Wedderburn®

Operator Manual
for

WS202 Digital Bench Scale

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1. Safety Instructions

Before operating this measuring instrument, carefully read all instructions and then save for future reference.

1.1. Choosing a Suitable Operating Location

When locating your scale please consider the following:
- Ensure operation location of the scale is in a well lit area to be clearly visible and to avoid eye strain of user.
- Position the scale on a flat and solid platform capable of supporting the weight of the maximum capacity of the instrument.
- Do not place the scale in a location where damage could result (heat, chemical, impact, etc).
- Position the scale in such a way as to be comfortable for operator to use.
- Ensure the scale is level and stable or stabilize by adjusting screw in feet.
- Avoid sudden temperature changes, the suitable operating temperature for this scale is between -5°C ~ 35°C.

1.2. Relocation

When relocating your scale from one location to another please use an appropriate moving technique and ensure that:
- The scale is switched off and disconnected from power before relocation.
- A suitable trolley or other or other suitable means is used for the relocation
- Ensure that the new location is suitable for the task.

1.3. General Operating Recommendations

The following recommendations should be noted when operating the scale:
- Do not overload the scale as this will damage the load cell.
- Be aware that electro-static discharges may cause damage to the scale. Use appropriate measures to avoid static build up in the instrument operation area.
- Care must be taken with power cord, when charging battery, ensure that it is not placed in a position where it can become a trip hazard. When operating the scale from battery ensure the power cord is full enclosed in the scale body in the space provided.

1.4. Cleaning

Regular cleaning of the scale is recommended.
- Use a clean cloth to remove any residual waste from the scale body and connections.
- Do not use abrasive scrubs or cleaning agents.
- Stainless

Note:
The scale must not be dismantled.

1.5. Routine Inspection and Testing

Regular inspection and testing of this scale should ensure trouble free and safe operation.

1.6. Electrical Safety

The WS202 scale is powered by a internal 6V 4.5Ah rechargeable battery.
This battery is recharged by connection to a 240V supply a 12V 0.83A transformer fitted within the scale body.

Where possible, the use of an approved RCD (Residual Current Device) connected to 240V power circuits is recommended.

1.7. Disposal of Battery

Be mindful that batteries contain heavy metals and toxic elements such as nickel, cadmium, mercury and lead acid. If batteries are disposed of in land fill these elements can leak out and damage our environment. Please consider disposal of used batteries in recycle programs.

Recycle programs that are set up to dispose of used batteries:
  • Contact your local council for recycling options.

1.8. Correct Use

  • Ensure that staff that will be using the WS202 scale are instructed in the correct use of the instrument and are made aware of the above safety instructions.
  • Incorrect use, placement or handling of the scale may result in damage and possible injury.

2.   Inspection Instructions

2.1. Initial Inspection

Upon receiving your new WS202 scale you should:
  • Unpack the scale carefully.
  • Check the scale immediately after unpacking for externally visible damage.
  • Ensure that scale is complete and that all parts are present.

If there is any issue regarding the results of this inspection, please do not use the scale but contact Wedderburn Online immediately.

2.2. User Inspection

Periodically inspect your WS202 scale to ensure that it is still in good order. Ensure that regular user inspections of your equipment have been performed.
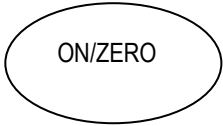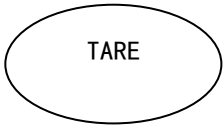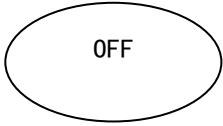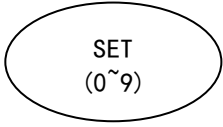
If faults are found, please contact Wedderburn to have it rectified.

3.   Specifications

Display	14mm LED x 6 digit
Scale weight	3.9kg
Body material	Stainless steel cover over plastic housing
IP rating	IP-68 (waterproof)
Operating Temp.	- 10°C ~ + 35°C
Internal battery	6V4.5Ah rechargeable battery

4.   Keys and Display Messages

4.1.   Keys and Function

KEY	NAME	FUNCTION
ON/ZERO	ON / ZERO	Press to turn the scale on
		Press to zero the scale
		Long press to enter LED power setting mode
TARE	TARE	Press to operate tare
		Press to confirm
		Press to exit
		Long press with power on to enter Calibration
OFF	OFF	Press to power off the scale
SET (0~9)	SET	Press to enter parameters
		Press to select parameters

4.2. Display Messages

Displayed	Meaning
dc x.xx	Means the voltage of battery is x.xx Volts.
- - - - - -	Indicates the weight over 100%FS+9e, with the beeping sound, this means over load, reduce the weight
bATLo	The battery voltage is low. Battery requires recharging. Only charge when the bATLo is displayed
c _End	Battery Recharge has ended
Err-0	Overload zero of load cell. Please reduce the tare.

5.   Operations

5.1.   Preparation

Place WS202 scale in location where it is to be used. Adjust leveling feet until the leveling bubble is centrally located this will ensure the weighing pan is in a horizontal position.

