

Appendix 2 : Exporting data to PC in the form of EXCEL

1. Introduction

This manual contains installation and operation instructions for the JWL Series weighing indicator. Please read the manual completely before installation and operation.

2. Precautions

- ⊙ Place the scale on a flat and stable surface (Refer to Section 3-3).
- ⊙ Verify that the input voltage and the plug type matches the local AC power supply (Refer to Section 4-4).
- ⊙ Make sure power cord does not pose a potential obstacle or tripping hazard.
- ⊙ Keep the scale away from EMI noise, strong wind and vibration, which might cause incorrect reading.
- ⊙ Avoid sudden temperature changes (suitable operating temperature is between -5°C~ 40°C.)
- ⊙ Do not drop loads on the platform.
- ⊙ Disconnect the power supply while cleaning the scale.
- ⊙ Do not immerse the scale in water or other liquids.
- ⊙ Service should be performed by authorized personnel only.

3. Before Using the Product

3-1 Unpacking and Checking

Open the package and check the instrument for transport damage. Immediately inform your dealer if you have complaints or if parts are missing. The package should contain:

- Scale body
- Weighing platform (plastic base with stainless steel pan)
- Power cord
- User manual

3-2 Installing Components

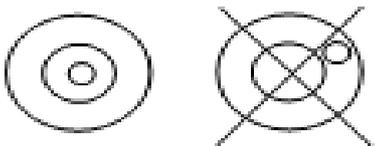
1) Before using the scale, remove the delivery protection screw (rotate counterclockwise), which located underneath the scale, and cork the plug buckle.

Note: the JWL-30K model is shipped without the shipping protection screw.

2) Cover the weighing pans on the scale body properly.

3-3 Leveling the Scale

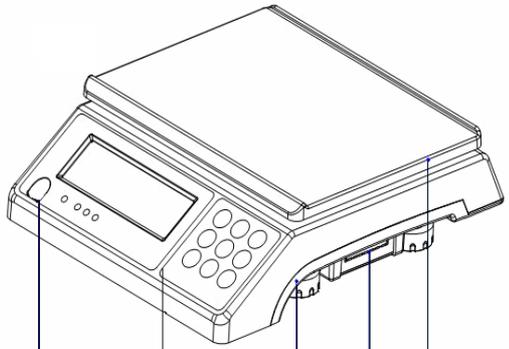
To compensate for small irregularities or inclinations at the location, the scale can be leveled. The scale is equipped with a level indicator at the front panel. Adjust the leveling feet until the air bubble in the indicator is centered as shown.



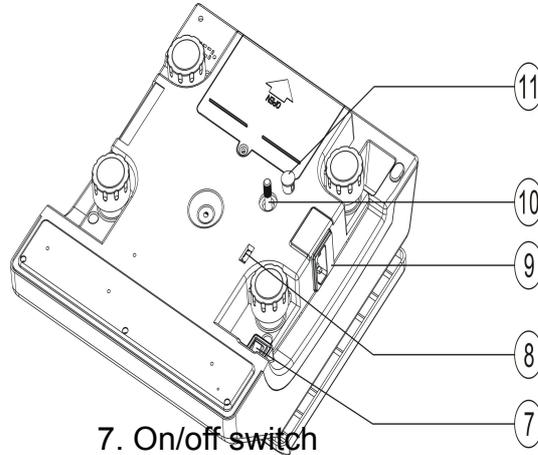
Note: The scale should be leveled each time its

location is changed.

4. Product Introduction



- 1. level indicator
- 2. Front panel
- 3. Bottom housing
- 4. RS-232 interface
- 5. Plastic weighing pan
- 6. Stainless steel weighing pan



- 7. On/off switch
- 8. Two-stage switch
- 9. Power socket
- 10. Transport protection screw
- 11. Plug buckle

