

Avery Weigh-Tronix

THE **evolution** SERIES™



This manual applies to indicator
PN 56874-0013 only

Model E1065 Indicator User's Manual

UNITED STATES

This equipment has been tested and found to comply with the limits for a Class A digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference when the equipment is operated in a commercial environment. This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instruction manual, may cause harmful interference to radio communications. Operation of this equipment in a residential area is likely to cause harmful interference in which case the user will be required to correct the interference at his own expense.

CANADA

This digital apparatus does not exceed the Class A limits for radio noise emissions from digital apparatus set out in the Radio Interference Regulations of the Canadian Department of Communications.

Le présent appareil numérique n'émet pas de bruits radioélectriques dépassant les limites applicables aux appareils numériques de la Class A prescrites dans le Règlement sur le brouillage radioélectrique que edicté par le ministère de2s Communications du Canada.

EUROPEAN COUNTRIES

WARNING

This is a Class A product. In a domestic environment this product may cause radio interference in which the user may be required to take adequate measures.



Caution

Risk of electrical shock. Do not remove cover.

No user serviceable parts inside. Refer servicing to qualified service personnel.

**CAUTION: DANGER OF EXPLOSION IF BATTERY IS INCORRECTLY REPLACED.
REPLACE ONLY WITH THE SAME OR EQUIVALENT TYPE RECOMMENDED BY THE MANUFACTURER.
DISPOSE OF USED BATTERIES ACCORDING TO THE MANUFACTURER'S INSTRUCTIONS**

**ATTENTION: IL Y A DANGER D'EXPLOSION S'IL Y A REMPLACEMENT INCORRECT DE LA BATTERIE,
REPLACER UNIQUEMENT AVEC UNE BATTERIE DU MÊME TYPE OU D'UN TYPE ÉQUIVALENT
RECOMMANDÉ PAR LE CONSTRUCTEUR. METTRE AU REBUT LES BATTERIES USAGÉES
CONFORMÉMENT AUX INSTRUCTIONS DU FABRICANT”.**

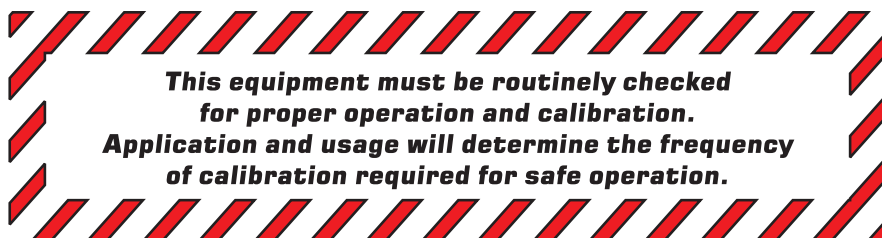
**CAUTION – THE EQUIPMENT IS INTENDED ONLY FOR INSTALLATION
IN A RESTRICTED ACCESS LOCATION.”**

**Avery Weigh-Tronix reserves the right to change
specifications at any time.**

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IMPORTANT



Specifications

Power requirements

- 85-265 Volts AC @ 0.3Amp maximum
- 50/60 Hz

Excitation

- +/- 5 volts DC
- Supports up to eight 350-ohm weight sensors

Analog signal input range

- +/-60 mV

Analog signal sensitivity

- 0.2 μ V/V/divisions minimum
- 1.0 μ V/V/divisions recommended

Calibration

- 2 to 5 points stored

Operational keys

- *Seven keys*; Tare, Select, Zero, Print, Units, F1, On/Off

Operational annunciators

- Center of Zero, Motion, Gross, Net, Tare,
- Under/Target//Over
- Units of measure (LB, KG)
- Print, OP1, OP2, OP3, Pt Tare

Display

- Six-digit, seven-segment, 0.8-inch high, LED

Display rate

- Selectable (1, 2, 5, 10)

Analog to digital conversion rate

- 100 times per second

Unit of measure

- Pounds, kilograms, custom

Capacity selections

- 999,999 with decimal located from zero to five places

Incremental selections

- Multiples and sub-multiples of 1, 2, 5

Programmable selections

- Zero range, motion detection, automatic zero tracking, five-point linearization.

