OPF-N Weighing Scale
USER'S MANUAL

Selletonscales.com

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SAFETY PRECAUTIONS

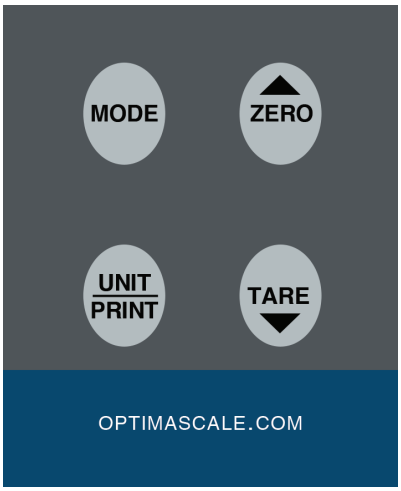
- To avoid damaging the battery do not keep charger plugged in once battery is fully charged.
- Avoid installing the balance in direct sunlight. This may cause poor performance or malfunctions.
- If the balance will not be used for a long period of time, remove all batteries from the battery compartment to avoid leakage, which may cause damage to the instrument.
- Avoid overloading or dropping material onto the platform as that may damage the balance.
- Place the weight on the center of the pan for accurate weighing.
- Make sure the weight is not over the Max capacity as it could damage the load cell inside.
- Do not spill liquids on the balance as it is not water-resistant. Liquids may damage the case and any liquid inside may cause damage to the electronics.
- Material that has a static electric charge could influence the weighing. Discharge the static electricity of the samples, if possible. Another solution to the problem is to wipe both sides of the pan and the top of the case with an anti-static agent.

PREPARATIONS & SET UP

- Place your balance on a stable and level table. Then level your balance by adjusting the feet to center the bubble in the spirit level.
- Plug into a wall outlet to avoid interference with other wirings
- Turn on the balance while there is no load on the pan
- We suggest to warm-up the balance by powering on 5 minutes before use for accurate weighing.
- Calibration may be required before weighing when the balance is initially installed or moved from a location.

DISPLAY AND KEY DESCRIPTION

LCD DISPLAY



Indication sign: Stable Zero Tare Low Battery

MODE

In weighing mode: shift weighing and counting function
In settings mode: it toggles between the mode options

ZERO

In weighing mode: it zero's the scale
In counting mode: it's the add key

UNIT/PRINT

In weighing mode: it shifts between weighing units
In the manual printing mode: it prints the weight data

TARE

In weighing mode: it tare's the scale
In counting mode: it's the reduce key

OPERATING INSTRUCTIONS

Power On

- Turn on the power by flipping the switch located on the underside of the scale to the left. Once on, the scale with auto-check and count down from 0-9 sequentially. It will then show the voltage 
for 2 seconds before entering the weighing mode

Zeroing

- If the screen reads any number other than 0 before weighing, press the ZERO key to set to 0

Unit Selection

- To switch between measuring units (kg, g, lb, oz) press the [UNIT/ PRINT] key

Tare Function

- Put a container you wish to use on the pan, then press the [TARE] key and the display will show the tare symbol and reset back to 0
- Add your sample to the container to weigh without the weight of the container
- To exit Tare mode simply press either [TARE] or [ZERO] key

Note: If you remove your container the scale will show the minus weight of the container

FEATURES

- Large removable stainless steel weighing platform
- Comes with a 9V rechargeable battery
- Large high contrast back-lit liquid crystal display (LCD)
- Splash proof keyboard and display
- Anti-static stainless steel weighing pan and glass windshield
- Automatic zero-tracking and full range tare
- Calibration with reference weights
- Optional RS-232c for bi-directional communication with a PC or Printer
- Parts counting, percent weighing and dynamic weighing
- Multiple weighing units: g, kg, lb, oz
- 1 year limited warranty

BATTERY

- When  appears on the display, you are requested to recharge the scale for 12 hours. When the scale is recharging the  mark will be flashing and will disappear after recharging has finished
- Charging Light Indication: When the scale is charging the charge light will turn Red. When the battery is done charging the charge light will turn Green

