

# Lab Manual

## KYOWA LTZ-50KA LOADCELL



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# Contents

1. Objectives .....	3
2. Instruments .....	3
3. System .....	4
4. Procedure .....	5

## 1. Objectives

- 1.1 This manual will introduce you how to setup to measure the weight upto 50 kg with Kyowa loadcell.
- 1.2 Understanding the control parameters of monitoring software *Measurement*, so you can observe the change of weight vs time by the chart.

## 2. Instruments

### 2.1 Loadcell LTZ-50KA



Figure 1

### 2.2 Controller DBU-120A



Figure 2

### 2.3 Monitor software *Measurement*



### 3. System

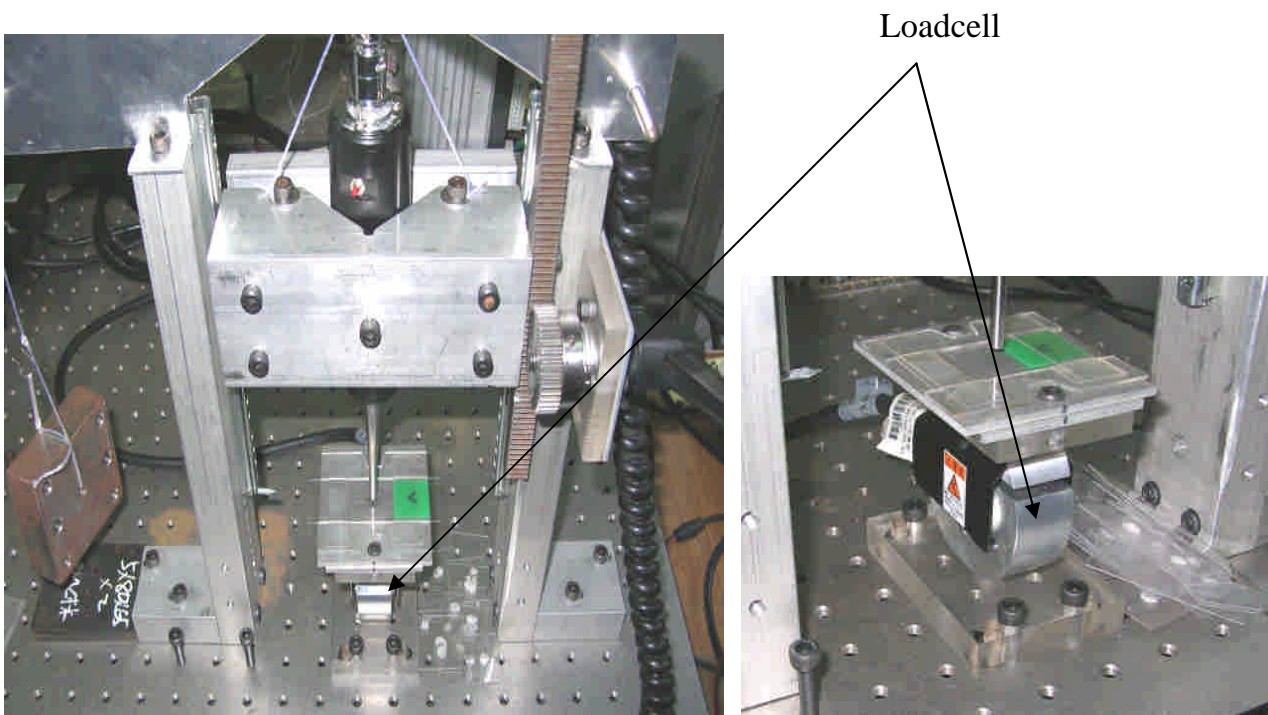


Figure 3. An example setup of weight measurement.

