



# FBx Series Bench Scale Instruction Manual



FBx-W Bench Scale



FBx-C Bench Scale

NTEP (Cert.#19-137)

## Fuzhou Furi Electronics Co.Ltd

### 1. Description

This manual contains installation, operation and maintenance instructions for the FBx Series Bench Scales. Please read this manual completely before installation and operation.

The indicator instructions please refer to "FBx Indicator Manual".

The FBx Series is a dedicated static checkweighing product line with enhanced software and simplified user functionality. FBS is stainless steel construction. Its easy-to-clean, hygienic design makes it specifically ideal for food processing and other wet-environment applications.

Behind this instrument stands Furi, An Aftermarket Department with trained instrument technicians is dedicated to providing the fastest service possible in the event this instrument requires servicing. Furi also has a Customer Service Department to answer any inquiries regarding applications and accessories.

## 1.1 Precautions



For safe and dependable operation of this equipment, please comply with the following precautions:


- Verify that the input voltage range printed on the data label matches the local AC power to be used.
- Make sure that the power cord does not pose a potential obstacle or tripping hazard.
- Use only approved accessories and peripherals.
- Operate the equipment only under ambient conditions specified in these instructions.
- Disconnect the equipment from the power supply when cleaning equipment.
- Do not operate the equipment in hazardous or unstable environments.
- Do not immerse the equipment in water or other liquids.
- Service should only be performed by authorized personnel.

### 1.1.1 Power Adapter Option Safety Precautions

Please use only approved Power Adapter.



**CAUTION: ELECTRICAL SHOCK HAZARD. REMOVE ALL POWER CONNECTIONS TO THE INDICATOR BEFORE SERVICING OR MAKING INTERNAL CONNECTIONS. THE HOUSING SHOULD ONLY BE OPENED BY AUTHORIZED AND QUALIFIED PERSONNEL, SUCH AS AN ELECTRICAL TECHNICIAN.**

Before making connections to the Power Adapter, remove power from the system. If the system contains an optional rechargeable battery, be sure that the  button is used to fully turn off the system after removing the AC power plug.

More detailed installation instructions are included with the Power Adapter when purchased.

## 2. INSTALLATION

### 2.1 Unpacking and Checking

Unpack and verify that the following components have been included:

- FBx bench scale
- Certification/Packing list
- Accessory pouch
- Instruction Manual
- Stainless Steel platform
- Warranty Card

Retain all of the original packaging materials in the event the unit has to be transported or stored.

### 2.2 Precautions

- This equipment should be used in an environment free from vibration, temperature extremes or highly corrosive conditions.
- These factors may affect normal operation of the unit.
- Scale bases used with the FBx Indicator must be located on a stable level surface and kept away from vibrating sources such as large machinery or appliances.
- Adjust the leveling feet so that the bubble is centered in the circle of the level indicator located in the rear of the scale.

**Note:** Ensure that the scale is level each time its location is changed.



## 2.3 Power Connection

### 2.3.1 Power Adapter

Plug the AC power cord into a properly grounded power outlet. The FBx Indicator utilizes a universal switching power supply, AC 100-240V 50/60Hz Input, DC 12V 1000mA Output.

### 2.3.2 Battery Power

The scale can be operated on the internal rechargeable battery when AC power is not available. The scale will automatically switch to battery operation if there is a power failure or the power cord is removed. A fully charged battery can operate the scale for over 16 hours independent of the AC power line.

When the battery requires charging, Low Battery Indicator  is displayed during operation. When the battery is fully discharged LCD will display , The scale will automatically turn off. At this time, please recharge in time, otherwise the scale will not be able to continue to use.

With AC power applied to the scale, a Yellow led may light up, which

means charging is in progress. Turning to a green led indicates that the battery is fully charged.

It's not necessary to turn on the power when the scale is during charging process. It takes 3 hours at least to charge the battery fully.



Before using the scale on battery power for the first time, the internal rechargeable battery requires charging for up to 10 hours. The scale can be operated on AC power adapter during the charging process. The battery is protected against over charging and the scale can remain connected to the AC power line.