Time and date/RAM

- Battery backed up real time clock and RAM standard

Internal resolution

- 53,687,100 counts per mV/V per second

Harmonizer™ digital filtering

- Fully programmable to ignore noise and vibration

Standard inputs

- Three logic level inputs for: Zero, Print, Tare, Units, F1, Start and Stop

Standard outputs

- 10/100 Ethernet (Modbus/TCP, TCP/IP, SMTP, DHCP, Ethernet/IP)
- PROFIBUS DP
- DeviceNet
- Two serial ports
 - RS-232/422/485 (SensorComm) - one
 - RS-232 or 20mA current loop
- Three cutoff outputs

Serial Command Inputs/Outputs

- Programmable serial response to ASCII character input
- SMA protocol, Broadcast

Self diagnostics

- Display, keys, inputs, outputs, serial port, A to D converter

Circuitry protection

- RFI, EMI, and ESD protection

Options

- Analog output/Pulse input
- Remote I/O
- ControlNet™
- TIU3
- Rack mount kit
- Desk stand kit

Operating applications

- General weighing with accumulation, Batching, Counting, Checkweighing, Peak measurement, Remote display

Operating temperature

- 14 to 104° F (-10 to 40° C)
- -40 to 140° F (-40 to 60° C) non-legal
- Up to 95% non-condensing humidity

Enclosure

- Composite, IP 54 when panel mounted

Dimensions

- 10.5" W x 8" H x 7.75" D (without mounting bracket)
- 10.5" W x 11" H x 8.25" D (with mounting bracket)

Weight

- 4.5 lb, 2 kg

Agencies

- NTEP CC#04-031 Class III/IIIL:10,000 divisions
- OIML Cert. # R76/1992 - GBI - 04.10 Class III:10,000 divisions
- Canadian Weights and Measures pending
- UL/CUL
- CSA
- CE marked



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Introduction

The Model E 1065 is an easy to use, uncomplicated indicator for weighing with the built-in capability to provide network controls and share data via EtherNet, PROFIBUS and DeviceNet. It is ideal for tank weighing applications providing process control interface and data management. These same features are also available when used with applications using bench scales and floor scales. The display includes a multi-colored multi-segmented fan graph for fast visual awareness for checkweighing. Also the indicator can perform counting functions, peak weight functions, and act as a remote display.

In addition to connecting to network interfaces, the Model E 1065 can connect to printers, remote display, computers and one SensorComm. There are three setpoint control outputs and it can accommodate three foot switch inputs for Zero, Print, Tare, Units, F1, Start and Stop.

About This Manual

Major sections of this manual are headed by titles in a black bar like *Introduction* above. Subheadings appear in the left column. Instructions and text appear on the right side of the page. Occasionally notes, tips, and special instructions appear in the left column.

Unpacking and Setup

Unpack your indicator and check for any shipping damage. If shipping damage is found, save all packing materials and contact the shipping company immediately.

1. Use the included material and install the indicator into an IP54 enclosure.
2. Connect all necessary cables to the appropriate connector on the back of the indicator. See Figure 1. The function of each connector and pinout is clearly marked.



Attention

Always plug the Model E1065 into an easily accessible, grounded outlet of the appropriate voltage. Never use the unit without an appropriate earth-ground connection.

Any computer based system should have a separate, grounded power circuit. We recommend one for the Model E1065.

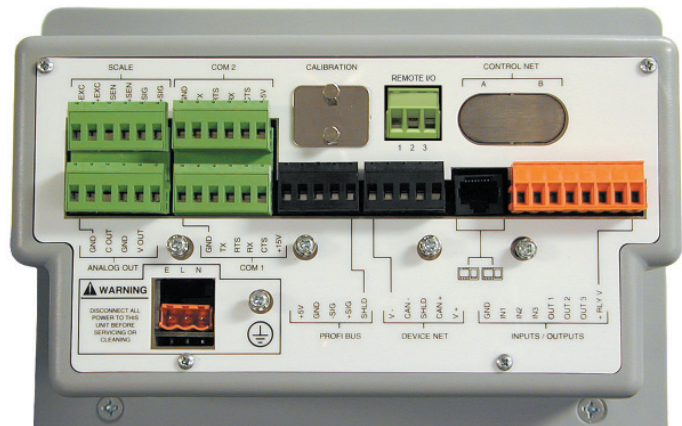



Figure 1
Connection panel on the E1065

3. Plug the power transformer into an appropriate wall outlet.
4. Press and release the  switch to turn the indicator on.
5. The indicator powers up in normal operation mode.