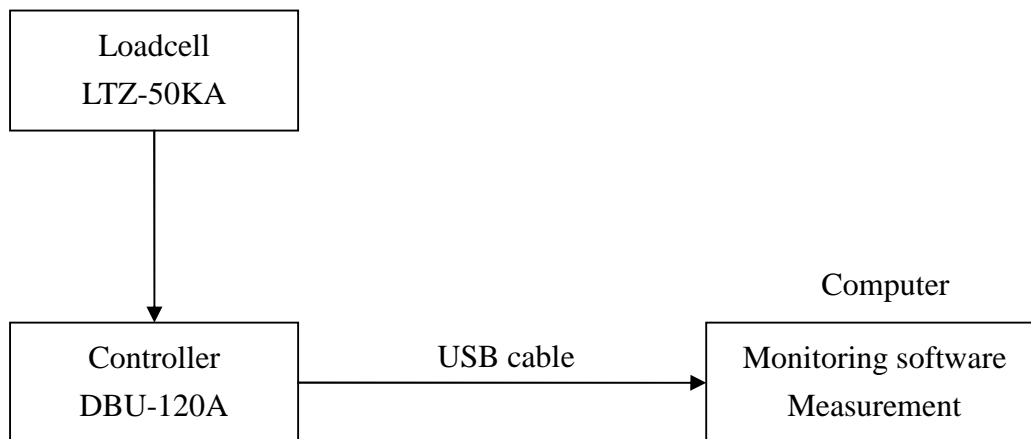


Figure 4. Block system of weight measurement

The loadcell must be fixed steadily on the table.

The object must be put on the center of loadcell.

Measurement value is monitored from the computer by *Measurement* software.

## 4. Procedures

*Measurement* is a software for configuring parameters and monitoring the DBU-120A controller. It is used by connecting a computer and the controller to configure parameters and monitor operating status.

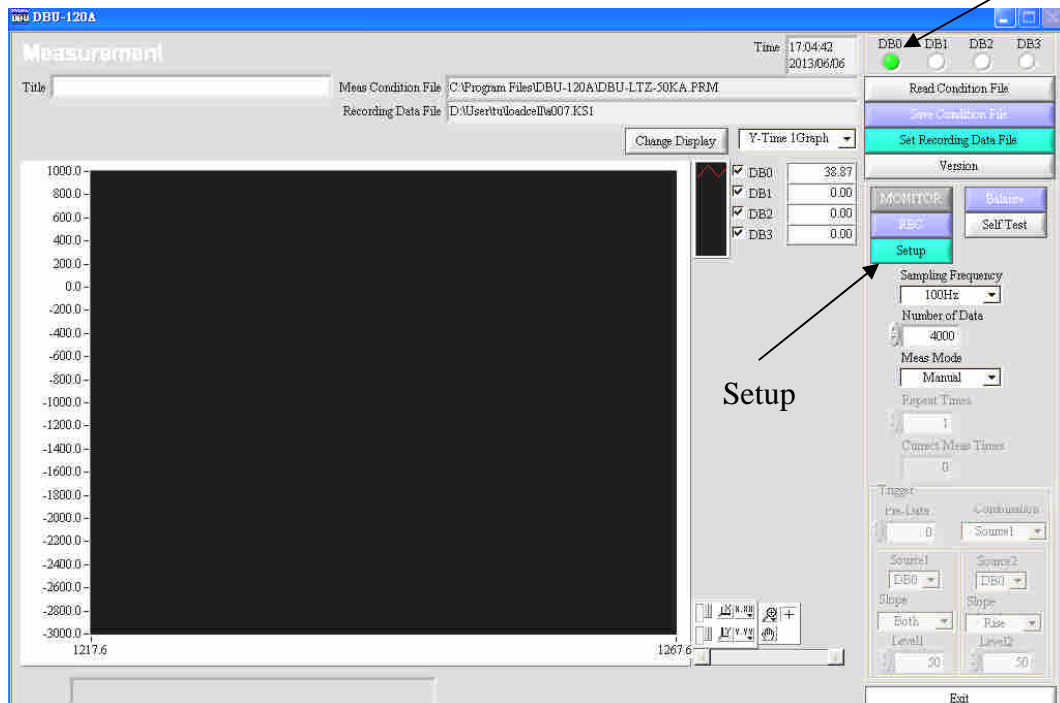
### Procedure steps:

1. Setup the instruments as the Figure 4 on page 4.
2. Start *Measurement* on the computer



3. On the interface, click on Setup button

Channel of connected device



4. On the set DB condition tab, setup value of parameters:

- Source: Loadcell icon

- Exciter: 2V

- Input: 350 Ohm

- Range: 10K□/m

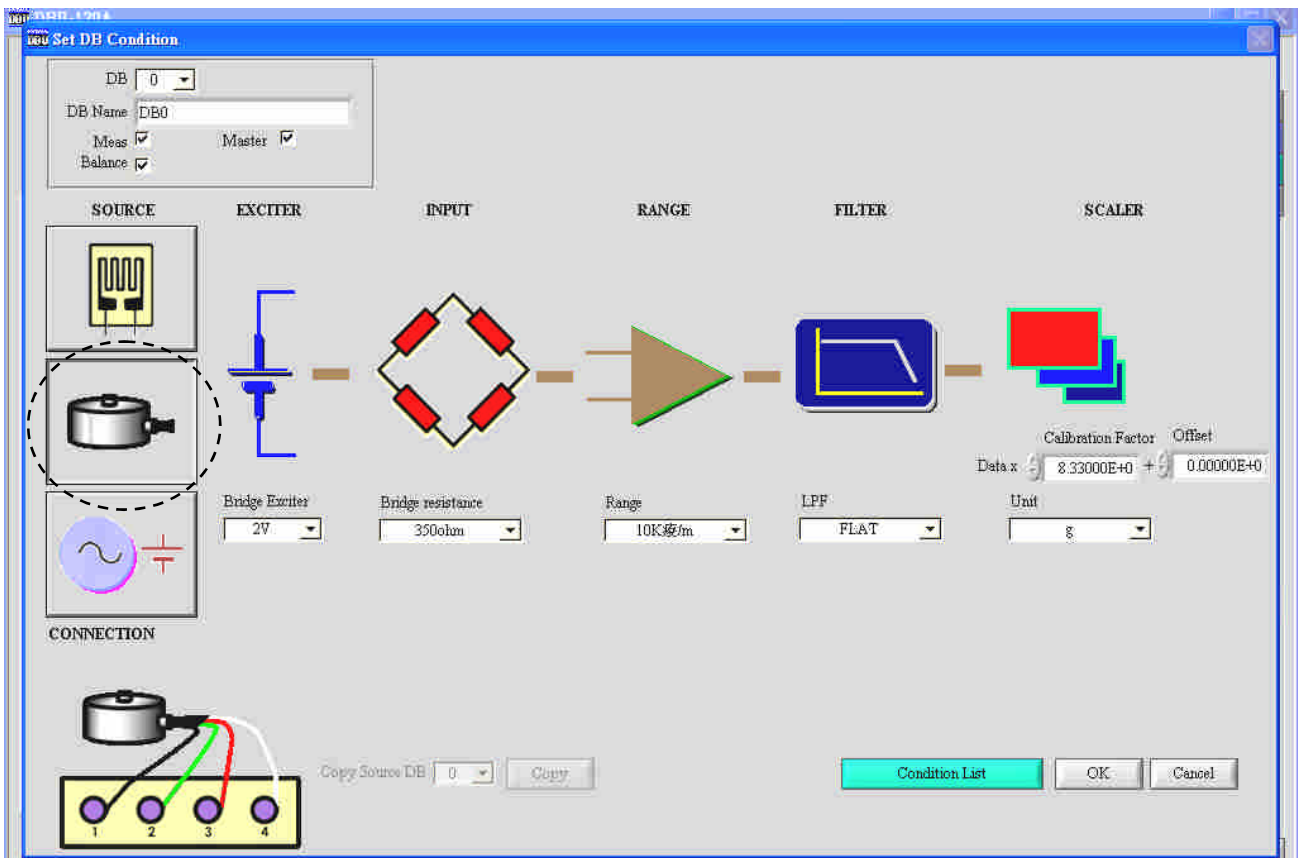
- Filter: FLAT

- Scale:

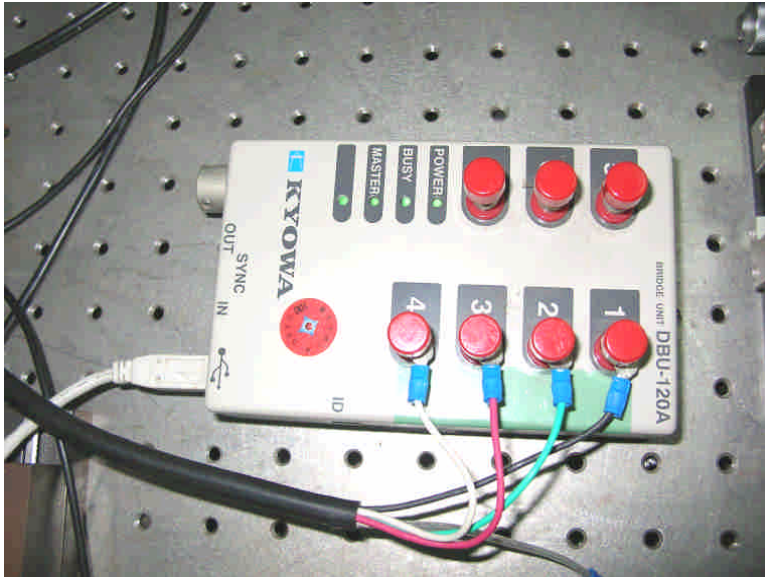
+ Unit: g

+ Offset: 0

+ Calibration factor:  $50,000 \text{ [g]} / 6002.3 = 8.33$

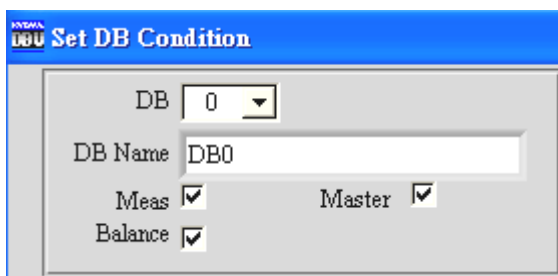


5. The wire connection follow the color in Set DB condition tab

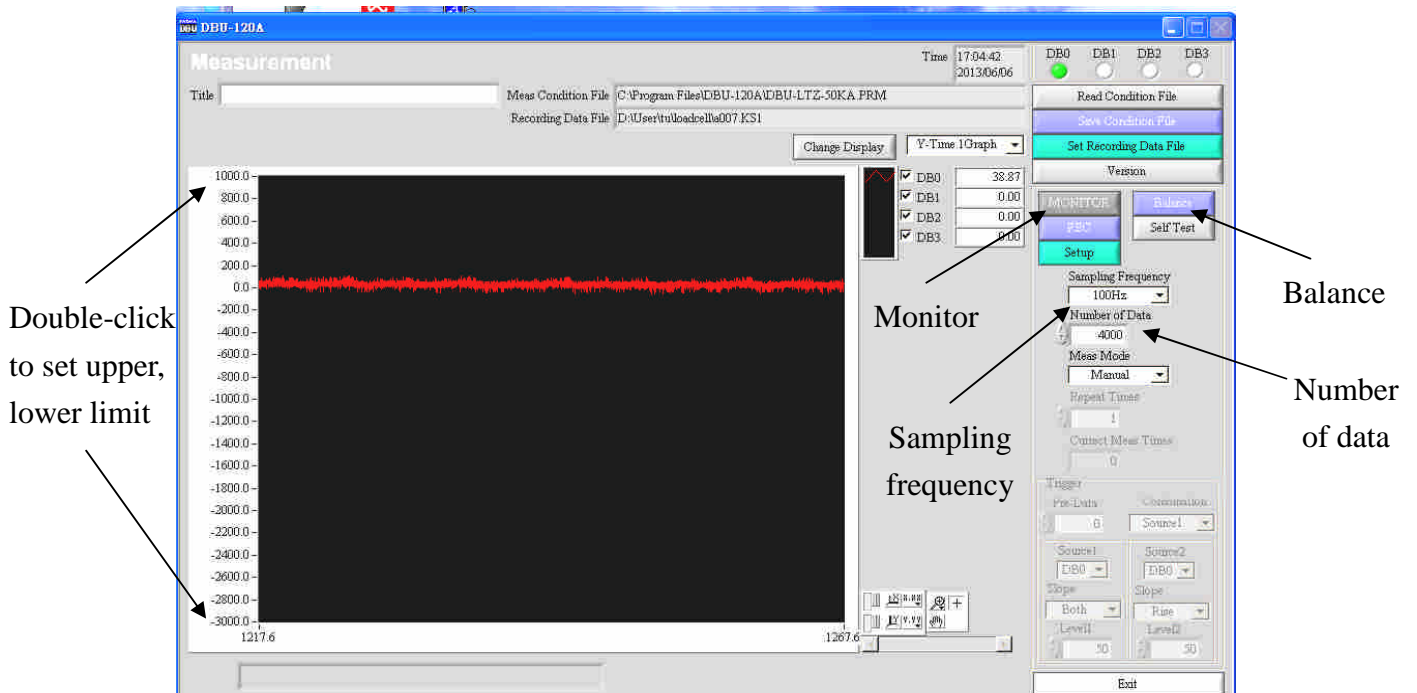


(color code: 1- black, 2- green, 3-red, 4-white)

