

## Electronic Weighing Indicator



## Indicator Users Guide

Version 1.18

## ToughGuy Series Weighing Indicator

### 1 About ToughGuy Series Weighing Indicators

We would like to thank you for choosing us as your preferred choice for your weighing requirements.

The ToughGuy series weighing indicator is an accurate, fast and versatile series of weighing indicators, loaded with time saving features and ease of customer use.

The indicator is loaded with features like, automatic zero tracking, overload alarm, low battery protection, "QUICK" weighing mode to display quick weighing results effects, pre-set tare and an accumulation function to add pieces being counted and finally recall the accumulated total.

The indicator feature auto zero tracking to automatically compensate for small fluctuations in zero such as a build up of material on the platform.

To extend battery life an auto-off feature is standard the operator can set the auto off timing to between 1 minute and 30 minutes of inactivity to suit the application. Alternatively the auto off function can be switched off, leaving the indicator permanently on until switched off by the operator.

### 2 Technical Data

Basic Parameters	
Measurement Data	ToughGuy
Capacity	Selectable 3kg ~ 500 Tons
Readout / Interval	1, 2, 5 (10, 20, 50 based on decimal point)
Tare range subtractive	100% subtractive
Repeatability	+/- 1d
Display Resolution	30,000 (upto max 100,000 Divisions *option)
Application Modes	Weighing, Counting, Accumulation, Percentage
Product Features	Auto Off, Pre-Set Tare, Piece Counting, Glow Control
Keyboard	6 membrane keys (On/off, Counting, F, Mode, Tare and Zero)
Display Indicators	Stability, Zero Position, Tare, Charging Status, Accumulation, Percentage mode, function active
Weighing Units	Kg, lb
Calibration	Digital with external weight.
Weight	2.5kg Approx
Front Display Type	0.8" Bright red LED display
Rear Display	Optional, Available with 0.8" LED Display
Communication	Optional RS232C for PC communication / Direct Printer Interface
Stabilization	2 seconds
Power	9V Adaptor / built in battery for backup to 35hrs. / 70 hrs with sleep mode active
Operating Temp.	50° to 98° F / 10° to 35° C
Dimensions	190 x 230 x 265 (w x d x h) – including pole.

### 3 Installation

#### 3.1 Unpacking

Unpack and verify that the following components have been included:

- a) ToughGuy Indicator with Instruction Manual
- b) Power Adapter / Attached power cord (customer specific)

Save the packaging material. This packaging ensures the best possible protection for the storage or transport of the product.

#### 3.2 Placing Your Indicator

Before you install the indicator, identify the best location for the equipment. The proper environment enhances its operation and longevity. Keep in mind the following factors, which might have a negative influence on the indicator's operation:

- a) **Vibration:** Vibration diminishes the indicator's ability to measure accurately. Electrical machinery such as conveyors and drill presses can cause inaccurate and non-repeatable readings. The indicator may also read inaccurately if it is not leveled properly. The indicator incorporates a QUICK weighing mode where the indicator can reject readings with vibration up to some extent.
- b) **Drafts / Air currents:** Moving air can cause the indicator to read wind movement as an additional force and cause inconsistency in the weighing results.
- c) **External Rubbing / Friction:** A indicator cannot measure accurately if an object is rubbing or pressing against the indicator platform.

#### 3.3 Power Source

The unit works on 220V AC and is fitted with a built in 6V 4Ah battery which provides backup of more than 30 – 70 hours depending on glow setting and sleep mode setting.

#### 3.4 Calibration Check

Put a known weight on the machine and make sure that the indicator reads the correct weight on the display. In case of a variation in the display reading, it is recommended to calibrate the indicator again with the procedure explained in

section 7.1 later in the manual.

**WARRANTY CERTIFICATE**

Customer Name : \_\_\_\_\_

\_\_\_\_\_

Phone: \_\_\_\_\_ Mobile: \_\_\_\_\_

Date of Purchase : \_\_\_\_\_ Invoice / DC No: \_\_\_\_\_

Model : \_\_\_\_\_ SI.No: \_\_\_\_\_

Dealers / Agent Name : \_\_\_\_\_

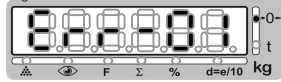
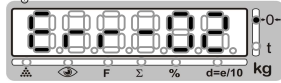
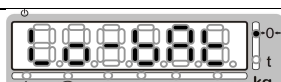
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The manufacturer warrants all products shipped against defects in MATERIAL and WORKMANSHIP for a period of one year for standard line of products. All OEM and custom build orders carry (1) year warranty for MATERIAL and WORKMANSHIP. Warranty will not be applicable for Battery and adaptors. Normal wear and tear, injury by natural forces, user neglect and purposeful destruction are NOT covered by this warranty. Technical Service MUST be performed by authorized staff or factory authorized personnel. Manufacturer's obligation is limited to replacement of parts that have been so returned and are disclosed to manufacturer's satisfaction to be defective. The provisions of these warranty clauses are lieu of all other warranties, expressed or implied, and of all obligations or liability in connection with sale of said articles. Manufacturer makes no warranty of merchantability or fitness for a particular purpose. By accepting the goods, the buyer acknowledges that the buyer has determined that the goods are suitable for the buyer's purposes. In no event shall the manufacturer be liable for any sub sequential or special damages. Any misuse, improper installation or tampering shall VOID this warranty.