4-1 Specifications & General Features

Specifications

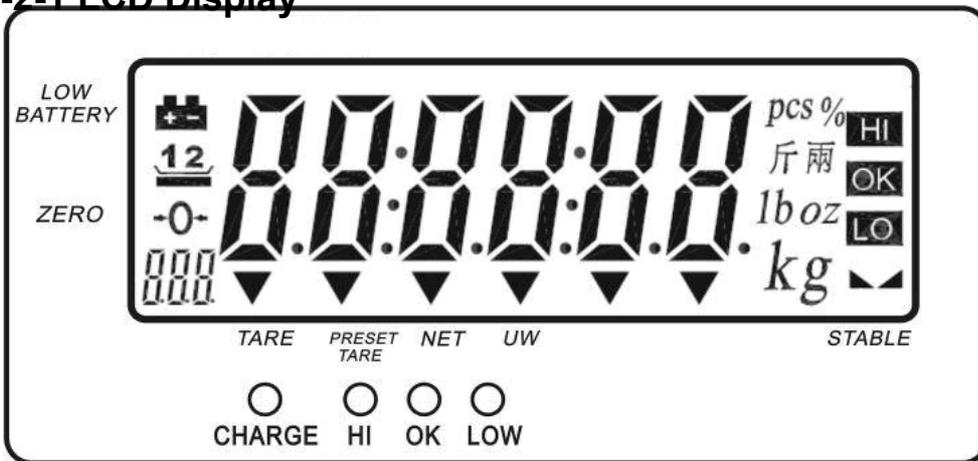
Model	JWL-1.5K	JWL-3K	JWL-6K	JWL-7.5K	JWL-15K	JWL-30K
Capacity (Kg)	1.5	3	6	7.5	15	30
Division-1 (g)	0.5	1	2	2	5	10
Division-2 (g)	0.2	0.5	1	1	2	5
Division-3 (g)	0.1	0.2	0.5	0.5	1	2
Division-4 (g)	0.05	0.1	0.2	0.2	0.5	1
Display	LCD(liquid crystal display), digits 31mm high, with back lighting					
Pan size	294X228X13.5mm					
Scale Dimensions	341X294X104mm					
Power Supply	AC 110V/220V (AC±10%) or built-in rechargeable battery (6V/4A)					

General Features

- Auto shut off, built-in rechargeable batteries or AC alternative
- Multiple functions: tare, preset tare, simple counting, check weighing, accumulation and display for every deal.
- Large bright backlit LCD with prominent 29mm high digits and LED backlight
- Software filtering design and adjustable weighing displaying speed according to different environments.
- Easy operation with big keys and high weighing resolution
- Single point calibration and linear calibration available
- RS-232 serial communication interface(PC, printer, relay)

4-2 Display

4-2-1 LCD Display



Low battery indication



Tare or Preset Tare Indication



Center of Zero Indication, The zeroing range is $\pm 2\%$ of weighing capacity.



Auxiliary display (parameter, accumulated number of weighments)

TARE Symbol “▼” points at “TARE” when manual Tare action is done.

Preset Tare Symbol “▼” points at “**Preset Tare**” when preset tare value is set.

“**NET**” Net weight--Gross weight minus Tare. Symbol “▼” points at “**NET**” when manual Tare or preset are actions are done.

“**UW**” Under simple counting mode, Symbol “▼” points at “**UW**” when unit weight is lower than 4/5 of scale division. Unit weight is too small for ensuring accurate quantity calculations.

○

CHARGE Charge Lamp

Red--- battery is charging

Green---battery is fully charged

HI lamp ON The weight on the weighing pan is greater than the upper limit.

OK lamp ON The weight on the weighing pan is between upper and lower limits.

LOW lamp ON The weight on the weighing pan is smaller than lower limit.