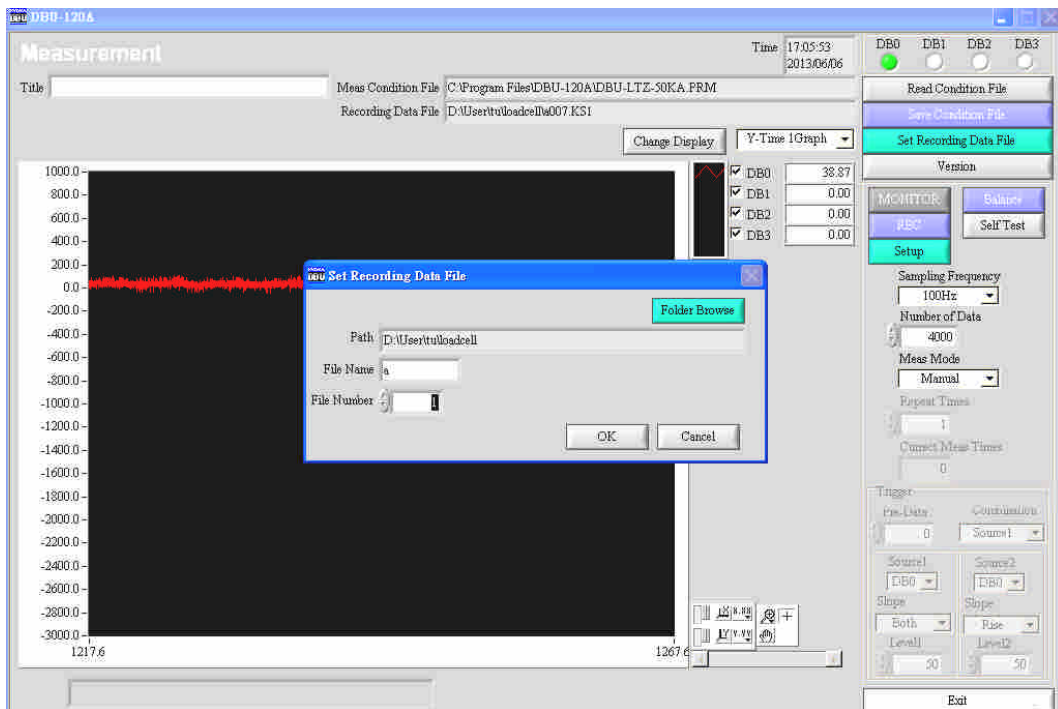
6. Check all 3 checkboxes on the top left of Set DB condition. And click OK.



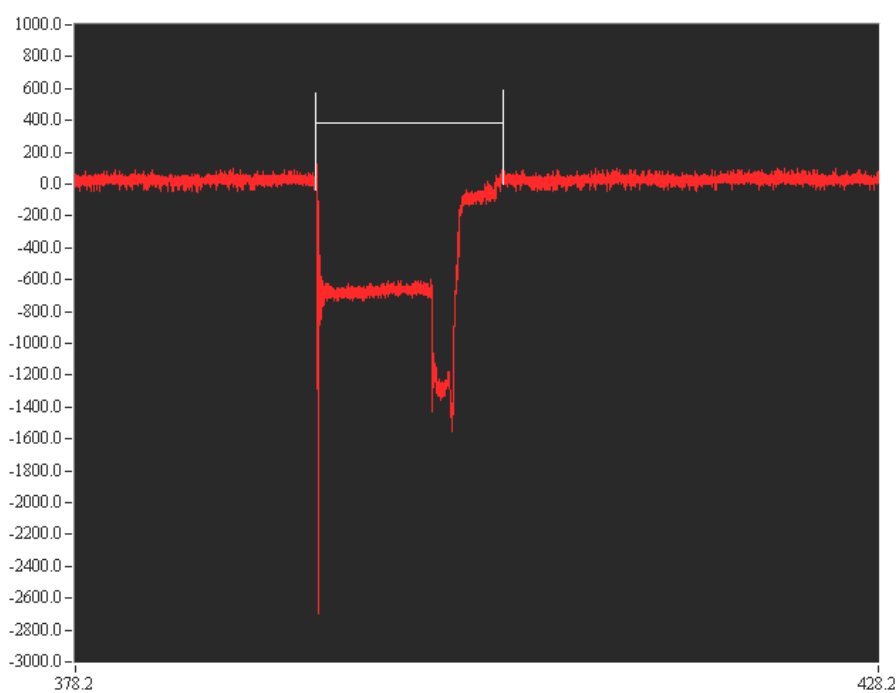
7. Click Monitor button to read the weight value from loadcell.  
In no-load condition, click Balance button to offset the weight to zero.



- Set recording data file: save data file with the file name, and starting number of the extensions (for multiple data files).



- An example of reading weight value:



- REMEMBER to **safely remove** DBU-120A device after using.

