



**Contact Details**

Tel: + 61 2 9476 4544  
Fax: + 61 2 9477 7974  
Email: [kelba@kelba.com](mailto:kelba@kelba.com)  
Web: [www.kelba.com](http://www.kelba.com)

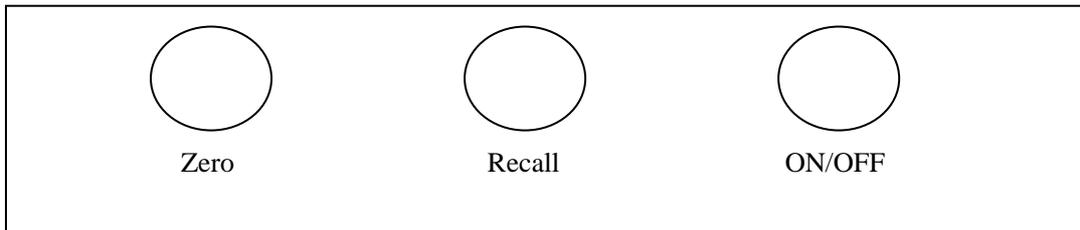
## Kelba KOCS-XZ

### Crane Scale Calibration Manual

Calibrating the scale includes two steps: 1. Setting up parameters; It can be done before on-site calibration . 2. On-site calibration.

#### Signal Wire Linkage charter

1. layout on the front of the crane scale



#### Parameter set-up

##### 1. Entering parameter set-up

- (1). Press and hold RECALL till the indicator shows "00000", the last "0" flickers.
- (2). Press ZERO, and one flickering bit will be increased on the indicator. When it becomes "00008", press RECALL, and the flickering bit will move one bit to the left, the fourth "0" flickers. Combine the operations of RECALL and ZERO till the indicator reads "28". Then press RECALL repeat until to show "SEL 0", which indicates setting up parameters. Digits at lower bits are the No's listed on the menu.

The number on the menu are defined as follows:

( ) is an optional value and [ ] is pre-set by our factory.

**【1】** : Full range (1-9999) [30]

**【2】** : Calibration parameter (16384-65000)

**【3】** :Wait for input data of standard weight for automatic calibration (applied in on-site calibration)

**【4】** :Analog gain (4-7) [5]

**【6】** :Division (1,2,5,10,20,50) [10]

**【7】** :Decimal point position (0-3) [0]

**【8】** :Unit of capacity and weight (0,1) [1]

**【9】** :Filtering parameter (1-6) [5]

## 2. Menu selection

When the indicator displays "SEL 0", pressing ZERO one time will cause the menu item to add one and make selection from 0-9. To calibrate the division, for example, select from the menu "SEL 6" and then continually press RECALL so that the flickering bit appears on the left. And the indicator displays the present division "d 01". Changing the division from "01" to "20" calls for combining the operations of RECALL and ZERO. Then continually press RECALL till the flickering bit disappears and "SEL 6" reappears on the indicator. Setting other parameters can be accomplished by changing the counterpart of the menu, then repeating the above operations.

After finishing correcting, keep pressing RECALL and exit the selection status.

## Detailed introduction to the menu

### 1. Weighing capacity indication and correction

On Item **【1】** the lowest four bits on the indicator indicate full range of the scale (1-9999). Weighing unit (metric ton or kilogram) is dependent on Item **【8】** which indicates unit of the weighing capacity and display.

### 2. Analog gain set-up

Analog gain refers to the multiple of the built-in amplifier. There are four selectable multiples in this scale: 4,5,6 and 7.

The scale will automatically set up this item in case that the user ignores analog gain set-up during on-site calibration.

Item**【4】**indicates the present analog gain code "A 05", in which A indicates the multiple of analog gain. Indication of various digits at the lowest bit is as follows:

Code	Gain	Allowable accuracy of load cell (mV/V)
4	16	1.5-3.0
5	32	1.0-3.0
6	64	0.5-1.5
7	128	0.25-1.0

### 3. Graduation set-up

Item **【6】** indicates the current division "d 01", in which "d" represents division. The division values include 1,2,5,10,20,50.

### 4. Decimal point position set-up

On Item **【7】** the lowest bit indicates the decimal point position code "P 0", in which "P" represents decimal point position. Indications of the lowest bit are as follows:

- 0 : no decimal point; read "0" when no-load.
- 1 : one decimal bit; read "0.0" when no-load.
- 2 : two decimal bits; read "0.00" when no-load.
- 3 : three decimal bits; read "0.000" when no-load.

## 5. Weighing unit set-up

Item **【8】** indicates the weighing unit code “U 0”, in which “U” represents the weighing unit. Indications of digits at lowest bit are as follow:

0 : lb

1 : kg.

When the “kg” changes to “lb”, the display weight will be changed automatically. For example, the weight is “1000”kg, while the item **【8】** changes to “0”, it will show “2200”lb.

## 6. Filtering parameter

We suggest to set the filtering parameter is “5”, it can keep the display data fast and stably. If the parameter is smaller, the display speed will be faster, but the final data is not stable.

## On-site calibration methods

### Weight calibration

The scale offers two methods for on-site calibration:

#### **Method One:** Automatic calibration

- (1) . Load the scale with plenty of weights ( It is preferable that the weight be very close to full scale).
- (2) . Enter parameter set-up and choose Item 03 on the menu. The indicator will indicate “SEL 03”.
- (3) . Keep pressing RECALL till the indicator indicates “00000”, then input the standard weight data. Pay attention to inputting the data which differs from that of the other scales manufactured by our factory .The input data is an expected displaying data after calibration .(E.g.,8000 should be input so that the scale will read 80.00 kg for the same weight loaded.)
- (4) . After inputting the expected data, press RECALL to exit calibration and returns to normal weighing operation.

E.g., Calibrating a crane scale of 300 kg with 200 kg weights. The operation is as follows (Suppose that all parameters have been set):

- ① Zero the scale at empty weight (indicating “0”).
- ② Load the scale with 200 kg weights. The indicator indicates a value before calibration, say, “157.6 kg”.
- ③ Enter calibration when the indicator displays “SEL 3”, keep pressing RECALL till the flickering bit moves to the right and finally disappears from the indicator. “00000” will be displayed.
- ④ Input “2000” (that is 200.0 weights without decimal point). Press RECALL till the flickering bit disappears and the scale will sound temporarily and display the weighing data.

**Method two:** Direct inputting calibration parameters

This method is mainly applied in changing scale accessories or adjusting the accuracy slightly. On Item

**【2】** ,the indicator will display the original calibrated parameter, which is proportional to weighing data plus or minus. Inputting new calibration parameter will not influence the set zero place.

To replace the meter, one only needs to input the same calibration parameters without taking the trouble of re-calibration. We ensure that the accuracy deviation of meters with different batch No.'s is no more than 0.02%.

$$\text{New calibrated parameter} = \frac{\text{Real weight}}{\text{Display weight}} * \text{original calibrated parameter}$$

For example:

The real weight of goods is 5000kg, but the scale display 5004kg, the original calibrated parameter is 42126, so the new calibrated parameter is:

$( 5000 \div 5004 ) \times 42126 = 42092$ , input “42092”, then press ”RECALL” for a while, come back to weighing, then it display “5000”.

**NOTE: PLEASE NOTE THAT THE KELBA CRANE SCALE SHOULD NEVER BE USED ABOVE ITS RATED CAPICTY, THIS WILL VOID ALL WARRENTY CLAIMS AND CAN CAUSE INJURY OR DEATH BY DOING SO.**