Call	Tel
Hotline	(+84.8) 62.888.666 (+84.8) 62.999.111
Mr Cuong (24/24)	0084 915.999.111
Mr Xa	0084 974.000.333
Ms Cuong	0084 908.444.000
Delivery	0084 919.555.444

OPERATION MANUAL

TABLE OF CONTENTS

I. Assembly Diagram - (1)

II. Outline - (2)

III. Technical Specifications - - - - - - - - - - - - - - - - (2)

IV. Special Remarks - (2)

V. Load cell and Indicator Connections - - - - - - - - (3)

VI. Display Definitions - (4)

VII. Keyboard Functions - - - - - - - - - - - - - - - - - - - (4)

VIII. Operation - (4)

① stop digit: 1 digit

② ASCII code

1) data transmission format:

1 2 3	4 5 6	7 8 9 10 11 12 13 14	15 16 17 18	19 20
Format 1	Format 2	Data	Unit	CRLF

Format 1 (2 bytes) Format 2 (2 bytes)

OL: overflow display NT: net weight mode

ST: stable US: unstable

Data (8 bytes)

2D (HEX) = "-" (minus) 2B (HEX) = "+" (positive)

2E (HEX) = "." (decimal point) 20 (HEX) = "" (blank)

Unit (4 bytes)

Kg=20 (HEX); 20 (HEX); 6B (HEX); 67 (HEX)

Lb=20 (HEX); 20 (HEX); 6C (HEX); 62 (HEX)

CRLF: 0d (HEX); 0a (HEX);

E.G.: (N.W. 16.8kg when it in stable mode)

Format 1 Format 2 Data Unit

ST NT +16.8 kg

" ↵ " to confirm.

It will show the power-saving mode, press "TARE" to select "0~3", press " ↵" to confirm. 0: power-saving mode; 1: it will turn to power-saving mode after 10 seconds; 2: it will turn to power-saving mode after 30 seconds; 3: it will turn to power-saving mode after 2 minites.

9. Baud Rate and RS232 Settings (Optional)

Press "↵ " and hold, turn on the scale, it will show the baud rate after self-calibration. Press "TARE" to select (bAud 24, bAud 48, bAud 96), means 2400bps, 4800bps, 9600bps. Press " ↵ " to confirm, enter data transmission mode:

St: transmission for 1 time after stable

Co: automatically and continuous transmission

PR: manual transmission (press " ↵")

Press "Tare" to select, press "↵" to confirm.

RS-232 output format:

2) use RS232 transmission

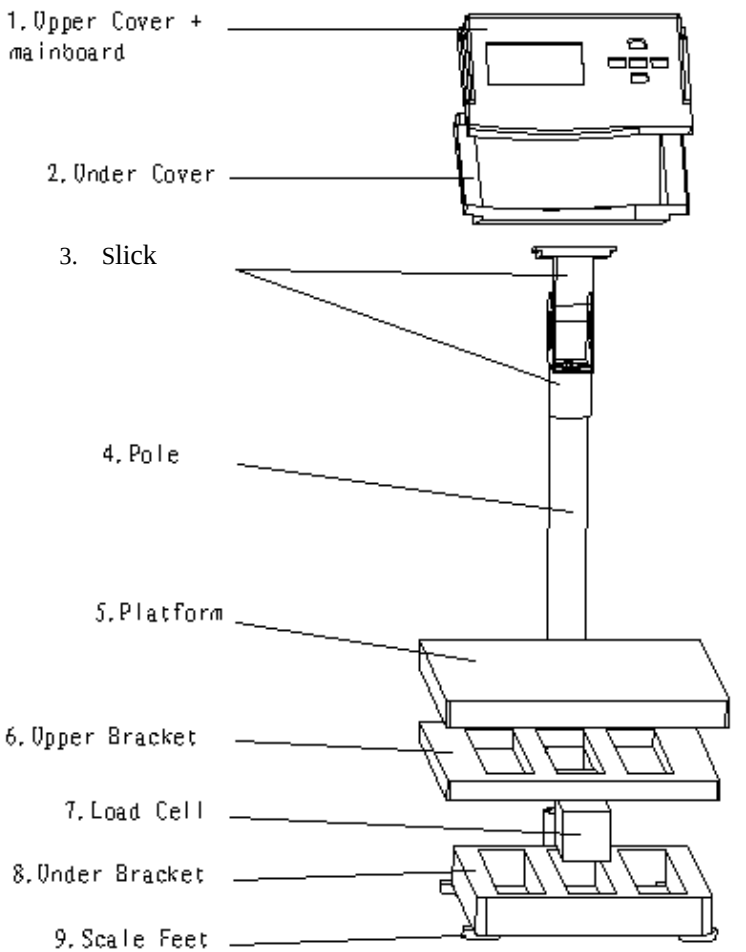
3) format

③ baud rate: 2400, 4800, 9600bps

④ 8 digits

⑤ verify digit: no

I. Assembly Diagram



II. Outline

FH weighing scales use high stability NA3 load cell and intelligent instruments composed from MPC89 SCM. Functions: Tare, Self-calibration, Memory, Counting, Fault display..etc.. Weighing accurately, fast and good stability, simple operation. Suit for Industry, Agriculture, Business, School, Research ... use.

III. Technical Specifications

Type: LED weighing scale
Power supply: AC110V/220V; DC 4V/4AH rechargeable battery
Capacity: 30/60/75/120/150/300/500/1000kg (optional)
Division: 1/2/5/10/20/50/100/200/500/1000g (optional)
Accuracy: III
Sensor Sensitivity Range: 1.5~3m V/V
Operation Temperature: 0~40℃ ≤85%RH
Sampling Rate: 10 times/ second
Display: 6 digits LED display; 9 LED lights model display

IV. Special Remarks

1. Rain or irrigation water is prohibited, shall not be placed in hot, humid place.
2. Non-impact, not to exceed the maximum capacity
3. When it show low battery, be sure to charge 12 hours then continue to use.

