

R320 INDICATOR

RAVAS
creating intelligence



Technical Manual

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WARRANTY POLICY

RAVAS USA, INC.

WARRANTY POLICY

RAVAS USA, INC. warrants the equipment that we manufacture for a period of twelve (12) months from the date of shipment against manufacturer's defects in materials and/or workmanship. The warranty applies only to the original owner of the equipment. RAVAS's obligation under this warranty is limited to the repair or replacement of defective parts, and the associated labor and travel costs for the repair. Replacement or repair of parts or products is at the sole discretion of RAVAS. This warranty does not cover shipping and handling charges.

For electronic products, manufactured by other companies and, sold by RAVAS USA, the warranty is limited to that offered by the electronic product's original manufacturer. Typical examples of such products include, but are not limited to, computers, printers, scanners and specialty indicators.

This warranty specifically excludes any repairs not necessitated by a manufacturer's defect. This includes, but is not limited to, failure to install, calibrate, and/or operate the product in accordance with the manufacturer's installation and/or technical manual. It also does not include intentional misuse of the product.

All warranty work must be pre-authorized by RAVAS USA and performed by RAVAS USA or a certified scale technician dispatched by RAVAS USA at its sole discretion. *RAVAS USA reserves the right to modify this warranty policy at any time.*

RAVAS USA MAKES NO OTHER WARRANTIES, EXPRESS OR IMPLIED, AND ALL IMPLIED WARRANTIES OF MERCHANTABILITY, AND/OR FITNESS FOR A PARTICULAR PURPOSE ARE HEREBY DISCLAIMED. IN NO EVENT WILL RAVAS USA BE LIABLE FOR PUNITIVE, SPECIAL OR CONSEQUENTIAL DAMAGES, OR FOR AN AMOUNT IN EXCESS OF THE PURCHASE PRICE OF THE DEFECTIVE RAVAS USA PRODUCT OR PRODUCTS.

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CONTACT INFORMATION

Parts, RMA and Service: Call: Toll Free 844-425-0544 x219 or Direct 330-425-0561
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 service-usa@ravas.com

Technical Support: Call: Toll Free 844-425-0544 x502 or Direct 330-425-0575
Email: service@ravas.com

More information can be found at: www.ravas.com

- Click on "Knowledge Base" link at bottom of any page (no login required).
- Then click on "Knowledge Base" tab.
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(Keyword search).

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FRONT & REAR PANEL LAYOUT



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OVERVIEW

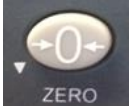


This instrument is a precision digital indicator using state of the art technology to ensure fast and accurate weight readings. The indicator is set up and configured to work with the RAVAS Scale Base LTEF16 (non-NTEP) and has basic weighing functionality (Zero, Tare and Net/Gross Weight).

OPERATING ENVIRONMENT

- Operating Temperature: -10 to 50°C
- Humidity: <90% non-condensing
- Operating Voltage 12 – 24 VDC @ 2.5A

OPERATION

Functional Operation of Buttons

	Power: ON-Push & hold until display starts. OFF-Push & hold for 3 sec. Display will show OFF for 3 sec then blank. If using Battery power backlight may switch off to preserve battery. Press Power to restore display. Used with “f” key to access setup menus
	Normal Operation: Sets Zero Weight level when empty scale drifts away from “0”. “0” is stored when power is removed. To remove previously stored “0” use a long press of the Zero key Menu Scroll: “GRP” Toggle Item Scroll: Move Down
	Normal Operation: Sets Tare. Display will show NET wt. Tare is stored when power removed and will be available on next power up. Menu Scroll: “ITM” Toggle Item Scroll: Move Left
	Normal Operation: Toggle between Gross and Net Weight IF Tare has been previously set. Menu Scroll: “SEL” (Select) Item Scroll: Move Right
	Normal Operation: NOT USED Menu Scroll: “EDT” (Edit) Item Scroll: Move Up
	Normal Operation: Holds Displayed Value Menu Scroll: OK response Item Scroll: OK response

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Power Up/Shut Down

1. Press the small red button (marked “UNITS”) and hold until display starts.
2. The display will turn all segments on as a self test. It will also display other information such as software revision and calibration counter.
3. When it finishes startup, a weight reading will be displayed. The indicator is now ready to use.
4. To turn the indicator off, press and hold the small red UNITS button. A countdown will be displayed.
5. Hold down the button until the display turns off.

Description of Button Operation

Zero: Sets zero weight adjustment when empty forks display something other than zero.

Short Press: Sets Zero

Long Press: Clears any stored zero

Tare: Temporary modification to remove the weight of a container or other object on the forks. An icon will appear above the units (lb or kg) resembling a tray when a tare value is stored.

Short Press: Sets the Tare value based on the applied weight to the forks.

Long Press: Manually set Tare value using Item Scroll keys. Press OK when value is correct. You can use this method to remove any Tare value by setting the value to 0 lbs.

Select: When pressed will sequence between gross weight, net weight and Tare weight. “Net” will be displayed when the toggle goes to net weight.