#### **CAUTION**

BATTERY IS TO BE REPLACED ONLY BY AUTHORIZED SERVICE PERSONNEL.

RISK OF EXPLOSION CAN OCCUR IF REPLACED WITH THE WRONG TYPE OR CONNECTED IMPROPERLY.

## **2.4 Before Weighing**

Whenever possible, allow the scale to warm up more than thirty (30) minutes. This gives the scale a chance to adjust to its new environment.

### 3.1 Drawings and Dimensions

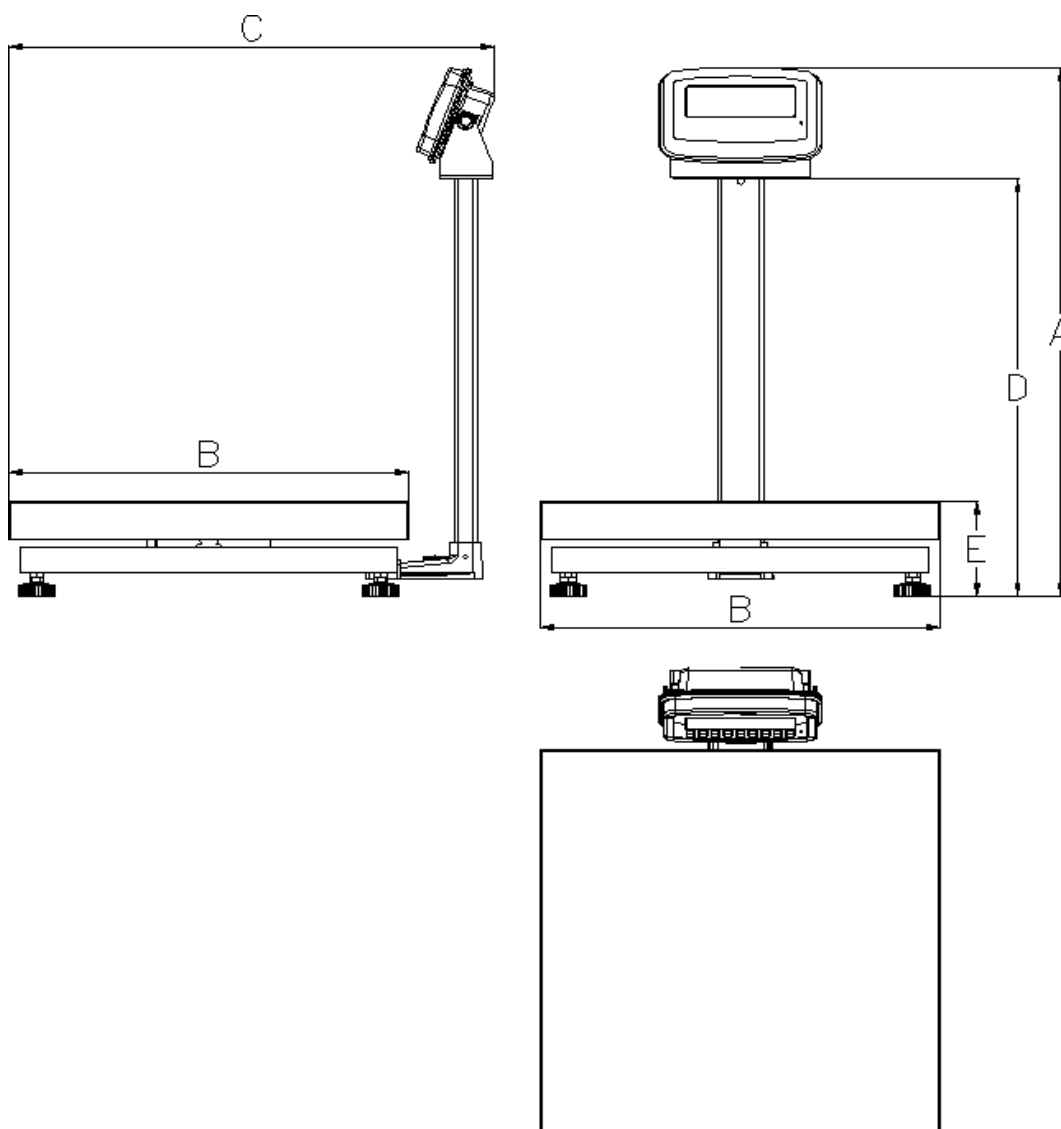




Figure 3-1. FBx Series Bench Scale.