PCS %

斤兩

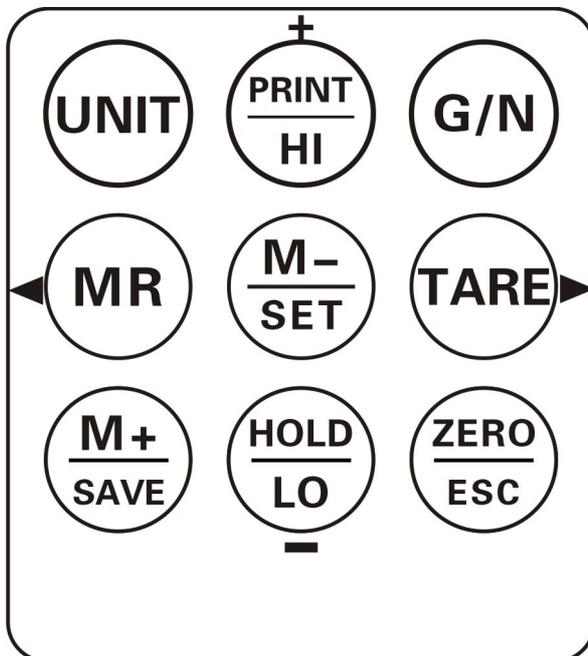
1b oz

kg

Units of measure

◀▶ Stable indication

4-2-2 Keyboard



	Short press steps through activated weighing units, release on desired one.
	Displays gross and net weight by turns
	<ol style="list-style-type: none"> 1. Tares the weight of the container or accepts the keypad tare entries 2. Cancel the tare 3. Select the later parameter in the same level 4. Select the later record when checking the accumulation record 5. Shift keys rightwards
	<ol style="list-style-type: none"> 1. Zeros the display (within 2% of max.capacity) 2. Exits from certain operation without save
	<ol style="list-style-type: none"> 1. Long press to enter function setting 2. Deletes accumulation records 3. Delete the present accumulation record for the sake of wrong accumulation operation under the accumulation mode.
	<ol style="list-style-type: none"> 1. Adds the indicated weight into accumulation memory 2. During editing, save and return to the higher option
	<ol style="list-style-type: none"> 1. Memory recall 2. Select the former parameter in the same level 3. Select the former record when checking the accumulation record 4. Shift keys leftwards
	<ol style="list-style-type: none"> 1. During setting value, add 1 to the current value 2. Set the upper limit of the check weighing 3. Print
	<ol style="list-style-type: none"> 1. During setting value, deduct 1 to the current value 2. Set the lower limit of the check weighing 3. Hold function

4-3 Power supply

Please verify the local AC power source and switch the two-stage switch to the proper place before plugging into the power outlet.

Alternative power supply

- 1) AC 110V/220V (AC±10%)
- 2) (6V/4A) Internal Rechargeable Battery

Power Consumption

- About 300 mW without backlight
- About 380 mW with backlight

Low Battery Warning

When  appears in the upper left corner of the weight window, the battery requires recharging. The charge lamp turns green from red when the recharging is completed (which takes about 8 hours). Disconnect the scale from power supply when it is fully charged.

5 Function Setting and Description of Parameter Values

5-1 Function Setting

1. Press and hold **M-/SET** while powering on or long press **M-/SET** under normal weighing mode to enter function setting. The window displays "**check**". Setting item "**P00**" displays momentarily at the left bottom
2. Press **MR** or **TARE** to shift between the functions
3. Press **M-/SET** to enter the parameter setting.
4. Press **MR** or **TARE** to shift between the function parameters
5. Press **M+/SAVE** to save and return.
6. Press **ZERO/ESC** to exit without saving.

5-2 Description of Parameter Values

1. **P00:**  **Offset value**

Displays the offset value and the keypad testing can be conducted

2. **P01:**  **Backlight mode**

Off : No backlight

Auto : Auto on with items greater than 9d placed on the weighing pan or any key is pressed. But auto off after N seconds (N=2s, 5s, 10s, 20s, ever) with no action
Ever= It is always on when the weights over 9e

On : Backlight on

3. **P02:**  **Auto-off**

Off : Non power off

5 , 10 , 30 , 60(minutes)

4. **P03:**  **Unit setting**

Init : Press key **Unit** to select the default unit when powering on the scale: pcs, 斤, lboz, g, kg, final .(final=keep the final being used unit when power off)

Use: Press key **Unit** to select the weighing unit. **on** : Enable the unit **off** : Disable the unit

5. **P04:**  **Zero range**

d0, d1, d2, d3, d4 and **d5**. (d= scale division)

6. **P05:**  **Hold function**

HoLd – 0 : no hold function

HoLd – 1 : Peak hold. Press any key to release

HoLd – 2 : Hold after stable. Press any key to release

HoLd – 3 : Hold after stable. Release after moving away the article

HoLd – 4 : Press key **HOLD/LO/-** to hold. Press any key to release

7. **P06:**  **Check weighing memory**

on : Check weighing on **off** : Check weighing off

8. **P07:**  **Check weighing function**

on: Check weighing under the condition that the weight is within the limits and the stable indication appears

off: Check weighing under the condition that the weight is within the limits

9. **P08:**  **Check Weighing buzzer beep**

Hi : There will be a warning sound when the weight of articles exceeds the upper limit, and the weight is equal or more than 20d

LO: There will be a warning sound when the weight of articles exceeds the lower limit, and the weight is equal or more than 20d

ok : There will be a warning sound when the weight of articles is between the upper and lower limit (including the upper and lower limits), and the weight is equal or more than 20d

out : There will be a warning sound when the weight of articles is beyond the upper & lower limit, and the weight is equal or more than 20d

no.beep : no beep

10. **P09:**  **External device**

ბირჩი = Birch printer (BP545,TDP643)

გოდექი = Godex printer

ზებრაი = Zebra printer

დოტ მატრიქსი = Dot matrix printer (CK,SH-24)

დიდი LED = Large LED display

PC = Computer

კონექტივი = Connecting the weighing managing system

სკრინი = CX large screen display(version 0.02)

ტერმალური = Thermal printer(Chinese available)

ტოლდო = the output format is compatible with Toledo Continuous Mode

Note: Special setting is needed by distributor if you want to print in Chinese.