Front Panel

The front panel, shown in Figure 2, consists of the keys and display.

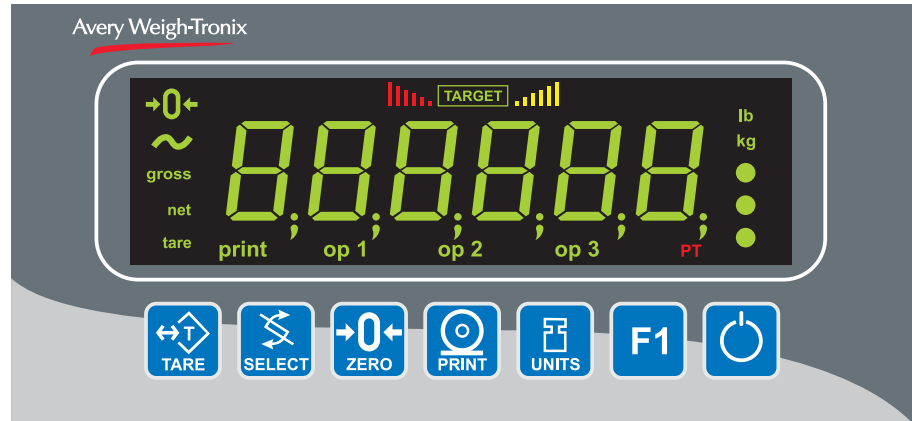


Figure 2
E1065 front panel

Keys

Never press a key with anything but your finger. Damage to the overlay may result if sharp or rough objects are used.

There are seven keys on the front panel. Their functions are listed below.



Press the **TARE** key to perform a tare function. Also acts as a left arrow key when in the User menu.



Press the **SELECT** key to toggle between Gross, Net, Tare, Count, Gross Accumulator, Net Accumulator, Transaction Counter, Piece Weight, and Peak. Dependent on the current application. Also acts as an up arrow key when in the User menu.



Press the **ZERO** key to zero the display. Also acts as an Escape key when in the User menu.



Press the **PRINT** key to send information to a peripheral device through the Comm port. Also acts as a down arrow key when in the User menu.



Press the **UNITS** key to scroll through the available units of measure while in normal operating mode. Also acts as a right arrow key when in the User menu.



Press the **F1** key to select application specific choices. Also acts as an ENTER key in the User menu. Press and hold to access the cutoffs (trips) menu.



Press and release the **ON/OFF** key to turn the unit on. Press and hold the key until the unit turns off.

Annunciators

There are several annunciators around the edge of the display. Figure 3 explains each one.