Product that is malfunctioning within the 1-year warranty period for scale line and 1-year warranty period for OEM products may be returned to manufacturer for Warranty Evaluation at the customers' expense. Manufacturer reserves the right to repair OR replace the components free of charge as may qualify under this warranty.

REMINDER!! WARRANTY DOES NOT COVER USER DAMAGE AND ABUSE. In addition to a listing of the repairs covered under warranty, if any, the customer will be billed accordingly for all parts and labor associated with any NON-WARRANTY repairs made to the product.






## 8 Error Codes

ERROR – DISPLAY	Error	Solution
	<ul style="list-style-type: none"> <li>Zero not in range</li> </ul>	Remove weight from pan and restart the machine. If the problem persists, the machine may have been overloaded.
	<ul style="list-style-type: none"> <li>Weight not enough for the selected setting</li> </ul>	Keep weight or Add more weight on pan for correct results.
	<ul style="list-style-type: none"> <li>LOW Battery. Machine displays message and turns off</li> </ul>	Battery is low. Connect indicator to power so that the battery can be charged.

## 9 Troubleshooting

SYMPTOM	POSSIBLE CAUSE	REMEDY
Indicator will not power on	If running on batteries, the battery may have fully discharged. AC Power cord not connected.	Connect indicator to power source. Recharge battery
Battery does not give enough backup	The battery is defective. The battery may have past its useful life. (Generally 6months – 1 year)	Change the battery.
Weight reading on indicator does not stabilize	External Rubbing / Friction A indicator cannot measure accurately if an object is rubbing or pressing against the indicator platform. Mobile interference, Vibration or wind could be other possible reasons	Move the indicator away from mobile signal, breeze or vibration areas.
Indicator does not show weight accurately	Improper calibration	Calibrate the indicator again to and check for the problem again.
External calibration is not stored after switch on / off the machine	This happens when the Internal to External calibration variance larger than 2%. The cause could be that the user is not using correct weight.	Use correct weights to calibrate. If the problem persists, calibrate the indicator using internal calibration routine.

## 4 Controls &amp; Functions

SYMBOL	NAME	FUNCTION
	<b>Power Key</b>	<ul style="list-style-type: none"> <li>To power on and off the machine</li> </ul>
	<b>Counting / Print Key</b>	<ul style="list-style-type: none"> <li>Switch to piece counting mode</li> <li>Long Press – Initiate the Print Command</li> <li>Switch to print data entry mode. Hold the C button and switch on the scale.</li> </ul>
	<b>Function / Left Shift Key</b>	<ul style="list-style-type: none"> <li>Long Press – Enable 10 times display function (Test mode).</li> <li>Left shift the selected digit during cal or other setup modes</li> <li>Switch between kg &amp; lb weighing mode</li> </ul>
	<b>Mode / Up Shift Key</b>	<ul style="list-style-type: none"> <li>Switch to auto weight accumulation or percentage weighing mode based on selected functionality of mode button</li> <li>Up Shift to change option of selected digit. Exchange 0 to 1 to 2 to 3 etc &amp; A to B to C etc.</li> <li>Long Press – Setup M button to quick switch to Accumulation Model or Percentage weighing mode.</li> <li>Switch to Internal Count Mode. Hold the M button and switch on the machine.</li> </ul>
	<b>Tare / Right Shift Key</b>	<ul style="list-style-type: none"> <li>Tare the weight kept on the pan</li> <li>Right Left shift the selected digits during cal or other setup modes</li> <li>Manual Accumulation</li> <li>Auto Zero Setting – Press, Hold the Tare button and switch on the machine.</li> </ul>
	<b>Zero / Enter Key</b>	<ul style="list-style-type: none"> <li>Zero the weight kept on the pan.</li> <li>Enter Key – Accept the selected setting and exit from setting mode.</li> </ul>

## 5 User Operation

### 5.1 Switching Indicator - On / Off

The indicator is switched ON / OFF by pressing the Power button on the rear side of the indicator. This button is used to switch on and switch off the indicator. It is a real ON/OFF which is implemented using the latest technology so that there is absolutely no power consumption when the indicator is switched off.

#### USAGE:

- SWITCH ON: Press the button once, the indicator will switch on.
- If the indicator is already switched on, press the button again, display will show "SEE YOU SOON" and switch off after sounding a beep.