8. Speed Reaction, Dynamic Weighing, ZERO Tracking Range, ZERO Display Range, DISP30D, External Division Setting, Power-saving Mode Setting.

Press “TARE” and hold, turn on the scale to show the speed reaction, press “TARE” to modify, press “↵” to confirm. Note: nb0 ~ nb3 means the speed reaction from slow to fast. nb3 suit for continuous weighing.

It will show pig0 (dynamic weighing OFF) or pigl (dynamic weighing ON) after confirmation. When selet pig1, weight<9d will be locked for 3 seconds, the new stable weight will be locked again for 3 seconds, it will unlock when the weight≤9d.

After confirming the dynamic weighing, it will show the ZERO tracking range, press “TARE” to choose (0.0d, 0.5d, 1.0d, 2.0d, 3.0d), press “↵” to confirm.

After confirming the ZERO range, it will show the ZERO display range, press “TARE” to select (Zero-S, Zero-L), press “↵” to confirm. If select Zero-S invalid, and select Zero-L, the scale will turn to 0 when the weight ±3d, but there will no ZERO indicator.

After confirming the ZERO display range, press “TARE” to select (30dOFF, 30dON), press “↵” to confirm. 30don means it will show 0 when ≤-30d, but the Zero indicator off. 30doff means invalid.

It will show the external division, press “TARE” to modify, press

Press: “ ↵ ” to modify the high limit, press “UNITS” “ZERO” to change the place, press “LIMIT” “TARE” to modify the digit, press “↵ ” enter low limit setting.

Low limit setting: it will show the low limit after “Lo” (unit: kg)

Press: “ ↵ ” to modify the low limit, press “UNITS” “ZERO” to change the place, press “LIMIT” “TARE” to modify the digit, press “↵ ” enter warning setting.

Warning setting: it will show “btyPEX”

Press “LIMIT” “TARE” “X” to select “1”, “2”.

BtyPE1: it will warning when between high/low limit

BtyPE2: it will warning when exceed high/low limit

Press “↵ ” to confirm.

7. **External Calibration**

Press “ZERO” and hold, turn on the scale, it will start self-calibration:

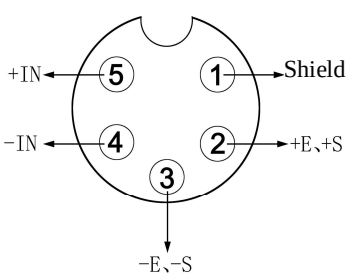
1) press “ ↵ ” when it show “CAL”

2) put the standard weight on the pan, input the value, (unit: kg). press “UNITS” “ZERO” to change the place, press “LIMIT” “TARE” to modify the digit, press “ ↵ ” to confirm.

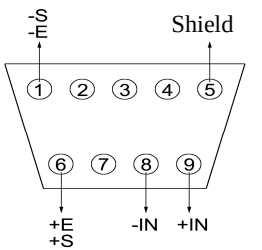
3. Before using it in a stable place, adjust the four adjustable feet, make it smooth.

V. Load cell and Indicator Connections

1. The load cell use 5-pin socket, below picture indicated the use for each pin.
2. If use 6-pin shield cable, +E and +S must be short circuit; -E and –S must be short circuit too, otherwise the indicator will not working correctly.
3. Connect the load cell before turn on the indicator, otherwise the it will not working correctly.



This picture for using 9-pin socket



Pin definitions:

+E, -E: positive and negative power supply

+S, -S: the feedback signal of load cell terminal power supply

+IN, -IN: load cell output signal

Shield: shield cable of the load cell

VI. Display Definitions

: zero mode

: net weight mode

: stable mode

: high limit warning

: low limit warning

M+: accumulation mode

: low battery indicator

KG: unit

LB : unit

In charge: charing indicator

VII. Keyboard Functions

ZERO: turn the scale to zero

TARE: press it to subtract the container ,it shows net weight

UNITS: units conversion

LIMIT: press it to set or delete the high/low limit

: press it to confirm

VIII. Operation

1. Turn on the Scale

Remove all objects from the pan, turn on the scale, it will show the version and self-calibration, then turn to zero, weighing mode.

2. Turn off the Scale

Press the power switch to “OFF”

3. ZERO

If the scale not show ZERO when weighing, press “ZERO”. But this key will not work when the value exceed maximum capacity ±5%, in this case, pls remove the object from the pan, then press “ZERO”, or restart the scale.

4. TARE

Put the packing on pan, press “TARE” after it stable, it will show zero and the net weight indicator. It will show negative net weight after removing the packing, press “TARE” to exit.

5. Units Converstion

Press “UNITS” to select the unit you need, it will show the unit indicator, e.g.: kg, lb.

6. Setting and Cancellation Warning

Press “LIMIT” to show “Hi-LoX”, press “LIMIT” “TARE” to choose “0”, “1”, press “ ” to confirm; press “UNITS” to exit.

“Hi-Lo0”: cancel pre-set limit warning;

“Hi-Lo1”: pre-set limit warning, press “ ” for limit warming settings.

Note: when it show “Hi-Lo0”, press “UNITS”, delete limit value, and exit. When it show “Hi-Lo1”, press “UNITS” to exit. When it show “Hi-Lo1”, only press “ ” to set the high limit.

High limit setting: it will show high limit after “Hi” (Unit: kg)