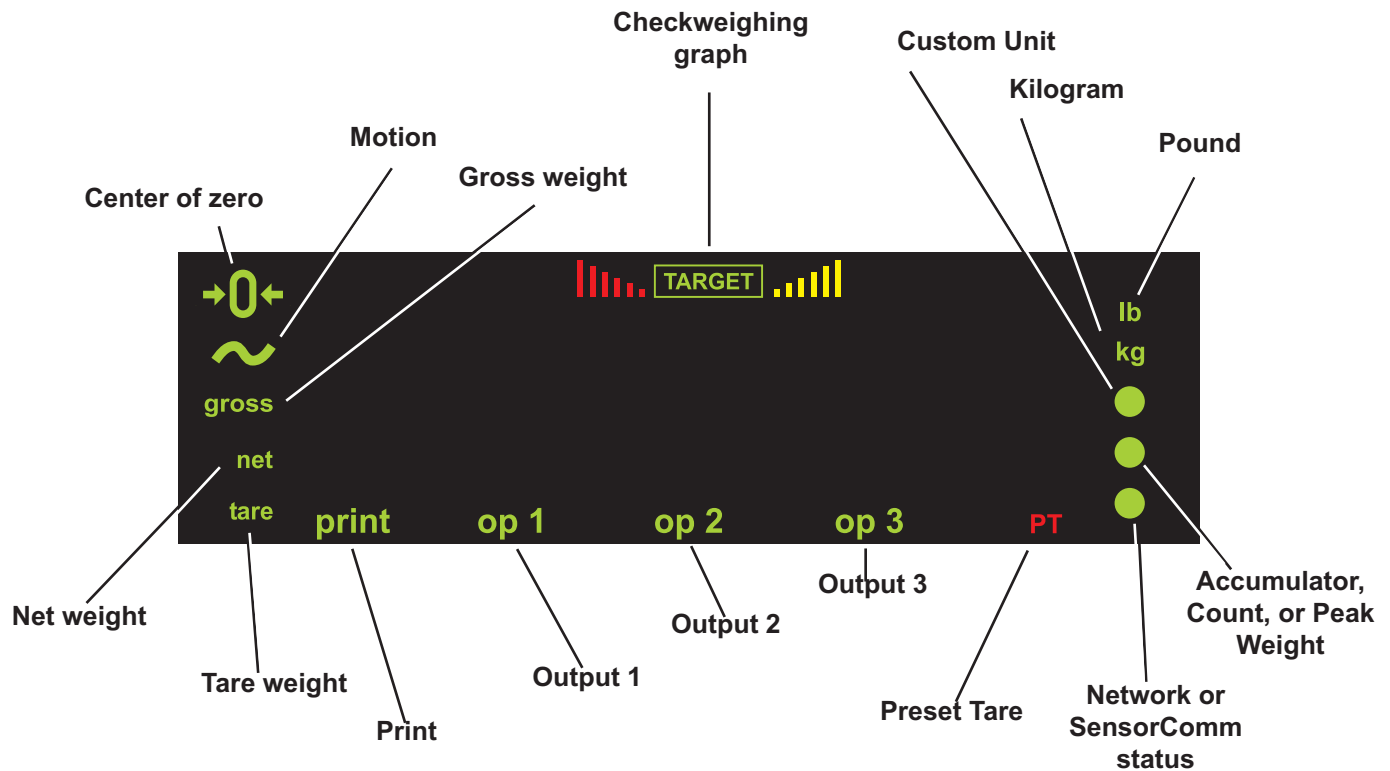


Figure 3
Annunciators

Bottom LED color

(Chosen as **SCOM** or **Network** in configuration. Can't be both.)

SCOM:

Red – a cell has been ghosted. Check the ghost log.

Green – a sensorcomm error has occurred. Check the error log.

Off – Scale is functioning normally.

Network 1 or 2:

Red – A network error has occurred. Check the network settings on the indicator and PLC, and reboot the indicator.

Green – The network connection has been established.

Amber – The network is ready for a connection, but no connection has been established.

Center of Zero	Lights when weight on the scale is within the zero range
Motion	Lights during scale motion. Goes out when scale is stable
Gross	Lights when gross weight is displayed
Net	Lights when net weight is displayed
Tare	Lights when tare weight is displayed
Print	Lights when print format sent through serial port
OP 1	Lights when output one is activated
OP 2	Lights when output two is activated
OP 3	Lights when output three is activated
PT	Lights when preset tare is active
Network & SensorComm Status	This is configurable to light to show status of the Network 1, Network 2 or SensorComm. See note at left.
Accumulator, Count	Lights when an accumulation occurs and while in the count and peak applications
Custom Unit	Lights when a custom unit of measure is active
KG	Lights when kilograms is the active unit of measure
LB	Lights when pounds is the active unit of measure
Checkweigher	Lights when checkweighing application is active

Numeric Entry Procedure

Some keys have alternate functions when you need to enter numbers. See Figure 4.

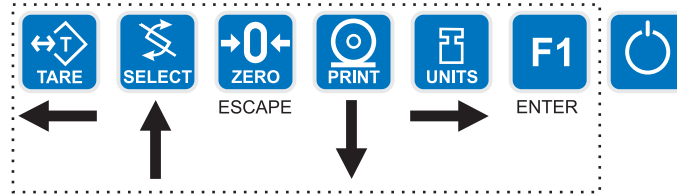


Figure 4
Alternate key functions

*Press the **ZERO** key to terminate a value entry and leave the previous value, if any, active*

In screens where numeric entry is possible, choose the first digit using the UP or DOWN keys. Use the LEFT and RIGHT keys to advance or back-space through the entry. Press the **F1** key to accept an entry. Below is an example:

Example: To key in the number 507-

Repeatedly press the UP (**SELECT**) or DOWN (**PRINT**) key until 5 appears on the display.

