

RAVAS-500 Series



Owner's Manual

www.ravas.com

PLEASE RETAIN THESE INSTRUCTIONS FOR FUTURE REFERENCE

If you have any queries concerning the duration and terms of the guarantee, please contact your supplier. We would also refer you to our General Sale and Supply Conditions, which are available on request.

The manufacturer accepts no liability for any damage or injury caused by failure to follow these instructions, or from negligent operation or assembly, even if this is not expressly stated in this instruction manual. In light of our policy of continuous improvement, it is possible that details of the product may differ from those described in this manual. For this reason, these instructions should only be treated as guidelines for the installation of the relevant product. This manual has been compiled with all due care, but the manufacturer cannot be held responsible for any consequences of errors. All rights are reserved and no part of this manual may be reproduced in any way.

We would like to inform you about the fact that this RAVAS product is 100% recyclable on the basis that the parts are processed and disposed of in the right manner.

More information can be found on our website: www.ravas.com

Rev. 20191125

Printing/Typographical errors and model changes reserved.



OPERATORS MANUAL

RAVAS-500 Series

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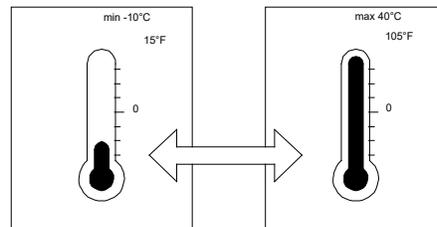
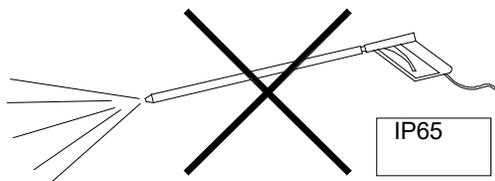
1. Introduction

This manual describes the use of the **RAVAS-320**. Read this manual carefully. The installer must be informed of the contents of this manual. Always do things in the correct order. This manual should be kept on a safe and dry place. In case of damage or loss the user may request a new copy of the manual from RAVAS.

2. Warning & Safety Measures

When using the RAVAS-520, please observe carefully the instructions and guidelines contained in this manual. Always perform each step in sequence. If any of the instructions are not clear, please contact RAVAS.

- All safety regulations that apply to the pallet truck remain valid and unchanged
- No weighing operations are allowed if any persons or objects are in the vicinity; around, under or close to the load
- Any modifications done to the system must be approved in writing by the supplier, prior to any work being completed
- It is the sole responsibility of the purchaser to train their own employees in the proper use and maintenance of this equipment
- Do not operate this unit unless you have been fully trained in its capabilities
- Check the accuracy of the scale on a regular basis to prevent faulty readings
- Only trained and authorized personnel are allowed to service the scale
- Always follow the operating and maintenance instructions of the pallet truck and ask the supplier when in doubt
- RAVAS is not responsible for errors that occur due to incorrect weightings or inaccurate scales



Should you have any further questions after reading this manual then you can contact us at:

salesoffice-usa@ravas.com
+1 (33) 425-3092

2.1 Lithium Ion Battery (standard)

Important Safety Information



DANGER

- Use the specific Li-ion charger and observe the specified charging conditions when charging the battery.
- Avoid influences of high temperature and keep away from fire.
- Do not deform, modify or disassemble the battery.
- Do not connect the (+) and (-) terminals with metal objects.
- Do not put the battery in (sea) water.
- Do not throw with the battery to avoid strong shocks.



WARNING

- When a battery leaks, the battery should directly be wrapped up properly and treated as recyclable resource.
- When, due to leaking from the battery, liquid gets into your eyes, immediately clean the affected area with water without rubbing your eyes, and seek medical advice immediately.
- The charging of the battery will be stopped automatically. When due to what cause the battery is not fully charged after 8 hours (LED of the charger doesn't become green), immediately unplug the battery from the holder to stop charging. Battery or charger does not work properly, exchange battery or charger.
- Storing and/or using the battery outside the given temperature range may have a negative effect on the lifetime and/or the performance of the battery.
- Do not longer use a battery with leakages, deformation or when any other abnormalities occur.
- Battery should be charged in a dry surrounding.



WARNING

Charging can be carried out at any time regardless of the amount of charge remaining, but you should fully charge the battery at the following moments:

- **The battery is not fully charged at the time of delivery!** The battery can be used after fully charging with the specific Li-ion charger. The LED on the battery charger will become green when fully charged. Note: Before using the weighing system, be sure that the battery is fully charged.
- After the battery has become completely empty. An empty battery will get broken (loss of capacity) when not directly fully charged.

Specifications

Nominal voltage / capacity	BA-14.8V-5A: 5 Ah (used for hand pallet trucks)
Operating temperature range	During use: -10°C - +50°C During charging: 0°C - +40°C

Operation

- **Normal charging**
 - Charging takes up to 6-7 hours for a full charge (a partially discharged battery will be fully charged sooner).
 - When the battery is fully charged, charger stops automatically.
 - After charging, the battery should be taken out of the charger.
- **Storing the battery**
 - When the weighing system is not used for a longer period, make sure the battery has approximately 70% of the battery capacity remaining. Take care not to let the battery become completely empty by charging it every 6 months.
 - Store the battery separated from the weighing system in an indoor place (approx. +10°C - +20°C) where it is not exposed to direct sunlight or rain.
- **Battery life**

The battery is a consumable item. The battery will gradually lose its capacity for charging after repeated use and after time has passed. If the operating time that the battery can be used becomes shorter and shorter, it has probably reached the end of its life.

Note: For replacement or additional battery pack, contact your distributor.
- **About used batteries**

Lithium ion batteries are recyclable, valuable resources. For recycling of broken or used batteries, follow the local guidelines in your country. If you are not sure, please send back to the distributor for proper way of recycling.



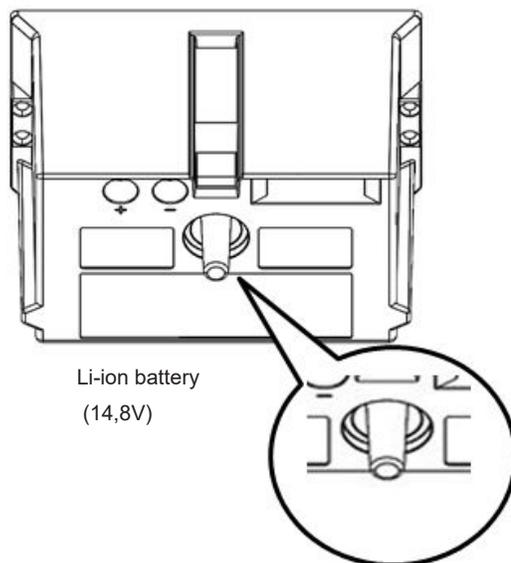
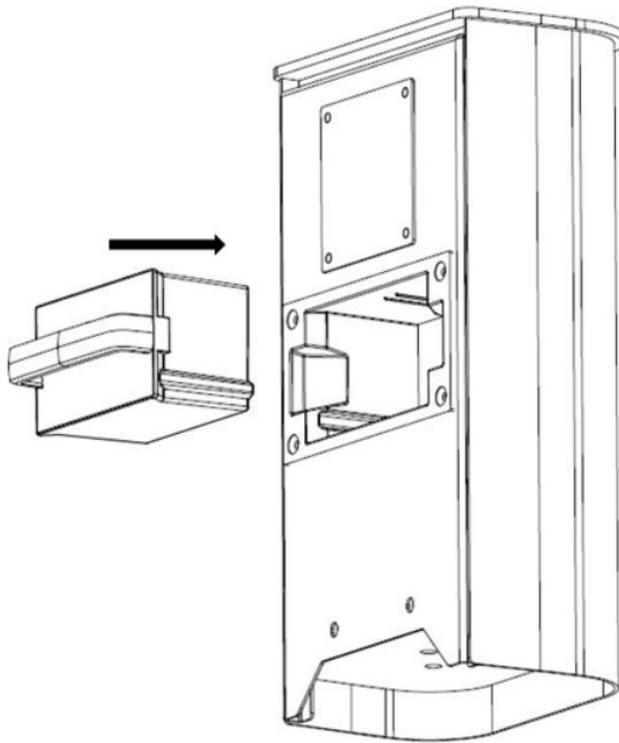
Disposal information for countries outside the European Union

This symbol is only valid within the European Union. Follow local regulations when disposing used batteries. If you are not sure, consult the place of purchase or a RAVAS dealer.

