



USA Measurements

"We Outmeasure the Competition"



USA Measurements US-1011 Indicator User Manual R1.1

CONTENTS

1.0 BRIEF INTRODUCTION	<i>ERROR! BOOKMARK NOT DEFINED.</i>
1.1 TECHNICAL PARAMETERS	<i>ERROR! BOOKMARK NOT DEFINED.</i>
1.2 MAIN FUNCTIONS	<i>ERROR! BOOKMARK NOT DEFINED.</i>
1.3 BOUNDARY DIMANSION.....	<i>ERROR! BOOKMARK NOT DEFINED.</i>
1.4 MODEL TYPE.....	<i>ERROR! BOOKMARK NOT DEFINED.</i>
2.0 INTERFACE	<i>ERROR! BOOKMARK NOT DEFINED.</i>
2.1 POWER SUPPLY.....	<i>ERROR! BOOKMARK NOT DEFINED.</i>
2.2 RS232 PORT	<i>ERROR! BOOKMARK NOT DEFINED.</i>
2.3 LOAD CELL PORT	<i>ERROR! BOOKMARK NOT DEFINED.</i>
3.0 OPERATION	4
3.1 INDICATING LAMPS	4
3.2 OPTIONAL BUTTIONS.....	<i>ERROR! BOOKMARK NOT DEFINED.</i>
4.0 SETTING.....	<i>ERROR! BOOKMARK NOT DEFINED.</i>
4.1 SETTING ENTRY	<i>ERROR! BOOKMARK NOT DEFINED.</i>
4.2 PARAMETER SETTING.....	7
F1 SCALE PARAMETER SETTING	7
F2 APPLICABLE PARAMETER SETTING.....	9
F3 INDICATOR PARAMETER SETTING	9
F4 SERIAL PORT COMMUNICATION	9
F5 MAINTENANCE AND SERVICE	10
5.0 FUNCTION DESCRIPTION	10
5.1 SORTING FUNCTION	10

5.2 ACCUMULATION FUNCTION.....	10
5.3 COUNTING FUNCTION.....	10
APPENDIX 1 INDICATOR PROMPT MESSAGE.....	ERROR! BOOKMARK NOT DEFINED.
APPENDIX 2 SERIAL PORT OUTPUT FORMAT	13
APPENDIX 3 PRINTING OUTPUT FORMAT	ERROR! BOOKMARK NOT DEFINED.

1.0 BRIEF INTRODUCTION

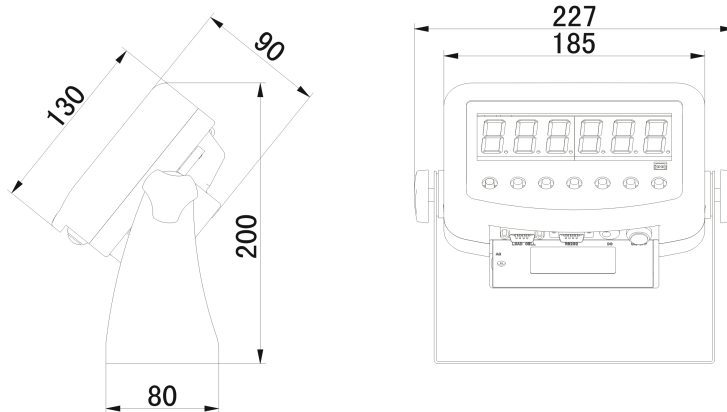
1.1 TECHNICAL PARAMETERS

- 6-digit 1.2-inch LCD display, various state indicator lamps. Long service life and good shock resistance
- 7 functional buttons, operation is simple and easy
- Protection level: IP5x
- Excitation voltage: +5VDC
- Load capacity of sensor: at most four 350Ω simulation sensors
- Input signal range at null point: 0-5mV
- Input signal range at full scale: 1-10 mV
- Inner resolution: 1 million
- Display division: 1000~30000
- A/D sampling rate: 120times/sec
- Power supply mode
 - Battery: 7.4V/4AH lithium battery
 - Adaptor: input voltage 100-240 VAC; output voltage 8.4V/1.2A; frequency 50-60Hz
- RS232 port
- working temperature: -10°C-40°C, relative humidity is below 85 %
- Storage temperature: -20°C-60°C, relative humidity is below 85 %

1.2 Main Functions

- Basic weighing function: zero, removing the peel and clearing the peel
- Accumulation, counting, selection
- Auto backlight energy-saving
- Parameter redundancy backup
- Real-time clock
- Auto power-off

