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【PRECAUTIONS】

The scale or indicator should always be used in an environment which is free from excessive air currents, corrosives, vibrations, temperatures and humidity extremes. These factors will affect displayed weight readings.

DO NOT use the scale or indicator

Next to open windows or doors causing drafts or rapid temperatures changes!
An operating temperature between 0 ~ 40 degree Celsius is recommended.
Near air conditioning or heat ventilations!
Near vibrating, rotating or reciprocating equipment!
Near magnetic fields or equipment that generates magnetic fields!
On a rough work surface!

Leveling the scale

(when the indicator is connected to a platform)

Always adjust the scale to a level position with level adjusters until the bubbles appear in the center circle of the level indicator!

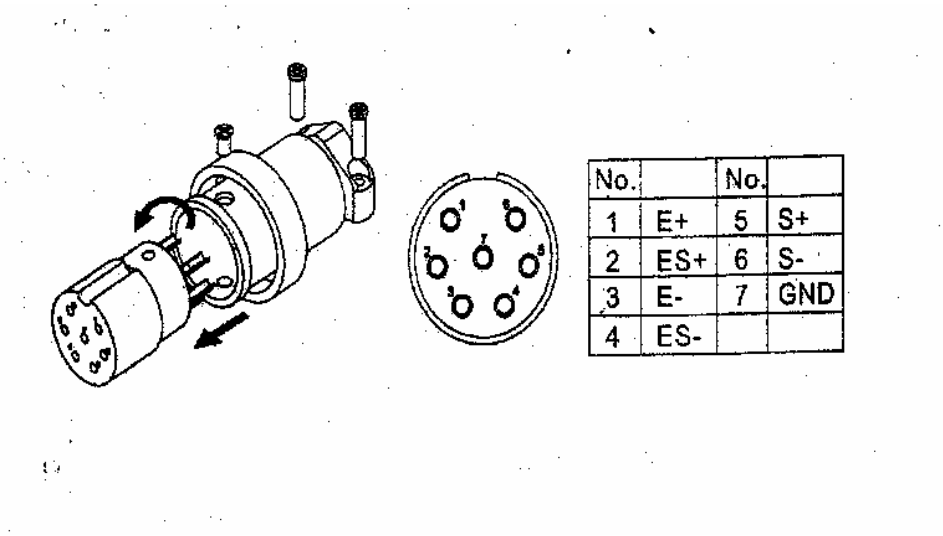
Battery

Recharged the battery whenever the symbol is flashing; this indicates that battery level is low. Charge the battery with the DC 9V / 1A adaptor supplied with the indicator. And when the battery is charging, the LED is red and when is fully charged the LED turns green. (it takes approximately 6 hours to charge battery completely)

【INSTALLATION】

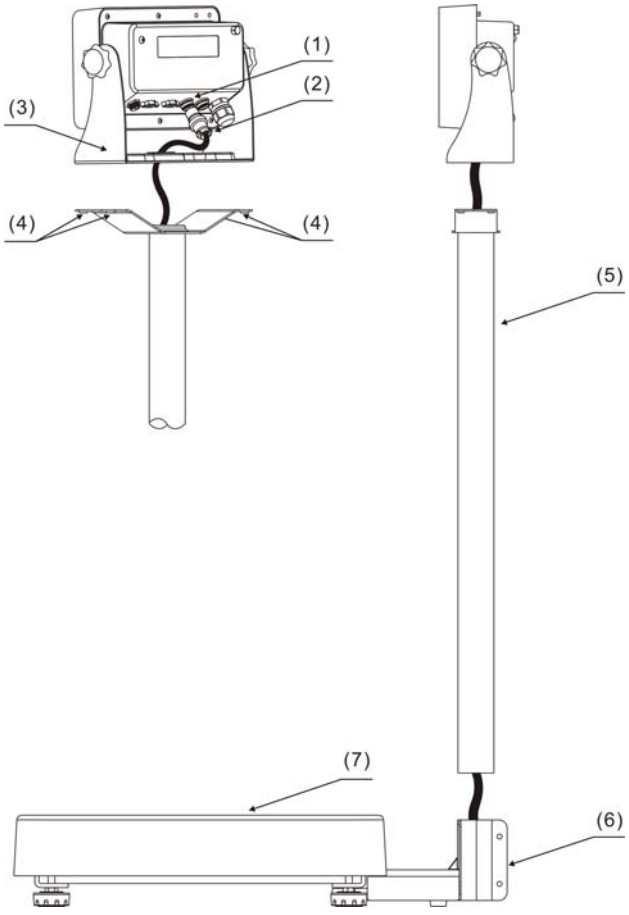
Load Cell connections

- 7 pin Load Cell connections



No.		No.	
1	E+	5	S+
2	ES+	6	S-
3	E-	7	GND
4	ES-		

- Setting up the platform

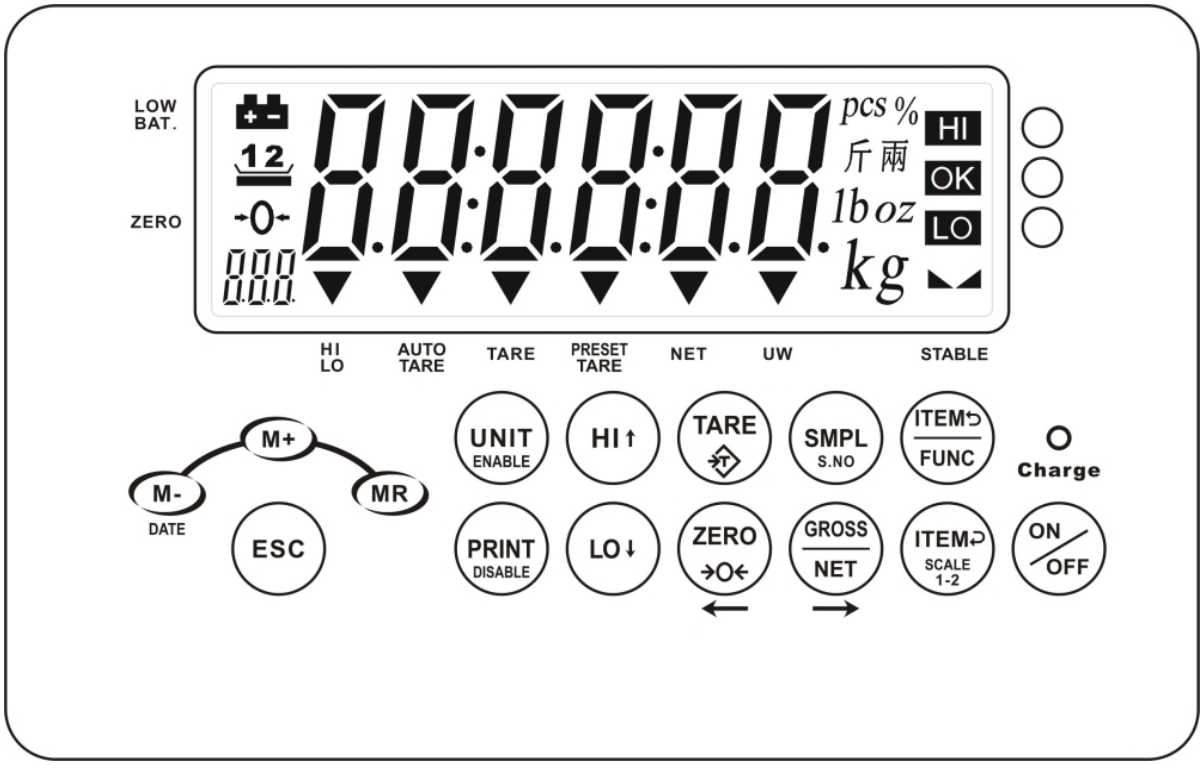


1	Load Cell (male) connector（7 pin）
2	Load Cell (female) connector（7 pin）
3	Indicator Stand
4	Supporter between frame and indicator
5	Pole
6	Pole holder
7	Platform

- **Assemble the scale by the following steps (refer to the diagram above)**

1. Pull the load cell cable through pole holder (6) and upwards. Install pole (6) into the pole holder (5), and fix the pole with cross-headed screws.
2. Pull load cell cable through indicator supporter (4) to connect to the indicator.
3. Install Indicator supporter (4) and indicator stand (3) together.
4. Adjust the indicator to adequate viewing angle and tighten the screws located on each side of the Indicator.

LCD display and function of each key



■ LCD display and explanation

LCD display	Explanation
kg	Weighing unit in Kilograms or Grams unit
→0←	" ZERO " sign
	Stable sign when the weight reading is stable
pcs	Piece counting function
%	Percentage function
▼	Indication sign for insufficient unit weight, net weight, tare, pre-tare, Hi-Lo limits
888	Operation message display
HI OK LO	HI, OK and LO limits indication
斤 兩 lb oz	Additional weighing units
	Battery Power is weak

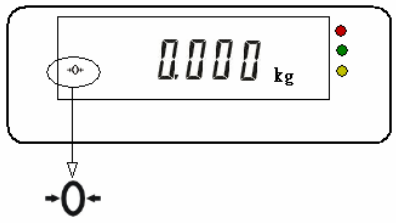
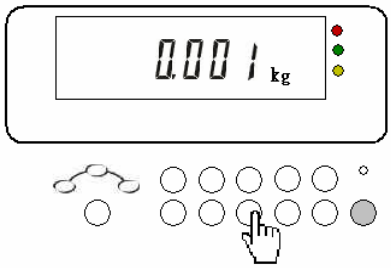
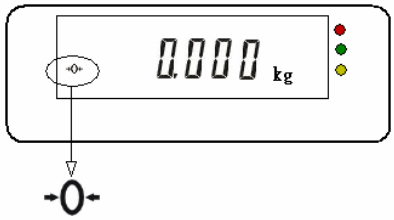
■ Explanation of each key

Position	keys	Main function	Secondary functions
	ON/OFF	Turns the indicator on or off	
1	M- DATE	To delete the accumulation weights or certain number of accumulated weight	1. Change the digit when in parameter mode (decreased) 2. Change the number when in HI-LO checking mode 3. Setting of date & time
2	M+	Accumulation	1. Change the digit when in parameter model (increased) 2. Change the number when in HI-LO checking mode 3. Press this key to enter the testing mode 4. Change the setting of accumulation mode

