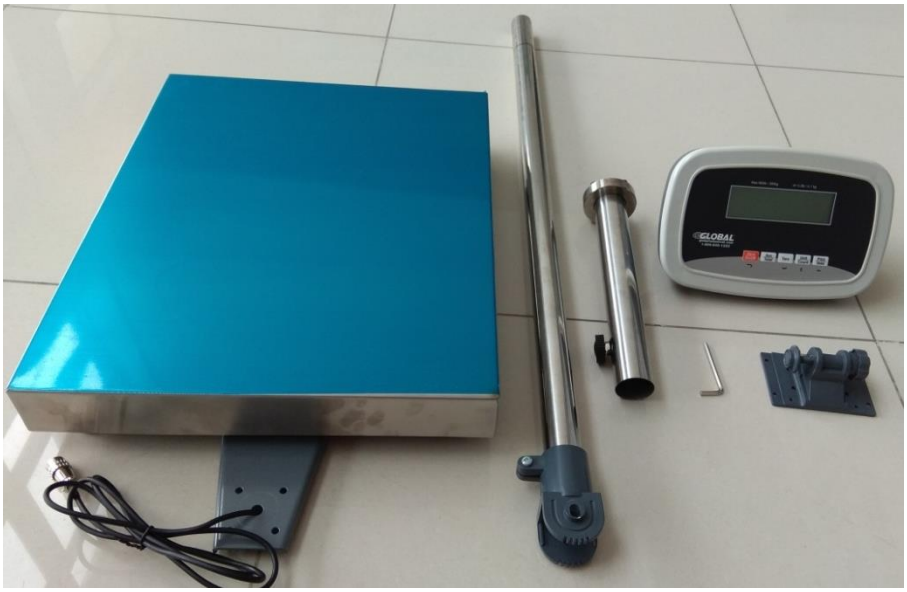
The Platform Scale comes partially assembled. The following components require assembly:

- Post
- indicator

Tools required:

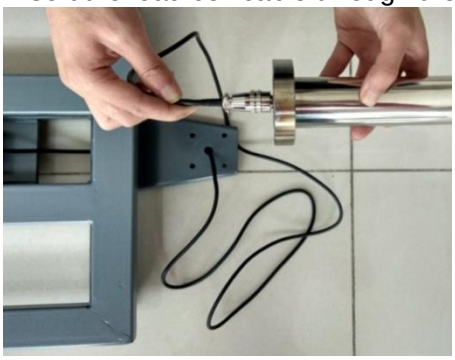
- Phillips head screwdriver
- Hexagon bar wrench (included)