Base	A Total Height	B Total Wdth	C Total Length	D Dimension from Indicator bottom to the ground	E Dimension from Platform surface to the ground
FBx-m1824	33inch	18inch	29inch	26inch	6inch
FBx-m2424	33inch	24inch	29inch	26inch	6inch

## 3.2 Technical Data

### Materials

- Indicator Housing: Stainless steel
- FBS scale structure: stainless steel;      FB scale structure: cast steel
- Keypad/display overlay: Polyester
- Feet: Rubber

### Ambient conditions

The technical data is valid under the following ambient conditions:

Ambient temperature: -10°C to 40°C / 14°F to 104°F

Relative humidity: Maximum relative humidity 80% for temperatures up to 31°C decreasing linearly to 50% relative humidity at 40°C.

Height above sea level: up to 4000m

TABLE 3-1. TYPICAL CAPACITY AND GRADUATION VALUES

Model	Capacity	$e_{min}$	Platter size
FBx-m1824	500lb	0.1lb	18inch x 24inch
FBx-m2424	8000oz	2oz	24inch x 24inch
FBs-m1824	226.80kg	0.05kg	18inch x 24inch
FBs-m2424	226800g	50g	24inch x 24inch

Explanation of model designations: FBx-myyyy;

x: denotes the material

S indicates Stainless Steel and blank indicates Cast Steel;

m: denotes the indicator model, where

C denotes the indicator with number keys and

W indicates the indicator without number keys;

where blank indicates scale structure model;

yyyy: denotes the platter size in inch (ex-1218 indicates 12inch x 18inch);

### 3.3 Calibration

The FBx scale is shipped pre-calibrated from the factory. However, many

conditions may require that the scale be recalibrated. Temperature changes, geographic gravity variations and rough handling are few reasons why a scale may need recalibration.

**Notes:** 1. Make sure that appropriate calibration masses are available before beginning calibration.

2. Make sure that the scale is level and stable during the entire calibration process.

3. Calibration is unavailable with J13 interface is not shorted CAL



4. Allow the scale to warm up for more than thirty (30) minutes after stabilizing to room temperature.

5. To abort calibration, press  key anytime during the process.

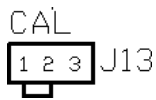
### 3.3.1 Any Value Calibration (AnyCal)


AnyCal Calibration uses two points to adjust the scale. One point is called the zero value where there is no weight on the scale. The other point is any value that can be set, but it is recommended that the value is not less than half of the full capacity. The value closest to the full capacity is recommended to give the best performance over the entire weighing range.




**Follow the steps below to calibrate the FBx scale:**


**Step 1:** To enter the parameter menu mode:


- Open the indicator housing. Shorting the CAL jumper of J13 on the main


PC board. See . Move to position 2-3



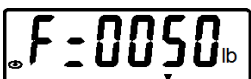
- Press  key to turn on the indicator, the system will enter the self checking mode.

- Press  key during  appears on the display, the display will show . The CAL arrow is lighted until the CAL jumper of J13 is removed and moved over to the left.


Press  key to select the setting menu in menu mode.

Press  key to allow entry into the displayed menu.

Press  key to exit the current setting menu.

**Step 2:** Press  key when  appears on the display, the display will show . This means the system enter the CAL setting menu.



This menu item is used to set the full capacity and main unit of the scale.

Press  key to select the main unit lb or kg.

If a different full capacity value is desired, enter the new value via the numeric keypad. Please refer to section 3.3.4 about how to input data of


“FBx Indicator Manual”.

FBx-C counting indicator can use numeric keypad, FBx-W weighing

indicator can use  key to add 1 and  key to shift 1.

Values entered refer to Appendix D for typical values of “FBx Indicator Manual”.