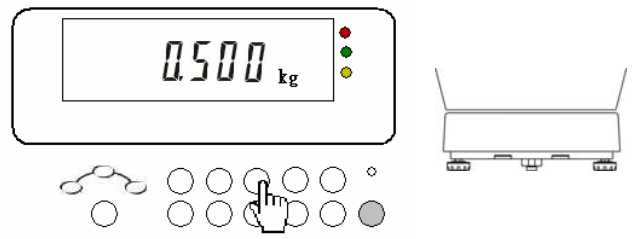
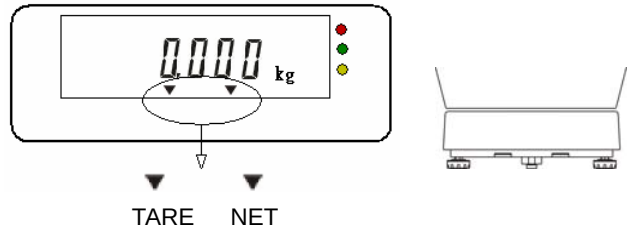
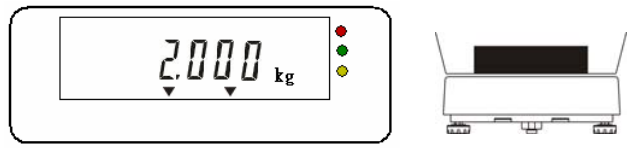
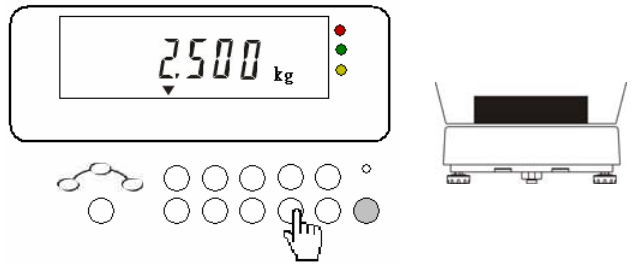
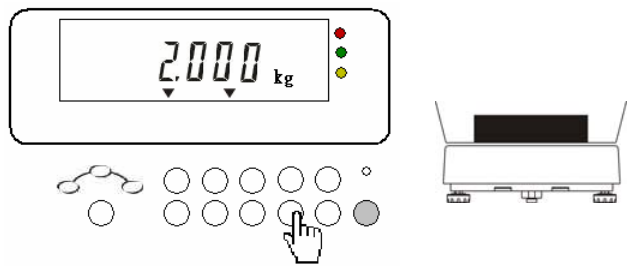
			5. Press this key to set the maximum unit of accumulation
3	ESC	Escape from current mode/position	Press to escape from parameter mode without saving the changes
4	MR	Recall total accumulation weights or certain number of accumulated weights	1. Capacity / division setting
5	UNIT ENABLE	Switch the weighing unit from one to another	1. Enable auto tare function 2.Enable HI-LO checking function 3. Select the initial weighing unit and setting of the initial weighing unit
6	PRINT DISABLE	Send the data stored in memory to printer or PC when pressed	1. Disable auto tare function 2. Disable HI-LO checking function 3. Setting of print format 4. Setting the space when in printing format mode (only forSH-24) 5. Setting of printing mode
7	HI ↑	Enter to HI-LO checking mode for HI Limit	1. Change the digit when in parameter mode (increased)） 2. Select the sampling amount in sampling mode (increased) 3. Setting of serial number mode 4. Setting of maximum serial number 5. Setting of time and date 6. Select the print format (increased) 7. Select the accumulation mode (increased)
8	LO ↓	Enter to HI-LO checking mode for LO limit	Same as above (decreased)
9	TARE →T←	Tare	1. To enter to pre-tare mode 2. To enter to auto tare mode

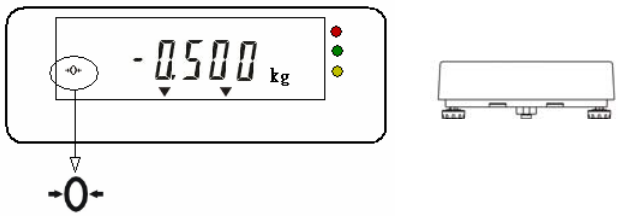
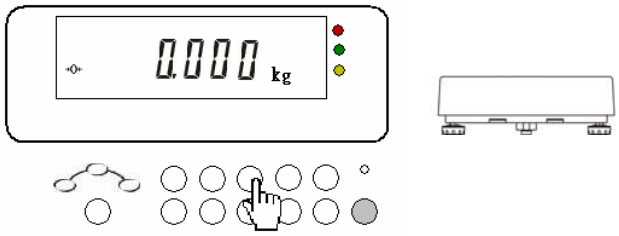
10		Zero	1. Select the initial unit 2. Move the cursor to left when in parameter setting mode
11		Sampling average	1. Setting of serial number mode 2. Setting of maximum serial number
12		Gross/Net Weight	1. Move the cursor to right when in parameter setting mode
13			1. Selection of memory (increased) 2. Enter to parameter mode
14			1. Selection of memory （decreased）or switch key when connect to two platforms.

【 ZERO 】

	(1). The indicators zero point -0- sign is shown in the left diagram. When the display is at zero, this sign will appear.
	(2). Press ZERO →0← to return to zero when the display is without the -0- sign.
	(3). Now, the -0- sign appear and the scale is in zero point. Remarks: The range of zero point is +/- 2% of the max capacity. Example : the zero range of 60kg is +/- 1.2kg

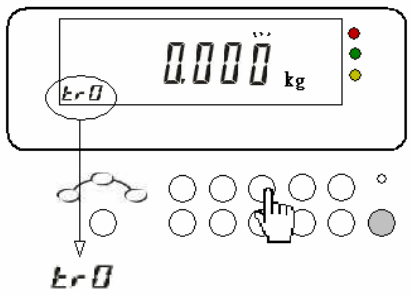
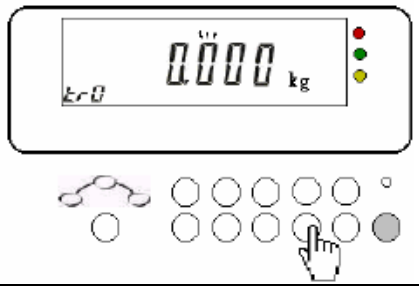
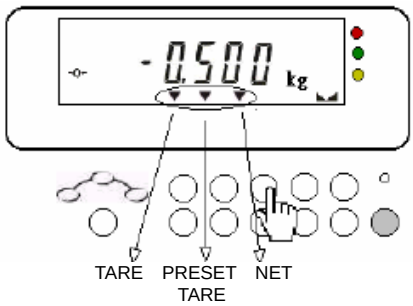
【 TARE 】

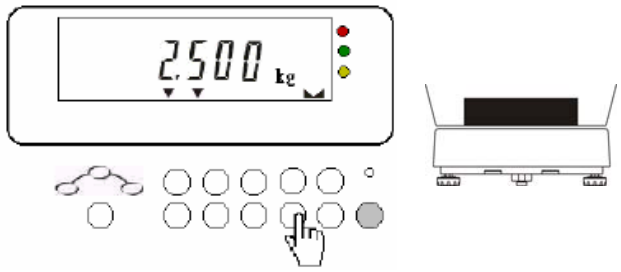
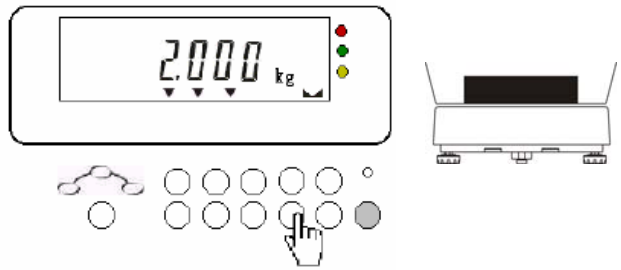
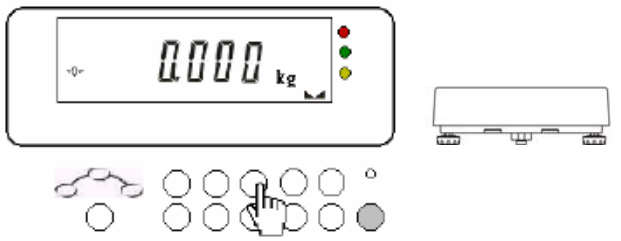
	(1). Place a container, for example 0.500 kg on the weighing pan. (2). Press TARE key.
	(3). After pressing TARE, indication sign for TARE and NET will appear. The scale is now in net weight condition.
	(4). Place a weight object of 2kg into the container. The net weight is read as 2.000 kg.
	(5). Press GROSS/NET → key. (6). Display will show the gross weight as 2.500kg (inclusive of the TARE weight). Net weight sign has disappeared!
	(7). Press GROSS/NET → again and display will show the NET weight again as 2.000 kg with the sign point to NET again.

	(8). Remove all objects from the weighing pan and wait for the zero -0- sign to appear.
	(9). Press TARE key. (10). The NET and TARE signs will disappear and the scale now return's to zero point. Remarks：Weighing Range = Maximum Range – Tare Range

【 PRE-TARE 】

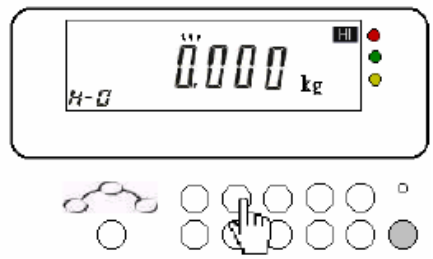
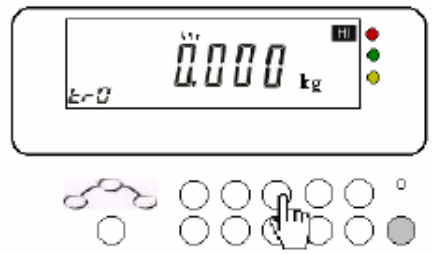
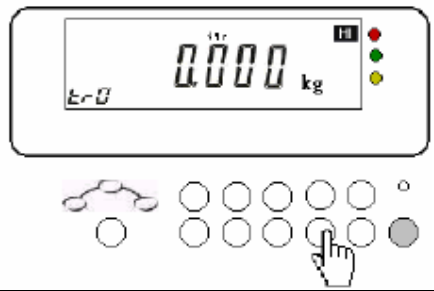
tr0~tr4 5 sets available

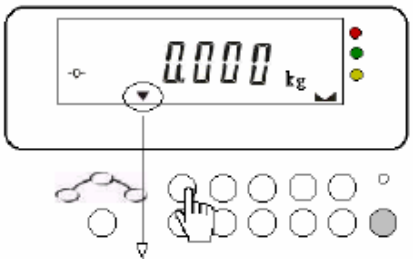
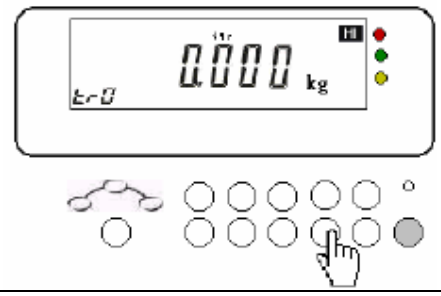
	(1). Under normal weighing mode, press TARE for 3 seconds, display will show the pre-tare mode with first digit blinking. At the operation message display "tr0" One can also switch from tr0~tr4 by press ITEM/FUNC or ITEM/SCALE 1-2 now.
	(2). Use ZERO/→0← or GROSS/NET key to move the cursor to the desired digit for change. For example : 0.000kg
	(3). Press M+ key to change the digit in increasing manner and M-/DATE key in decreasing manner. For example :0.500kg, number 5 will be blinking.
	(4). Press TARE key to complete one set of TARE data and return to normal weighing mode. Now the display will show -0.500kg, arrow pointing to TARE, PRE-TARE and NET. Zero sign will appear on the display.

	(5). Place the container(0.500kg) and weight mass of 2.000kg on the weighing pan. The display will show 2.000kg, the zero sign will disappear and this 2.000kg will be the NET weight .
	(6). Press GROSS/NET → key, now the display will show 2.500kg, arrow pointing to NET disappear .This 2.500kg will be the Gross Weight of the weight mass with the weight of container.
	(7). Press GROSS/NET → key once again and you will see the Net Weight 2.000kg again.
	(8). Remove the weight mass and container, display will show –0.500kg .
	(9). Press TARE key, arrow pointing to Net, Tare, Pre-Tare disappear. The scale return to normal weighing mode with the Zero sign appearing now. Remark : Weighing Range = Max. Range – Tare Range

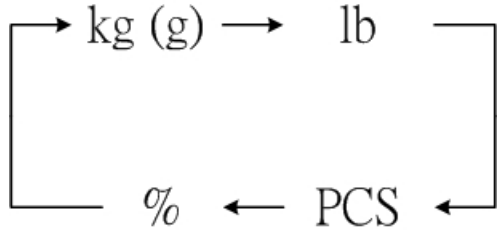
【AUTO TARE】

tr0~tr4 5sets available

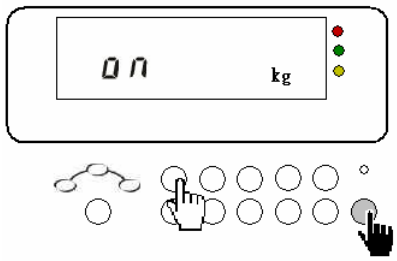
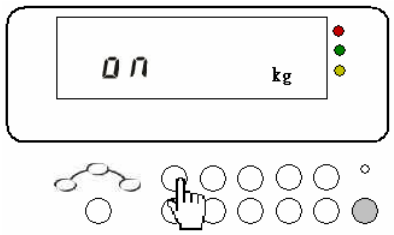
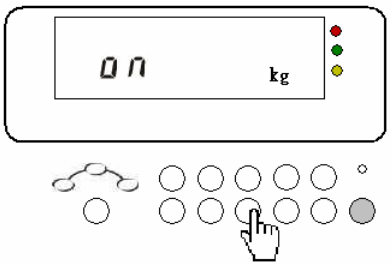
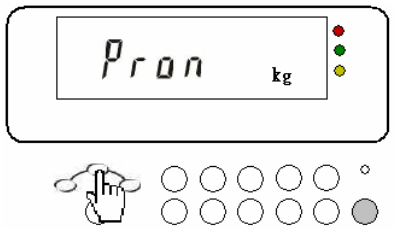
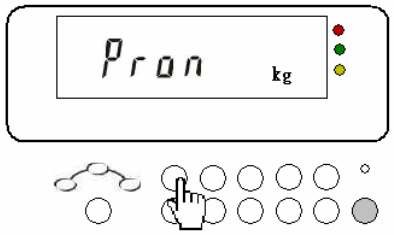
	(1). Under normal weighing mode ,press HI↑ ,display enter to Hi / Lo setting mode. The HI indication will appear on the top right corner .The operation message display show "H-0". If instead a "tr0" displayed, skip (2) and jump to (3).
	(2). Press TARE key now and you may set the HI limit of Auto Tare . The HI indication will appear on the top right corner .The operation message display show "tr0". One can also switch from tr0~tr4 by press ITEM/FUNC or ITEM/SCALE 1-2 now.
	(3). Press GROSS/NET → or ZERO ← key to move the cursor to the desired digit for change. Exp: : tr0 0.000kg HI
	(4). Press M+ key to change the digit in increasing manner and press M-/DATE key to change the digit in decreasing manner. For example : 0.500kg， number 5 will be blinking .