1.3 Boundary Dimension




1.4 Model type


HL318Plus C

2.0 INTERFACE


2.1 Power supply

	1Pin(inner core): DC+ 2Pin (outer core) : DC-
---	--

2.2 RS232 PORT

	2Pin: TXD 3Pin: RXD 5Pin: GND
---	---

2.3 load cell PORT

	1Pin: -E 2Pin: -SN 5Pin: SHLD 6Pin: +E 7Pin: +SN 8Pin: -S 9Pin: +S
---	--

3.0 Operation

3.1 indicating lamps

sign	Analysis	Remark
~	Dynamic/static	The lamp is on when scale is at dynamic state;

		otherwise, the lamp is off
	Zero center	The lamp is on when the absolute value of weight on the scale is less than $\pm d/4$; otherwise, the lamp is off
Net	Gross/net weight	The lamp is on at net weight and off at gross weight
	Weight check	Underload
		pass
		overload
	counting	The lamp is on when the counting function is in use.
	accumulation	The lamp is on when the accumulation function is in use
kg	Weight unit	The weight unit in use
lb		
	Battery power	The power is too low and charge the battery in time
	Button indicator	This sign shows up when a button is pressed; otherwise, it is not seen.

3.2 operational buttons

Button	Button name	At normal weighing state	Setting
	〔TOTAL〕	When the accumulation function is in use, short press adds the current weight to the accumulation and long press inquires and cleans accumulation value.	No definition

	[[COUNT]]	When the counting function is in use, quantity and weight display switch at short press. There is no use by long press.	Return and exit
	[[kg/lb]]	Switch between kg and lb	Move cursor to the left
	[[GROSS]]	No definition at gross weight status; At net weight status, skin weight is added to the net weight (net weight ---> gross weight)	Move cursor to the right
	[[TARE]]	Skin removal (gross weight ---> net weight)	Decrease (number)
	[[ZERO]]	Zeroing	Increases (number)
	[[PRINT]]	Short press → start up (when the indicator is off) Long press → shut down (when the indicator is on) Short press → print (when the indicator is on)	confirm

4.0 Setting

4.1 Setting entry

At normal weighing state, press [[CAL]] until **【CAL】** shows on the screen. Press [[PRINT]] to enter into the menu setting interface, setting parameters from F1~F5.

At normal weighing state, press [[GROSS]] until **【SETUP】** shows and then press

[[PRINT]] to enter into the menu setting interface, setting parameters from F2~F5. Below shows where the [[CAL]] button is.



4.2 Detailed parameter setting

F1 Scale parameter setting

F1.1 Capacity

Selectable parameters: 3~200000 (default 6)

F1.2 Decimal

Selectable parameters: 0-----no decimal

1----- 1 decimal

2-----2 decimals

3-----3 decimals (default)

4-----4 decimals

F1.3 Division

Selectable parameters: 1(default), 2, 5, 10, 20, 50

Note: when F1.2, F1.3 or F1.4 is being set, division value should not be beyond 10000.

F1.4 Zero calibration

[[E_5CL]] remove weights off the scale and make sure there is nothing on the scale.

Press [[PRINT]] and the screen shows [[10 CAL]] which decreases to [[00 CAL]].

Finally, [[]] appears for one second indicating zero calibration finishes.

F1.5 Load Calibration

[[LOAD]] add weights

Add weights to the scale and make sure: $\text{scale capacity} * 50\% \leq \text{weights} \leq \text{scale capacity}$.

Press [[PRINT]] to enter into the next step. [[000000]] Enter the same weight value as

the weights. When the scale is stable, press [[PRINT]] and the indicator shows

[[10 CAL]] which decreases to [[00 CAL]]. Finally, [[]] appears for one

second indicating load calibration ends.

F1.6 Auto-zero-tracking rate

Selectable parameters: 0.5d (default), 1d, 3d

At net weight status, zero tracking is ineffective.

F1.7 Auto-zero-clearing range at power-on

Selectable parameters: OFF (default), $\pm 2\%$, $\pm 10\%$

F1.8 Zeroing range

Selectable parameters: OFF (default), $\pm 2\%$

F1.9 Digital filter

Selectable parameters: 0~9, default: 5

F1.10 Scale function setting

Selectable parameters: 0-----sorting (default)

1-----accumulation

2-----counting

F1.11 Restoring factory default

Selectable parameters: 0-----no restore

1-----restore parameters from F1~F4 while scale
parameters will not be affected

F2 Applicable parameter setting

F2.1 Empty scale door setting

Range: 0~full scale capacity (default: 0.100)

F 2.2 Lower limit weight

Range: 0 ~ full scale capacity (default 1.000)

F 2.3 Upper limit weight

Range: 0~full scale capacity (default: 2.000)

F 2.4 Sampling method

Selectable parameters: 0-----weigh value on the scale sampling (default)

1-----manual weight value input

F 3 Indicator parameter setting

F 3.1 Date format setting

Selectable parameters: 0-----year.month.day(default)

1-----month.day.year

2-----day.month.year

F3.2 Date setting (format see F3.1)

F 3.3 Time setting (format: hour.minute.second)

F 3.4 Overtime backlight shutdown time setting

Selectable parameters: 0~999 seconds (default: 0)

If 0 is set, this function is ineffective.