5.2.   Switching the Scale On and Off

Switch on
Press the **[ON/ZERO]** key, the software version number will be displayed followed by the battery level voltage (dc-x.xx). The scale will then start a display check running through from 999999 to 000000, all the indicator lamps will light then go out.
Then the **"ZERO"** indication lamp will light and the display shown "0". Now the scale is read to use.

Switch off
Press the [OFF] key to power off the instrument.

Auto-off
After 10 minutes in zeroing, auto-off.

Low voltage auto-off
When the battery voltage falls below 5.6V, then instrument will automatically power-off.

ZERO
The instrument can be returned to zero if the weight display is ≤4% maximum capacity (without Tare).
With the instrument switched on, press the [ON/ZERO] key, the instruments display will shows "0" and the "ZERO" indication lamp will light

5.3.   Weighing

Once instrument is zeroed, place load on to the weighing pan. The load weight value will be displayed on the scales displays.

5.4.   Tare Operation

Tare is used if a tare weight is required to be removed from the gross weight, for example the weight of a container.

Without weight applied ensure the display indicates "0" weight by pressing the **[ON/ZERO]** key. Place the container only upon the scale weighing pan, the weight of the container will be displayed. Press the **[TARE]** key to remove this weight value and the display will indicate "0" but now the lamp over the **"TARE"** wording will be lit. Now add the required load and the NET weight value will be displayed.

When the load and tare weights are removed from the weighing pan the display will show a negative value and the lamps over the **"ZERO" "TARE"** wording will both be lit. Press the **[TARE]** key to remove the tare value. The scale will now display "0" and now only the lamp over the **"ZERO"** wording will be lit.

5.5.   Save Power Function

After 40 seconds of inactivity the scale will go to auto save power mode. To indicate the scale is in Auto save power mode the display will indicate a small "o".

To wake the scale, add weight to the weighing pan.

5.6.   Battery Charge Indication

The battery charge level indicators are located to the left side of the display and show fully charge (higher than 6.3V), half charge (between 6V and 6.3V) and low charge (less than 6V).

5.7.   Battery Charge

Power to the scale is supplied by an internal rechargeable lead acid battery (6V/4.5Ah). When the display it indicates "-bAtLo- "then the battery requires recharging. The 240V power lead for charging is located by sliding the cover plate from the base of the scale. Connect the 240V power lead to the supply and switch on, you may continue using the scale if required or switch it off for full recharging.

5.8.   Set Parameter

To display the different parameters of the scale Press and hold the **[SET/0~9]** key for 3 seconds to show the menu, then release the key.
To step throught the parameter options press the **[SET/0~9]** key again to move to the next parameter.

The parameter menu are as follows:
- rAngE (set limit)
- UnItS (choose unit)
- oFF (choose auto power off)
- FILt (set display mode)
- Zero (set auto zero)
- bUZZEr (set buzzer)
- d (choose division)
- on-rA (choose range of power on)
- d-dP (choose single or dual display)

Press **[SET/0~9]** key is the select key**,**
Press **[TARE]** key is to confirm,
Press **[TARE]** key again to exit

Range setting for HI / OK / LOW indication:

Switching on the parameter
When the display shows "rAngE", press the [**TARE**] key and then press the **[SET/0~9]** key to choose "on" or "oFF".
"on" is to start the function, oFF is exit, press the **[TARE]** key to confirm.

If "on" was choosen.
- The indicator next to the LOW wording on the righ side of the display will now be lit and the display shows all zeros with one flashing.
- The Low limit will now be required to be set. Press the **[SET/0~9]** key to change the unit untill the required unit is reached. Press the [TARE] key to set this unit and move to the next lowest (move one unit right), set this in the same way if required. Press the **[TARE]** key until it has moved all the way through the units until the Low indicator light has gone out and now the HI indicator light is on. Set the Hi (upper) level setting in the same way as the Low limit. Step through the display digits until the Hi indicator light goes out and "on" is again shown on the display. The scale will then set and return to the weighing mode.

Incorrect setting

If the low limit is set greater than the hi limit, the rAngE parameter displays "off", then will exit the parameter setting.

If set correctly the scale will Indicate
If "??????" is the weight indicated on the display
- when "??????" ≥ high limit, **"HI"** lamp is lit.
- When low limit < "??????" < high limit, **"OK"** lamp is lit.
- When "??????" ≤ low limit, **"LOW"** lamp is lit.
- When the weight upon the weight pan is unstable, no lamps are lit.

5.9. Units (Change unit）

Select unit or counting

When the display shows "units", press the **[TARE]** key and then press the **[SET/0~9]** key to choose unit, then press the **[TARE]** key to confirm and exit.
The units that can be choosen: H9(kg), 9(g), Lb.lb, Lb.oz or pcs(counting).

When display returns to weight mode the unit that was selected is indicated by a lit lamp over the unit wording printed at the bottom of the display window.