	(5). Press LO↓ key now and you may set the LO limit of Auto Tare . The LO indication will appear on the right corner .The operation message display show "tr0".
	(6). Repeat steps（3）、（4），and complete the LO limit for Auto Tare . Exp: "2000g"。
 AUTO TARE	(7). Press UNIT ENABLE key to save and return to normal weighing mode. The arrow pointing to Auto Tare will appear on the display.
	(8). To cancel the Auto Tare function , press HI↑ or LO↓ key . The operation message display will show trx.
	(9). Press PRINT DISABLE key to confirm cancel the Auto Tare function and return to normal weighing mode .

【 SELECTION OF WEIGHING UNIT 】

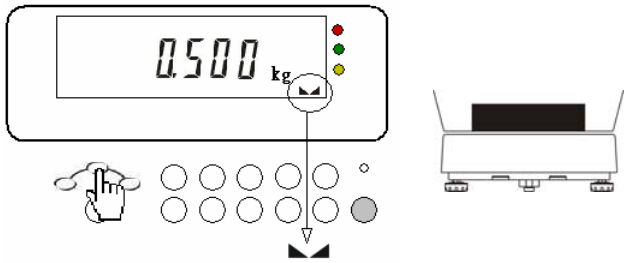
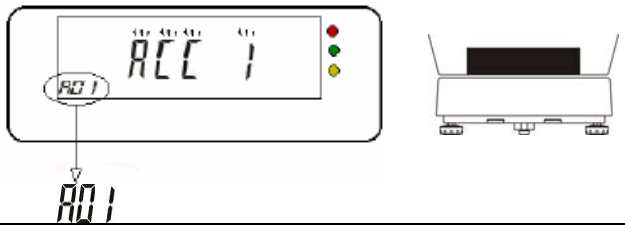
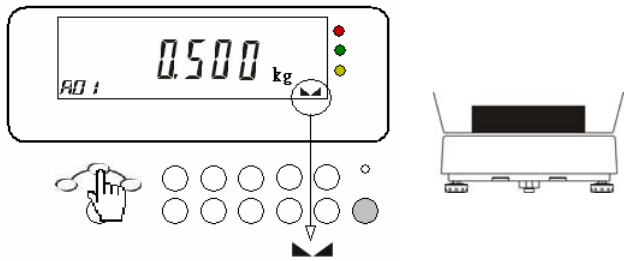
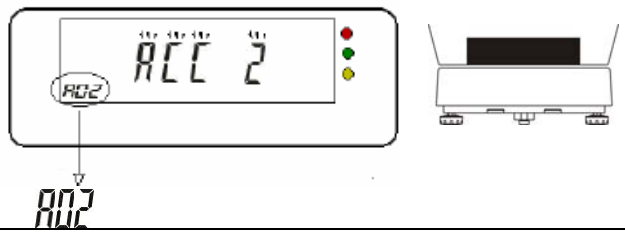
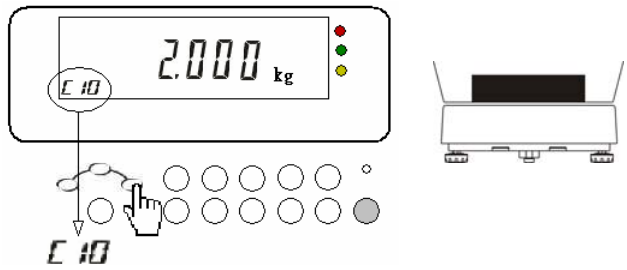
	Press UNIT ENABLE key to select the weighing unit in sequence as shown on the left diagram. Remarks：When using division ≧1g，the unit will be shown as kg when using division < 1g，the unit will be shown as g

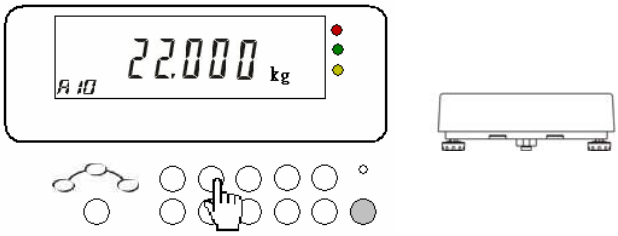
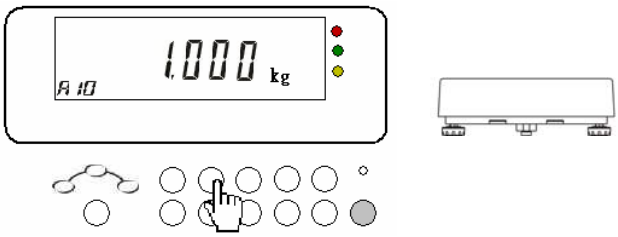
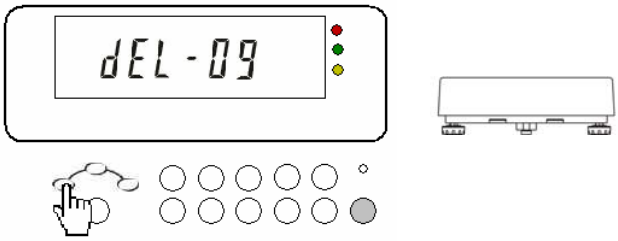
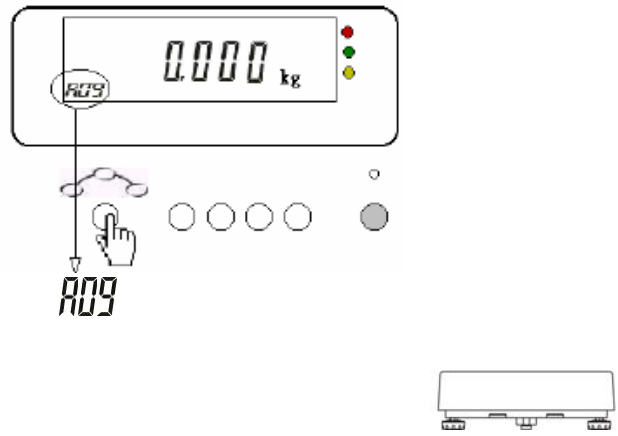
【UNIT IN USE AND INITIAL WEIGHING UNIT SETTING 】

	(1). Press and hold UNIT ENABLE key without release and turn on the scale. Until display show on kg then release UNIT ENABLE
	(2). Press UNIT ENABLE key for selection of different weighing unit , there are 4 weighing units：kg、lb、pcs、% .
	(3). Use ZERO →0← key to select the weighing unit to be (ON)(in used) or (OFF){not in used } .
	(4). Press M+ key to save changes and display will show Pron kg for selecting the initial weighing unit when turn on the scale.
	(5). Press UNIT ENABLE key to select the desired initial weighing unit. Remark：The selected weighing unit must be ON{in used} when select for initial weighing unit

	(6). Press M+ key to save changes and return to normal weighing mode.

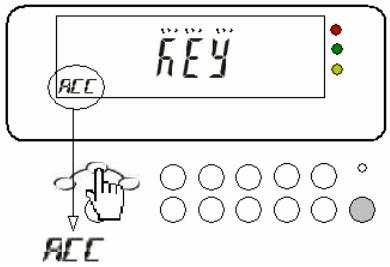
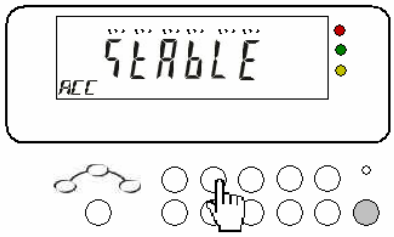
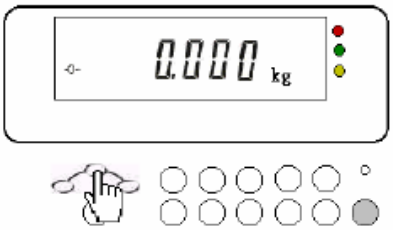
【 ACCUMULATION 】

	(1). Place an object on the pan wait for the stable sign and press M+ key.
	(2). Display will show “ACC 1”，and then the weight of the object . At the operation message display , you can see ”A01”
	(3). Remove the first object and place the next object on the pan, press M+ key when stable.
	(4). The display will show “ACC 2” and the weight of the second object. At the operation message display , you can see ”A02”
	(5). Repeat procedures（3）and （4）, for the desired accumulations (6). Press MR key now, display will show the weight of the last object. The operation message display at left will show C ×× (flashing)。For example if there are 10 accumulations , it will show C 10.

	(7). Press HI↑ or LO↓ key now and you will see A 10 or C09 indicates all the 10 accumulations or the weight of the 9th object!
	(8). To delete accumulations, press HI↑ or LO↓ key to recall the respective accumulation or all accumulation. For example: A 10 or C09.
	(9). Press M- DATE and when the display show dEL-A (meaning to delete all the accumulations) or dEL-09 (to delete the respective accumulation) .Press M- DATE key to confirm delete
	(10). If all the accumulations are deleted, the display will return to normal weighing mode. When there is only one single accumulation that has been deleted, the small indication will blink and you need to press ESC key to return to normal weighing mode. You can also repeat procedures（6）～（10）for deleting other accumulations . Remarks：Maximum number of accumulation is 99 units

.

【 ACCUMULATION MODE 】

	(1). Under normal weighing mode press M+ key, display will show KEY. Operation message display will show ACC.
	(2). Use HI↑ or LO↓ key to select the accumulation mode(please refer to chart below).
	(3). Press M+ key to complete the setting and return to normal weighing mode.

※ Accumulation mode:

KEY : Accumulate manually by pressing.

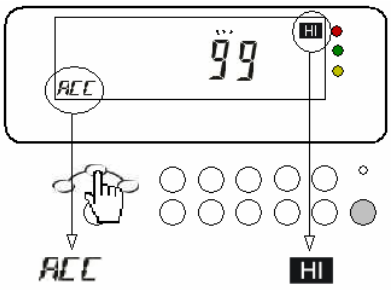
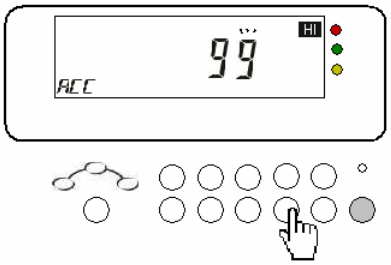
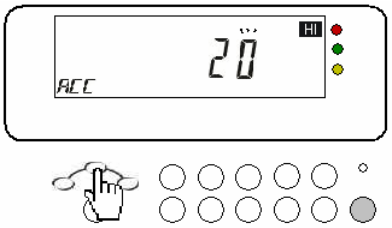
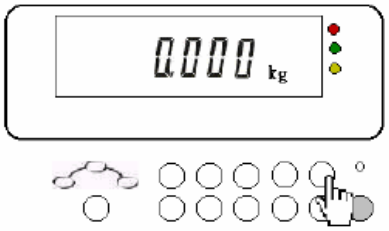
STABLE : Accumulate when the weight is stable.