**Note:** Make sure the weighing pan is empty before turning on the indicator.

### 5.2 Manual Tare

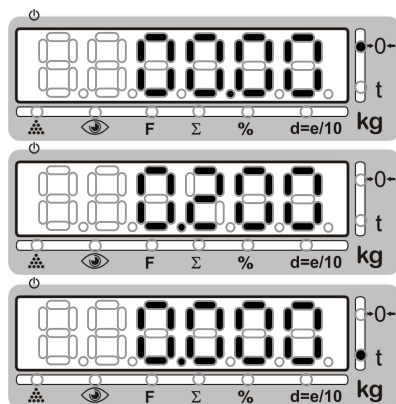
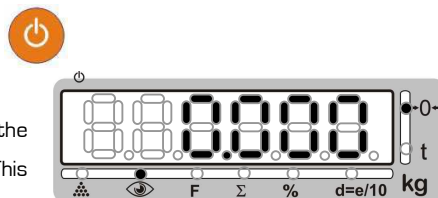
**5.2.1 TARE button:** This button is used for taring a weight to display 0.000. A Tare value is indicated by the "t" LED on the panel.

Place a container on the weighing pan (say 200g), then press the TARE button.

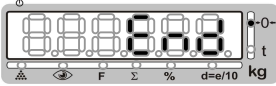
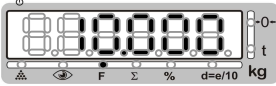
The weight is tared and the machine will display zero and the tare LED will be ON.

To recall the tared weight, simply press the TARE button again. To TARE the value, again press the TARE button.

**5.2.2 LEFT ARROW KEY:** This is used to move the selected digit while entering settable values or calibration weight or any other user parameter etc.

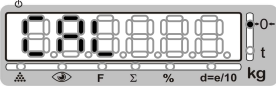



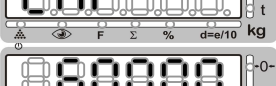
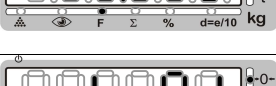


4	Pause for 2 seconds at the previous step and press Zero/Enter key. The display shows "LoAd" momentarily and shows the internal counts.	
5	Put a known weight on the weighing pan (Ex.: 10kg). Press the Enter key. The display will now show all "000000" with the units digit blinking.	
6	If you put 10kg weight, Enter the weight in grams "010000". Change the blinking digit by pressing the mode button. Shift the changed digit to left by pressing the "F" button once.	
7	Press the Enter key once again	
8	With the weight still on the pan, press Zero/Enter key once again to return to weighing mode. Check calibration.	

6	Press the ZERO/ Enter key once again	
7	With the weight still on the pan, press Zero/Enter key once again to return to weighing mode. Check calibration.	

## 7.2 Internal Service Calibration

Internal calibration also referred as service calibration requires opening the machine and changing the jumpers. It is advisable to do this step only if you have required assistance or the service personnel assisting you to do this.

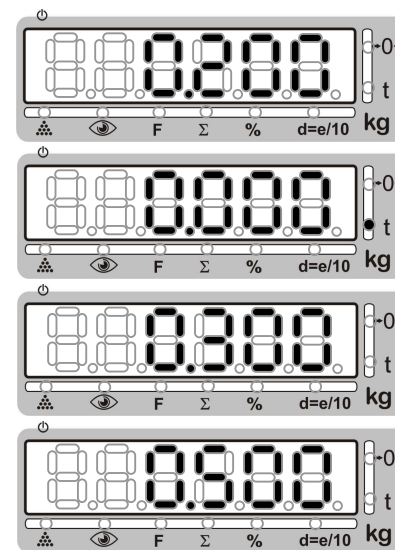
STEP	PROCEDURE	DISPLAY
1	Open the 2 screws from the front bottom of the machine and change the calibration jumper marked CAL to ON. Now shut down the cover & switch on the machine. Make sure there is nothing kept on the weighing pan. At this moment do not put back the screws, simply shut the cover. Be careful with the display and keyboard cables.	
2	Turn on the machines and it will read "CAL"	
3	Press Zero and the display will show "d 1". This setting is used to set the division of the indicator. Valid values are 1, 2 or 5. You can change to desired division by pressing the MODE / up arrow button.	
4	Press Zero and the indicator will now show display as "0." Now you can set the decimal point. Decimal point values can be set by using the F key. The decimal point will move.	
5	Press ZERO and the display show "CAP" Press Zero and the display will now show the current capacity. Enter the capacity as "60.000" if you wish to make capacity 60kg. Note the decimal point is automatically shown as per previous setting in step 3 & 4. You can enter the capacity by using the F for shifting the digit to left and Mode Button for changing the digit.	 
	Make sure there is no weight on the indicator pan. Press Zero / Enter key and the display shows "noLoAd" momentarily and shows the counts at zero level.	

5.2.3 MANUAL ACCUMULATION: Function: This function will work only if the ACC is selected to 0 in the MODE button setting.

Keep a weight on the weighing pan(ex 200g). The display will show the weight. Now press TARE. The display will show

0.000 Now keep another weight (ex 300g), the display will show its weight. Now press TARE button. The display will

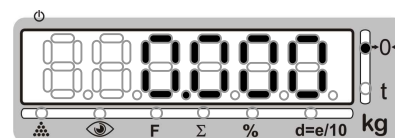
show the total of the first value tared and the second weight tared. Press TARE button again, the display will show 0.000. Now keep another weight, the display will show the weight. Press TARE button, the display will show the total of all the three weights (0.500g), press TARE button, the display will show 0.000



## 5.3 Zero Operation

Center of Zero is indicated by the annunciator  $\rightarrow 0 \leftarrow$ . You can press the ZERO/ENTER key to set the zero point

from which all other weighing and counting is measured. The zero will function within 20% of the internal zero setting. The indicator has an automatic auto-zeroing function to account for minor drifting or accumulation of material on the platform. This auto-zero range can be configured in the user setup. However you may need to press the ZERO/ENTER key to rezero the indicator if small amounts of weight are shown when the platform is empty.