ALARMS

Over load alarm

- When the load on the platform is over its set capacity a beeping will sound and the display will show ------ , you must remove the load from the platform immediately

Low load alarm

- If there is a problem in the load cell, a beep will sound and the display will show 

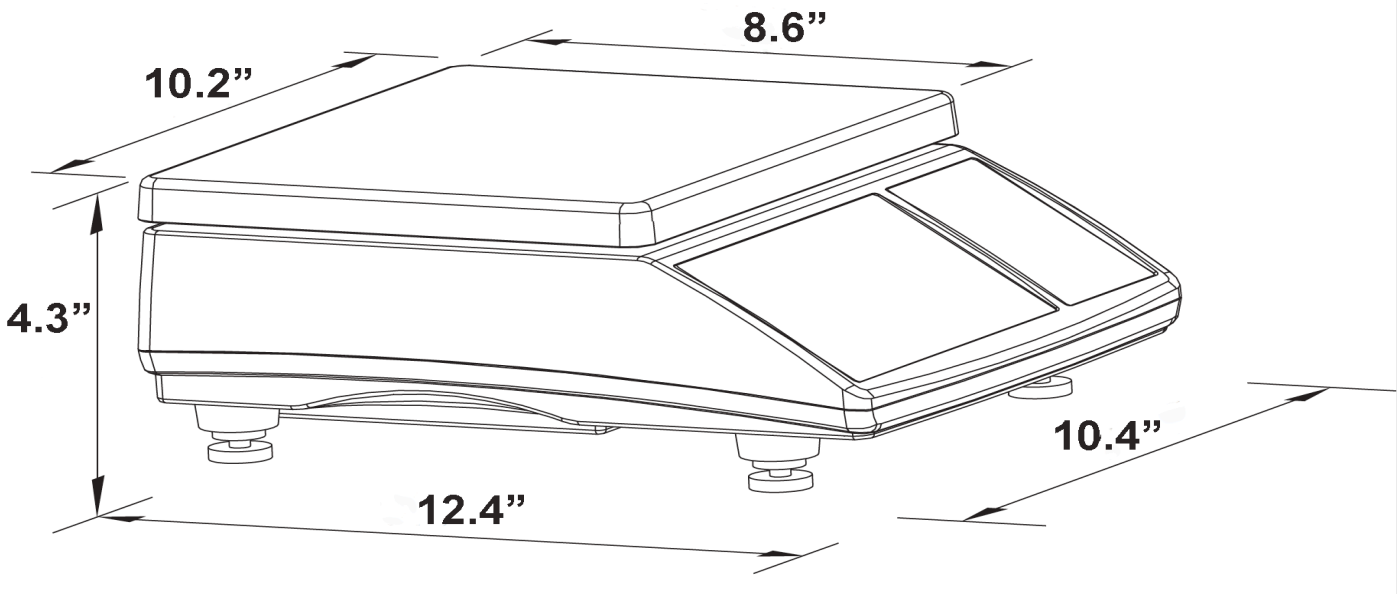
Counting alarm

- In counting mode when the count number goes over 1,000,000 the display will show 
- If it is a minus number the display will show 

SPECIFICATIONS

UNIT\MODEL	OPF-N1.5	OPF-N3	OPF-N7.5	OPF-N15	OPF-N30
Capacity	1.5kg (3.3 lb)	3kg (6.6 lb)	7.5kg (16.5 lb)	15kg (33 lb)	30kg (66 lb)
Resolution	0.05g/0.1g	0.1g/0.2g	0.2g/0.5g	0.5g/1g	1g/2g
Division	1:15,000 ~ 1:30,000				
Response	2 seconds				
Display	LCD display with backlight				
Tare	Equal to Max capacity				
Overload alarm	Auto alarm when load over capacity				
Alarm	Protect automatically when the load is 125% of capacity				
Source	Rechargeable battery : DC 6V 4Ah • Adapter : AC 110/220V DC 12V 500mA				
Power	LCD: Backlight 90mA No backlight: 70mA LED: Working 80mA Dormancy: 35mA				
Temperature	Storage: -10°C - 50°C (14-120°F) Work: 0° - 40°C (32-104°F)				
Humidity	Storage: 5% ~ 90% R.H. Work: 10% ~ 80% R.H.				
Pan Size	218mm x 260 mm				
Net/Gross weight	3.62/4.40kg				
Package	4 Units in one carton box size 40x19x33 (cm^3)		Weight 18.7 kg Carton size 64x42x40 (cm^3)		