ექსელის ფუნქციები = Work with the function of "Use Serial Keys" in Windows in outputting the data to Excel. Reference user manual: <http://www.jadever.com.cn/Download.aspx>

11. **P10: ბირჩი RS-232 Serial Transmission Rate**

9600 , 4800 , 2400

12. **P11: ბირჩი Print mode**

contin : Continuous print

stable : Stable print (weight is equal or more than 20d)

key : Manual print by pressing key **PRINT**

13. **P12: ბირჩი Print format**

See the appendix (more than 100 formats. The appendix just shows two formats.)

14. **P13: ბირჩი Filtering setting**

Set the filtering level in which the stable indication turns on. The higher the setting, the slower stabilization time

Options: 1 , 2 , 3 , 4

15. **P14 : ბირჩი Tare/Zero condition**

stable : Only after the stable indication appears, Tare/Zero function acts after pressing down key **TARE** or **ZERO**

always : Tare/Zero function acts by pressing down key **TARE** or **ZERO** even if it is not stable

auto: Press down key **TARE** or **ZERO** even if it is not stable, but Tare/Zero function acts after stable

16. P15 : RTC set

on: Enable RTC function

off: Disable RTC function

RTC setting:

When the window shows “on”, press **M-/SET** to enter RTC setting and the window shows the year. Press **◀/MR or TARE/▶** to choose date and time. Press **M-/SET** to enter setting. Press **◀/MR or TARE/▶** to shift key leftward or rightward; Press **+ /PRINT/HI** or **HOLD/LO/-** to change the value. Press **M+/SAVE** to return.

17. P 16: Zero-Offset function.

ON display the previous weight when powering on again

OFF not display the previous weight when powering on again

18. P17 : Initialization

Press **M-/SET** then press **M+/SAVE** to initialization and the window display **RESET**.

6. Calibration

Note: Before calibration, please set the unit first. The unit used in calibration is the one that has been set before. During the calibration procedure, press **ZERO/ESC** to return to normal weighing mode without saving.

Here we take 3kg/1g as an example

1. Press and hold **TARE** while powering on. Do not release it till the window displays “**CAL**”.
2. With no load on the weighing pan, press **TARE** to start zero point calibration. “**on 0**” is blanking at the left bottom.

3. Wait till the window displays the first calibration value. “0000” appears at the left bottom.



Note: The first calibration value is default. With the same capacity, the last first calibration point value can be recorded. If the capacity has been changed, the default value is 1/3 of full load. If you need to change the value, do as the following: Press

M-/SET to enter the value setting. Press **MR** or **TARE** to move leftwards or rightwards. Press **+/PRINT/HI** or **HOLD/LO/-** to change the value. Press **M+/SAVE** to save.

4. Put the corresponding weight on the weighing pan, and then press **TARE** to complete

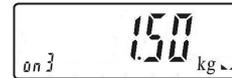
the first point calibration. “0000” appears at the left bottom.



Note: After the first point calibration, the window can display the weight value. If no need for the other point calibration, move to step 6 to finish the calibration procedure.

5. Add another mass to the current weight. The window will show the total weight. Press

TARE to complete. “0000” appears at the left bottom.

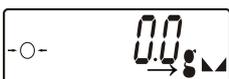


6. Press **M+/SAVE** to save. After the window displays “0000”, it will return to normal weighing mode.

7. Operation

7-1 Weighing

Begin with no load on the scale, the display reading zero. Place item(s) to be weighed on the scale. The display shown is 1000.0g, gross weight. (The desired weighing unit should be selected before weighing, refer to section 7-5.)



7-2 Manual Tare & Preset Tare

When weighing a sample that must be held in a container, tare stores the container weight into memory.

Manual Tare

- 1) Under the weighing mode, place the container on the weighing pan, wait till stable symbol appears, and press the key **TARE**. The container is tared.



- 2) Place the item(s) to be weighed into the container. The weight displayed is the net weight.



- 3) Remove all items from the weighing pan; the screen displays the tare value.