: Accumulate when the weight is within the HI,LO range (OK range)

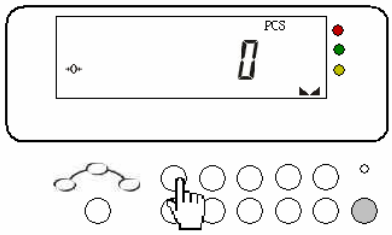
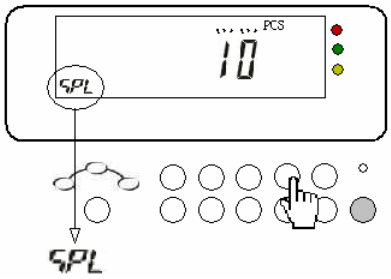
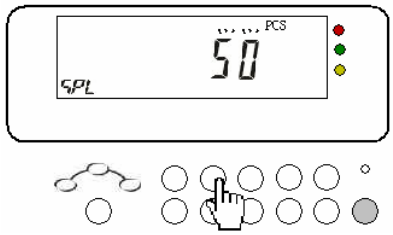
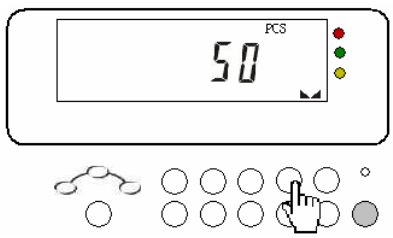
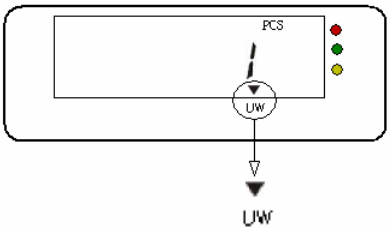
oh

Remark: accumulation is workable without enable the HI-LO checking function.

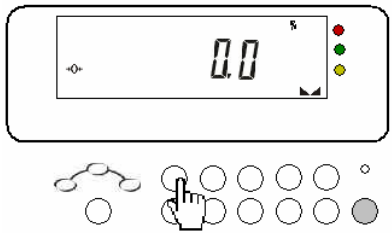
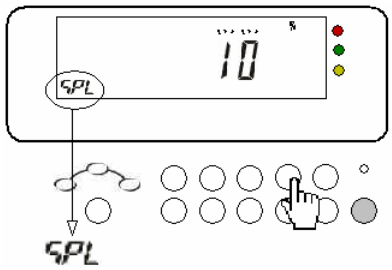
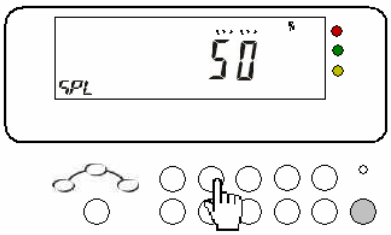
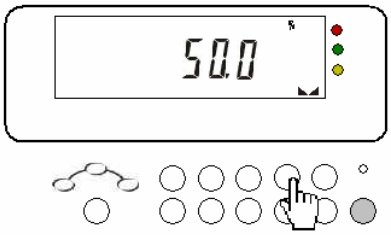
【 MAX ACCUMULATION SETTING 】

	(1). Press M+ for 3 seconds, display will show 99（this is the default maximum number of accumulation）. The upper right corner will show HI and the operation massage mode show "ACC".
	(2). Press ZERO ←O← or GROSS NET → key to move the cursor to digit wish to be changed.
	(3). Use M+ or M- DATE key to change the maximum accumulations. For example setting to 20 maximum accumulations.
	(4). Press ITEM FUNC key to return to normal weighing mode.
	(5). When the accumulations reach 20 times, the internal alarm will beep and no more accumulations are allowed. The display will show ACC20 (flashing) as a signal indicating that maximum accumulations is reached (this function applied to all accumulation mode).

【 SIMPLE COUNTING 】

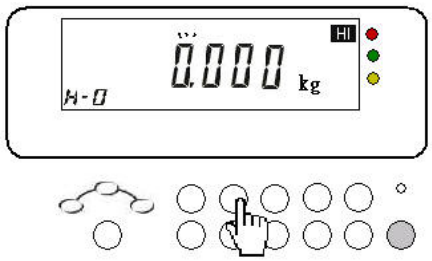
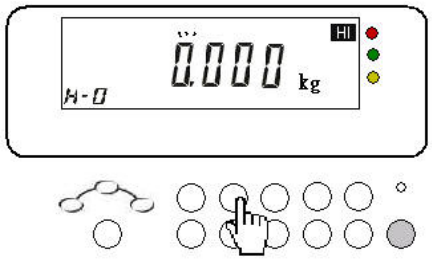
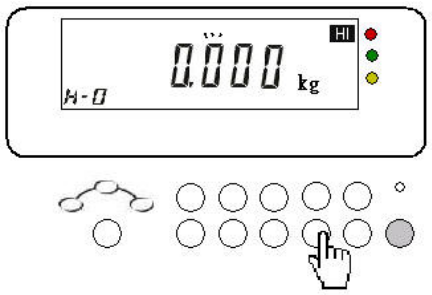
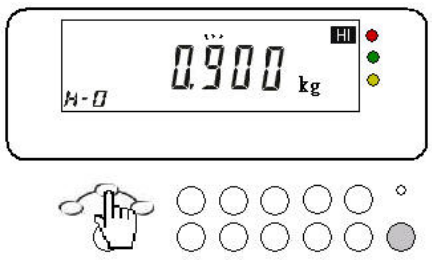
	(1). Press UNIT ENABLE key to select the ***pcs*** as weighing unit.
	(2). Place the sampling quantity on the pan. (You can choose the sampling quantity as 10、25、50、100***pcs*** only!)
	(3). Press SMPL S.NO key, display show the number of the sampling as 10***pcs*** (flashing) and the operation message display will show "SPL".
	(4). Press HI↑ or LO↓ key to select the sampling quantity. For example, if you select 50pcs for sampling quantity. 50***pcs*** (flashing) will be displayed on the screen.
	(5). Press SMPL S.NO key to complete the sampling procedures. Now the scale is ready for simple counting. Put the same objects on the pan for counting.
	Remarks：If the sampling quantity's unit weight for 1pcs is ≦0.8 x division , indication of insufficient unit weight will point to **UW**.

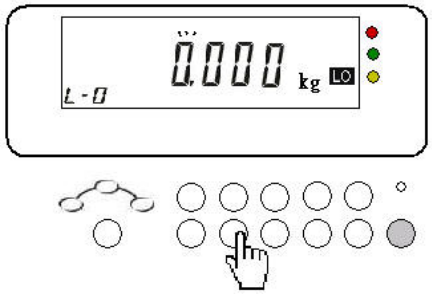
【 PERCENTAGE % 】

	(1). Press UNIT ENABLE key to select % as weighing unit .
	(2). Place the sampling quantity on the pan.(You can choose the sampling quantity as 10、25、50 or 100 %)
	(3). Press SMPL S.NO key, display show the number of it as 10 % (flashing) and the operation message display will show "SPL" indicate now is in sampling mode.
	(4). Press HI↑ or LO↓ key to select the sampling quantity. For example, if you select 50 % for sampling quantity; 50 % (flashing) will be displayed on the screen.
	(5). Press SMPL S.NO key to complete the sampling procedures. Now the scale is ready for percentage weighing. Put object on the pan for percentage weighing

【 HI / LO CHECKING 】

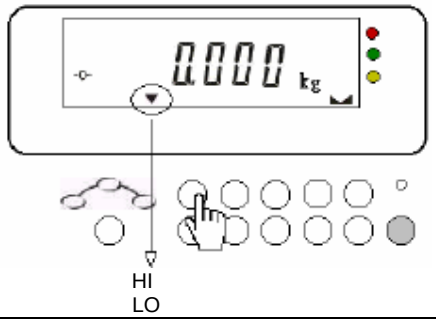
H-0~H-9 , L-0~L-9 -- 10 sets available

	(1). Under normal weighing mode press HI↑ key, display enter to Hi / Lo setting mode. The HI indication will appear on the top right corner .The operation message display show "H-0".
	(2). If the operation message display does not show H-0 , press TARE key to make sure you can read H-0 at the operation message display.
	(3). press ZERO →0← or GROSS NET → key move the cursor to the digit you want to change.
	(4). Press M+ or M- DATE key to enter the number. (5). Repeat （3）、（4）to complete the setting of HI limit .



(6). Press LO↓ key, indicator is ready for entering the value of the LO limit, the LO indication on the right will appear and the operation message display on the left will show L-0.

(7). Repeat （3）、（4）、（5）to complete the setting of LO limit .

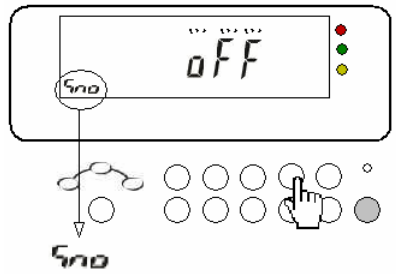
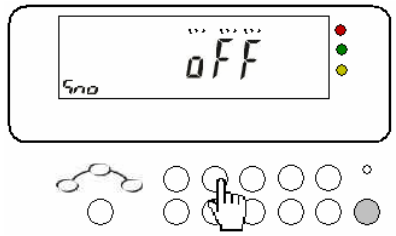
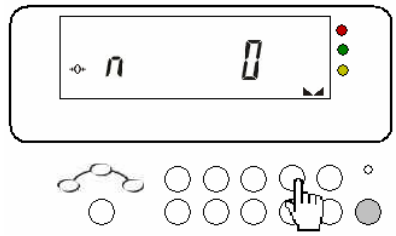


(8). Press UNIT ENABLE key to return to normal weighing mode. At this point , the arrow pointing to HI-LO checking will appear and HI-LO checking function is ready for operation .

(9). To cancel the function of HI-LO checking, press HI↑ or LO↓ key when the indication of HI-LO indication signs is on the LCD. Follow by pressing PRINT DISABLE key . HI、LO indication signs will disappear and this function is disabled .

Remarks：LO limits must be ≦ HI limits

【 SERIAL NUMBER 】

	(1). Press SMPL S.NO key display will show oFF (flashing) and operation message display will show Sno.
	(2). Press HI↑ or LO↓ to select the desired serial number mode. Please refer to below diagram.
	(3). After select, press SMPL S.NO key to return to weighing mode, display will now show n 0 for serial number, except if the setting is in oFF mode.

※ Mode of serial number：

oFF ： No action .