1. Take all the contents out of the box.

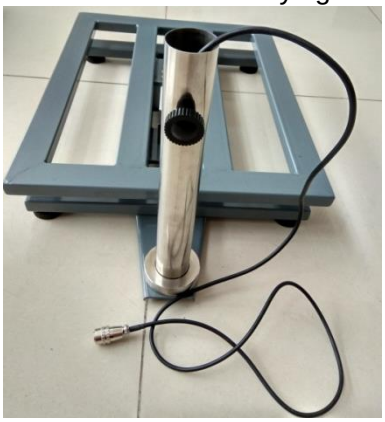


2. Remove the 4 inner hexangular set screws on the rear side of the shorter post.

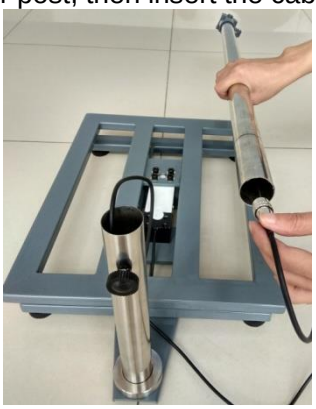

3. Remove the stainless steel platter from the Insert the load cell cable through the short post.

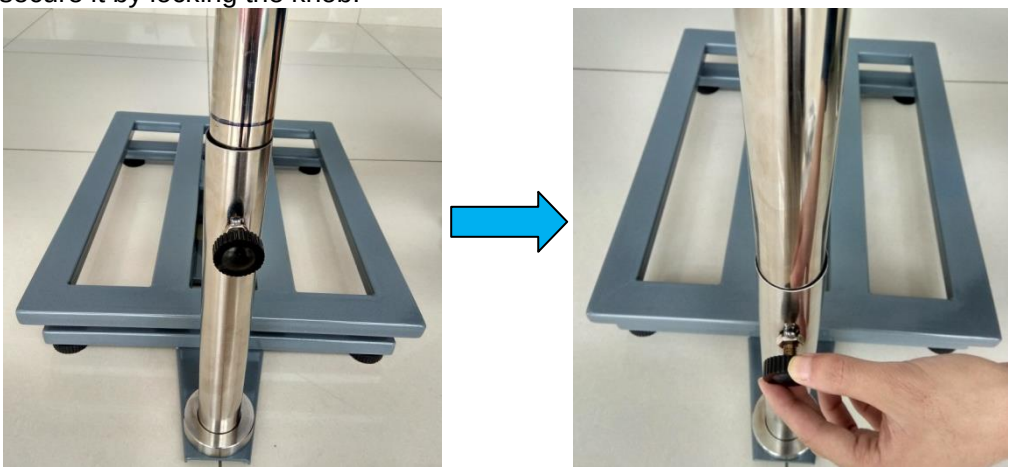
4. Secure the post onto the bracket of scale base with the 4 inner hexangular set screws. Make sure the screws are securely tightened.



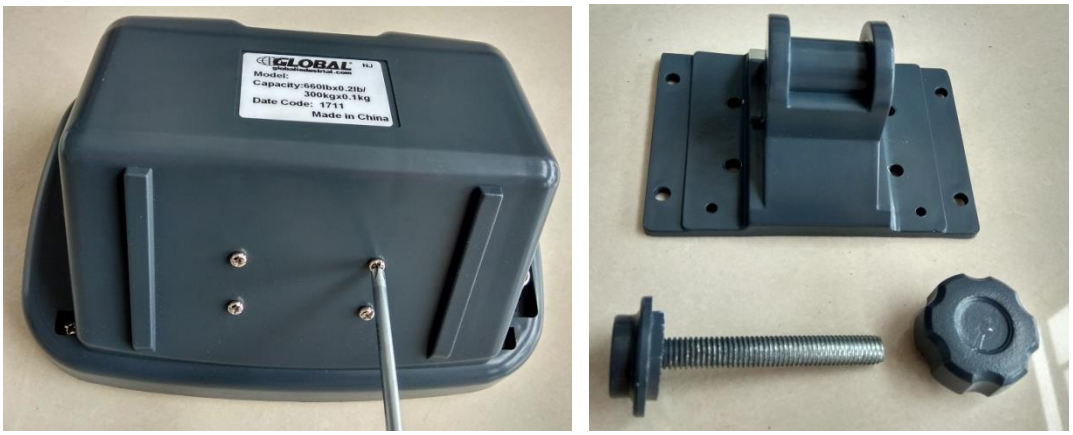

5. Loosen the locker knob on the shorter post, then insert the cable through the longer post.

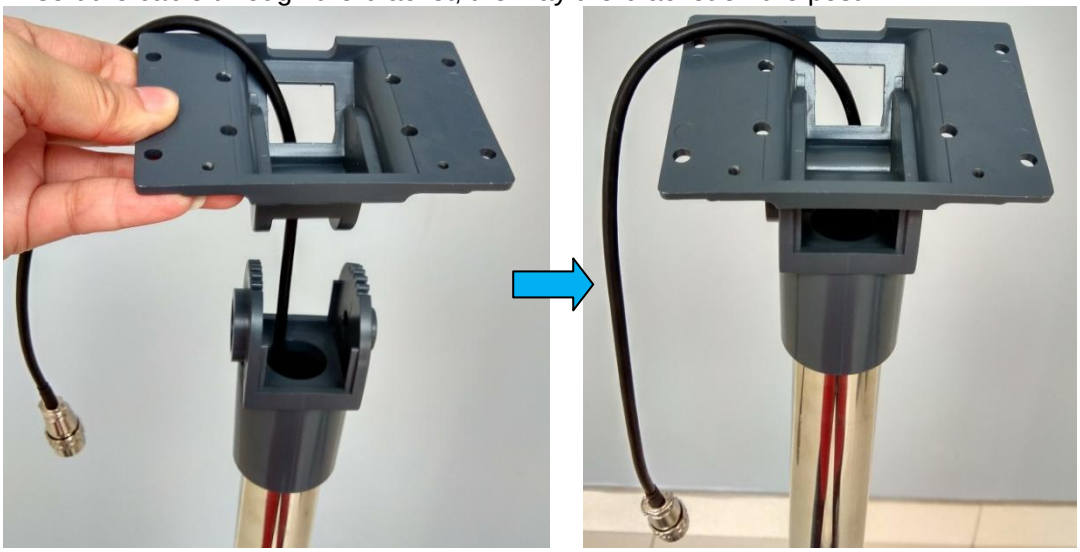
6. Insert the longer post into the short post till reach or pass the black line marked on longer post, then secure it by locking the knob.