If PCS (counting mode) is selected:
When "pcs" is displayed, press the **[TARE]** key. Now lamp over "pcs" is lit.

To set the weight and number of samples for counting.
Long time press the **[ON/ZERO]** key**,** the display will show "count" and return to "0".
Place a number of samples upon the weighing pan (The weight should less than Max. capacity) and press the **[TARE]** key**.** The display shows all zeros with one flashing, the lamp above the PSC will also be flashing. To set the sample number, press **[SET/0~9]** key to add 1 to the flashing unit number or move to next lowest digit by pressing the **[TARE]** key. Press the **[SET/0~9]** key moving down through the digits untill the scale returns to count mode. The unit count is displated.

Remove sample load and add load to be counted. The display will indicate the count.

Note:
The greater the number of the sample units the greater the accuracy of the count.

5.10. To exit counting mode

Re enter units by pressing and holding the **[SET/0~9]** key, press the **[TARE]** key to enter and then select another unit with the **[SET/0~9]** key. Press **[TARE]** key to confirm.

5.11. A-oFF (Choose auto power off ）

 When menu displays "A-oFF", press the **[TARE]** key to enter, press the **[SET/0~9]** key to choose "no" or "yes". "no" is no auto power off," yes" is after 10 minutes without weight applied the scale will auto power off.

5.12. FILtX (Change display mode）

When menu displays "FILtX" , press the **[TARE]** key to enter,. press the **[SET/0~9]** key to choose FILt-1, FILt-2 or FILt-3. Press the **[TARE]** key to confirm and exit.

FILt-1: Display renew speed is slow.
FILt-2: Display renew speed is fast.
FILt-3: Display renew speed is faster.

5.13. Zero (Set range of auto-zero)

When menu displays "zero", press the **[TARE]** key, now show zero x.xE
(x.x is the range, displayed by Test division:0.5, 1.0, 1.5, 2.0, 2.5, 3.0E, 3.5, 4.0, 4.5, 5.0.). Press the **[SET/0~9]** key to choose and the **[TARE]** key to confirm.

5.14. bUZZEr (set buzzer sound on or off)

When menu displays "bUZZEr", press **[TARE]** to enter, press the **[SET/0~9]** key to choose "on" or "off", press the **[TARE]** key to confirm.

5.15. d (Change division figure)

When menu displays "d", press the **[TARE]** key to enter, then press **[SET/0~9]** to choose division. There are 3 divisions setting to choose from. Note: the lower the division setting the slower the display renews speed will be.

5.16. On-rA (choose range of power on)

When menu displays "On-rA", press the **[TARE]** key to enter, press the **[SET/0~9]** key to choose "20" or "100". 20 = 20% Maximum capacity, 100 = 100% capacity. Press the **[TARE]** key to confirm.

5.17. d-dP (choose single or dual display)

When menu displays "d-dP", press the **[TARE]** key to enter, press the **[SET/0~9]** key to choose "no" or "yes".
no = Operator display only (single display)
yes = both front and back displays working (dual display).
Press the **[TARE]** key to confirm.

5.18. Display LED Power Setting Mode

With scale powered on, Press the **[ON / ZERO]** key untill display shows "LC-1".
Press the **[SET/0~9]** key to choose LU-1 or LU-2.
LU-1 is saving mode (recommend), LU-2 is brighter.
Press the **[TARE]** key to confirm.

6.   Battery Maintenance

The 6 volt battery used with the WS202 counting scale is sealed lead acid type and therefore does not require any maintenance other than ensuring the battery is fully charged. To ensure maximum life from your scales battery ensures that unused scales are recharged at least every 3 months. Full battery recharge can take up to 12 hours.

A faulty battery will not hold a charge or will not hold it for long and require recharging often, if this is the case contact Wedderburn for replacement.

7.   Trouble Shooting

Symptom	Possible Cause	Suggested Solution
Blank display when Power ON/ZERO button is depressed	Discharged battery	Recharge the battery
	Defective battery	Contact Wedderburn Online for suitable replacement battery
	Corroded battery	Clean connections
	Power button not properly depressed	Press Power On/Off firmly and hold until power turns on.
"- - - - - -" is display	The weight applied to the weight pan is over 100% maximum capacity +9e	Remove some or all of weight
"bATLo" is displayed	The battery voltage is low.	Battery requires recharging.
Display reading not stable	The scale is in motion	Wait until the scale is stable
	The load is not stable	Wait until the load is stable
Large error in weight reading	The scale is not zeroed before applying load	Zero the scale before loading
	Requires re-calibration	See section 7 for calibration instructions
	In correct weighing unit lb/kg/g	Set correct measuring unit, see section 5.9.2
	In Counting mode (lamp on over "PCS" wording)	
Scale will not enter calibration mode (ERROR 2)	Calibration switch in incorrect position	See section 7 for calibration instructions

8. Wedderburn Contact

For any further enquiries, please contact your local Wedderburn branch.

Phone: 0800 800-379
Fax: 0800 933-337
Website: www.wedderburn.co.nz