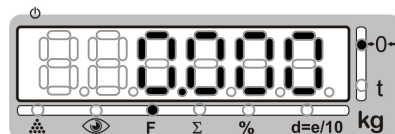
## 5.4 FUNCTION Button



**FUNCTION button:** This button incorporates the “NEVER BEFORE” functions for any indicator. This button has the power of increasing the resolution of your indicator 10 times, without compromising on the accuracy of the indicator. This button is also used for switching between the weighing units. This button is also used to enter values in setting mode.

### 5.4.1 SWITCH BETWEEN KG/LB:

Press the button once to switch between kg and lb mode.. Note the indicator keeps in memory the currently selected weighing



unit. If the indicator is switch off in kg mode it will switch on in kg and if it is switched off in lb mode it will switch on in lb mode,

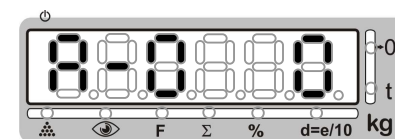
### 5.4.2 D=e/10:

Keep the button pressed for 3 seconds, you will notice that a RED LED corresponding to d=e/10 will glow on the sticker panel. Now the indicator is in the latest & most innovative “D=e/10 MODE”. Now keep a weight on the weighing pan and see the weight is displayed with a resolution of 10 Times.

### 5.4.3 LEFT ARROW KEY:

This is used while entering settable values, calibration weight or printing data, etc.

**6.10 Auto Zero Setting:** Press and hold the TARE button and then switch on the indicator. The display will show AD – X (0, 1, 2, 3). This is the auto zero setting. You can select the value using the MODE button. 3 mean 3d Default setting of Auto-Zero mode is 3d.



## 7 Calibration

All weighing indicators come pre-calibrated from the factory. However the indicator may require re-calibration. Temperature changes, geographic gravity variations, altitude changes and abuse are few reasons why a indicator may need recalibration. The indicators can be calibrated using a known external weight.

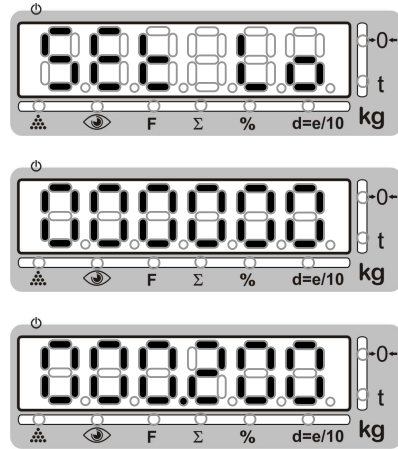
### 7.1 External User Calibration

STEP	PROCEDURE	DISPLAY
1	To start calibration turn the indicator off and then turn it on. During the count down, press and hold down the Zero button (do not release until the display shows “CAL”)	
2	Make sure there is no weight on the pan. Press Zero / Enter key and the display shows “noLoAd” momentarily and shows the counts at zero level.	
3	Pause for 2 seconds at the previous step and press Zero/Enter key. The display shows “LoAd” momentarily and shows the internal counts.	
4	Put a known weight on the weighing pan (Ex.: 10kg). Press the Enter key. The display will now show all “000000” with the units digit blinking.	
5	If you put 10kg weight, Enter the weight in grams “010000”. Change the blinking digit by pressing the mode button. Shift the changed digit to left by pressing the “F” button once.	



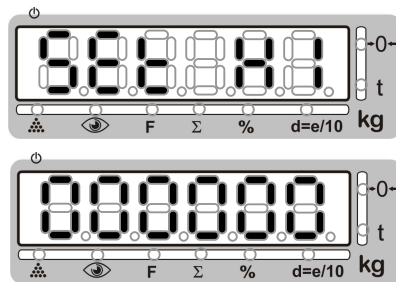
### 6.9 Check Weighing Mode

a) SET LOWER VALUE LIMIT: When indicator is in the weighing mode, with no weight on the pan, while pressing the ZERO button press the TARE button the display will show "P-TARE" now press the ZERO/ENTER button again until display shows "SET LO" press the ZERO button once again and display shows all zeros 000.000 now you can enter a particular value using M & F keys. For eg. You want to enter low value as 200 grams the press