- 4) To clear tare with an empty pan, Press down key **TARE** or key **ZERO/ESC**.

Preset Tare

- 1) Long press key **TARE** for 3 seconds. The scale is now in Digital inputting mode with the

left-most digit blinking.



- 2) Press **←/MR or TARE/→** to move leftwards or rightwards. Press **+ /PRINT/HI or HOLD/LO/-** to change the value. Press **M+/SAVE** to save and return to weighing

mode.



- 3) Put the load on the container, the scale will automatically deduct the value of the container from the total value.

NOTE: Press Key **G/N** to display gross and net weight by turns.

- 4) Clear the load on the container, and press **TARE/→** or **ZERO/ESC** to cancel the pre-tare.

7-3 Check Weighing

Lower limit setting

1. Begin by pressing down key **HOLD/LO/-**. The scale is now in digital inputting mode

with the right-most digit blinking.



2. To set the value of lower limit, press key **←/MR** to shift leftwards, key **TARE/→** to shift rightwards, key **+ /PRINT/HI** to increase setting values and key **HOLD/LO/-** to decrease setting value. Key **M-/SET** to enable or disable the weighing checking

function.

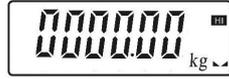


- To save the Lower limit and return to weighing mode, Press key **M+/SAVE**

Upper limit setting

- Begin by pressing down key **+/PRINT/HI**. The scale is now in digital inputting mode with

the right-most digit blinking.



- To set the value of upper limit, press key **←/MR** to shift leftwards, key **TARE/→** to shift rightwards, key **+/PRINT/HI** to increase setting values and key **HOLD/LO/-** to

decrease setting value.



- To save the upper limit and return to weighing mode, press key **M+/SAVE**

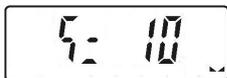
Place the sample on the weighing pan, if the sample weight is under the lower weight range while over or equal 20d, the LOW lamp will light up. If the sample is within the lower and upper weight range while over or equal 20d, the OK lamp will light up. If the sample is over the upper weight range while over or equal 20d, the HI lamp will light up.

7-4 Simple Counting

- Press key **UNIT** to select the unit "PCS".

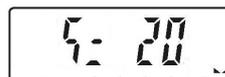


- Press key **G/N**, the ex-factory default sample quantity (10 pcs) is displayed.



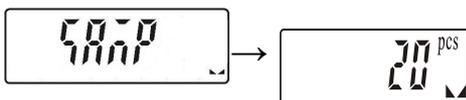
- Use key **+/PRINT/HI** or **HOLD/LO/-** to choose the sampling amount. Available options

are 10、20、50、100、200、500、1000(pieces) .



- Put the corresponding samples on the weighing pan, and then press key **TARE/→**. “

5000” is displayed momentarily before the display reverts to the sample quantity.



5. Remove the samples and put the load on, the scale calculates the amount of the load.
6. To go back to the normal weighing mode, remove the load and press key **UNIT** to select the proper weighing unit.

Note:

1. The larger the sample size, the more accurate unit weight.
2. Symbol “▼” points at “UW” when calculated unit weight is lower than 4 / 5 of scale division.

7-5 Accumulation, Accumulation Display and Accumulation clear

Accumulation

Under the weighing mode, put the item on the weighing pan. Press key **M+/SAVE** at the appearance of “▲▲”. “                     

2. Press **M-/SET** to enter the external device setting. Press **←/MR or TARE/→** to choose the printer model
3. Shift to certain printer model. Press **M-/SET** and the window will show “UNSUP” or “INIT?”
 “UNSUP” means the printer is no need for initialization. Press **ZERO/ESC** to return.
 “init?” means the printer is should be initialized. Press **MR/SAVE** to initialize the printer.
 When the initialization is finished, the window will show “ok”. And then displays the printer model. Press **ZERO/ESC** to return.

7-7 Input commands

Connect the indicator and computer. Run serial port debugging program on the computer. Input the capital number “Z”, “T”, “R” ,“C”,“P” in the sending area, and the indicator can conduct the corresponding actions.