Dimensions(in):

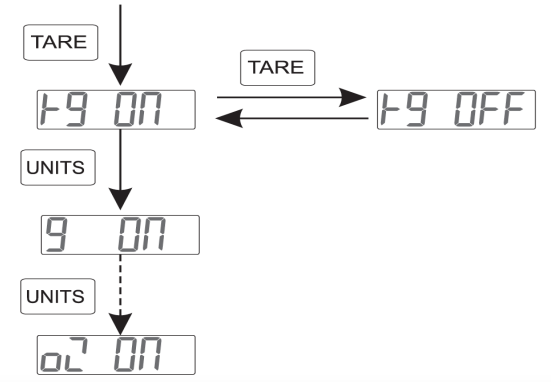


USER SETTINGS

- Hold [TARE] key and turn on the scale to enter the setting mode.
- It will show the selection of parameter. Press the [MODE] key to go to the selection

Unit Setting

- If you wish to disable one of the unit options (kg, g, lb) from showing in weighing mode, you can do so by holding the [TARE] key while turning the scale on. Then press the [UNIT] key to select which unit you wish to turn off. Press the [TARE] key to toggle the unit between on or off. Press [MODE] key to save settings

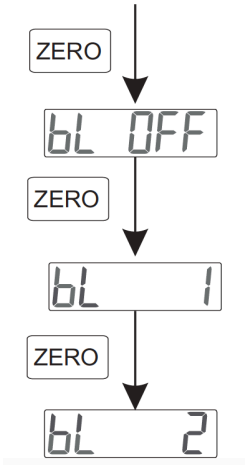


Backlight Setting

- There are three backlight options:
  - **bL 1** : the backlight lights up only when something is on the scale
  - **bL 2**: the backlight is always on
  - **bL OFF**: the backlight is always off

You can change these settings by:

- Hold the [TARE] key while turning on the scale
- Then press the [MODE] key twice or until the screen reads one of the backlight options
- Then press the [ZERO] key to toggle between backlight modes



Transmission Setting (Optional)

- This function is for selecting a communication mode that is active when the scale is connected to a printer/computer and the relative equipment. There are four modes selectable

You can choose your communication setting by:

- Holding the [TARE] key while turning on the scale
- Then press the [MODE] key until the screen reads one of the modes ex. [FC 1], [FC 2], [FC 3], [FC 4]
- Press the [ZERO] key to toggle between the transmission modes
- Press the [MODE] key to set your mode

Continuous Transmission mode [FC 1]

- Scale continuously sends data every 0.3 seconds to the PC (while in weighing mode)

Response Transmission mode [FC 2]

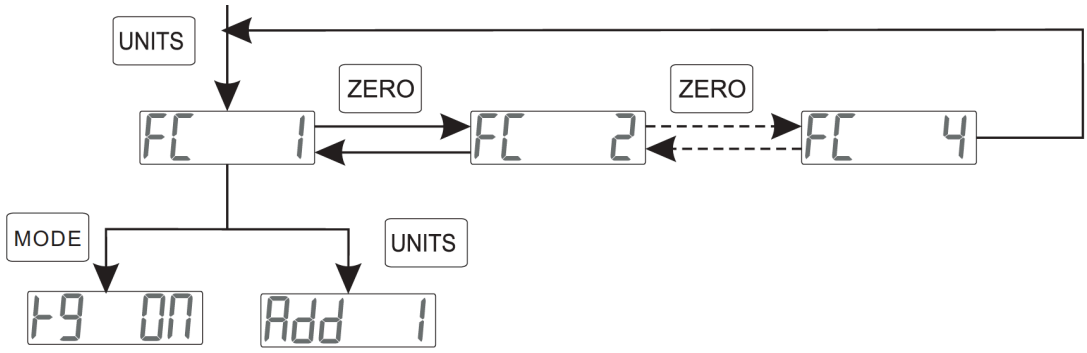
- When the PC requests/inquires the data, the scale will respond and transfer the corresponding data