**Step 3:** The full Capacity and main unit are set, press  key to confirm


the setting. The display will show .

This menu item is used to set the calibration weight and calibration unit.


If a different calibration weight is desired, enter the new value via the numeric keypad. Please refer to section 3.3.4 about how to input data of “FBx Indicator Manual”.


FBx-C counting indicator can use numeric keypad, FBx-W weighing

indicator can use  key to add 1 and  key to shift 1.

Press  key to select the calibration unit lb or kg.

**Note:** Calibration value range from 1 kilogram or 1 pound to 100% full scale are accepted. Suggest that value range is not less than half of 100% full capacity. Note that values closer to the full capacity will usually yield the most accurate calibration.

**Step 4:** Calibration weight and unit are set, press  key to confirm the


setting. The display will show .


This item is set the division. The unit shown is the main unit that is set in front.



Selections are: 0.01 /0.02 /0.05 /0.1/ 0.2 /0.5 /1 /2 /5 /10 /0.002 /0.005.



After setting the division, the scale will enter the calibration.

Set capacity, main unit , calibration weight, calibration unit and division in sequence. Refer to 3.6 of “FBx Indicator Manual”.


**Step 5:** The division is set, press  key to confirm the setting. The display will show a series of digits known as the A/D value.

For example , these numbers will continuously move.

**Step 6:** Once the display shows the stable indicator “”, press the  key, the display will show the calibration weight that you entered in the upper step 3, flashing.

**Step 7:** Place the corresponding mass on the platform, after 2 seconds, stable indicator “” is displayed, then press the  key the scale will calibrate.

If calibration was successful, the calibration weight is displayed and the scale automatically return to the weighing mode. Remove the mass and begin weighing operations.

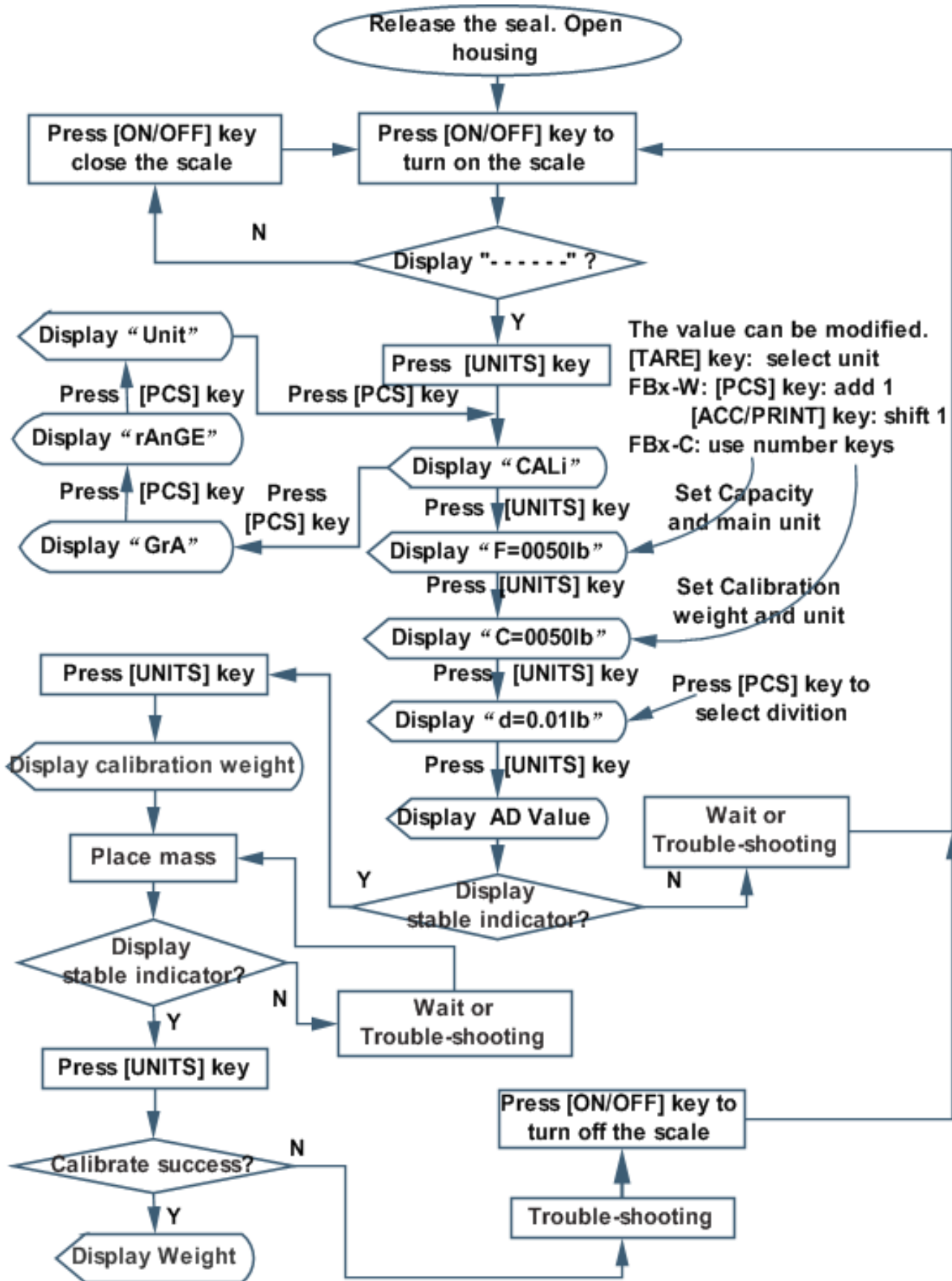
If calibration fails, please press  key to return, then to check if parameter setting is correct.