3. System set

3.1 Placing the battery pack in the pallet truck

The power supply to the system takes place through an exchangeable battery pack. With a completely charged battery pack the total weighing time is about 25 hours for a Li-ion battery (for a system without a printer).



3.2 Switching on/off the RAVAS-520



After 5 seconds all electronics are warmed up and you can start weighing.

4. Changing battery

4.1 Low battery indication RAVAS-520

An exchangeable battery pack supplies power to the **RAVAS-520**.

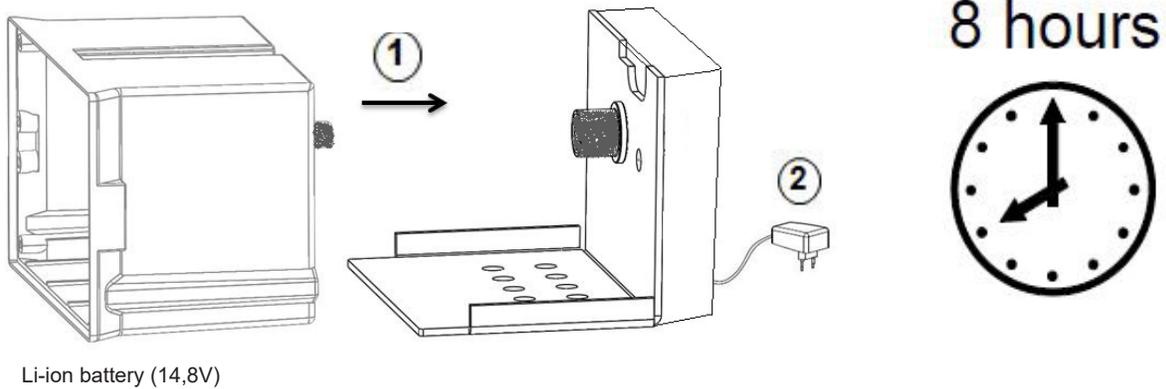
When the voltage level of the battery pack is running low, the battery indicator will turn from green to yellow (1). The note 'LOW POWER' appears on the display (2). The **RAVAS-520** will switch off automatically after 2 minutes.



4.2 Charging the battery pack of the pallet truck

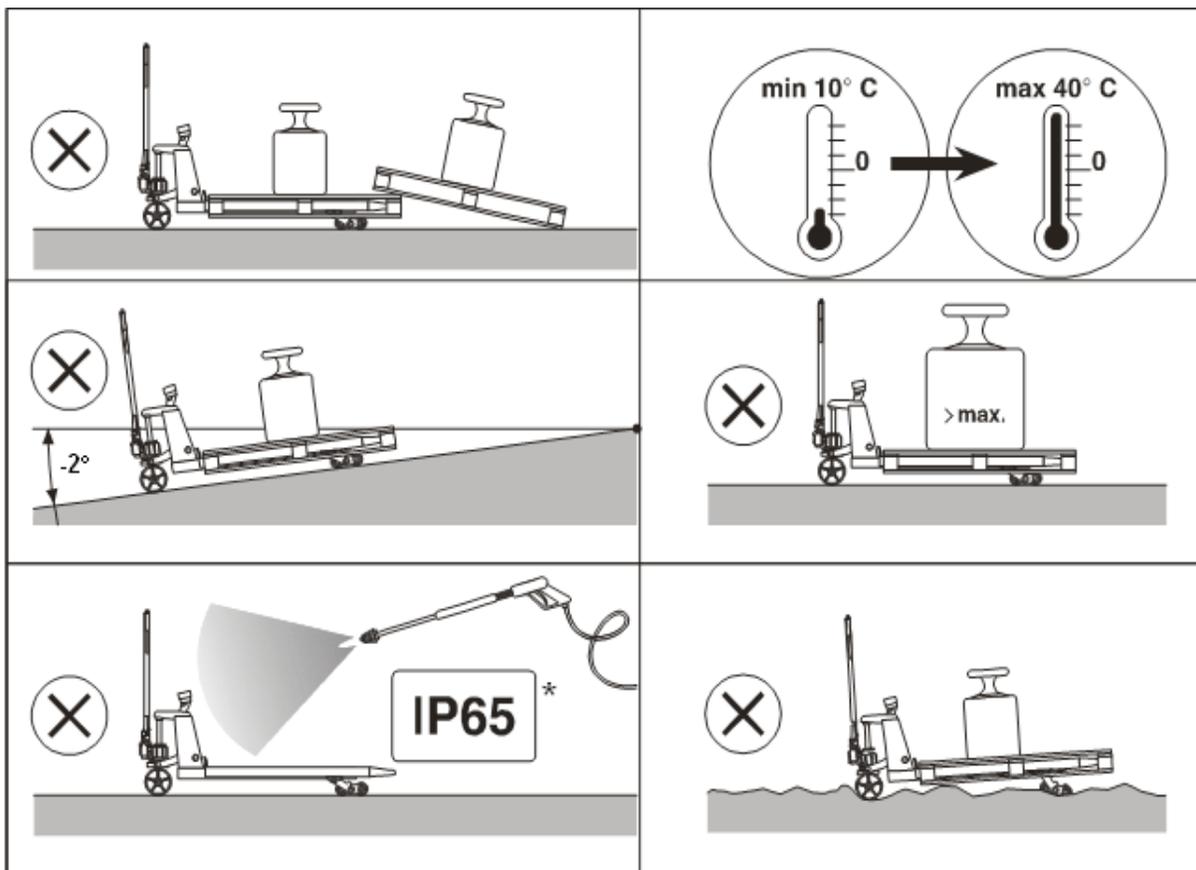
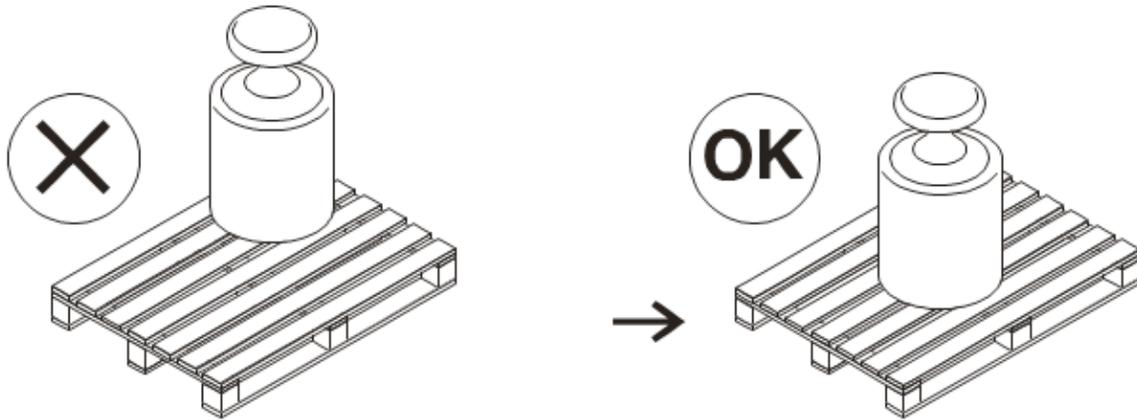
The system is equipped with a rechargeable battery pack and a smart charger. After charging for at least 8 hours, the charger will shut off when the battery pack is completely full. The red LED on the adaptor will change to green once the battery is fully charged.