M key two times and F key two times and the display will show 000.200 and press the ZERO button till the scale comes to the weighing mode. The low value has been set, now you keep any weight upto 200gm on the pan there will be a continues beep sound, now keep some more weight on the pan and the beep sound will be stopped. **The high low limit enunciator shows the status of weight range is either HI / LO / OK**

b) SET HIGH VALUE LIMIT: When indicator is in the weighing mode with no weight on the pan, while pressing the ZERO/ENTER button press the TARE button and the display will show "P-TARE" now press the ZERO button until the display shows "SET HI" press the ZERO button once again and display shows all the zeros "000.000" now you can enter a particular value using M & F keys. For eg. You entered a high value as 400gm, the moment the weight goes up from the 400gm on the pan a continues

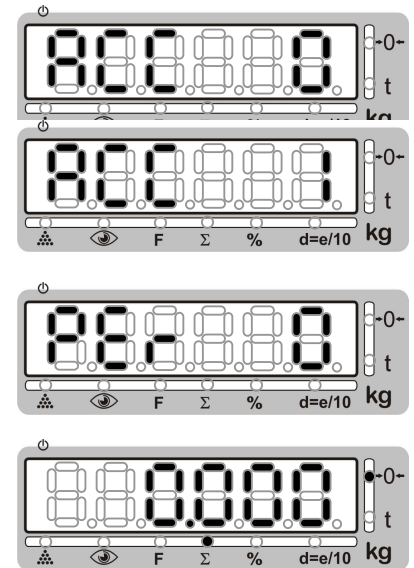


sound will be there that is you have to lift the excess weight from the pan. **The high low limit enunciator shows the status of weight range is either HI / LO / OK**

### 5.5 MODE Button / UP ARROW KEY:

This mode is used for two different modes of the indicator, the accumulation mode and the percentage weighing mode. Keep this button pressed for 3 seconds, the display will show "ACC 0". Using the UP arrow/M button you can select between the 0 and 1 value. Press the enter button to accept your selection, now the display will show "PER 0" Again you can select between the 0 and 1 using the UP arrow/M key and press enter to accept the selection. 0 means the function is OFF and 1 means the function is ON. It is important to note that only one function can be switched on at a time, while both can be switched off if the user does not want to use them. Whenever the indicator is switched on the function in this button is not active. When the MODE button is pressed once, the function becomes active.

5.5.1 ACCUMULATION FUNCTION: Press the mode button for 3 seconds. Select the ACC value as 1. Press enter. Display will show PER 0. Press enter again. Now user has accepted to switch on the accumulation function, you will find the RED LED corresponding to  $\Sigma$  will glow on the panel sticker, denoting that the accumulation function is switched on. Now when you keep the weight, the indicator will automatically accumulate the weight value in memory. Now remove the weight, and keep same weight or another weight, it is again accumulate the weight and also show the number of items added. If you do not remove the weight, before adding a new weight, it will not be accumulated in the memory. If you wish to see the total number of accumulated items and their total weight, simply press the MODE button. If the user wishes to clear the Memory of the accumulated items, simply press ZERO button. The display will show "M CLR", press ZERO button again, the display will show YES (you can toggle between YES or NO by



using the M button], press ZERO button and the display will show M Clrd indicating that the memory has been cleared. If the user will switch off the indicator, the accumulated values will be lost and reset to 0.

#### 5.5.2 PERCENTAGE WEIGHING FUNCTION:

Press the MODE button for 3 seconds. The display will show ACC X (0 or 1),

press ENTER button, the display will now show PER X (0 or 1). You should now use the UP ARROW key to select PER 1,

and then press enter. The indicator will come back in to the weighing mode. Now the MODE button will be used for the

PERCENTAGE WEIGHING FUNCTION. Now press the MODE button, the display will show LOAD momentarily and then

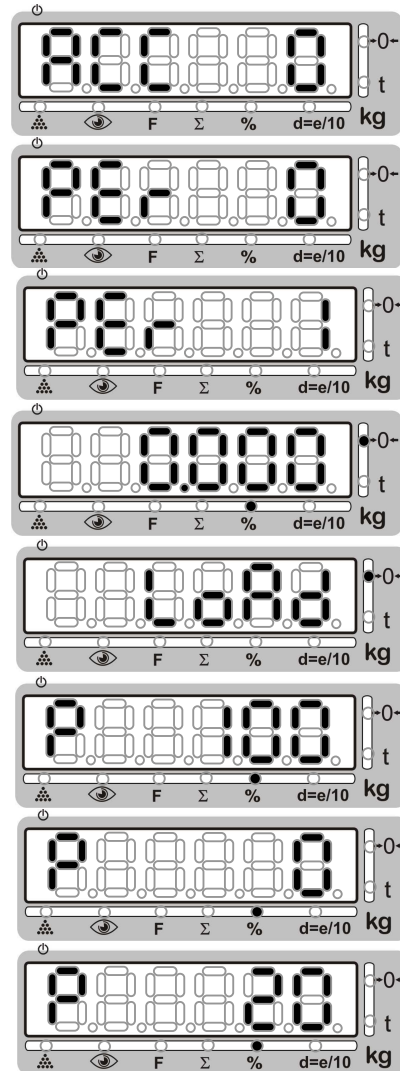
blinking 0.00, now keep a weight for eg:-1kg it will show the weight blinking and then press ENTER/ZERO button.