**Step 8:** Turn off the power, then turn on the power again, place a known weight on the platform to verify if it is accurate.

**Step 9:** If the weight displayed does not correspond with the value of the calibration weight, please repeat above steps.

**Step 10:** After calibration is completed, open the CAL jumper of J13, re-install the front cover and make sure the liquid-tight connector is tight.

**Menu flow chart is shown below**



### 3.4 Legal for Trade



Before this product can be used in legal-for-trade or legally controlled applications, it must be inspected in accordance with local Weights and Measures or approval agency regulations. It is the responsibility of the purchaser to ensure that all pertinent legal requirements are met. Please contact your local Weights and Measures office or authorized manufacturer's representative for further details.

This procedure must only be performed by authorized personnel.

**Note:** If the scale has been previously set for Legal For Trade operation, it will be necessary to remove the seal before proceeding. Removal of the existing seal will make the scale legally unusable for Legal for Trade use until a new seal is put into place.

## 4. ACCESSORIES AND OPTIONS

Accessories and Options
Table/Wall Mounting Bracket
Table Mounting Kit
Wall Mounting Kit
Power Adapter
USB Cable (option)
RS232 Cable (option)

## WARRANTY

LW Measurements products are under warranty against factory defects for a period of two (2) years from the date of shipment for Customers in the continental United States.

LW Measurements will pay for freight both ways within the first 30 days of purchase if technical support is required. (Determined by our certified Technical Support Team) In the event technical support is needed the customer is responsible for shipping the product back to us after the 30 day period has expired. Once the product is received, the technical support team will inspect and as necessary repair or replace the scale. LW Measurements will ship the product back to the customer at our expense.

Any new scales returned for warranty must be properly packaged in the original box. If they are not properly packed in the original box, the customer is responsible for the shipping cost. If we determine there is a factory defect, we will provide a replacement and accept responsibility for shipping back to customer. If we determine that it is not a factory defect, the customer will be responsible for shipping fees incurred.

For Customers outside the lower 48 States, including Mexico, Canada, Puerto Rico, Hawaii, Alaska and all other countries are responsible for all shipping fees incurred.

Our warranty does not cover misuse or neglect including but not limited to battery or water damage, overloading, and chewed or cut wires, keypad damage (punctures), scratched platforms, dented platforms unless caused by shipping (Must report/return within 30 days). If the product is found to have been misused or damaged by the customer, LW measurements is not responsible for the cost of return.

For warranty claims please call your customer service representative.