First position the battery pack inside the charger module (1), then plug the adaptor into the mains voltage (2).

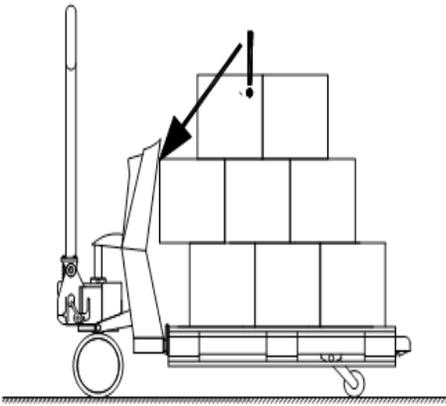


5. Use

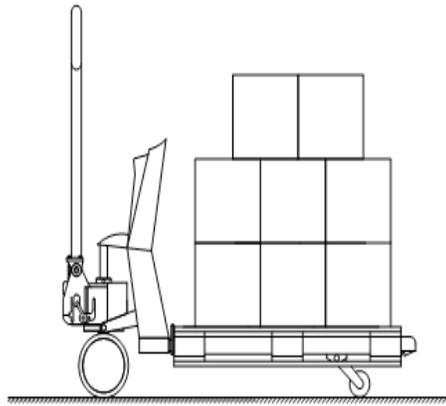
5.1 Use (accurate weighing)



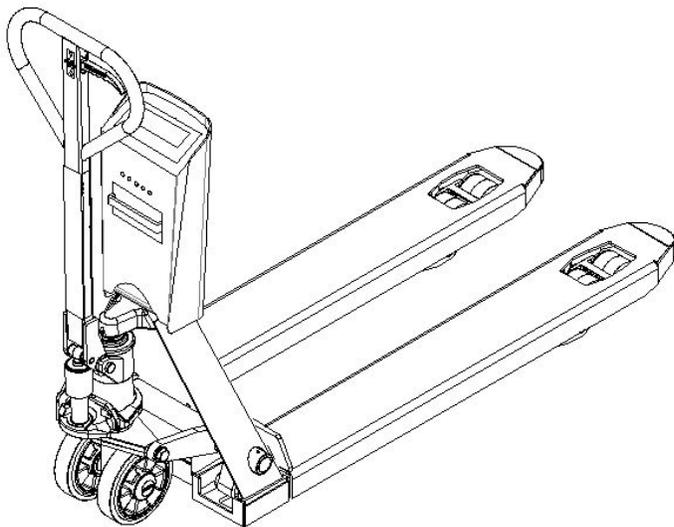
* excl. 



Wrong way of lifting the load



Correct way of lifting the load



Check the zero reading before each weighing!

Before each weighing it is necessary to check whether the system is unloaded and free.

If the indicator does not determine the zero point automatically, it must be done manually using the >0< key.

5.2 Indicator functions



5.3 Display Functions

kg
lb
NET
TARE
M

Zero out of range Out of level
Bad calibration

Display shows weight in kilograms
 Display shows weight in pounds
 Display shows net weight
 Display shows tare weight
 Display shows subtotal memory active
 Make sure the truck is unloaded while setting a new zero
 Make sure the pallet truck is horizontal
 No calibration has been saved

5.4 Error messages

Whenever a weighing was not done correctly the weight will turn red and the error is displayed.

1. Error **Out of level**

Level switch measures scale is $>3^\circ$ out of level.



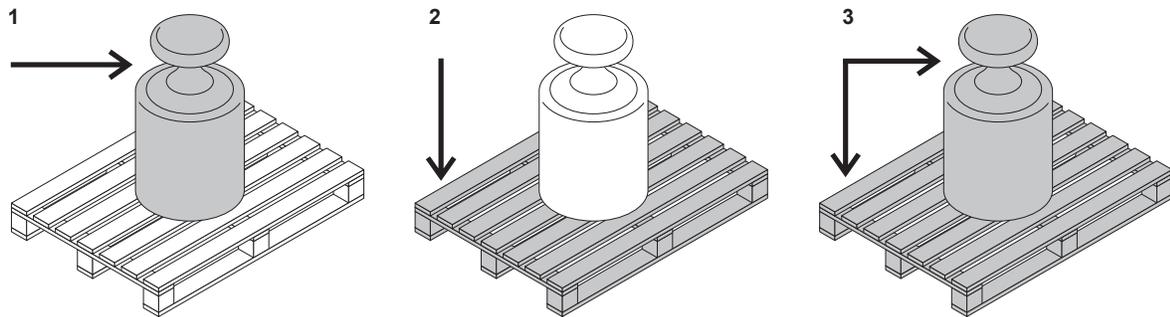
2. **Overload**

The system has been overloaded according to its Q-max.



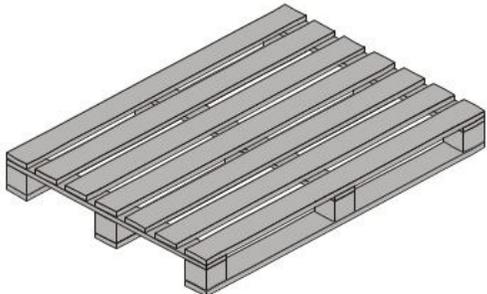
5.5 Net / Tare / Gross weight

EXPLANATION: $Net(1) + Tare(2) = Gross(3)$



5.5.1 Net weighing: automatic tare

1



2

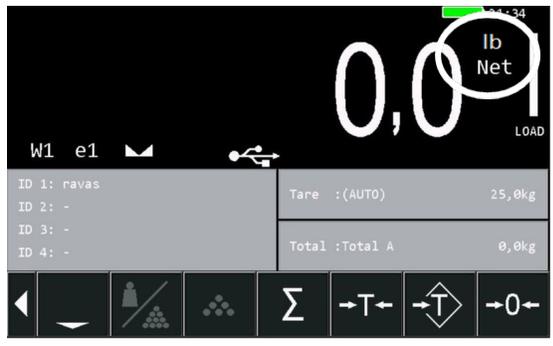


3



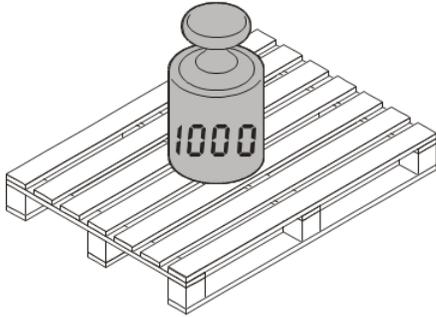
Press the →T← key.

4

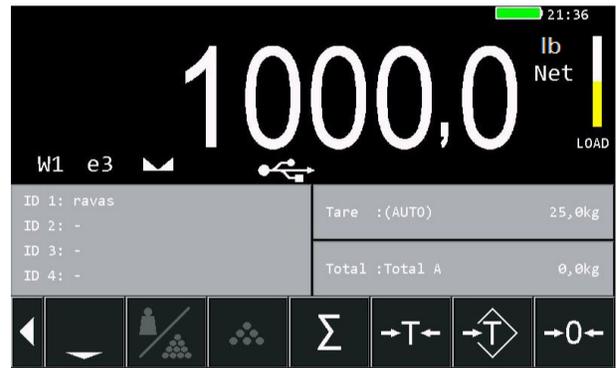


The indicator is set to zero. The 'NET' sign shows that the tare weight is activated.
'Tare:25lb' shows the tare weight.

5



6



The display shows the net value of the load weight.