StAbLE ： The serial number plus 1 (+1) when the stable sign appear.

oh ： Serial number plus 1 (+1) when the weight is in between HI –LO checking limits. This function is valid even if the HI-LO checking function is disabled

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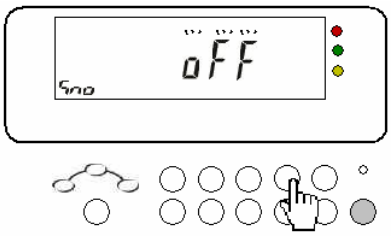
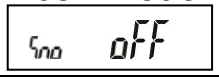
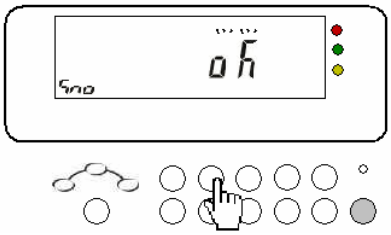
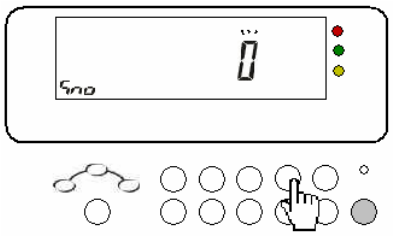
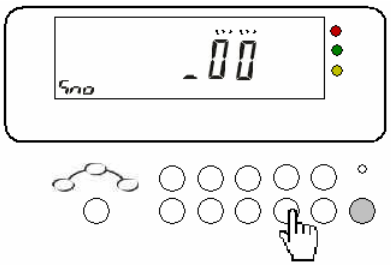
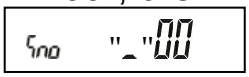
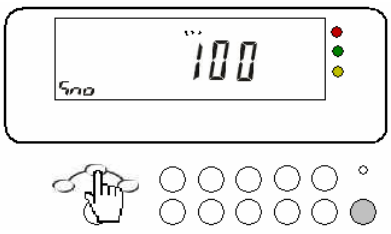
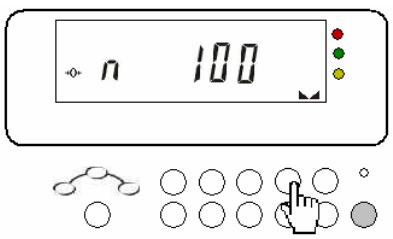
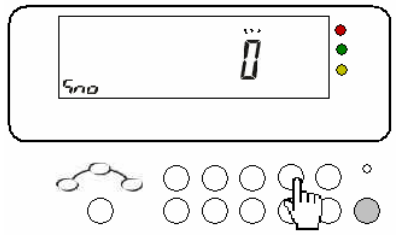
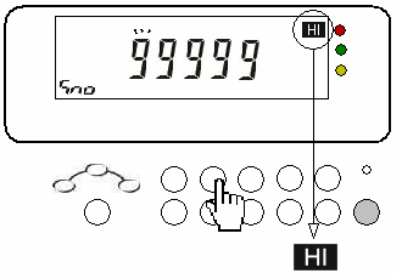
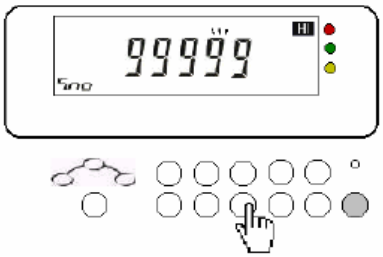
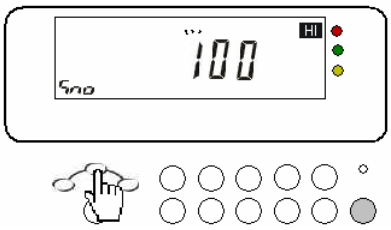
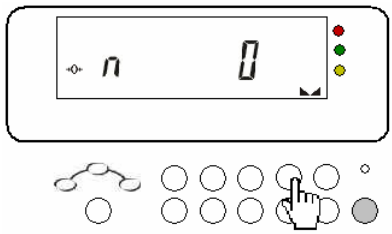
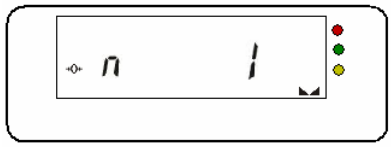
StoP ： Pause! No adding of serial number but display will still show the last serial number when there is nothing on the pan.

【 SERIES NUMBER SETTING 】

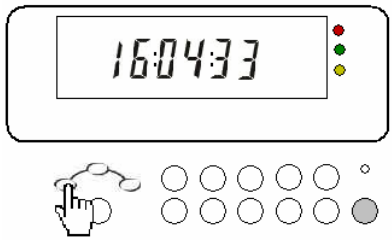
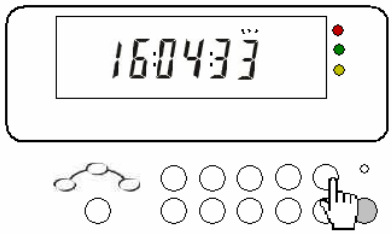
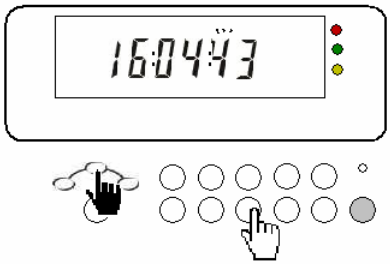
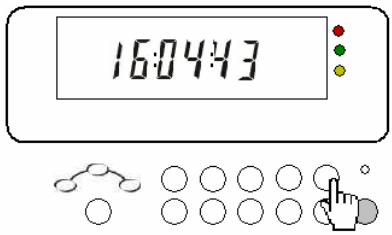
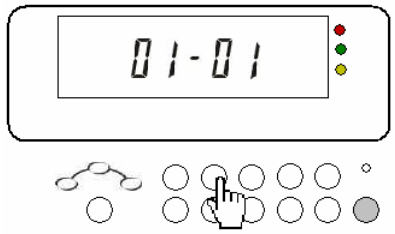
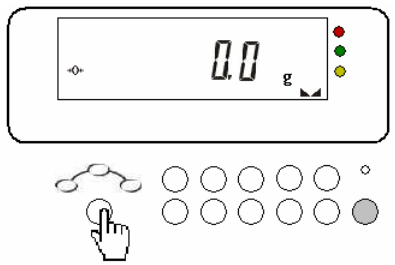
	Under normal weighing mode, press SMPL S.NO key to enter to setting of serial number mode . Display will show 
	(1). Press HI↑ or LO↓ key to setting of serial number mode . Example：Setting is “OK”
	(2). Pres SMPL S.NO key for 3 seconds, display will show
	(3). press ZERO →0← or GROSS NET key to move the cursor selected digit for change ◦Example：Serial number starting from 100 , then move the cursor to : 
	(4). use M+ or M- DATE key to key in the number. Example：100 is the starting serial number
	(5). press SMPL S.NO key to save the changes and return to normal weighing mode. Now the starting serial number is 100 Remarks：Max. serial number is 99999

【 MAX SERIAL NUMBER SETTING 】

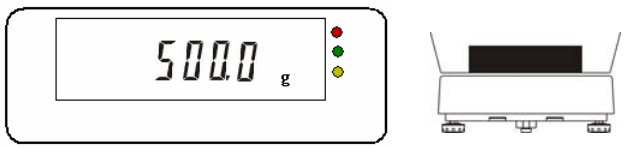
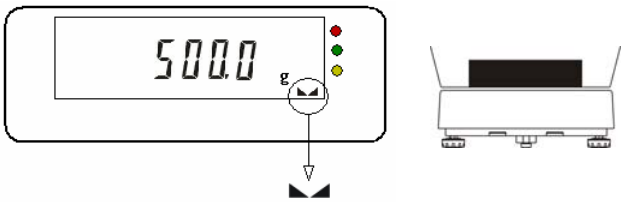
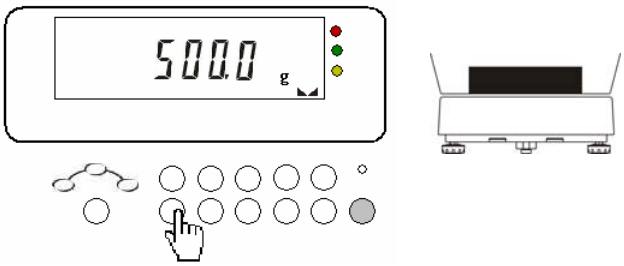
	(1). press SMPL S.NO key without release and display will show "0" Remark：if the serial number is been set before ,by pressing SMPL S.NO it will show the first serial number .
	(2). Press HI↑ key ，display will show symbol HI on the right corner meaning the scale is in setting of maximum serial number mode.
	(3). Press ZERO →0← or GROSS NET → key to move the cursor to the digit wish to change. (default : 99999)
	(4). Use M+ or M- DATE key to change the number. For example maximum serial number is 100 and key in "100" HI

	(5). Press SMPL S.NO key to complete the setting and return to normal weighing mode. The operation message display will show the starting serial number.
	(6). When the serial number reaches the maximum serial number, it will restart from serial number 1 again.
Remark：max serial number must ＞ starting serial number	

【 TIME AND DATE SETTING 】

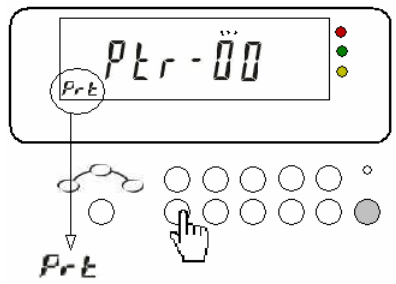
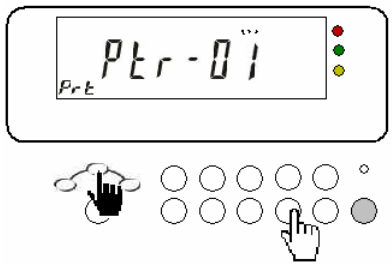
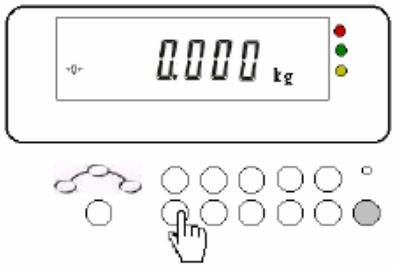
	(1). Under normal weighing mode press M- DATE key display will show the time.
	(2). Press ITEM FUNC key to enter to time setting mode. Last digit is flashing.
	(3). Press ZERO →0← ← or GROSS NET → key to move the cursor and press M+ or M- DATE key to change the setting.
	(4). Press ITEM FUNC key to complete the setting.
	(5). Press HI↑ or LO↓ key to select setting of month, date and year. (6). Repeat （2）、（3）、（4）, for setting of month, date and year .
	(7). Press ESC key to complete and return to normal weighing mode. Remarks：After switching off the indicator, the date/time will be erased unless if this indicator is equipped with RTC + Rs232 .

【 PRINT 】

	(1). Place the object on the pan。
	(2). Wait for the stable symbol.
	(3). Press PRINT DISABLE to print. Remarks：This function is workable only with the purchased of RS-232 interface and compatible printer(P3 should also be set to compatible printer)

【 PRINTING FORMAT 】

This function is applicable only when the Parameter P3 - Printer Type is set to normal, SH-24, BP-443D or EZ-2P.

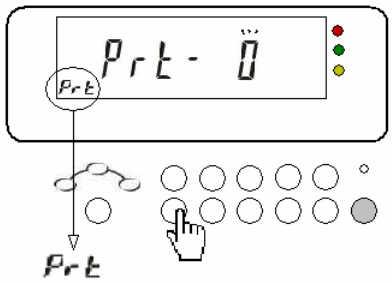
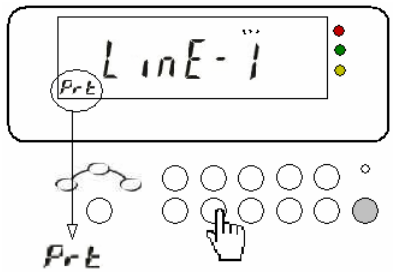
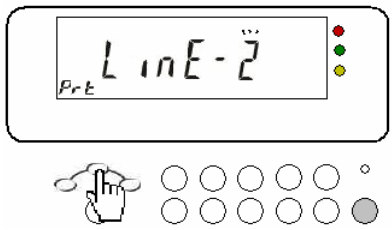
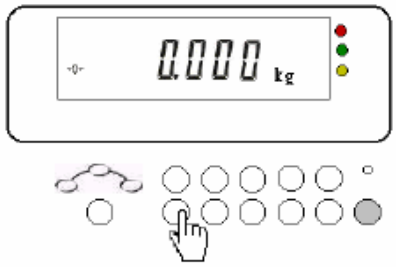
	(1). Under normal weighing mode press PRINT DISABLE key when the pan is empty. Display PrT-"0"0 , (flashing) and the operation message display will show PrT. Remark : If P3 was set to no-USE, the scale will then enter to HI limit setting.
	(2). Press ZERO →0← ← or GROSS NET → key to move the cursor and use M+ or M- DATE key to key-in number. In total there are 100 print format available for choose.
	(3). Press PRINT DISABLE key to complete the chosen and return to normal weighing mode.