Press the RIGHT (**UNITS**) key once to move cursor one space to the right.

Repeatedly press the UP (**SELECT**) or DOWN (**PRINT**) key until 0 appears on the display.

Press the RIGHT (**UNITS**) key once to move cursor one space to the right.

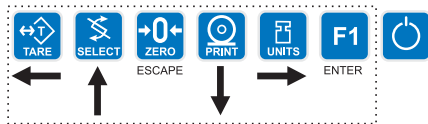
Repeatedly press the UP (**SELECT**) or DOWN (**PRINT**) key until 7 appears on the display.

Press the **F1** key to enter the value.

Menu Mode

User menu password is 111. You must key in the password within 10 seconds or the display returns to normal operation mode.

Choose the first digit using the UP or DOWN keys. Use the LEFT and RIGHT keys to advance or backspace through the entry.



The E1065 has a User menu you use to do the following:

- See software information
- Perform a display test
- Perform a button test
- Perform a serial port test
- Audit the number of configurations and calibrations performed

1. Access the User menu by pressing and holding the **ZERO** key for 3-5 seconds. Release the key when . . .

PASS_ is displayed.

2. Use the arrow keys to scroll in the User menu password = 111 and press **F1**. See note at left. Figure 5 shows a flowchart of the User menu items. Use the keys shown in the box in Figure 5 to navigate through the menu and choose the items you want.

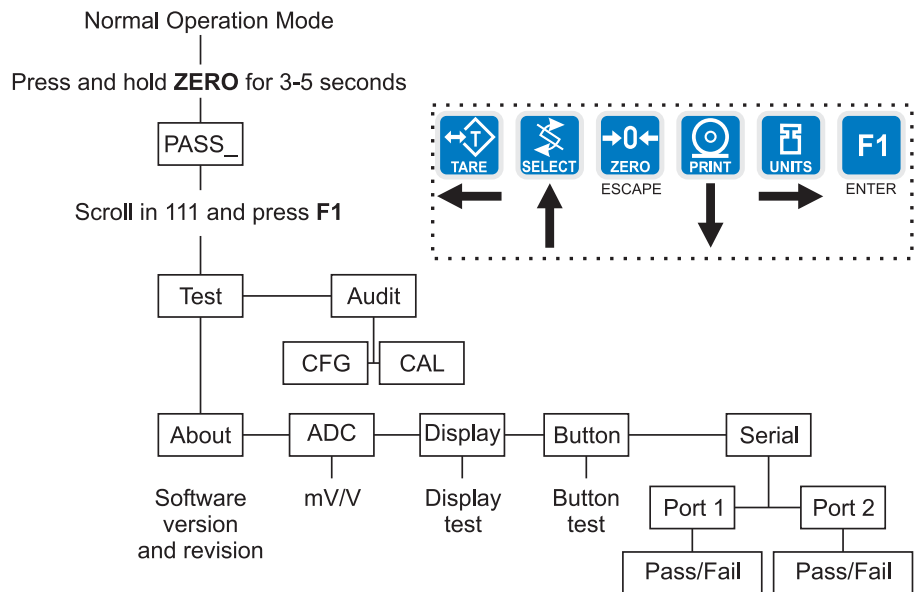


Figure 5
User menu flowchart

Specific instructions on the User menu appear in the section *Indicator Diagnostics* later in the manual.

Indicator Operations

The E1065 comes equipped with several weighing applications;

- Accumulator weighing (default setting)
- Batch weighing
- Checkweighing
- Counting
- Peak weighing

These different applications are activated using a password protected Service menu. See the *Service Manual* for instructions on changing applications.

The accumulator application comes as the default application. You can do gross weighments, tare/net weighments and accumulator functions. Below are instructions for each.

Gross Weighing

*To change unit of measure, press the **UNITS** key.*

To perform gross weighing, power up the unit and follow these steps:

1. Empty the scale and press **ZERO** key to zero the display. . .
0 is displayed.
2. Place item to be weighed on the scale. . .
Weight is displayed.