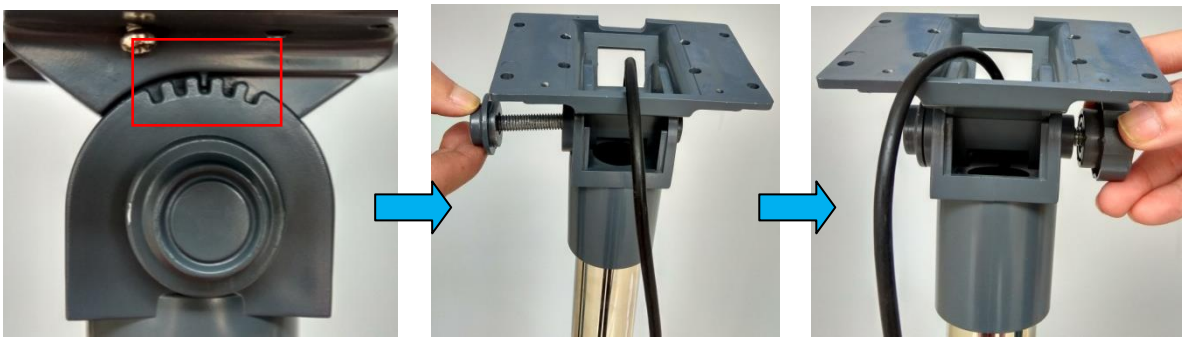
7. Remove the 4 screws on rear side of the indicator, then disassemble the locking device on the indicator bracket.



8. Insert the cable through the bracket, then lay the bracket on the post.

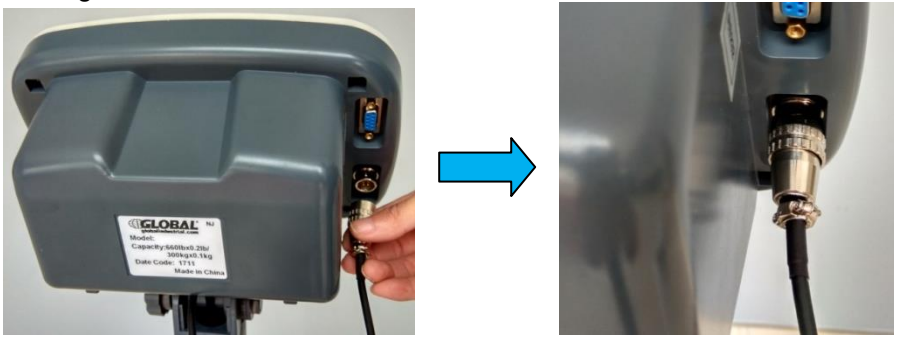


9. Position the bracket in the slot to the direction desired. Lock the bracket.



10. Place the indicator on the bracket, and secure it with the 4pcs phillips screws.

11. Plug the female connector from load cell to the male socket on indicator.
Note: the connector is a snap-in connector, do not screw the female one into the male one, a twisting force will cause inside wires to break.



12. Put the stainless steel platter back to the scale base, now the scale is ready to use.

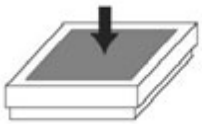
5. FUNCTION

5.1 WEIGHING

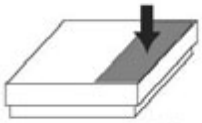
Normal Weighing

1. Power on the scale by pressing the Zero On/Off key.
2. When the display stabilizes, but it doesn't show zero, press the Zero On/Off key to set a new zero point.
3. Place objects on the scale platform and read the weight on the indicator.

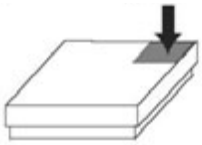
Note: Objects should be placed at the center of the platform. Corner or side loading heavy objects may risk overloading an individual load cell and damage the scale.