7



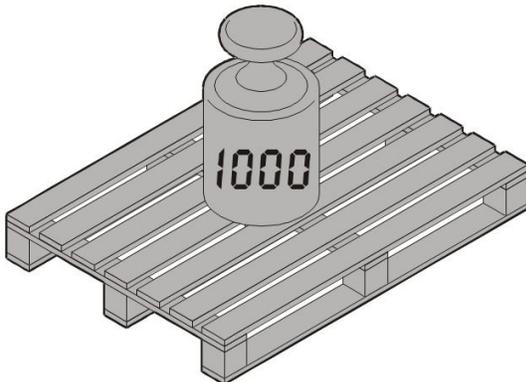
Press the →T← key.

8



The gross weight is displayed again.

9



NOTE: for NTEP approved RAVAS-520 the tare will be erased automatically when the weight returns to gross zero! For the next weighing the tare must be activated again.

5.6 Net weighing: Reset Tare (two ways)

5.6.1 option 1



1. If a tare weight active press the $\rightarrow T \leftarrow$ key.



2. The indicator is back in the weighing mode and is ready for the next weighing. NET sign is gone. In the tare field 'None' is active.

NOTE

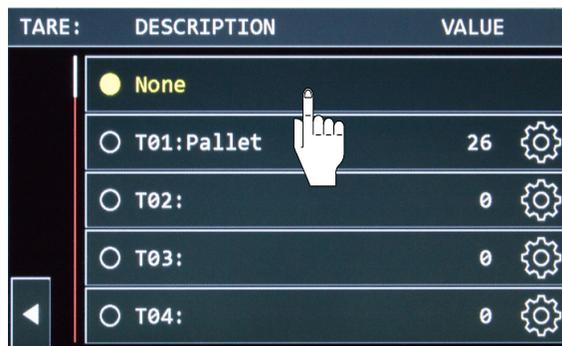
For NTEP approved RAVAS-520 the tare will be erased automatically when the weight returns to gross zero! For the next weighing the tare must be activated again.

5.6.2 option 2

1. Press the preset tare button.



2. Select > none.



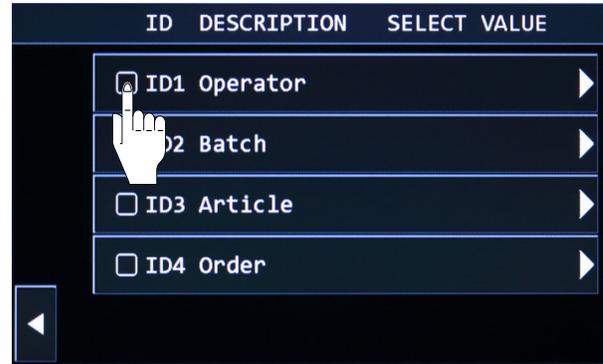
5.7 Activate and edit ID code

The RAVAS-520 allows you to enter up to 4 ID codes which will be visible on the printout or when used with data communication.

1. Press the ID field



2. On the left side of the button you can activate the ID fields (only the active ID fields will be visible on the printout).

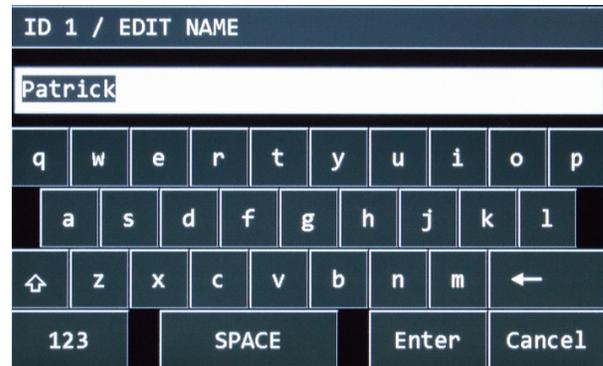


3. If you press on the right side of the button an ID entry field pops up, which allows you to select one of the 10 preset ID codes.

Note: they must be named first on a new system. To change a name, press the settings symbol.



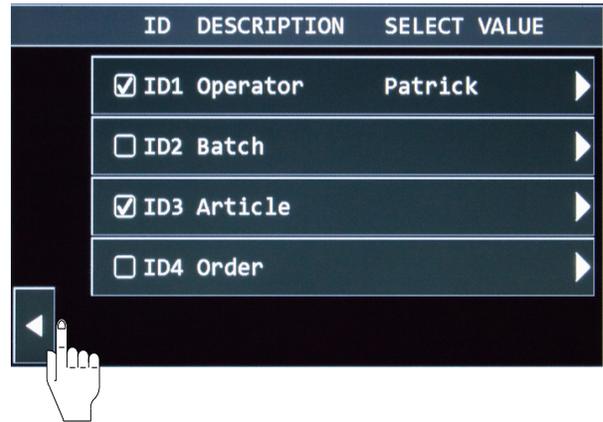
4. Enter ID code or name



5. After entering one or more ID codes, select your preferred ID and press the back button.



6. Press the back button to return to the weighing mode



7. Your active ID codes will now be shown on the print out, or when transferring data.

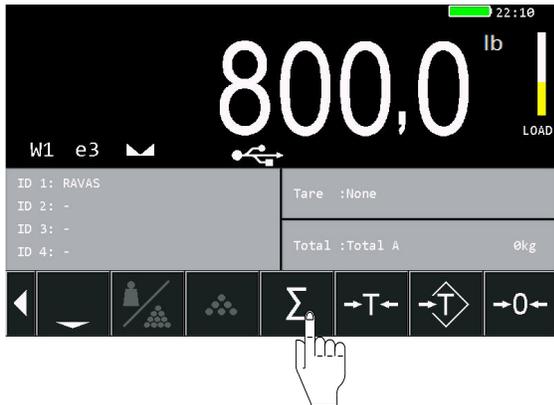


5.8 Adding, print, clear memory & send data

5.8.1 Add weight to subtotal

1. Load scale.

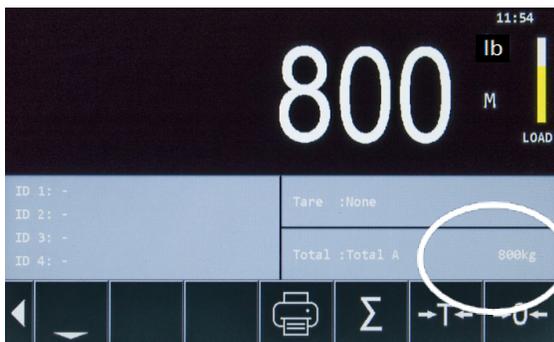
Press the $\rightarrow \Sigma \leftarrow$ key.