Z=zero

T=tare

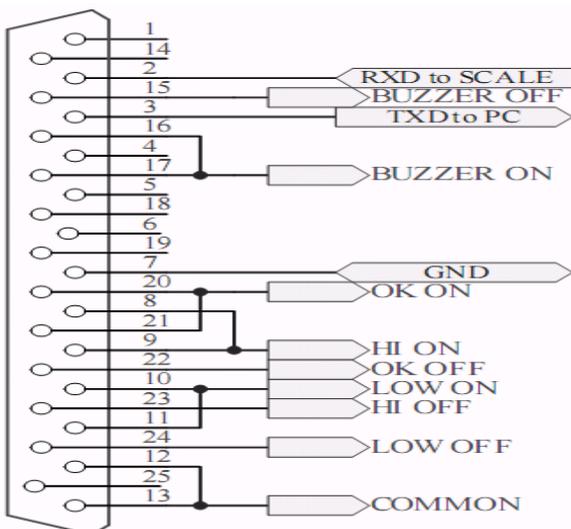
C=cancel tare

R/P=reading / print

8. Serial Interface

If external interface is needed, please select the proper three-in-one board first, which integrates RTC (time display), RS-232 and relay (weight checking) functional module onto one circuit board. Only after this board is adopted, the three functions can be realized.

8-1 RS-232 Diagram



Single Option

- 1) RS232+RTC+Relay+ (SH-24 , BP545D , Godex and ZEBRA) printer
- 2) RS232+RTC+Relay+ LED Light Tower (Applicable to the quality control of the factory product quantity or weight and that of the total production line.)
- 3) RS232+RTC+Relay+Computer

9. Troubleshooting and Error Message

Error Message	Problem	shootings
ERR0	Exceed the zero range	The item should be within 2% of full load
ERR2	Exceed the initial zero point	1. Check whether there are other alien articles on the scale pan, remove those articles. 2. LOAD CELL failure, which requires to be changed or to contact our Service.
ERR3	Exceed the A/D resolution range	1. Check whether it is A/D failure, if yes, please replace AD. 2. LOAD CELL failure, replacement is required or contact our Service.
ERR4	EEPROM failure	Re-sold EEPROM or contact our Service.
ERR5	Overload condition	Remove weight that is greater than the scale capacity from the pan.
ERR6	Exceeds the display range	-----
ERR7	Accumulated number of weighments exceeds the display range	Delete the exceeding weighments
ERR8	Lower limit is higher than upper limit	re-act the upper limit setting and lower limit setting
ERR9	Exceed tare or pre-tare range	The tare value should be over zero and less than or equal to full load.
ERR10	Wrong calibration weights	Place the right weights(the calibration value \leq full load)

Appendix 1 : printing format (Optional)

Printing Device	Format	Sample
<div data-bbox="175 1624 451 1787" style="border: 1px solid black; border-radius: 10px; padding: 5px;"><p>2004.11.25 12:28:26 1. 000 kg</p></div>	prt-01	
<div data-bbox="175 1825 451 2033" style="border: 1px solid black; border-radius: 10px; padding: 5px;"><p>2004.11.25 12:27:58 G.W. : 1. 500 kg T.W. : 0. 500 kg N.W. : 1. 000 kg</p></div>	prt-02	

<p style="text-align: center;">1. 000 kg</p>	prt-03	
<p style="text-align: center;">ST GW + 100.00 kg</p> <p style="text-align: center;">UT GW + 100.00 kg</p> <p style="text-align: center;">UT NW - 200.00 kg</p> <p style="text-align: center;">ST NW - 200.00 kg</p>	prt-04	<p>ST: stable; UT: unstable; NW: net weight; GW: gross weight</p>
<p style="text-align: center;">ST,GS,+ 100.00kg</p> <p style="text-align: center;">ST,GW,+ 100.00kg</p> <p style="text-align: center;">US,GS,+ 100.00kg</p> <p style="text-align: center;">UT,GW,+ 100.00kg</p> <p style="text-align: center;">US,NT,- 200.00kg</p> <p style="text-align: center;">ST , NT , - 200.00 kg</p> <p style="text-align: center;">ST NW - 200.00 kg</p>	prt-05	<p>ST: stable; UT: unstable; NW: net weight; GW: gross weight</p>
<p style="text-align: center;">2004.11.25 12:28:26 1. 000 kg</p> <p style="text-align: center;">BIF BRA/CK</p>	prt-01	
<p style="text-align: center;">2004.11.25 12:27:58</p> <p style="text-align: center;">G.W. : 1. 500 kg</p> <p style="text-align: center;">T.W. : 0. 500 kg</p> <p style="text-align: center;">N.W. : 1. 000 kg</p>	prt-02	
<p style="text-align: center;">2010-11-12 13:14:15</p> <p style="text-align: center;">G.W.: 1.48 kg</p> <p style="text-align: center;">T.W.: 0.00 kg</p> <p style="text-align: center;">N.W.: 1.48 kg</p>	prt-02	