Yes



No



No

4. To change the weight unit of measure, press the Unit Count key.
5. Power off the scale by pressing and holding the Zero On/Off key for 4 seconds.

Zero

If the display does not show 0, and there is nothing on the platter, press the Zero On/Off key to zero the reading.

The zero function is unavailable when the reading is out of the zero range and the indicator will show the error message **0**____ or **0**⁻ ⁻ ⁻, meaning the scale is over or under zero range.

Setting a Tare Weight

1. Zero the scale as described above.
2. Place an empty container on the platform, press the Tare key. The display will return to zero, eliminating the weight of the container. The **NET** annunciator will be lit on the display.
3. Put the material or object to be weighed in the container. The net weight will be displayed.
4. To exit tare mode, remove all weight from the scale. The display will show a negative weight. Press the Tare key to return the display to zero.

Hold Function

The Hold function is being used if you like to hold the results at the display after the weight/load has been removed from the scale.

1. Press and hold the Print Hold key for 4s while scale is under load.
2. “HOLD” announciator is on and the weight remains saved at the display after unloading the scale.
3. For deactivation of the Hold function, press and hold the Print Hold key again.

5.2 COUNTING

1. In normal weighing mode, press and hold the Unit Count key to enter into counting mode.
2. When the scale displays “SPL.—“, place the samples on scale, press the Tare key to confirm.
3. “—“ will flash, then scale displays “00000”, use the ↑ and → keys to input the quantity of the samples, press the Tare key to confirm. If any error occurs, the scale will display “SPL.Er” and requires re-inputting the quantity.
4. Now put more parts on the scale for counting, the display will show the number of parts (pcs).
5. Press and hold the Unit Count key to return to normal weighing.

5.3 ACCUMULATION

Accumulation can be used in both weighing and counting modes.

1. In normal weighing or counting mode, when reading is stable, press the Acc Total key to accumulate the current weight or quantity into memory, “TOTAL” announciator will be on and off in 2 seconds.
2. Remove the weight, allowing the scale to return to zero and put a second weight on. Press the Acc Total key, the display will show the new total.
3. To review the accumulated total, press and hold the Acc Total key for 4 seconds, the scale will display the total weight or quantity, “TOTAL” announciator will be on. After 2 seconds, the nnounciator will be off and the scale will back to normal weighing or counting mode.

Note: In all cases the scale must return to zero or a negative number before another sample can be added to the memory. More product can then be added by pressing the Acc Total key. This can continue until the total weight or quantity exceeds 999999.

6. CALIBRATION

Before calibrating the scale, you should ensure that you have a known KG weight for calibration.

1. When in normal weighing mode with the scale at zero press and hold down Zero On/Off and Tare keys to enter the calibration mode.

2. When the indicator shows " CAL-?", press the Tare key to confirm and go to next step, or press the Zero On/Off key to exit the calibration mode.

3. Scale will display the max, capacity then display the division, press Tare key to confirm and go to next step or press the Zero On/Off key to exit the calibration mode.

4. When "**CAL.P0**" is displayed, the scale will begin to calibrate the zero-point of the scale. Remove all weight from the scale. Press the Tare key to confirm, or press the Zero On/Off to exit this mode. After receiving the reasonable zero-point data, the scale will go to the next stepl automatically.

5. Now the scale displays "**CAL.P1**", then displays a defaulted standard weight of 50%FS. Load 12.5%-100%FS weight on the scale, and use the ↑ and → keys to input the loaded weight. Press the Tare key to confirm the input and go to next step. If an error occurred, the scale will display "**CAL.Er**" and return back to **step 4** for re-calibration.

6. When scale displays "**CAL.P2**", then displays a default standard weight of 100% FS. Load 25%-100%FS (this must be **equal or larger** than the weight from the "CAL.P1") weight on the scale. Use the ↑ and → keys to input the standard weight's value. Press the Tare key to confirm. The indicator will flash the input weight and go to next step automatically. If an error occurred, the scale will display "**CAL.Er**" and return back to **step 4** for re-calibration.

7. When "**CAL.P0**" is shown again, the scale will calibrate the zero-point again. Remove any weight from the scale, press the Tare key to confirm, and back to the normal weighing mode. If an error occurred in calibration, the scale will display "**CAL.Er**" and then it necessary to repeat the procedure from **step 4**.