2. The weight is added.



3. The weight has been added to the selected total memory.

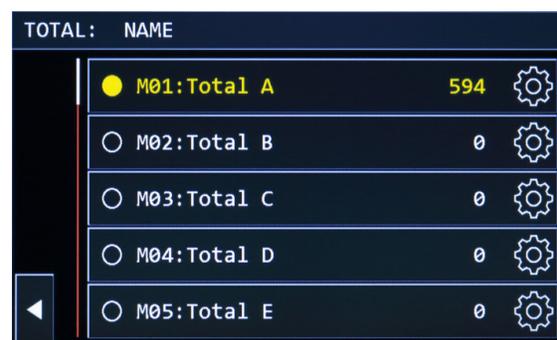


5.8.2 Change active total memory

1. If preferred you can select a total memo , press the total field.



2. Select your preferred total memo .

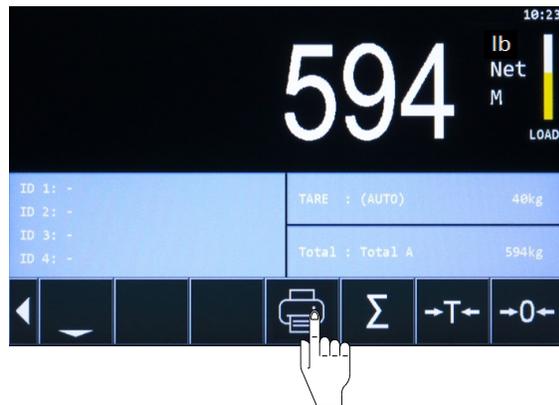


5.8.3 Print single weight

1. Load scale



2. Press the printer key.



3. The indicator is now printing.

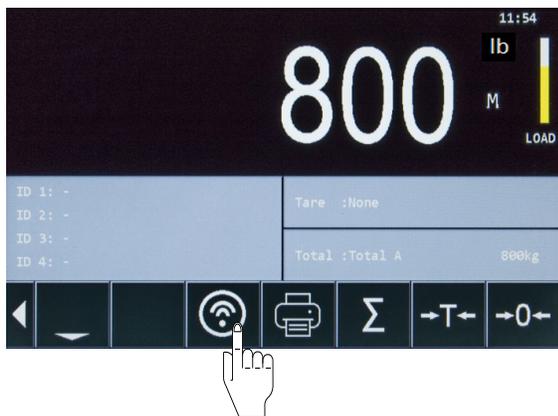


4. The weight is printed and the indicator is ready for the next weighing.

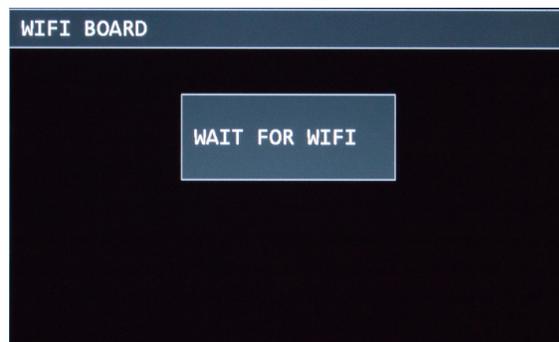


5.8.4 Send WiFi

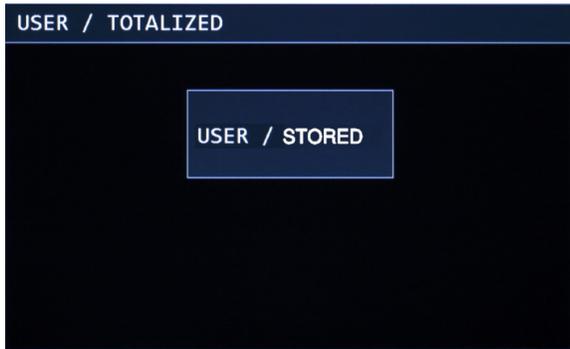
1. First a new weight must be on the display.
Press the WiFi button.



2. The indicator is sending.



3. If this is shown, the connection is lost. The weight will be stored in the memory and sent automatically once the connection is recovered



4. It is not possible to send the same weight result twice.



5.8.5 Edit, clear and print total registers

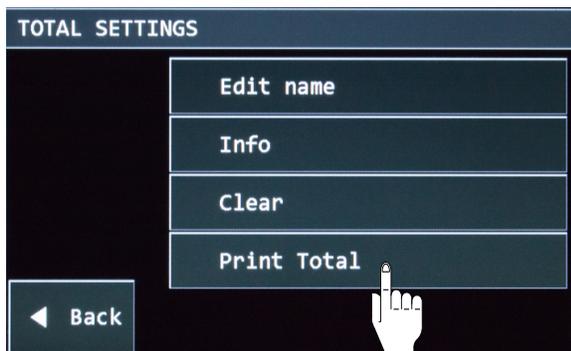
1. Press the total field.



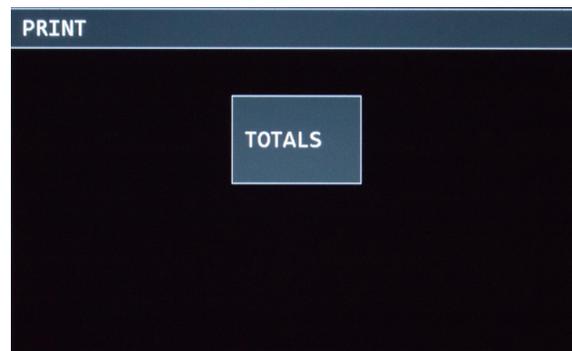
2. Select the total memory you want to print or clear and press the settings symbol.



3. Press Print. Total to get a total print out of the selected total register.



4. The indicator is printing your receipt.

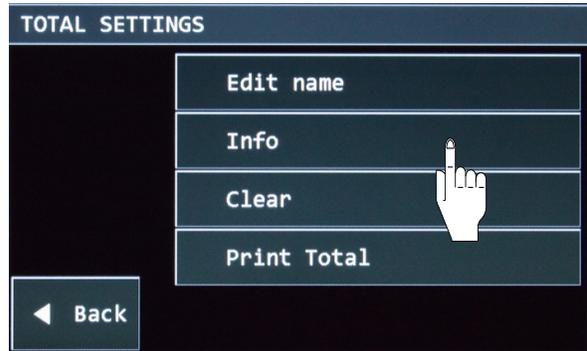


5. If you want to reset the active total memory after printing, press "OK."

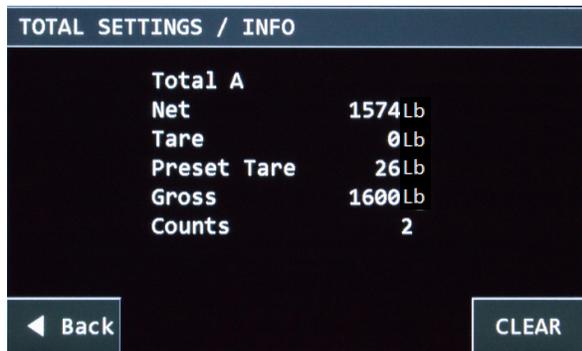


6. Get detailed information about the selected total register.

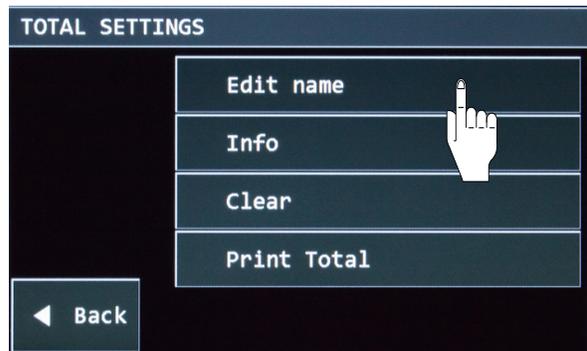
Press 'Info'.



7. Press Clear if you wish to erase all information in this total register. Or go back if you don't wish to change the register.



8. Change the name of the selected total register.



9. You can edit the name, press 'Enter' if you are finished.



5.9 Piece counting

5.9.1 Activate piece count function

1 In case the piece counting symbol is not lit, piece counting is not activated.



Press the arrow down symbol.

2



The 'basic weight' symbol is green. This means that piece counting has not been activated.



5



Press the 'pcs symbol'.

6

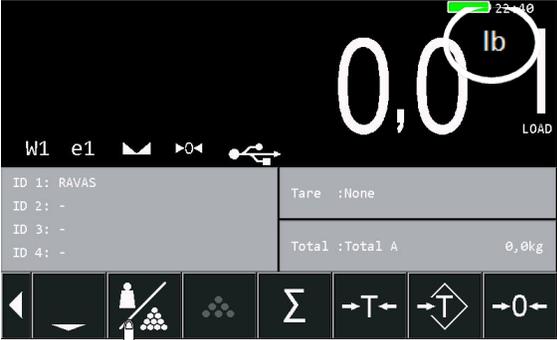


The 'pcs'-symbol has turned green, to indicate that piece counting is activated.

The display will automatically return to the start screen.