Note：

1. There are three options of printers available: SH-24 (dot-matrix printer), BP-443D (Label printer) or EZ-2P (Label printer).

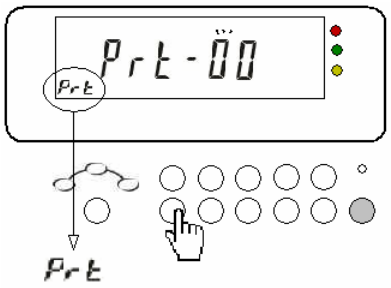
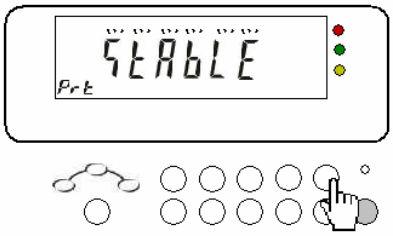
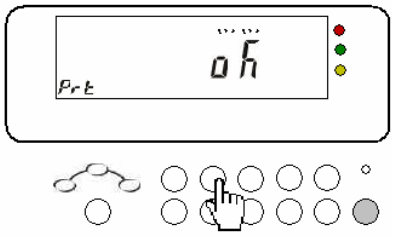
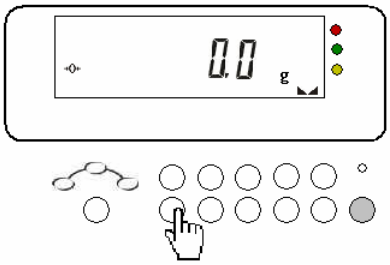
【SPACE BETWEEN LINES WHEN PRINTING 】

Only available for SH24 / normal

	(1). In parameter for printer(P3) choose the setting to SH-24 / NORMAL
	(2). Press PRINT DISABLE key and display shows PrE-0. The operation message display will show PrE.
	(3). Press LO↓ key, display show LinE-"1". The operation message display will show PrE.
	(4). Press M+ or M- DATE key to set the number of empty lines (space) when printing. {minimum =0，maximum=9}
	(5). Press PRINT DISABLE key to complete the setting and return to normal weighing mode.

【PRINTING MODE 】

*** This function is applicable only when the Parameter P3 - Printer Type is set to normal, SH-24, BP-443D or EZ-2P.**

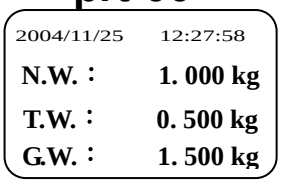
	(1). Press PRINT DISABLE key. Display show PrE-"0"，operation message display show PrE。
	(2). Press ITEM FUNC key. Display will show the printing mode . Example：StABLE.
	(3). Use HI↑ or LO↓ key to select the printing mode. (refer to the below mentioned chart)
	(4). Press PRINT DISABLE key to save changes and return to normal weighing mode.

※

KEY	:	Print manually by pressing PRINT key.
Contin	:	Print continuously when connecting to PC or large LED Display.
no	:	No action
StABLE	:	Print after stable symbol appear
oh	:	Print when weight is between HI-LO limits (this function is valid even if HI-LO checking function is disabled)

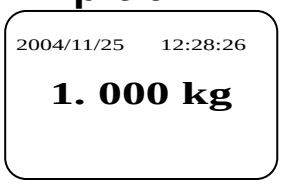
【 Samples of BP-443D / EZ-2P Printing Format】

prt-00

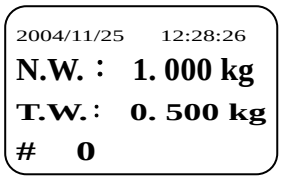


prt-01

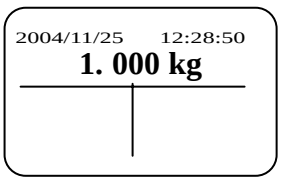
prt-02



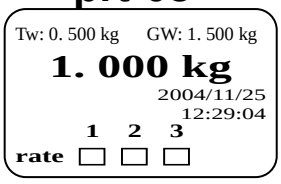
Prt-03



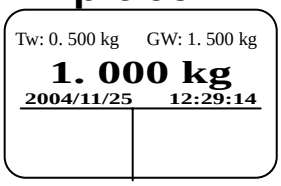
Prt-04



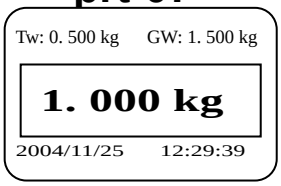
prt-05



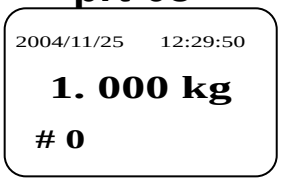
prt-06



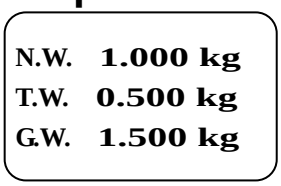
prt-07



prt-08



prt-09



＊ 10 Print format are preset in printer by Manufacture ＊

Note：

(1) Please contact your supplier/-dealer for additional EZ-2P & BP-443D print formats.

(2) A memory card has to be installed in EZ-2P.
(BP-443D memory card is standard)

(3) The print formats are installed into the printers through PC. Please email your specific requirement to us and we will make the requested print format for you.

【 Samples of SH-24 Printing Formats 】

When ALL03 appear under display of accumulation, press PRINT DISABLE key the print-out will like as following.

2002/01/01 00:09:23
(1) 0.100 kg
(2) 0.100 kg
(3) 0.100 kg

0.300 kg

0.300 kg

Prt-00
0.379kg

Prt-01
2002/01/01 00:09:23
0.379kg

Prt-02
#1 0.379kg

Prt-03
2002/01/01 00:09:23
#1 0.379kg

Prt-04
N.W: 0.379 kg
T.W: 0.100 kg
G.W: 0.479 kg

Prt-05
2002/01/01 00:09:23
N.W: 0.379 kg
T.W: 0.100 kg
G.W: 0.479 kg

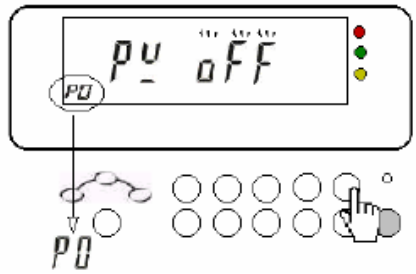
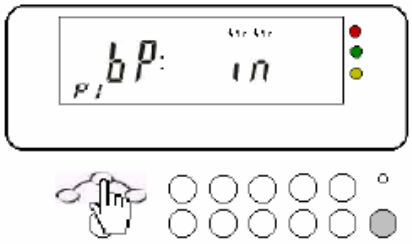
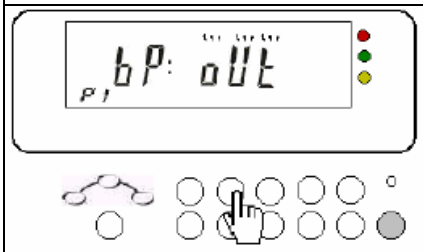
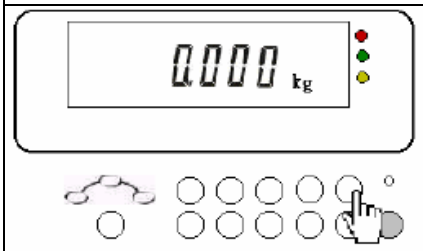
Prt-06
#1
N.W: 0.379 kg
T.W: 0.100 kg
G.W: 0.479 kg

Prt-07
2002/01/01 00:09:23
#1
N.W: 0.379 kg
T.W: 0.100 kg
G.W: 0.479 kg

Remark：

Without any commands, the printer are able to print format Prt00~Prt07 when connected to a parallel port printer.

【 PARAMETER SETTING 】

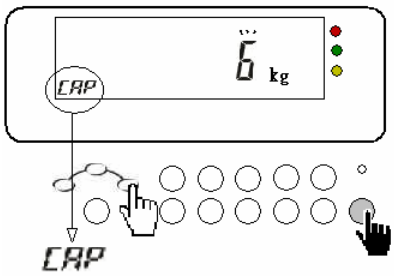
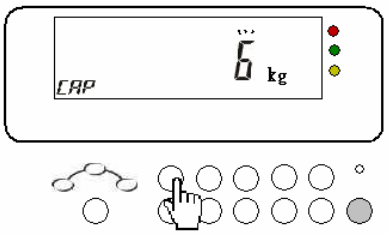
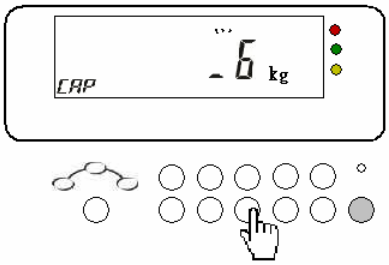
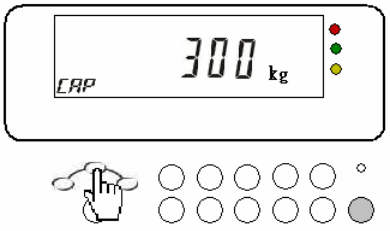
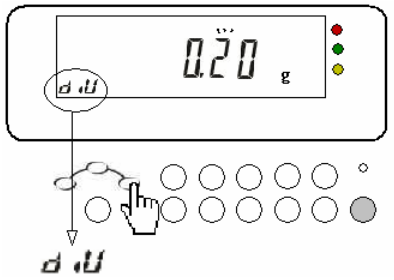
	Press ITEM/FUNC key without release and turn on, or under normal weighing mode press ITEM/FUNC key for 3 seconds. Display will show PU:"oFF" and the operation message mode show Po.
	(1). Press M+ or M- DATE key to choose each parameter（please refer to below chart）.
	(2). Press HI↑ or LO↓ key to choose desired setting.
	(3). When setting is complete, press ITEM/FUNC key and return to normal weighing mode.

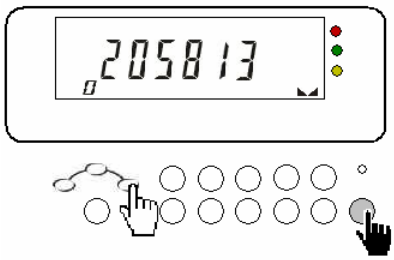
【 PARAMETER 】

No	Function	Display	Detail
PO	Auto Power Off (Weights > 20d)	oFF	Off (No action)
		5	5 minutes
		10	10 minutes
		30	30 minutes
		☆ 60	60 minutes
		90	90 minutes
P1	Beeping (The effect of this parameter is to determine when to have beep sounds during Hi/LO/OK checking.)	☆ in	Scale：Enable the HI-LO checking functions , beeps when the range is between HI & LO
		out	Scale：Enable the HI-LO checking functions, beeps when the range is out of HI & LO
		Ein	Option：Relay with light tower：beeps when the range is between HI & LO
		Eout	Option：Relay with light tower：beeps when the range is out of HI & LO
P2	HOLD (able to hold the displayed weight after load is remove)	☆ oFF	No action of Hold
		on	Able to hold the displayed weight and print at the same time after pressing print key PRINT DISABLE (when there is loading). Press Key ESC to clear.
P3	Printer type Setting of this parameter determines the data format for the connected printer type	☆ normAL	N/A
		SH-24	Normal dot-matrix printer
		bP-443	Label printer
P4	RS-232 Baud Rate Setting of this parameter determines RS-232 data transmission rate.	2400	
		4800	
		☆ 9600	
		19200	

P5	RS-232Data Format Setting of this parameter determines the RS-232 transmission data format.RS-232	☆	n81	
			o81	
			E81	
			n71	
			o71	
			E71	
P6	Backlight		oFF	No Backlight
			on	Backlight is on always
		☆	SAvE	Backlight when stable sign appear. Off automatically 3 seconds after stable weighing
			AUto	Auto (backlight is actuated when weight loading is over 20e)
P7	Channel		1	Channel 1
			2	Channel 2
		☆	1.2	Dual Channel

【 CAPACITY/RESOLUTION SETTING 】

	(1). Press MR key and turn on the scale. Display will show capacity of the scale (flashing), operation message display will show CAP
 kg → g → lb	(2). Press UNIT ENABLE key to select the weighing unit .
	(3). use ZERO →O← ⟵ or GROSS NET ⟶ key move the cursor to the digit which needs to be change CAP "_"6kg
	(4). Press M+ or M- DATE key to enter the desired capacity and complete the setting CAP "3"00kg
	(4). Press MR key and enter into setting of resolution mode. Display will show the resolution (flashing) and operation message display will indicate d.U symbol.