7. USER PARAMETERS

1. When the scale is in normal weighing mode, press and hold the Zero On/Off key and Unit Count key for 3 seconds until '**SEtUP**' is shown on the display.
2. In the SETUP mode, press the ↑ key to change the flashing digits, press the → key to shift the flashing data entry position from left to right, and press Tare key to confirm and move to the next parameter setting. Press the Zero On/Off key to exit the set up mode.

Parameters setting summary:

Parameter	x/xy	Remark	244241 Setting	244242 Setting
P1.xy	00-15	Auto-off time: No auto-off = 00. 01-15 minutes auto-off time.	05	05
P2.xy	00,01,02	0 = Only Hold Function 1 = Only Print Function 2 = both HOLD and PRINT function (pressed down less 3s,this key works as Print function; pressed down more than 3s,this key works as HOLD function)	02	02
P3.xy	00-50	Hold function: 0 = disable hold function 1 = hold larger weight reading 2-50 = hold reading when the variety is within ±2~50d, auto release hold function when weight is below 10d and auto-hold new stable weight (more than 10d)	02	02
P4.x	0-3	0 = No RS232 and USB Function. 1 = Press PRINT key to output display data when scale is stable 2 = Press PRINT key to output gross, TARE and net weight when scale become stable; 3 = Continuously outputs display data. 4 = continuously output gross, TARE and net weight; 5 = Output display data one time when scale is stable; 6 = Output gross, TARE and net weight one time when scale become stable 7 = Bi-directional communication (the scale receives and executes commands from the HOST device)	2	2
P5.x	0-4	Communication baud rate: 0=1200bps, 1=2400bps, 2=4800bps, 3=9600bps, 4=19200bps	3	3

Parameter	x/xy	Remark	244241 Setting	244242 Setting
P6.x	0-2	Communication format: 0=8N1, 1=7O1, 2=7E1	0	0
P7.xy	00-32	Resolution select: 00=500, 08=2400, 16=7500, 24=35000, 01=600, 09=2500, 17=8000, 25=40000, 02=750, 10=3000, 18=10000, 26=50000, 03=800, 11=3500, 19=12000, 27=60000, 04=1000, 12=4000, 20=15000, 28=70000, 05=1200, 13=5000, 21=20000, 29=75000, 06=1500, 14=6000, 22=25000, 30=80000, 07=2000, 15=7000, 23=30000, 31=100000 32 = factory preset N (0<N<100000)	10	10
P8.x	0-2	Division select: 0=1, 1=2, 2=5	2	0
P9.x	0-5	Decimal point in calibration: 0= x1, 1= x0.1, 2= x0.01; 3= x0.001; 4= x0.0001; 5= 10	2	1
P10.x	0,1	Calibration unit: 0=kg, 1=lb	0	0
P11.x	0-6	Weighing units enable: 0=only kg; 4=kg or lb:oz; 1=only lb; 5=lb or lb:oz; 2=only lb:oz; 6=kg, lb, or lb:oz 3=kg or lb;	3	3
P12.x	0-7	Power-on zero-point range: 0=calibration zero -point ±1%FS; 1=calibration zero -point ±2%FS; 2=calibration zero-point ±5%FS; 3=calibration zero-point +10%FS; 4=calibration zero-point ±20%FS; 5=calibration zero-point ±50%FS; 6=calibration zero-point ±100%FS; 7=No limitation	7	7
P13.x	0-9	Zero range for ZERO button: 0= Power-on zero-point ±1%FS; 1= Power-on zero-point ±2FS; 2= Power-on zero-point ±3FS; 3= Power-on zero-point ±4FS; 4= Power-on zero-point +5%FS; 5= Power-on zero-point ±10%FS; 6= Power-on zero-point ±20%FS; 7= Power-on zero-point ±50%FS; 8= Power-on zero-point ±100%FS; 9= No limitation	6	6
P14.x	0-2	Weight signal **is in** power-on zero point range, Choose which data as current power-on zero point: 0= current weight ; 1= calibration zero-point; 2=switch-off zero-point	0	0