5.9.2 Enter piece weight manually

1

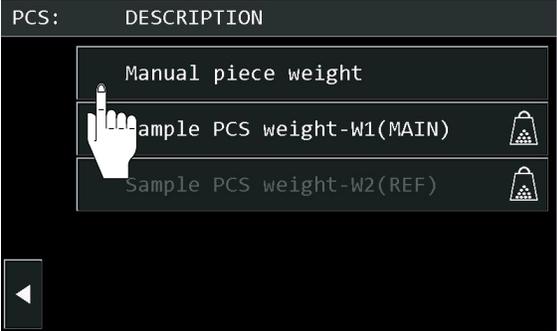


Activate piece counting by pressing the 'toggle weight / piece' symbol.

2 For entering the piece weight manually or calculating the weight via reference scale press  (piece counting)



3



Select 'Manual piece weight'.

4



Enter the piece weight and confirm with Enter.

5

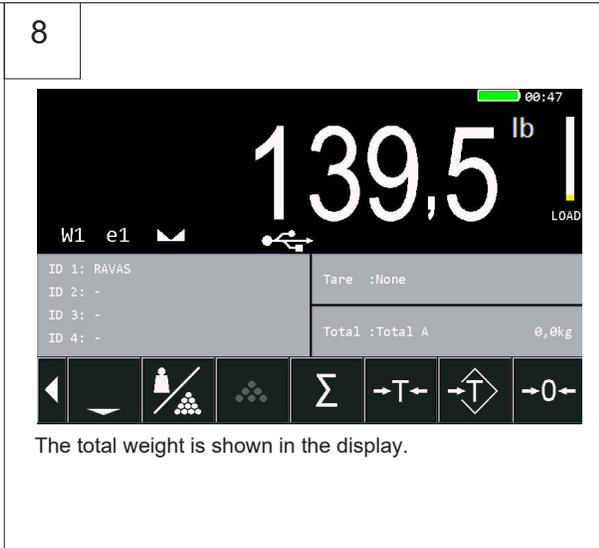
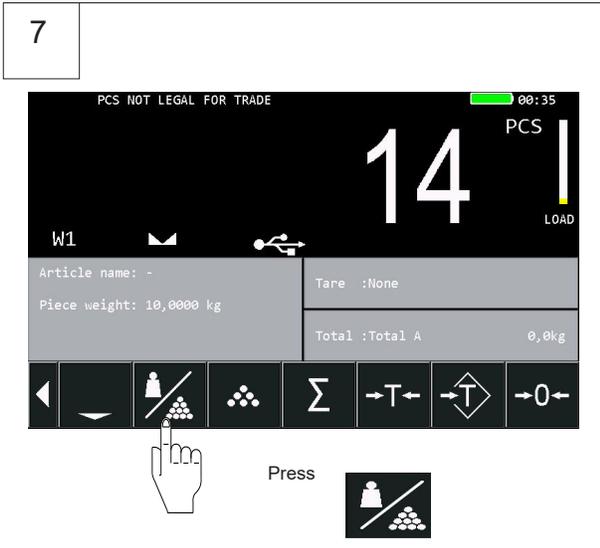


The weight per piece is now shown in the display.

6 Pick up load.

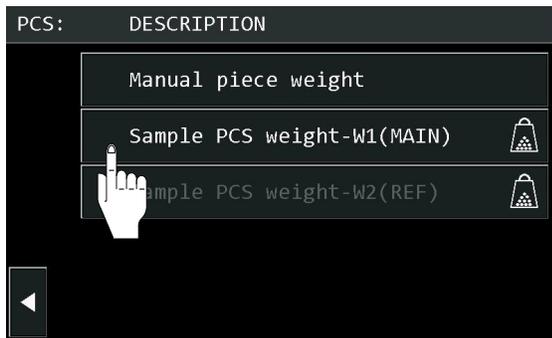


The number of pieces is shown in the display.



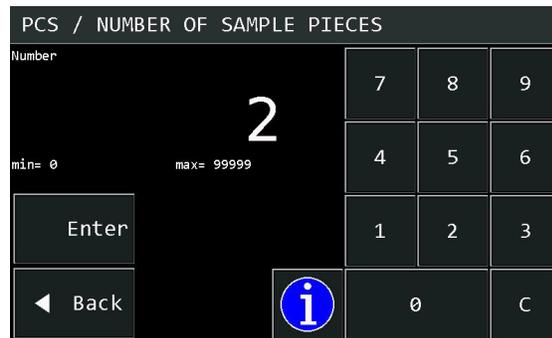
5.9.3 Calculate piece weight

1 Repeat step 1 and 2 of chapter 5.9.1.



Select 'Sample PCS weight-W1(MAIN)'.

2



Enter the number of pieces that will be added or removed from the scale, e.g. 2. Confirm with 'Enter'.

Note: the weight difference should be at least 2 - 5 lb.

3



Add or remove the given number of pieces from the load. Then confirm with 'OK'.

4



Automatically the weight per piece is calculated (see in the display on the left).

5.10 Data storage on USB stick

1



After completing your weighings, press the → Σ ← key to save all data on the indicator.

2



After saving the weighing data, place a USB stick in the indicator.

Before inserting the stick please read the notes written at 5.10.3!

3

NOTES:

- 1) Make sure the stick is empty or does not contain former weighing data information!
- 2) Insert the stick only when the indicator turned on!
- 3) Indicator only works with USB stick form FAT32.

4



Once the connection is made, a white image of the USB stick will pop-up on the display.

5

The data transfer will start automatically. As long as the image of the USB stick is green, data are being transferred. Once the image is white again, the transfer has finished.

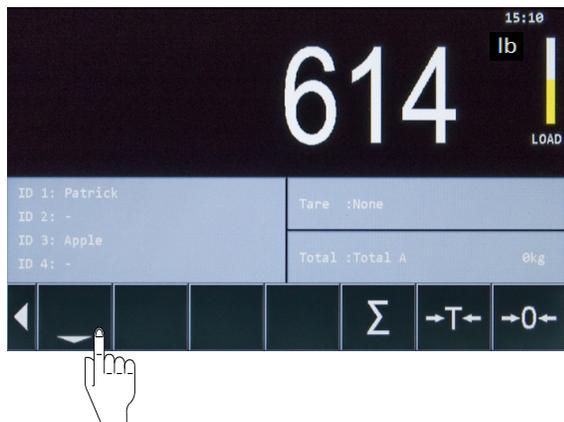
6

	2019-2-11	13-2
	RAVAS WLAN connector .NET tool-20161...	12-1
	Ravas5200 USB	12-1
	Storage	6-5-
	WLANConnector	7-4-

When the USB stick is connected to your PC, the data file is displayed.

5.11 Change the time and date

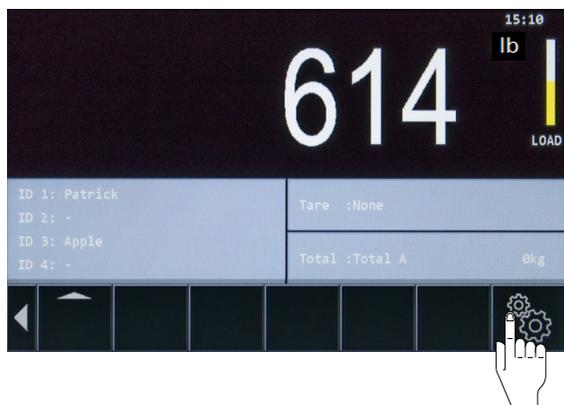
1. Press arrow down



2. Press on the arrow up/down



3. Press the user settings symbol.



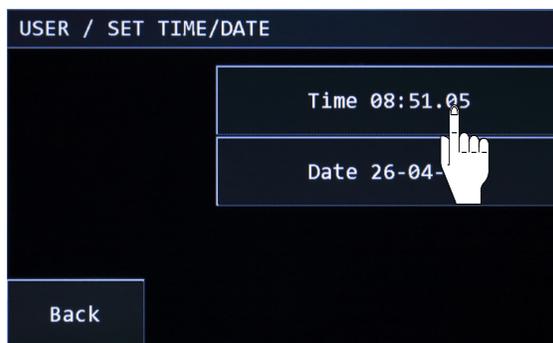
4. Select 'User menu'



5. Select the parameter you wish to change.



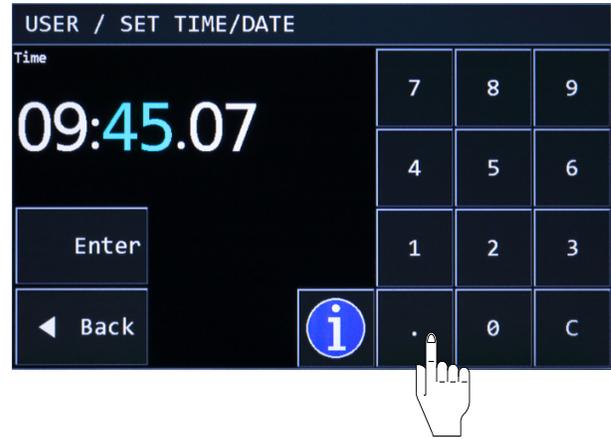
6. For this example we change the time.