Stable Transmission mode [FC 3]

- Once the weight on the scale is stable, the data will be transfered to the PC

Print Transmission mode [FC 4]:

- This mode is the same as the previous mode, but the transferring format is different. It applies to a printer connection



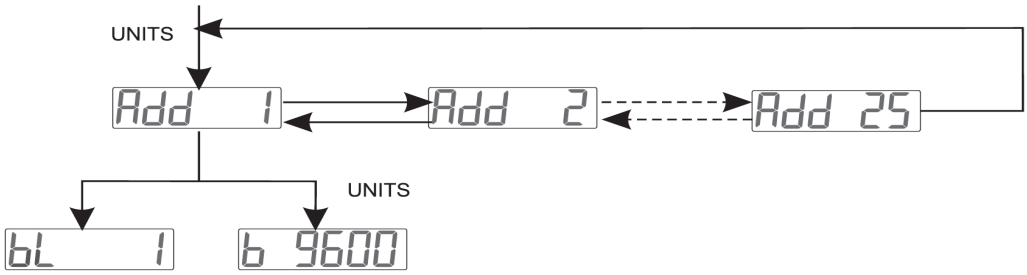
*See attachment section for more information

Selection of Indicator (Scale) Address

- You can set an address for your scale to better communicate with its PC or printer (especially if multiples scales are in use). Doing so will help the scale know when a command from the PC is meant for it versus another scale

To set your indicator address:

- Holding the [TARE] key while turning on the scale
- Press [MODE] until you are on your set communication setting ex. [FC 1]
- Then press [UNIT] to select address, the screen will read [Add 1]
- Press [ZERO] to change your address (the selection range is 1-25)
- Press [MODE] to select your setting and enter the BPS setting.

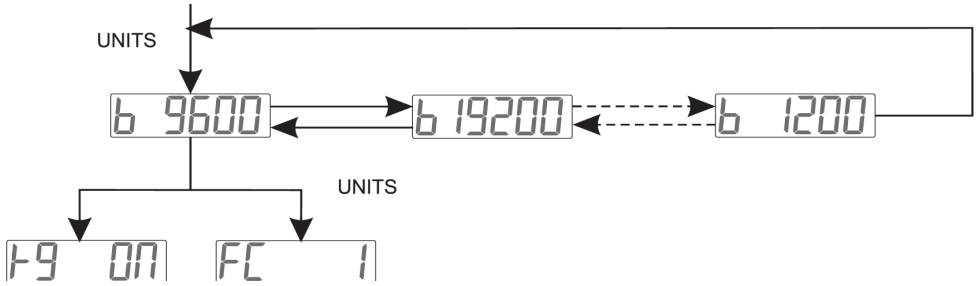


Selection of BPS (Bits Per Second) / Baudrate

- When the BPS of the scale and the communication equipment is not the same the communication may not function properly

To change your BPS:

- Hold the [TARE] key while turning on the scale
- Press [MODE] until you are on your set communication setting ex. [FC 1]
- Then press [UNIT] and you will see your address ex. [Add 1], and by pressing [UNIT] again you will see your BPS ex. [b 9600]
- Press [ZERO] to change your BPS setting



ATTACHMENT

Continuous Transmission (mode 1) & Stable Transmission (mode 3)

- All the data is in ASCII code except the Start bit. This is the format:

Byte	Notes	Contents
1	Start of text	02H(STX)
2	Indicator Add	A-Z
3	Stable Status	0 stable / 1 unstable
4	Data Sign	+/-
5~10	Data Sign	6 Byte (From high to low)
11	Decimal	From right to left (0-5).
12~14	Unit Code	A-Z
15	Power	0 normal / 1 low battery
16~17	XOR Checksum	2 Byte A-Z
18	End of text	03(ETX)

XOR=2⊕3⋯⋯14 ⊕15

Note: Checksum of the high-half byte and low-half byte less or equal to 9, adding 30H, then the datas transfer as number of ASCII code. Example: Checksum of high-half is 6, adding 30H, it comes up to 36H, datas will be transfered as 6 of ASCII code. Checksum of high-half byte and low-half byte is over 9, adding 37H, the datas transfer as alphabet of ASCII code. Example: Checksum of high-half is B, adding 37H, it comes up to 42H, the datas will be transfered as B of ASCII code.
When the weighing is stable, the next datas transfer will be done only after the weight on the scale is removed and the scale goes back to 0.