Depending upon the weight the display will show the weight as P 100 or P 100.0, so that whatever weight was kept

has been considered 100%. Now lift the weight from the pan the display will show P 0. and keep any other weight on the

pan for eg:- 200gm the display will show P 20 that is the weight which has been kept is the 20% of the sample, keep another 100gm display will show P 30

that is 30% of the sample weight. Also the RED LED corresponding to P on the panel sticker will glow, indicating that the indicator is in the percentage

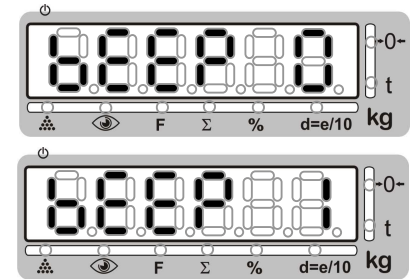


**6.6 BEEP:** This function allows to enable or disable the beep sound. With beep=0 the buzzer is completely disabled and there will

be no sound for alarms or key press.

a) beep=0 : Buzzer disabled

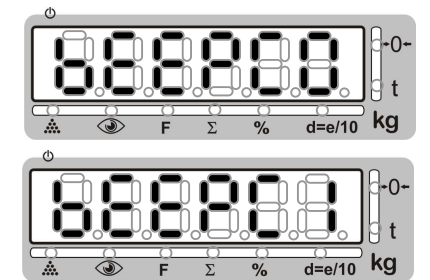
b) beep=1 : Buzzer enabled



**6.7 BEEP C:** This function allows user to complement the buzzer sound at limit setting. Eg when you set low limit as

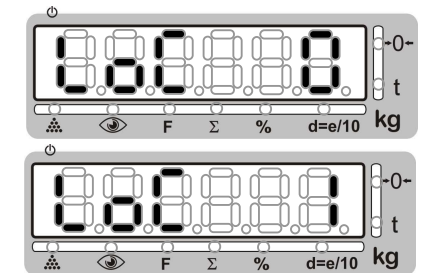
0.100g. With beepC=0, the indicator will sound alarm if the reading is below 0.100g and stop at 100g or above. If beepC=1, the buzzer sound will be

complemented to sound above 100g and remain disabled when the reading is below 100g. The alarm does not sound at 0 level or 0 level + 3 divisions.



**6.8 LOC – Lock Keyboard:** This function allows the user to lock all buttons except tare and zero. The only buttons

operational under this mode are TARE and Zero. The setting can be changed by pressing the M button when the display is in LOC setting mode. LOC 0 means setting inactive and LOC 1 means setting is active and keyboard is locked.



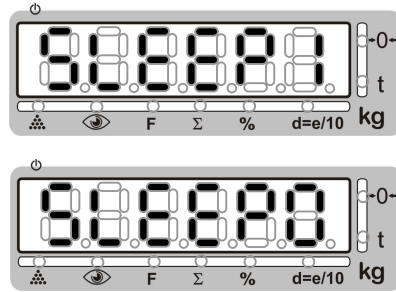
ZERO/ENTER button, until the display comes back to the weighing mode.

**6.5 Sleep Mode:** The indicator has a power saving mode called the SLEEP MODE. Whenever the indicator is switched on, the SLEEP MODE is by default set to ON condition. In this mode, if the indicator is idle for two minutes, that is there is no weighing being done, the display will simply show the decimal point of the right

most digit on the display. Whenever any weight is kept, the indicator will automatically come out of the SLEEP MODE and start displaying the weight. It is important to know that SLEEP mode increases the battery back-up time by double. The Normal backup time when the sleep mode is switched off is 30 Hours,

and with the SLEEP mode switched on, the battery back-up time increases to more than 60 Hrs. If the USER wants to **switch off** the SLEEP MODE for some special usage or function it can be done as follows: When the indicator is in the weighing mode, Press ZERO and TARE button together. The display will show "P-TARE" Now press the ENTER button 8 times so that the display shows "SLEEP1". 1 means the sleep mode is currently switched On. If the user wants to switch the sleep mode Off, press the MODE button once. The display will now show "SLEEPO". Press the ENTER button till the scale comes back to the weighing mode. Now the Sleep mode has been switched off.

NOTE: If both the sleep mode and clock mode are "on" then display will not show the decimal point, it will show the running clock on the display.



weighing mode. To come out of the percentage weighing mode, simply press the Mode button, indicator will return to weighing mode. If the weight is too small or no weight was kept before pressing the ENTER button, the display will show "ERR 02" indicating the function could not be completely because the weight kept is insufficient. Also the indicator will automatically return to the weighing mode after display ERR 02.

## 5.6 COUNTING Button / PRINT Button:

This button is used to put the indicator in the counting mode and also for the printing the weight data on the printer using the RS232serial output of the indicator.