7. Enter the correct hour.



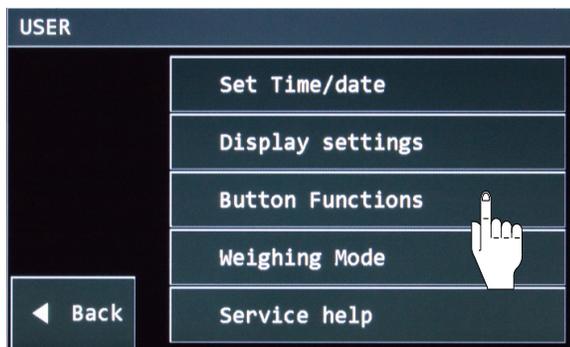
8. Change the cursor to the next value by pressing on the '.'
When you are finished, press 'Enter'.



5.12 Change button functions & positions

5.12.1 Change button function

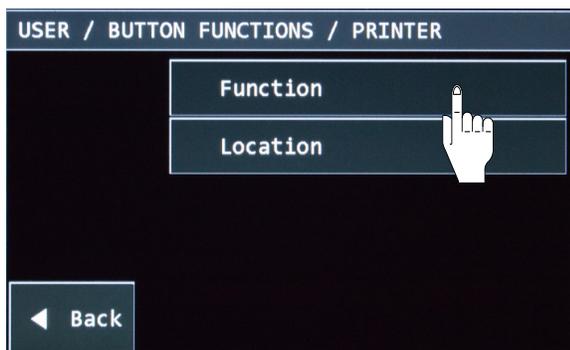
1. Go into the user menu. Select Button Functions.



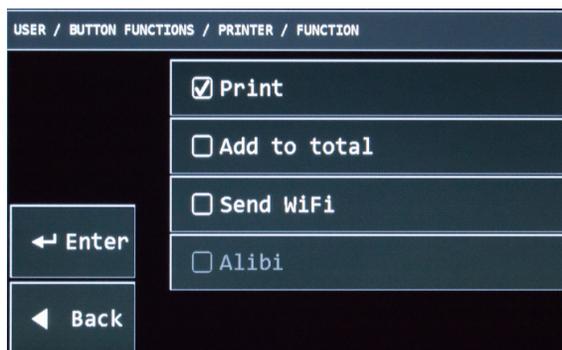
2. Select the button you wish to change. For this example we take the print button.



3. Select Function.



4. Check the boxes of the actions you want to happen after pressing the 'Printer' button.



5. When you are finished, press 'Enter'. The changes will be saved.

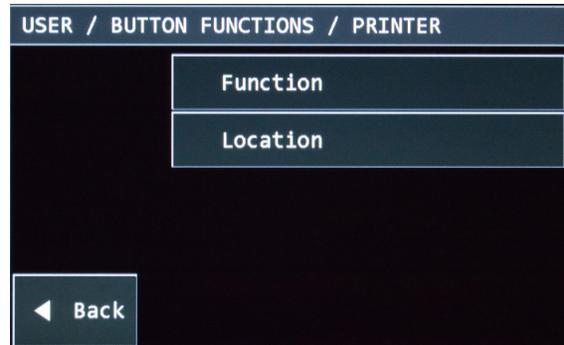


5.12.2 Change button position

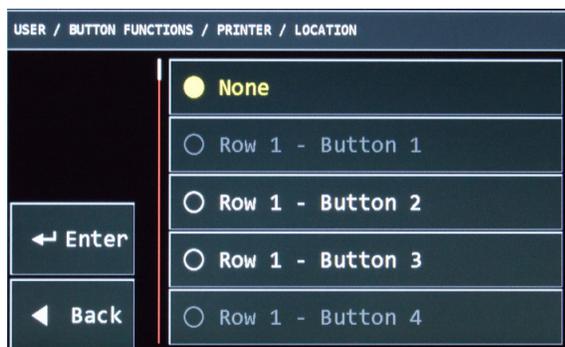
1. You can also change the location of the buttons.
To hide buttons that are not used and get frequently used buttons to a better location.



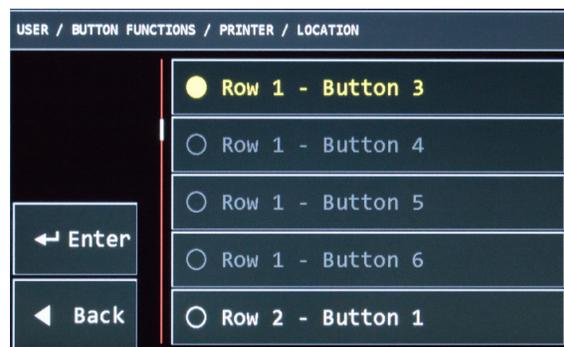
2. Go to button functions in the user menu
Select the button you wish to move. Printer button for this example.



3. If a button is not in use, because in this example the printer is installed after delivery. The default location is None.



4. Select the row and button position on which the printer button should be located. Save changes by pressing "Enter".



5. The printer button is now present on button 3, row 1.

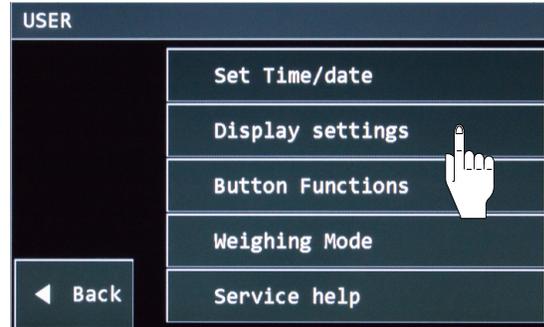


5.13 Show/hide buttons on startup

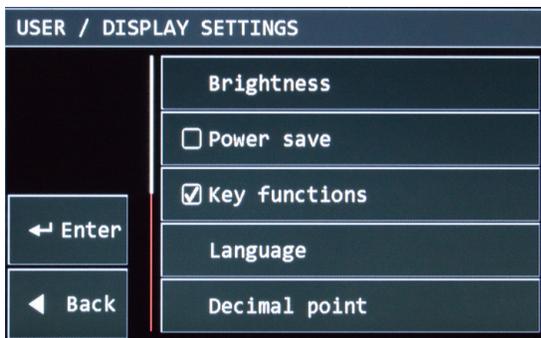
1. Default on start-up the buttons are always present the bottom of the display. By pressing on the '<' they can be hidden. But the next time you switch on the indicator they are back. Follow the following steps if you wish to always hide the buttons.