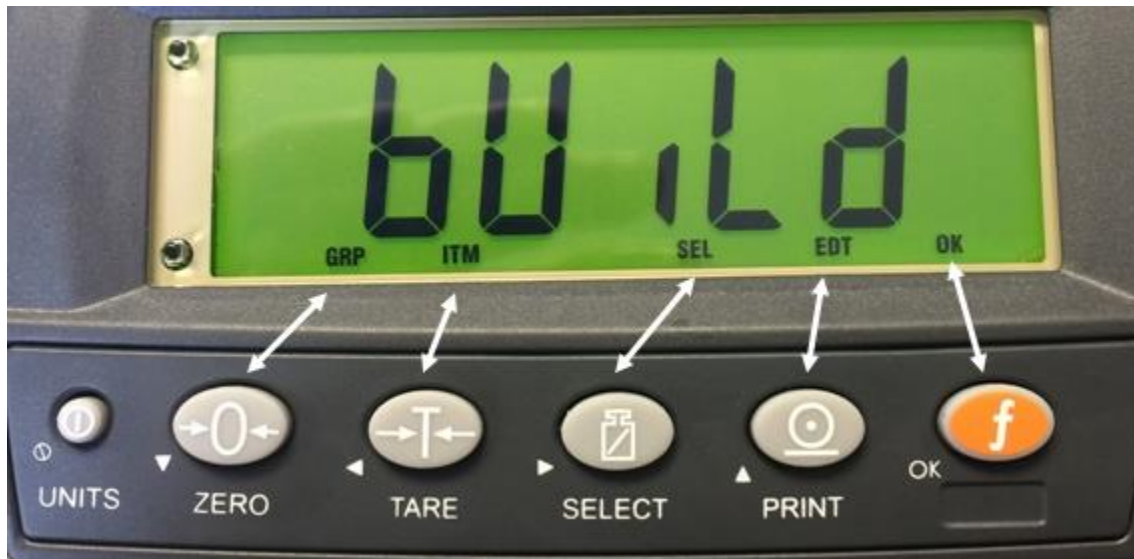
Orange“f” Button: When pressed, the indicator will hold the displayed reading until the button is pressed again. An “H” icon will appear below the last digit when the display is holding a weight reading. The indicator will then return to taking “live” weights.

Print: This button is not used for any function during normal operation. It only is enabled when using menus (described in instructions to follow).

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Calibration

1. Once the indicator has been installed, empty and raise the forks off of the ground.
2. Power up the unit by pressing the power key (small button at the lower left of the indicator).
3. Simultaneously, hold in the power and function button (orange button with “f” on it). This enables full setup menus, which contain the calibration program.
4. The display will go through some messages, ending with “bUiLd”.



Button Functions in Menu

5. Press “GRP” 2 times. “CAL” should appear. Press ITM
6. “ZEro” should appear. Press SEL.
7. A flashing “0” should appear. Press SEL.
8. “2. In P” should appear (stands for Zero In Process). This indicates zero calibration is in process.
9. When operation is complete, the flashing “0” will appear. Press ITM.
10. “ZEro” should appear. Press ITM again. “SPAN” should appear. Press SEL.
11. “CLr.L N” should appear. This is for a linearity function we will not use. Press OK. The flashing “0” or another flashing number should appear. Press SEL.
12. Apply a calibration weight to the forks. Use a weight of 500 lbs or greater. For calibration, the weight should not end in an odd number (i.e. 505 lbs). If the default setting for the indicator is set to 2 lb increments, an odd number weight will be rounded down to the nearest even number (i.e. 504 lbs).

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13. Use the arrow keys to set the span value to the weight the simulator represents. Press OK.
 - a. Tare to move left
 - b. Select to move right
 - c. Print to increment the digit
 - d. Zero to decrement the digit
14. "S. in P" appears, indicating span calibration is in process.
15. Once completed, the display will show the flashing numbers that should correspond to the weight applied to the forks. Repeat from step 6 if the calibration is incorrect.
16. Press ITM. "SPAN" reappears on the display.
17. Press GRP. Press GRP again until "-End-" appears. Press OK.
18. "SAViNG" should appear, followed by a few more messages.
19. Once saved and completed, the calibration weight should appear on the display.

Default Settings

Build Menu Settings

1. Decimal Point ("dP") – none (CHANGE NOT RECOMMENDED)
2. Capacity ("CAP") - 5000
3. Increments (Resolution) ("rES") – 1
4. High Resolution ("Hi.rES") – off (DO NOT CHANGE)
5. Units ("Units") - lbs
6. Input Cable from Load Cell ("CAbLE") – 4 (DO NOT CHANGE)

Changing the Build Menu Default Settings

The Capacity, Increments and Units can be changed as instructed below. Changing the Decimal Point, High Resolution and Input Cable settings may negatively impact the performance of the indicator.

1. Power up the unit by pressing the power key (small button at the lower left of the indicator).
2. Simultaneously, hold in the power and Zero button.
3. Press ITM until the setting to change appears.
4. Use the arrow keys to change the setting. Press OK when the setting is correct.
5. When you are finished, press GRP until "-End-" appears.
6. Press OK.

Other Menu Settings

There are other menu options available. These have been preset to work with the RAVAS applications. Changing any other setting may result in improper operation of the indicator.