	(5). Repeat steps（3）、（4）to complete setting of resolution. Exp：
	(6). Press MR key and display will show the internal self checking value and stop. This means that setting of capacity/resolution is completed. Example： Turn off the scale and turn on again.

Note：

Maximum capacity to be set for this indicator is 400000kg.

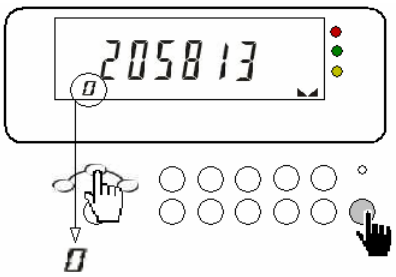
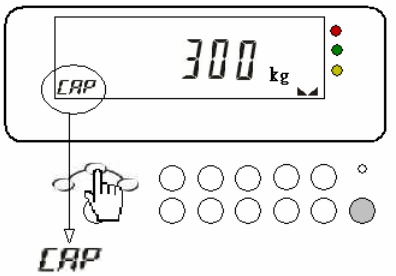
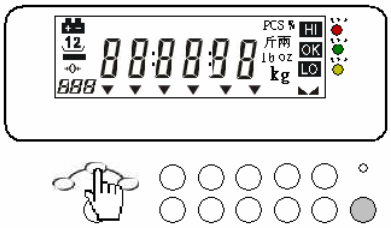
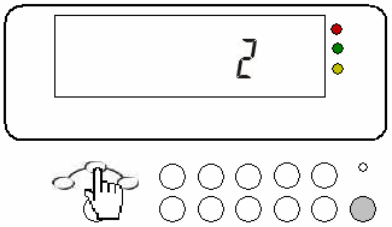
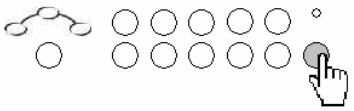
Minimum division to be set for this indicator is 0.01g.

Whenever the capacity / resolution is set or changed, be sure to re-calibrate according to calibration procedure located in service manual.

【 Division Configuration Chart 】

Kg	g	lb
Max 5000kg	Max 5000g	Max 500lb
2000kg	2000g	200lb
1000kg	1000g	100lb
500kg	500g	50lb
200kg	200g	20lb
100kg	100g	10lb
50kg	50g	5lb
20kg	20g	2lb
10kg	10g	1lb
5kg	5g	0.5lb
2kg	2g	0.2lb
1kg	1g	0.1lb
0.5kg	0.5g	0.05lb
0.2kg	0.2g	0.02lb
0.1kg	0.1g	0.01lb
0.05kg	0.05g	0.005lb
0.02kg	0.02g	0.002lb
0.01kg	0.01g	0.001lb

【 TESTING MODE 】

	(1). Press M+ key and turn on the scale. Display will show the internal count value and operation message display show 0 。
	(2). Press M+ key , display will show the setting of capacity , the operation message display will show CAP 。
	(3). Press M+ key and all segments in display are appearing. This is to check if the display is in good condition.
	(4). Press M+ key ，display show 2 ，this is to check the key function condition.
	(5). After testing completed press ON/OFF key to switch off.

※ Relative position

1	:	Memory cancel	6	:	print	11	:	Sampling
2	:	accumulation.	7	:	HI limit	12	:	Net/gross
3	:	escape.	8	:	LO limit	13	:	Item/Function
4	:	Memory recall	9	:	Tare	14	:	Item/Scale
5	:	Unit.	10	:	Zero			

【ERROR MESSAGES】

Error Message	Reasons / Possible Caused	Solutions
E0 no EE	The CPU unable to read the EEPROM	Contact the manufacturer or nearest agent
E1 CAL-d	Unable to read the 3 points calibration range	Refer to “service manual” for calibration procedures
E2 PHi	Zero Point is too high	(1) Make sure the pan is empty when turn on the scale or perform the 3 points calibration. (2) Check the connections of wires
E3 PLo	Zero Point is too Low	(1) Make sure the pan is on the scale or perform the 3 points calibration. (2) Check the connections of wires.
E4 UnStAb	Unstable zero point	(1) Make sure there is no winds or vibration . (2) Check the connections of wires.
E5 LC-oF	(1)Load cell spec. not compatible. (2)calibrating weights mistake	(1) Replace with a compatible load cell. (2) Change with correct calibrating weights.
E6 no LC	Load cell read out always the same	(1)Check if load cell wire are connected correctly.
E10 CLk-b	Optional RS-232(RTC) batteries run out	Replace the batteries
E11 diFF	Unable to accumulate. Two objects are with different units.	Press M- DATE twice to clear all accumulation data or press ESC and return to normal weighing mode.

E12 ou-**XX**	Accumulation data exceed preset maximum	Press M- DATE twice to clear all accumulation data or press ESC and return to normal weighing mode.
E13 LoHi	Hi / Lo setting incorrect	Press HI↑ or LO↓ key and reset Hi / Lo value.
E20 XXXXX	External division over Maximum (XXXXX is external resolution)	Press MR and reset Capacity / Resolution
E21 duC **XX**	Capacity / Resolution Setting inaccurate.	Press MR EN/DIS and redo Calibration (make sure the calibrate weight is correct).
-----	Overload (Maximum display= max .capacity + 9e)	Remove the object from the weighing pan.
	Indicator unable to Switch On when pressing ON/OFF key	Use a tool to press the RESET key located at the back of the indicator to turn on the scale and clear the problem.

【 LCD CHARACTERS 】

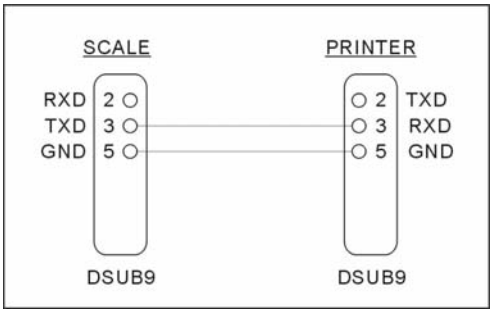
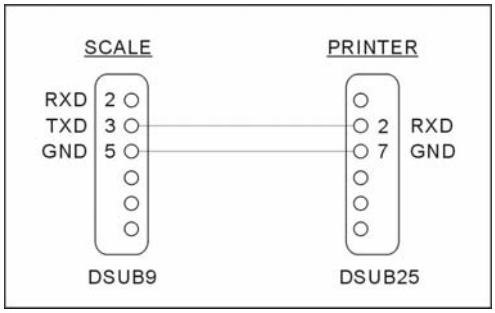
0	1	2	3	4	5	6	7	8	9

A	B	C	D	E	F	G	H	I	J	K	L	M

N	O	P	Q	R	S	T	U	V	W	X	Y	Z

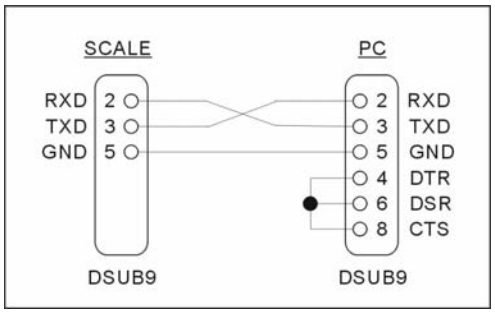
【CONNECTER】

Scale To Printer

Connecter for EZ-2P/BP-443D	Connecter for SH-24
	

Scale To PC

When you want a scale to transmit data to PC continuously.
(1) Using a cable as following to connect Scale and PC
(2) Set printer mode as continue
(3) Scale data will be sent to PC continuously. (of course, you must have the receiving software on the PC)



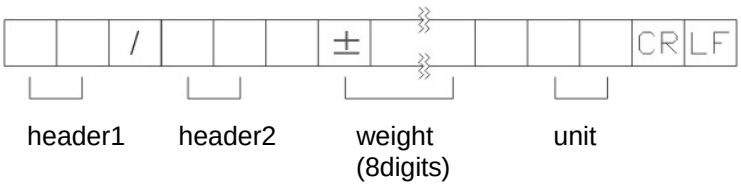
Only pin 2, 3 and 5 are used.

【DATA PROTOCOL】

- **Output Data when Print Mode set as Continue**

(header1: ST=STABLE US=UNSTABLE)
(header2: NT=NET GS=GROSS)

For example : ST /NT□+□12.350□kg

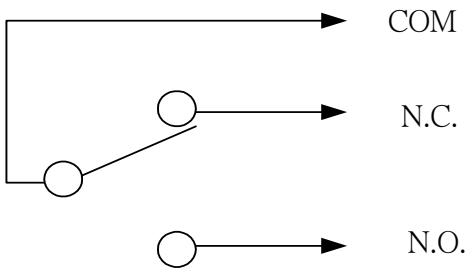
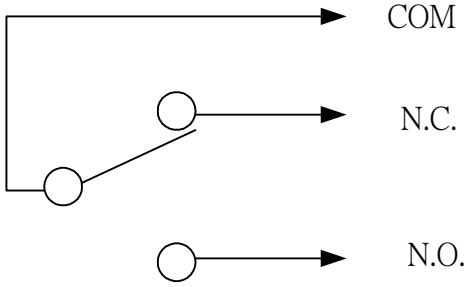
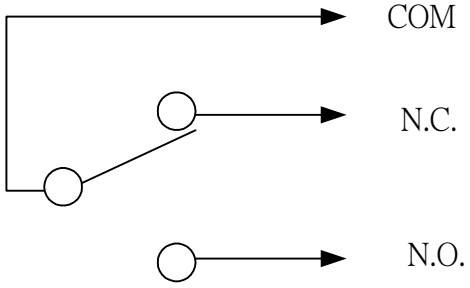
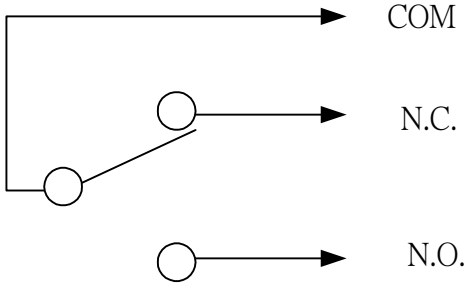


- **Input commands**

"T"＝perform TARE function "Z"＝perform ZERO function

【RELAY MODULE DIAGRAM】

■ **Relay Output：**

Alarm	
HI	
OK	
LO	

■ **Relay Contact Spec**

1A/24VDC，0.5A/125VAC，0.25A/250VDC

【 DUAL PLATFORM OPERATION CH1,CH2 】

OPTIONAL

(1) Set parameter 7(P7) to 1.2.

(2) Turn off the indicator. Restart the indicator with MR key pressed. Now you are entered to platform1 (CH1).

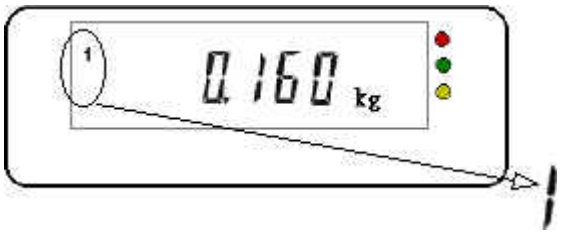
(3) Set the capacity / Resolution and perform calibration of platform 1.