Print Transmission Mode (mode 4)

- After the weighing is stable, press the [UNIT/PRINT] key to print the data once. The format will be:

  NO. 1 ; NO. 1 : Weighing times
  Net: 0.0001kg Net: Net weight

Response Transmission (mode 2)

- PC transfers the order to the scale and the scale operates accordingly after it receives the order.

Field	Start Bit	Scale Add.	Order bit	Date bit	Checksum	Stop bit
Value	0X02	1-25	1	units conversion	xor checkout	0x03
Length	1	1	1	1	2	1

1. Zero(H) : The order bit 0x48('H') is for zeroing once.
2. Tare(I) : The order bit 0X49('I') is for tare once.
3. Units shift(L)

SCALE SETTINGS

To Enter the Settings Mode:

- While pressing [MODE] and [TARE], turn on the power. The scale will enter the setting mode. Press [MODE] to select different settings which you can set using the [UNIT] key

Filtering Range

- To change how much the scale fluctuates while reading, you can change how often it filters, Enter the settings mode and it will display "F lL #"
- Then press [ZERO] to select the zero tracking range (1-6), 3 is the default number. The higher the number the more stable the scale
- Finally, press [MODE] key to confirm it, go to the next menu

Zero Tracking

- To change how lenient the scale is at finding the zero point, In the settings mode press [MODE] until the display reads "ZE #"
- Pres [ZERO] to select the speed (1-7) the default is 3, The bigger the number the more lenient it is
- Finally, press [MODE] key to confirm it, go to the next menu

Linearity Correction

- To change the linearity calibration, Enter the settings mode and press [MODE] until the screen reads "L Id #"
- Press [ZERO] to change the range (1-5), 5 being the default
- We suggest not to change the default settings
- Finally, press [MODE] key to confirm it, and the display will show the next menu

Linearity Dot

- To change the correction point, Enter the settings mode and press [MODE] until the display reads "L In #"
- Press [ZERO] to change the range (-8 - +8), 0 being the default
- We suggest not to change the default settings
- Finally, press [MODE] key to confirm it, go to the next menu

Selection of Maximum Capacity

- To change the max capacity, In the settings mode press [MODE] until the display reads "C#####" ex. "C7.5000" means the capacity is 7.5kg
- The default number is the max capacity of the scale
- We suggest not to change the default settings
- Finally, press [MODE] key to confirm it, go to the next menu

Selection of Division

- To change the max capacity, in the settings mode press [MODE] until the display reads "D0.00##" ex. "d0.0002" means the division is 0.2g
- The default number is the actual division of the scale
- Use the [UNIT] key to toggle between options
- Finally, press [MODE] key to confirm it, and the display will show the next menu

CALIBRATION

When to calibrate

- When the scale is initially installed
- When the scale's location has changed
- After the scale has not been used for a long period of time
- If ambient temperatures have changed greatly

How to calibrate

- Enter the settings mode by pressing [MODE] and [TARE], while you turn on the power
- Press the [MODE] key 6 times until the display reads "E#.0000"
- Press [UNIT] to choose the calibration weight (we suggest to use 2/3 of the weight of the scales capacity)
  ex. "E5.0000" would mean you calibrate with a 5kg weight
- You can change the weight by using the [ZERO] key to go up and the [TARE] key to go down and the [UNIT] key to change to the next sequential number
- Confirm your weight by pressing [MODE] key
- It will display ZeroAD value (range from 10000-60000)
- Press [MODE] key again and it will display "-Load-" for two seconds, please place your weight that is the same as the one you just entered on the scale within two seconds!
- Press [MODE] to confirm

CONTACT US

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Please e-mail info@selletonscales.com for any support related questions

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