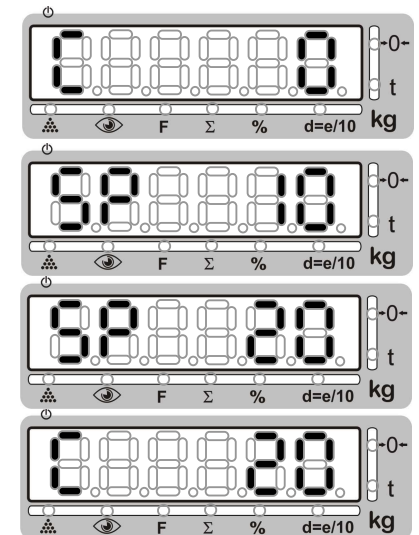
**5.6.1 COUNTING FUNCTION:** When the indicator is displaying 0.000, press this button, the display will show C 0, press M button the display will show "SP 10" which is the number of sample pieces. You can select between values of 10, 20, 50, 100, 200, 500, 1000 using the

M/Up arrow button. Once the number of pieces is displayed, keep the same number of pieces on the weighing pan

and press the enter button. The weight of the pieces kept on the weighing pan is displayed as the number of pieces selected. Simply press the counting

button once, if the user wants to exit the counting function to come in to the weighing mode.

**5.6.2 PRINT FUNCTION:** When a certain weight value is being displayed, keep this button pressed for three seconds. The display will now show "PRINT" momentarily and a printed slip of that particular weight will be generated on the attached printer. The display will go back in the weighing mode.



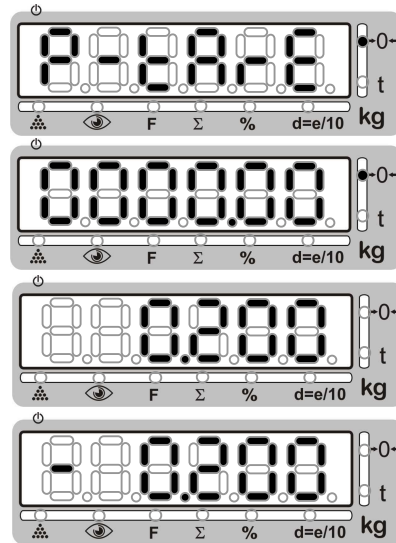
## 6 Indicator Settings

**6.1 Pre-Set Tare:** Pre-set Tare is a known tare value. Pre-set Tare is indicated by the “P-TARE” enunciator followed by the tared value during startup of the machine.

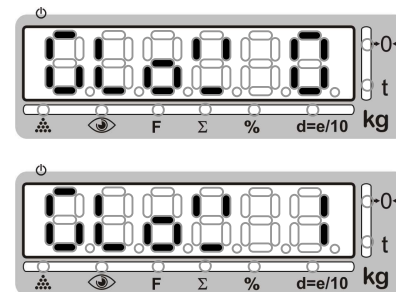
**Setting Pre -Tare**

With an empty pan Press Zero + TARE - “P-tArE” will flash on the display, press ZERO key once again all zeroes will be displayed. Now enter a value (ex.200g), using M key to change the blinking digit & F key to shift the blinking digit to the left. Exit the setup menu by pressing the Zero/Enter key 16 times till the scale comes to the weighing mode. The Pre-set Tare will be displayed as a negative value (no weight on the pan).

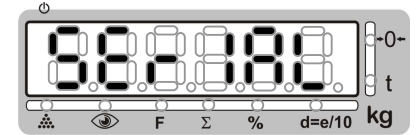
**Note:** The pre set tare value when entered becomes permanent that is when scale is switched off and then switched on the display will show the “P- tare” momentarily and then the entered value in - 0.200 To clear the Pre-set Tare value, you will again have to go in the setting mode by pressing ZERO + TARE and change the pre tared entered value to 000000 with the pan empty.



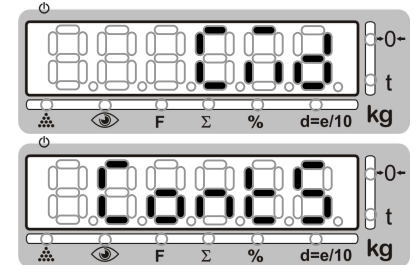
**6.2 Led Glow:** The display GLOW strength can be increased or decreased depending upon the user requirement. Increasing the GLOW of the display will effect the Battery back up time, and the battery life. The GLOW setting is set to minimum by Default. If the user wants to increase the GLOW of the display, it can be done as follows:



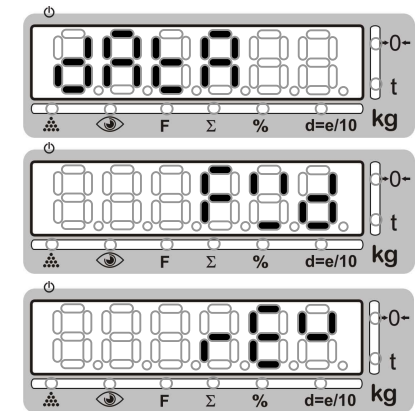
When the indicator is in the weighing mode, While pressing the ZERO button, press the TARE button. The display will show “P-TARE” Now press the ENTER button two times so that the display shows “GLOW 0”. 0 means the GLOW mode is currently set to Low. Now press the MODE button, and you will notice the GLOW of the display is increased as Glow 1 or 2. If the user wants to keep this setting, simply press the ENTER button until the display comes back to the weighing mode.