(4) Press ITEM SCALE 1-2 and switch to platform 2(CH2).

(5) Set the capacity / Resolution and perform calibration of platform 2.

(6) Turn off the indicator now and then restart.

(7) Now the display is for platform 1(CH1).



now in platform 1(CH1)

(8) Press ITEM SCALE 1-2 for switch between CH1 and CH2.

Features:

(1) Each platform has respectively Serial Number and Max. Serial Number.

(2) Each platform has respectively 10 sets of Hi/Lo, 5 sets of Auto Tare and 5 sets of Pre Tare memories.

(3) Printing format for two platforms can be set to different one at the same time.

Accumulation:

(1) Accumulation is only allow for either one platform.

【PRODUCT SPECIFICATIONS】

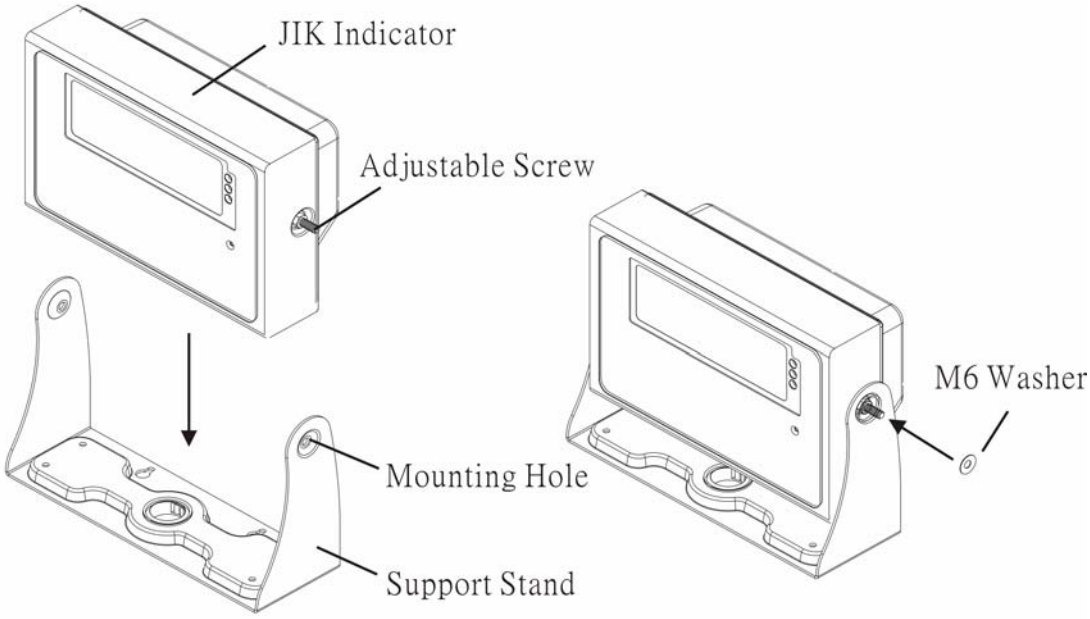
1. General

Enclosure	ABS	S/S
Demensions	230(W) * 150(H) * 90(D) mm	
Display	6digit 30mm(H) & 3digit 10mm(H) LCD(include EL backlight)	
Units	kg or g , lb , 台斤.兩 , 港斤.兩 , pcs , %	
Power	Adaptor 9V/1A Recharging Battery 6V/3Ah	Adaptor 9V/1A Recharging Battery 6V/3Ah can be selected
Weight(include Battery)	Approx. 2.5kg	Approx. 2.8kg

2. ADC and Loadcell

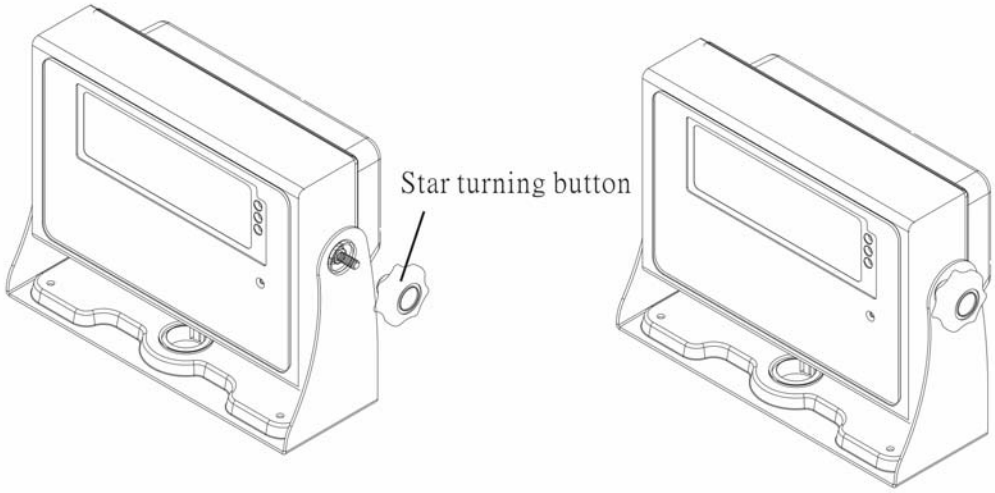
Model		Advanced
ADC	Transform Mode	Δ - Σ
	Internal Resolution	Approx. 5,000,000 counts
	External Resolution	Max. 60,000d(non-OIML)
	Conversion Speed	10 times/sec
System Linearity		Within 0.01% of FS
Loadcell	Excitation	5VDC ± 6% , 120mA(drives up to 8 * 350 L.C.)
	Full Scale	-10 ~ 40mV(include dead load)
	Input Sensitivity	Min. 0.1uV/d(non-OIML)

【 ASSEMBLY MANUAL OF JIK INDICATOR AND SUPPORT STAND 】



Illustrator I　　Illustrator II

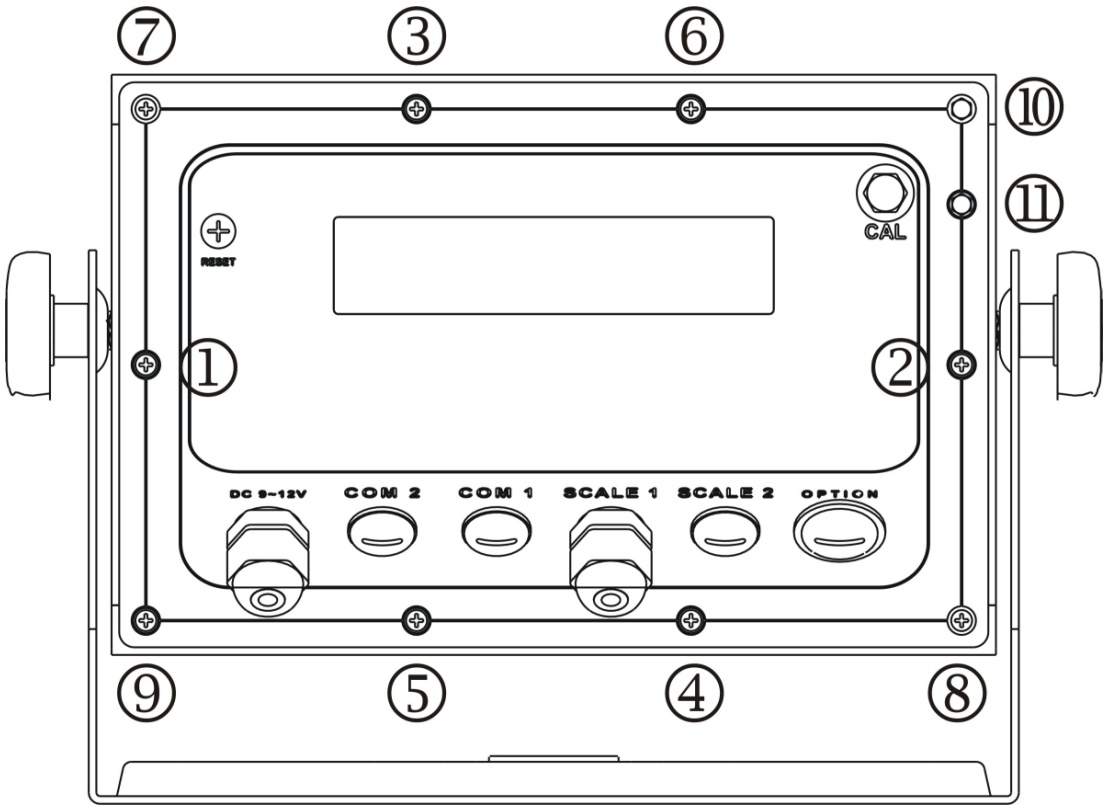
1. Using adjustable screw to pass through mounting hole. (illustrator I)
2. Put M6 washer onto adjustable screw. (illustrator II)



Illustrator III　　Illustrator IV

3. Rotating the star turning button into adjustable screw. (illustrator III)
4. Adjust the indicator to the best view, and then rotate it tight via star turning button. (illustrator VI)

【 FIXING SCREW INSTRUCTION FOR JIK-XSX 】



- After connecting load cell and optional devices (RS-232, RELAY), fix all screws attached fallow the above numeric sequence.
- If using an electric screwdriver, set the torque range to 5-7 kgf.cm.
- Sealing screws are to be located at sequence 10 and 11.

【 SINGLE POINT CALIBRATION FOR WEIGHT 】

Step I (Enter into calibration mode)

Turn on the scale by holding down MR key until CAP is shown on the lower left screen, i.e. the scale has entered into the calibration mode.

Note: If the calibration unit, capacity, and resolution have been set, you may skip Steps II~IV and press MR key to enter into Step V to perform zero point calibration.

Step II (Select Calibration Unit)

You may select calibration unit (kg, g) by use of UNIT ENABLE key.

Step III (Capacity Setting)

Press ZERO →0← ← or GROSS NET → key to shift the flickering digit left or right; press M+, M- DATE key to set any value between 1-9; after setting, press MR key to enter into the next step.

Step IV (Resolution Setting)

Press ZERO →0← ← or GROSS NET → key to shift the flickering digit left or right; press M+, M- DATE key to set any value between 1-9; after setting, press MR key to save and show the offset-value; press the weighing pan gently, if the value changes, it's normal.

Note: If you don't want to perform calibration, just power off and the setting are completed.

Step V (Zero Point Calibration)

Press MR key to perform zero point calibration; when CAL on the lower left stops flickering, zero point calibration is completed with CAL **kg shown.

Note: If the show value is very unstable, press TARE key to enter into stb adjustment function, use HI↑ key to extend the range of stb (it is recommended to adjust one segment each time), after confirmation, press TARE key to save setting and the zero point calibration will be performed automatically.

Step VI (Single-point Calibration) Note: If to perform three-point calibration, skip this step.

Press ZERO →O← ← or GROSS NET → key to shift the flickering digit left or right; press M+, M- DATE to adjust the value; input the weight value to be calibrated, and put the correct weight onto the weighing pan, then press MR key to save and confirm, once PASS is shown, take away the weight on the weighing pan and restart the machine for normal use.

Step VII (Three-point Calibration)

Press HI↑ key for 3 seconds until C-1 is shown at the lower left corner.

First Point C-1: Press ZERO →O← ←, GROSS NET →, M+ and M- DATE key to shift the flickering digit left or right and to set values; input the weight value to be calibrated, and put the correct weight onto the weighing pan, press MR key to confirm and perform calibration.

Second Point C-2: Put the weight to be calibrated onto the weighing pan, the weight value will be shown automatically on the screen; press MR key to confirm and perform calibration.

Third Point C-3: Put the weight to be calibrated onto the weighing pan, the weight value will be shown automatically on the screen; press MR key to confirm and perform calibration. Once PASS is shown, take away the weight on the weighing pan and restart the machine for normal use.

Recalibration: If any error occurs during calibration, press ITEM FUNC key to return to zero point calibration mode and perform calibration according to the calibration procedures.

Note: The weight value in three-point calibration shall comply with C-1 < C-2 < C-3.