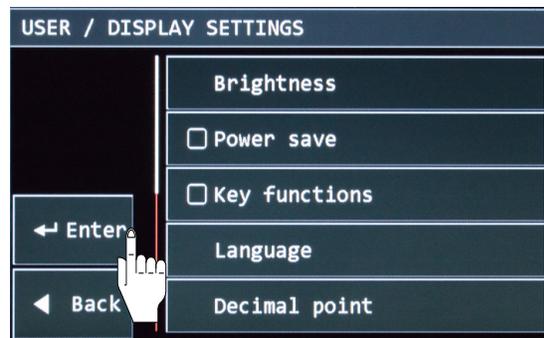
2. Go into the user menu. Select 'Display "settings."'



3. The checkbox for 'Key Functions' is checked, meaning the buttons are always present.



4. Uncheck the box to hide the buttons on start-up. Press "Enter" to save the changes.



5. The weight will be displayed bigger without the buttons active. If you need the buttons, press '>'.>

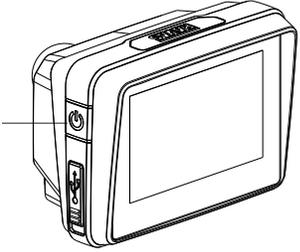


5.14 Alibi memory

The 5200 indicator has the possibility of an alibi memory. The indicator stores every weighing in its alibi memory and adds a unique number to it.

The data stored in the alibi memory are:

1. Date > this is the date in format dd\mm\yy (EU).
2. Time > this is the time in format hh:mm.
3. Gross weight > displays the gross weight. For example: 233.5 kg or 136,5 lb.
4. Net weight > displays the net weight. For example: 233.5 kg or 136,5 lb.
5. Tare weight > displays the tare weight. For example: 233.5 kg or 136,5 lb.
6. UID Code / Alibi number > this is a 10 digit number which is generated by the indicator itself.

1	 <p>On/ Off switch</p> <p>Switch on the indicator by pressing the On/Off button.</p>	2	 <p>Max 100/200/2000 kg Min 2 kg e= 0.1/0.2/0.5 kg</p> <p>lb</p> <p>LOAD</p> <p>W1 e1</p> <table border="1"><tr><td>ID 1: -</td><td>Tare :None</td></tr><tr><td>ID 2: -</td><td></td></tr><tr><td>ID 3: -</td><td>Total :Total A</td></tr><tr><td>ID 4: -</td><td>0kg</td></tr></table> <p>Press the arrow down 2 times to scroll through the buttons.</p>	ID 1: -	Tare :None	ID 2: -		ID 3: -	Total :Total A	ID 4: -	0kg
ID 1: -	Tare :None										
ID 2: -											
ID 3: -	Total :Total A										
ID 4: -	0kg										

3



Press the settings symbol.



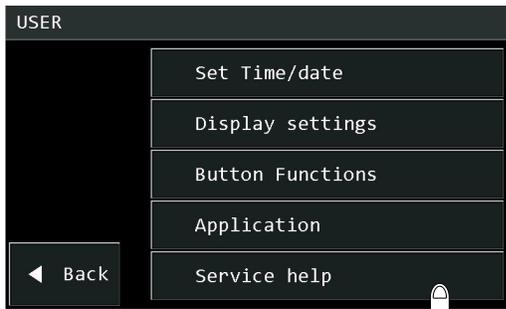
4



Now press 'User Menu'.



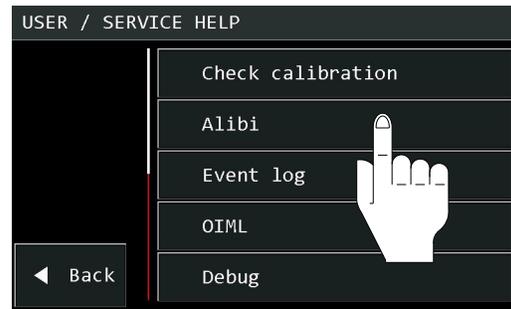
5



Press 'Service Help'.



6



Press 'Alibi'.



7



The information of the last weighing is shown on the display.

By pressing 'Prev' you switch to weighings performed prior to the last weighing.

6. Maintenance

The maintenance guidelines for normal pallet trucks apply to the chassis of the mobile weighing system. From experience we know that the integrated weighing system still functions when the chassis is damaged by overloading.

Main guidelines:

- Because the steering wheels are mounted in the front, pulling of the pallet truck is preferred above pushing it.
- When the lifting mechanism is not used, the handle should be kept in the neutral, middle position. This prolongs the life span of the sealings.
- The weighing system meets up to the protection class IP65. This means that dust or moisture (rain or water beam from all sides), will not influence the operation of the electronics. However, high-pressure cleansing in combination with warm water or chemical cleansers will lead to the entry of moisture and therefore negatively influence the operation of the system.
- Only specialists may undertake any welding. This is to avoid damage to electronics and load cells.
- The bearings of the wheels (non-polyurethane) and the pivoting points of the levelling bar of the loading wheels must be cleansed and greased regularly.
- All safety regulations that apply to the pallet truck remain valid and unchanged;
- No weighing operations are allowed if any persons or objects are in the vicinity; around, under or close to the load;
- Any modifications done to the system must be approved in writing by the supplier, prior to any work being completed;
- It is the sole responsibility of the purchaser to train their own employees in the proper use and maintenance of this equipment;
- Do not operate this unit unless you have been fully trained in its capabilities;
- Check the accuracy of the scale on a regular basis to prevent faulty readings;
- Only trained and authorized personnel are allowed to service the scale;
- Always follow the operating, maintenance and repair instructions of the pallet truck and ask the supplier when in doubt;
- RAVAS is not responsible for errors that occur due to incorrect weighings or inaccurate scales.

Maintenance

The pallet truck is largely maintenance free.

6.1. Oil

Please check the oil level every six months. The oil can be hydraulic oil: ISO VG32, its viscosity should be 30cST at 400 C, total volume is about 0.4lt.

6.2. To Remove Air from the Pump

Air may come into the hydraulic oil during transportation or if the pump has been turned upside down. It can cause the forks not to elevate while pumping in the raise position. The air can be removed in the following way: put the control handle (117) to the lower position, then move the draw-bar up and down several times.

6.3. Daily Check and Maintenance

Daily check of the pallet truck with scale can limit wear as much as possible. Special attention should be paid to the wheels, the axles, as thread, rags, etc. may block the wheels. The forks should be unloaded and lowered in the lowest position when the job is over.

6.4. Lubrication

All bearings and shafts are provided with long-life grease at the factory. You only need and long-life grease at monthly intervals or after each time the lubrication points of the truck are cleaned thoroughly.

6.5. Battery Replacement

- A) Remove the screw (238-7) and the battery cover (238-8).
- B) Use 4 new "AA" batteries (238-9) to replace the old ones.
- C) Replace the battery cover (238-8) and tighten the screw (238-7) securely.

6.6. Maintenance of Display Unit

The weighing system meets up to the protection class IP65. This means that dust or moisture (rain or water beam from all sides), will not influence the operation of the electronics. However, high-pressure cleansing in combination with warm water or chemical cleansers will lead to the entry of moisture and therefore negatively influence the operation of the system

7. RAVAS WeightsApp - applicable for the RAVAS-520

With the RAVAS WeightsApp you can read the data from your mobile weighing system directly from your smartphone or tablet.

The app not only displays the weight in large digits on a smartphone or tablet, it also stores the weighed gross weights, tare weight, product code, date & time and the ID of the device or operator. The data can be sent to any email address as a CSV file, after which it can be imported in a spreadsheet program on a PC.



- enter the ID of an operator or device
- enter tares (automatically or manually)
- zero the weighing system

From the app you can:

Date and time are automatically generated. If your Android device has an integrated barcode scanner, you can use it to enter product IDs.

In addition the app makes it possible to download a log file from the RAVAS indicator and send it for technical analysis as a CSV file in the event of malfunctioning.

The RAVAS WeightsApp can be downloaded for free from Google Play and the Apple Store.

For instructions for the use of the RAVAS WeightsApp see www.ravas.com.