Tare/Net Weighing

*To clear a tare weight, remove all weight from the scale and press the **TARE** key.*

To perform a net weighment, power up the unit and follow these steps:

1. Empty the scale and press **ZERO** key to zero the display. . .
0 is displayed.
2. Place item to be tared on the scale. . .
Weight is displayed.
3. Press the **TARE** key. . .
0 is displayed and the NET annunciator lights.
4. Place material to be weighed on the scale. . .
Net weight of material is displayed.
5. Repeatedly press the **SELECT** key to scroll through gross, tare, and net modes. Remove the weight from the scale and press **TARE** to return to gross mode.

Accumulator Weighing

The Accumulator application comes as the default active application in the E1065.

You can use tare/net weighing with the accumulator application. The accumulator stores both gross and net totals for later recall.

*You must remove all weight from the scale to scroll through the items listed at right. With weight on the scale, repeatedly pressing the **SELECT** key will only show the gross, net and tare values.*

The accumulator is memory that collects individual weighments (gross and net) and stores the totals. These totals can be recalled at any time. The number of weighments included in the totals can be displayed and all information can be reviewed and deleted.

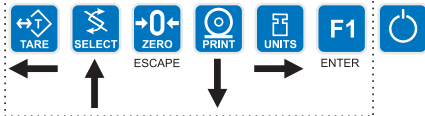
To use the accumulator, power up the unit and follow these steps:

1. Empty the scale and press **ZERO** key to zero the display. . .
0 is displayed.
2. Place item on the scale. .
Weight is displayed.
3. Press the **F1** or **PRINT** key to add weight to the accumulator. Pressing the **PRINT** key also prints the default print format . . .
A circle annunciator lights briefly on the right side of the display to show the weight was accumulated.
4. Remove weight from the scale. Weight must return to zero before another accumulation can be recorded.
5. Repeat 2 through 4 for each weighment you want to accumulate.
6. To review the accumulator total and the number of weighments, remove all weight from the scale and press the **SELECT** key repeatedly. . .
 - 1st press = Net weight displayed
 - 2nd press = Tare weight displayed
 - 3rd press = Display toggles between showing **ACCUM.** and gross total of all weighments
 - 4th press = Display toggles between showing **ACCUM.** and net total of all weighments
 - 5th press = Display toggles between showing **TOTAL** and number of weighments
 - 6th press = Display returns to gross weigh mode

You need the supervisor's password to clear the accumulator. See the *Service Manual* for instructions.

Using Cutoffs in the Accumulator Application

Choose the first digit using the UP or DOWN keys. Use the LEFT and RIGHT keys to advance or backspace through the entry.



If enabled, you can use the cutoff (trips) function while in the accumulator application. Cutoffs are enabled in a password protected menu. See the *Service Manual* for instructions. Follow these steps to set up to three cutoffs:

1. With the indicator powered up, press and hold the **F1** key until. . .
OP1 is displayed.
2. Press the **PRINT** key. . .
The current value for OP1 is displayed.
3. Press **F1** to accept this value
OR
Key in a value using the numeric entry procedure, see note at left, and press the **F1** key.
OP1 is displayed.
4. Scroll through all three outputs by using the **TARE** or **UNITS** key.
5. Repeat steps 2 and 3 for each output.
6. Press **ZERO** key. . .
SAVE is displayed.
7. Press **F1** to save the changes or **ZERO** to abort the changes. . .
The unit returns to normal operation mode with the saved outputs active.
8. As you apply weight to the scale, output one will activate below its setpoint and deactivate above its setpoint. The same is true for the other two setpoints. Each output's annunciator will light on the display when the cutoff (trip) value is reached.

Batch Weighing

After a batch has been started, it can be aborted by pressing the F1 key.

When in Manual Mode, you must press F1 during ingredient filling to abort the operation. If you press F1 during a configured delay time, the key press is ignored. An F1 press after the delay time will start the next ingredient.

Pulse count requires optional feature.

This section applies if your indicator has the batching application active.

The batching application has a recipe with up to eight ingredients. In the recipe, the following items are set.

Batch type can be by weight, percentage or gross. Each explained below.

Weight	Batches are all the same size and the weight of each ingredient is predetermined by the recipe.
Percentage	Batch size is chosen by the operator and each ingredient is determined by the percentage set in the recipe.
Gross	Each ingredient runs until the gross weight on the scale reaches the value that was set, regardless of the weight on the scale when the batch was started.