Parameter	x/xy	Remark	244241 Setting	244242 Setting
P15.x	0-3	Weight signal **is not in** power-on zero point range, Choose which data as current power-on zero point: 0= current weight ; 1= calibration zero-point; 2=switch-off zero-point; 3=continuously display "0----"	3	3
P16.x	0-8	Zero tracking range: 0=0d, no tracking; 1=±0.25d; 2= ±0.5d; 3=±1d; 4=±1.5d; 5=±2d; 6=±3d; 7= ±4d; 8=±5d	6	6
P17.x	0-3	Data filter intensity: 0=very weak, 1=weak, 2=middle, 3=strong	2	2
P18.x	0-9	Check weight stability range: 0=±0.5d; 1=±1d; 2=±1.5d; 3=±2d; 4=±3d; 5=±4d; 6=±5d; 7=±6d; 8=±7d; 9=±8d	1	1
P19.x	0-9	Overload limit range: 0=FS+0d; 1=FS+9d; 2=101%FS; 3=102%FS; 4=105%FS; 5=110%FS; 6=120%FS; 7=150%FS; 8=200%FS; 9=No limitation	1	1
P20.x	0-2	Backlight on-off mode selection (if it is installed): 0= Backlight is always off; 1= Backlight is always on; 2= Backlight is auto on and auto off. It is auto off after 10s when scale goes to stable and has no key operation, and it is auto on when scale is unstable or there's some key operation.	2	2
P21.x	0-4	LCD contrast level	3	3

8. RS232/USB COMMUNICATIONS

8.1 *RS-232 connection between the Scale and the Host**:***

Scale ----------Cable----------Host

(DB9 female)-----(DB9 male)----(DB9 female)----(DB9 male)

PIN2	TXD	2	2	PIN2 RXD
PIN 3	RXD	3	3	PIN3 TXD
PIN 5	GND	5	5	PIN5 GND
PIN4	DSR	4	4	PIN4 DTR
PIN6	DTR	6	6	PIN6 DSR
PIN7	CTS	7	7	PIN7 RTS
PIN8	RTS	8	8	PIN8 CTS
PIN1	NC	1	1	PIN1 NC
PIN9	NC	9	9	PIN9

8.2 ***When Parameter P4.x in section 7 is set to 0 :***

No RS232 and USB function. It will not transmit or receive any data although the scale is equipped with RS232 or USB. The RS232 and USB function can be only activated when scale is in normal weighing mode.

8.3 ***When Parameter P4.x in section 7 is set to 1 :***

Output the current displayed data when the Print/Hold key is pressed, and it does not receive any data. The output format is as below:

<LF>< reading, symbol, decimal point, weight unit><CR><EXT>

8.4 ***When Parameter P4.x in section 7 is set to 2 :***

Output displayed gross, tare and net weight when the Print/Hold key is pressed, and it does not receive any data. The output format is as below:

<LF>< Gross: Weight, symbol, decimal point, weight unit><CR><EXT>

<LF>< TARE: Weight, symbol, decimal point, weight unit><CR><EXT>

<LF>< Net: Weight, symbol, decimal point, weight unit><CR><EXT>

The number of bytes used:

Weight reading ---------- 7bytes;

Symbol ----------1byte;

Decimal point ----------1byte;

Weight unit ----------2 or 4 bytes;

8.5 *When Parameter P4.x in section 7 is set to 3 :*

Continuous output data when reading is stable, and it does not receive any data. The output format is same as P4.1:

8.6 *When Parameter P4.x in section 7 is set to 4 :*

Continuous output gross, tare and net weight when reading is stable, and it does not receive any data. The output format is same as P4.2:

8.7 *When Parameter P4.x in section 7 is set to 5 :*

Output displayed data one time when scale is stable, and it does not receive any data. The output format is same as P4.1:

8.7 *When Parameter P4.x in section 7 is set to 6:*

Output gross, tare and net weight one time when scale is stable, and it does not receive any data. The output format is same as P4.2:

8.8 When Parameter P4.x in section 7 is set to 7 :

1. The baud rate and data format is fixed as per P5 and P6 setting. Responses to serial commands will be immediate, or within one weight measure cycle of the scale. One second should be more than adequate for use as a time-out value by remote (controlling) device.
2. The length of the weight field will be 7 digit weight data, one for minus sign, one for decimal point, two for measure unit (e.g. “lb”, “kg”). If the unit is lb:oz, another two for “lb” and one for a space (<sp>) after lb. Units of measure abbreviations are always lower case.
3. If the weight is overcapacity, the scale will return nine ‘^’ characters (the field of symbol, decimal point, weight data is filled by ‘^’).
   a) If the weight is under capacity, it will return nine ‘_’ characters (the field of symbol, decimal point, and weight data is filled by ‘_’).
   b) If the zero point is error, it will return nine ‘_’ characters.
4. The character will be ‘-’ for negative weight or a space character for positive weight. Symbol, follows after the first digit.
5. Useless leading zero before digits is suppressed

8.9 Key to symbols used.

<LF> Line Feed character (hex 0AH)

<CR> Carriage Return character (hex 0DH)

<ETX> End of Text character (hex 03)

<SP> Space (hex 20H)

H1H2H3 Three status bytes. Refer to Table1 for definition.

<p> Polarity character including minus sign for negative weight and a space character for positive weight

W1-W7 weight data

<dp> decimal point

U1U2: measure units, kg, lb

8.10 Commands and response

1. Command: W<CR> (57h 0dh)

   Response:

   ①<LF>^^^^^^u1u2<CR><LF>H1H2H3<CR><ETX>---over capacity

   ②<LF>_____u1u2<CR><LF> H1H2H3 <CR><ETX>---under capacity

   ③<LF>---------u1u2<CR><LF> H1H2H3<CR><ETX>---zero-point error

   ④< L F > < p > w 1 w 2 w 3 w 4 w 5 w 6 < d p > w 7 u 1 u 2 < C R > < L F > H 1 H 2 H 3 < C R > <ETX> ---Scale is stable, and the current weight unit is kg or lb. With or without decimal point and the position is as per the P9 setting and current unit.

2. Command: S<CR> (53h 0dh)

   Response: <LF> H1H2H3<CR><ETX>

3. Command: Z<CR> (5ah 0dh)

   Response: Zero function is activated and it returns to current scale status. just like pressing **ZERO/ON/OFF** button:

   <LF> H1H2H3<CR><ETX>

   If ZERO function cannot be activated, it will return to current scale status.

4. Command: T<CR> (54h 0dh)

Response: TARE function is activated, and then returns scale status. just like pressing **TARE** button:

<LF> H1H2H3<CR><ETX>

If TARE function cannot be activated, it will return to current scale status.

5. Command: U<CR> (55h 0dh)

Response: Changes units of measure and return scale status with new units, just like pressing **UNIT** button. The new measure unit should be allowed to use as per P11 setting.

<LF>u1u2<CR><LF> H1H2H3<CR><ETX>

6. Command: X<CR> (58h 0dh)

Response: power off the scale, just like press down the **ON/OFF** key to turn off the scale.

7. Command: all others

Response: Unrecognized command

<LF>?<CR><ETX>

Table1: The status bits definition:

Bit	Byte 1 (H_1)	Byte 2 (H_2)	Byte 3 (H_3)
0	0=stable	0= not under capacity	01=normal work mode 10= hold work mode 00=not define 11= not define
	1= not stable	1= under capacity	
1	0= not at zero point	0= not over capacity	
	1= at zero point	1= over capacity	
2	always 0	always 0	0= gross weight
			1= net weight
3	always 0	always 0	always 0
4	always 1	always 1	always 1
5	always 1	always 1	always 1
6	always 0	always 1	always 0
7	parity	Parity	parity

9. ERROR MESSAGES

1. **0- - - - -** zero point is over the setting range
2. **0_ _ _ _ _** zero is below the setting range
3. **Ad- - -** ADC is over max. range
4. **Ad _ _ _ _** ADC is below min. range
5. **- - - - - -** overload
6. **CAL.Er** there is an error in calibration
7. **Lo.bAt** the voltage of batteries or input power is below 5.6V.

10. WARNING

- Do not dismantle the weighing machine without following the necessary instructions.
- Do not jump while standing on the platform. This may damage the sensor inside.
- Do not move the weighing machine violently and abruptly. It is recommended to move and put down the weighing machine gently.
- It is suggested to wipe the stains with soft cloth soaked with detergent and to wipe later with soft cloth too. Do not use organic solutions and boiled water to wipe the stains. Do not use water for cleaning.
- Keep the weighing machine in a dry and clean environment. Do not expose it outdoor or use it in locations near fire, under direct sunshine or with high temperature.

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