<div data-bbox="256 114 443 293" style="border: 1px solid black; padding: 5px;"> 2004.11.25 12:28:26 1.000 kg </div>	prt-01	
<div data-bbox="240 349 512 786" style="border: 1px solid black; padding: 5px;"> 2012.04.26 13:05:33 G.W.: 100.00 kg T.W.: 0.00 kg N.W.: 100.00 kg </div>	prt-02	
<div data-bbox="228 808 496 1122" style="border: 1px solid black; padding: 5px;"> 2010.01.01 06:31:54 (01) 1.765 kg (02) 1.760 kg (03) 1.760 kg ----- (03) 5.285 kg </div>	When 003 appear under display of accumulation, press key PRINT to the print out.	

NOTE:

The printing sample could be of different kinds of formats. When there is specific demand about the format, conduct as follows

- 1) As for **BRICH/GODEX/ZEBRA** printers, the factory designs the format as planned and email to the user. Add the format into the previous format file via computer. Then it is successful to add the new format and able to print the new format.
- 2) As for **DMP/CK** printer, it needs to change the scale design

Appendix 2 : Exporting data to PC in the form of EXCEL

Introduction:

Connect the scale with PC and set the parameter of external device as "EXCEL" on the scale, then you could export the weighing data to PC in the form of EXCEL. With this

function, you could record/accumulate/average/data statistical analysis the testing data, which we could call it as **scale-computer data management function**.

Note: pls enable “Use Serial Keys” function in the computer.

Hardware connection and settings

1. Use transmitting serial wire or USB wire to connect scale and pc.

Note: pls install usb driver first, if you use usb wire.

2. Parameter settings in scale:

"PERI" = "EXCEL" (external device)

"BAUD" = "2400"/"4800"/"9600" (baud rate)

"PRT.M" = "KEY"/"STABLE" (printing model)

"PRT.F" = "PRT.F01" (printing format)

Enable the function of “Use Serial Keys” in the computer

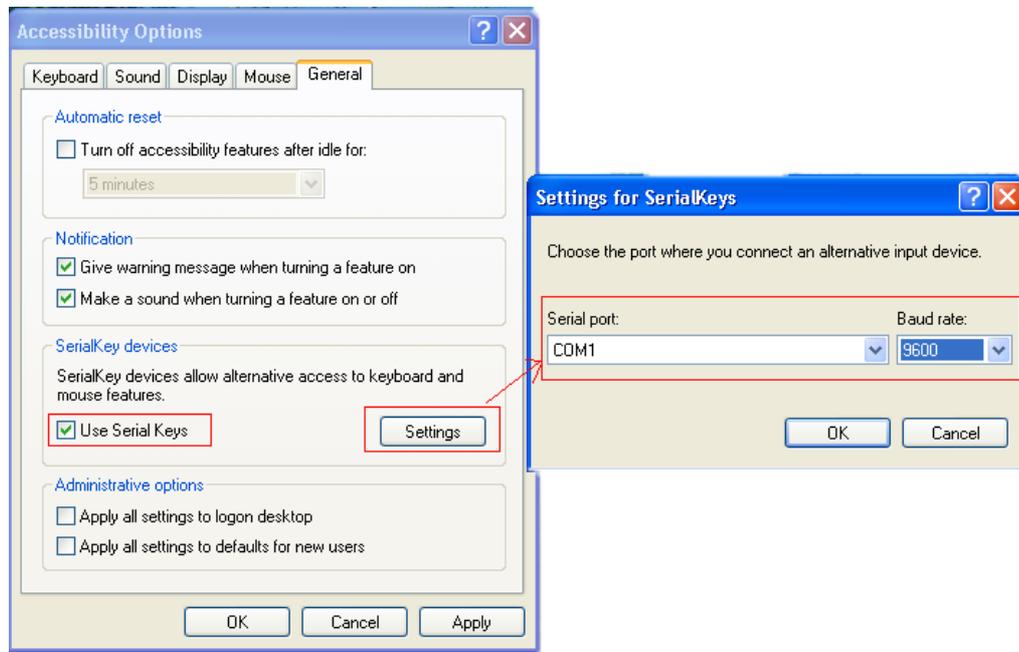
Set Windows XP as a example:

1. Press “Start” ->“Run”, and enter “access.cpl” ->“OK”.



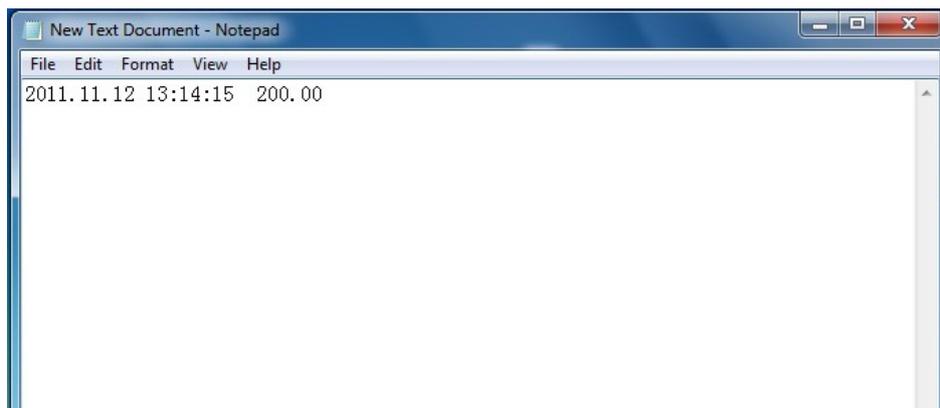
2. In the dialog box “Accessibility Options”, enter General option, choose “Use Serial Keys” and press “Settings”.

In the dialog box “Settings for SerialKeys” , set the corresponding Serial port and Baud rate, which should be same as Baud rate in scale.



3. Test if Serial Keys works well.

Open a Text Document, and press the Print button on the scale. The Serial Keys works well, if pc exports the weighing data to Text.



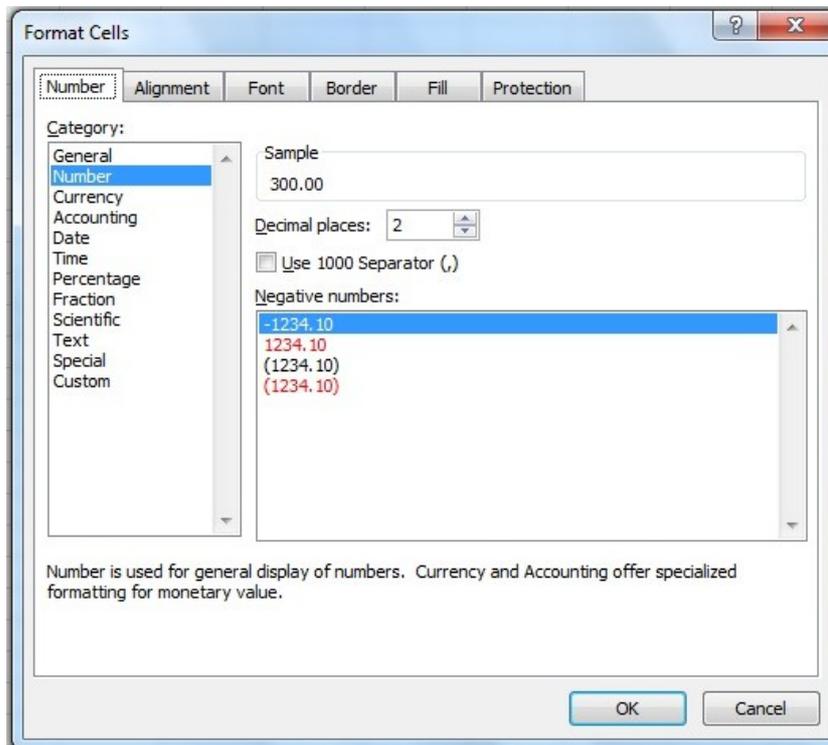
Export weighing data to Excel

1 . Open Excel.

2 . Press [Print], then Excel will show Date and Weighing data.

	A	B	C	D	E	F	G	H
1	TIME/DATE	WEIGHING(KG)						
2	2011.11.12 13:14:15	200.00						
3	2011.11.12 13:14:16	250.00						
4	2011.11.12 13:14:17	300.00						
5								
6								
7								
8								
9								

3. Use "Format Cells" to beautify Excel:



Troubleshooting

1. Enable "Fast User Switching" function will disable "Use Serial Keys" in the computer.
Note: Start->"Control Panel "->"User Account"-> "Fast User Switching" function.
2. The data export requires only "GND+RX+TX" three lines, while some wire include nine lines (including usb 9-25pin adapter), which may cause abnormal function.
Note: cut other useless line to check if these three lines work well.