**6.3 Serial Data:** This is the serial port mode setup as command (bidirectional) or continuous mode. When the indicator is in the weighing mode, press the TARE & ZERO button. The display will show “P-TARE” Now press the ENTER button until the display shows “SERIAL” Now press the ENTER button again and display will show “CMD” which means command mode you can select it to the continuous mode by pressing “M” button display will show “CONTS” and then press the “ZERO/ENTER” button, until the display comes back to the weighing mode. For more information refer to the serial protocol document,



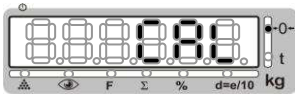
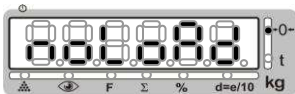
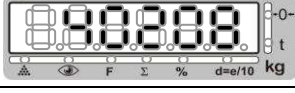
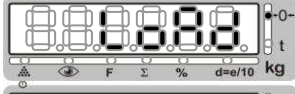
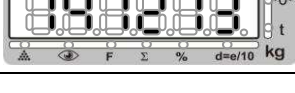
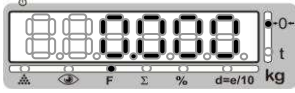
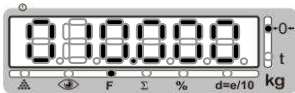
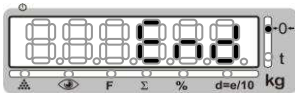
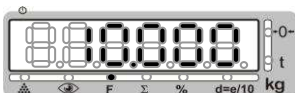
**6.4 Data – Data Format:** when indicator is in the weighing mode with no weight on the pan, while pressing the ZERO button, press the TARE button. The display will show “P-TARE”. Now press the enter button five times so that the display shows ‘DATA’ Now press the enter button again and the display will show “FWD’ which means the data is being send in the forward mode, you can select it to the reverse mode by pressing “M” button display will show “REV” and then press the



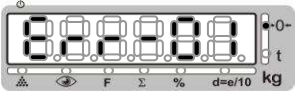
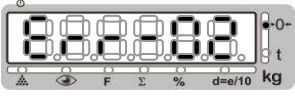
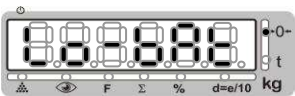
## Calibration

All weighing scales come pre-calibrated from the factory. However the scale may require re-calibration. Temperature changes, geographic gravity variations, altitude changes and abuse are few reasons why a scale may need recalibration. The scales can be calibrated using a known external weight.

### External User Calibration

STEP	PROCEDURE	DISPLAY
1	To start calibration turn the indicator off and then turn it on. During the countdown, press and hold down the Zero button (do not release until the display shows "CAL")	
2	Make sure there is no weight on the platform. Press Zero / Enter key and the display shows "noLoAd" momentarily and shows the counts at zero level.	 
3	Pause for 2 seconds at the previous step and press Zero/Enter key. The display shows "LoAd" momentarily and shows the internal counts.	 
4	Put a known weight on the weighing pan (Ex.: 10kg). Press the Enter key. The display will now show all "000000" with the units digit blinking.	
5	If you put 10kg weight, Enter the weight in grams "010000". Change the blinking digit by pressing the mode button. Shift the changed digit to left by pressing the "F" button once.	
6	Press the ZERO/ Enter key once again	
7	With the weight still on the pan, press Zero/Enter key once again to return to weighing mode. Check calibration.	

## Error Codes

ERROR – DISPLAY	Error	Solution
	<ul style="list-style-type: none"> <li>Zero not in range</li> </ul>	Remove weight from platform and restart the scale. If the problem persists, the machine may have been overloaded.
	<ul style="list-style-type: none"> <li>Weight not sufficient for the selected setting</li> </ul>	Keep weight or Add more weight on platform for correct results.
	<ul style="list-style-type: none"> <li>LOW Battery. Scale displays message and then turns off</li> </ul>	Battery is low. Connect the power adapter so that the battery can be charged.

## Troubleshooting

SYMPTOM	POSSIBLE CAUSE	REMEDY
Indicator will not power on	If running on batteries, the battery might be fully discharged. Power adapter not connected.	Connect scale to power source. Recharge battery
Battery does not give enough backup	The battery is defective. The battery may have past its useful life. (Generally 6months – 1 year)	Change the battery.
Weight reading on indicator does not stabilize	External Rubbing / Friction A scale cannot measure accurately if an object is rubbing or pressing against the platform. Mobile interference, Vibration or wind could be other possible reasons	Move the scale away from mobile signal, breeze or vibration areas.
Scale does not show weight accurately	Improper calibration	Calibrate the scale.
External calibration is not stored after switch on / off the machine	This happens when the Internal to External calibration variance is larger than 2%. This might be cause when user did not use correct weight values.	Use correct weights to calibrate. If the problem persists, calibrate the scale using internal calibration procedure. call for service

# Electronic Weighing Scales



## Service Manual

## ToughGuy Series

Version 1.18