F 3.5 Auto power-off

Selectable parameters: 0~60min (default: 0)

If 0 is set, this function is ineffective.

F4 Serial port communication

F4.1 Communication method

Selectable parameters: 0-----no output (default)

1-----continuous output (only when the indicator is at
stable state)

2-----printing output (format see appendix 3)

F4.2 Data and verification setting

Selectable parameters: 8_N_1 ----8 digits no verification (default)

7_E_1----7 digits uneven verification

7_0_1 ----7 digits even verification

8_E_1 ----8 digits uneven verification

8_0_1----8 digits even verification

F4.3 Baud rate

Selectable parameters: 2400, 4800, 9600 (default), 19200

F4.4 New line

Selectable parameters: 0~9 (default: 3)

F5 Maintenance and Service

F5.1 Button test

interfaces. Press [ZERO] to clear the total quantity and the total weight. Press [PRINT] to confirm and press [COUNT] to exit.

5.3 Counting

F 1.10=2

Operation: at normal weighing stage, press [COUNT] to switch between the weight and quantity display.

Sampling: long press [COUNT] until "SAMPLE" shows on screen. Then press [PRINT] and "Sn XXX" shows and put the correct quantity number in. If F 2.4=0, put the things with the corresponding quantity on the scale and press [PRINT] to confirm the quantity and weight. If F 2.4=1, press [PRINT] and then "XXXXXX" shows and put in the corresponding weight and press [PRINT] to confirm the quantity and weight.

Appendix 1 Indicator Prompt Message

The instrument has extremely high stability and reliability, thus is not easy to have error in general situation. Once an error occurs, please make clear the error first and observe whether the instrument still has error after power-on. Do not hurry to repair the scale body or instrument. Repair the instrument according to error code of the instrument as possible.

No.	Symbol	Analysis	Treatment Method
1	【 _EEE 】 【 EEE 】	Unable to reset after startup	1. Determine it is no-load state in startup; 2. Make zero calibration again.
2	【 〰-----〰 】	The weighed object is over full range for 9 days	Reduce weight on weighing platform
3	【 〰-----〰 】	The weighed object is below 0 for 5 days	Press [Zero] to reset
4	【 〰-〰〰〰-〰 】 【 〰-〰〰〰-〰 】	Out of zero clearing range	Check whether the weighing platform has weight. Remove weight.
5	【 --〰〰-- 】	Invalid operation	
6	【 Err 03 】	EEPROM checksum and error	Press [Print] reprint factory value. Start up again. If the information occurs again, return to factory for repair. Please calibrate the scale again if the situation does not occur; Attention: this place is provided with all parameters of instruments of the

			factory.
7	【Err 05】	The calibration input weight is too small	Input \geq 10 % weight of full range
8	【Err 06】	The weight in calibration is too light	Load \geq 10% weight of full range
9	【Err 07】	The scale is dynamic in scale	Inspect the scale body
10	【Err 08】	Setting error of date and time	Set according to specification of date and time
11	【Err 09】	Error of AD initialization	If the error occurs after restarting, return it to the factory for repair
12	【LOAD】	In loading scale, it indicates to loading weight;	Load weight according to requirements;
13	【SETUP】	It has enters menu setting	Press 【Print】 to continue setting.
14	【End】	End of zero point and loading point calibration	
15	【Ld---】	Loading default value	

Appendix 2 Serial port output format

Serial port continuous output format



HEAD1: OL Upper overload or lower overload, or no zero clearing in startup;

ST the scale is in stable state;

US the scale is in unstable state;

HEAD2: GS gross weight;

NT net weight;

DATA: instrument display data;

UNIT: kg or lb;

CR/LF: new line.

Example 1: at stable state, gross weight is 18.000kg. sp = space.

S	T	,	G	S	,	sp	sp	1	8	.	0	0	0	k	g	0d	0a
---	---	---	---	---	---	----	----	---	---	---	---	---	---	---	---	----	----

Example 2: at unstable state, net weight is -0.200kg. sp = space.

U	S	,	N	T	,	-	sp	sp	0	.	2	0	0	k	g	0d	0a
---	---	---	---	---	---	---	----	----	---	---	---	---	---	---	---	----	----

Appendix 3 Printing output format

LIST
Date 2018/04/14
Time 15:08:46

Gross 2.061kg
Tare 0.000kg
Net 2.061kg

LIST
Date 2018/04/14
Time 15:10:18

Count 206PCS