Batching mode can be Manual, Automatic, Filling or Continuous.

Manual	If the recipe is set up for manual mode, you press the F1 key to start the batch and you need to press the F1 key each time a setpoint is reached to activate the next ingredient output. See important note at left.
Automatic	If the recipe is set up for automatic mode, you press the F1 key to start the batch and each output is activated and deactivated automatically by the indicator.
Filling	In FILL mode, any recipe that has been setup is ignored. The filling process is run based on the values set for the cutoffs. In order to complete the filling process, at least one cutoff must be enabled.

Press the **F1** key to start the filling process.

- If cutoff 1 is enabled, and the net weight on the scale is below the value of the cutoff, cutoff 1 will come on.
 - If cutoff 2 is enabled, and the net weight on the scale is below the value of the cutoff, cutoff 2 will come on.
 - If cutoff 3 is enabled, and the net weight on the scale is below the value of the cutoff, cutoff 3 will come on.
- Each cutoff will remain on until its cutoff value is met.
- Press the **F1** key again to restart the filling process.

Continuous	Continuous batching mode. This mode is very close to the Auto mode but, in continuous mode another batch is started immediately after the previous batch has finished. In auto mode the user must press the F1 key to start each batch.
-------------------	--

The *Basis* of each ingredient can be weight, time or pulse counts.

Weight	If an ingredient basis is weight, the output activates at the appropriate time and deactivates when the weight set in the recipe is reached.
Time	If an ingredient basis is time, the output activates for the time set in the recipe and then deactivates.
Counts	If an ingredient basis is counts from a pulse counter, the output activates for the value based on pulse count units set in the recipe and then deactivates.

In filling mode the process can be changed by changing the value(s) of the cutoffs.

Follow these steps to set up the three outputs:

1. With the indicator powered up, press and hold the **F1** key until. . .
OP1 is displayed.
2. Press the **PRINT** key. . .
The current value for OP1 is displayed.
3. Press **F1** to accept this value (or ZERO to abort) or key in a value, see note at left, and press the **F1** key.
OP1 is displayed.
4. Scroll through all three outputs by using the left and right arrow keys.
5. Repeat steps 2 and 3 for each output.
6. Press **ZERO** key to exit the cutoffs setup.
7. Press **F1** to save the changes or **ZERO** to abort the changes

In automatic or manual mode, a recipe must be setup. The recipe values are set in a password protected menu. However, a shortcut can be used to change the amount of each ingredient.

To access this shortcut menu:

1. Press and hold the **F1** key until
ingr 1 is displayed
2. Press the **PRINT** key to change the amount of ingredient 1 to batch.
A numerical value is displayed.
3. Scroll in a new value and press **F1** or press **F1** to accept the value that is shown. The **UNITS** and **TARE** keys allow you to access all 8 ingredients.
4. When finished, press the **ZERO** key to escape from this menu.
Save will be displayed.
5. To save the changes you made, press **F1**. To exit without saving, press the **ZERO** key.

The batch type, batch mode, and ingredient basis cannot be changed through this shortcut. See the Service Manual for instructions on creating a recipe.

Auto Batching by Weight

Each ingredient may have a built in delay time between deactivation of one ingredient and activation of the next.

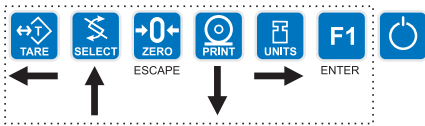
Following is an example of batching for a recipe set as follows:

Batch type: Constant
Batch mode: Automatic
Basis: Weight

1. With the indicator powered up and the scale empty, zero the scale by pressing the **ZERO** key. . .
 0 is displayed.
2. Press the **F1** key. . .
 The OP1 annunciator lights and output 1 is activated.
3. Add weight to the scale. . .
 When the weight reaches the setpoint for ingredient 1, OP1 annunciator light goes out, OP2 annunciator lights and output 2 activates. See note at left.
4. Add weight to the scale. . .
 When the weight reaches the setpoint for ingredient 2, OP2 annunciator light goes out, OP3 annunciator lights and output 3 activates. See note at left.
5. Add weight to the scale. . .
 When the weight reaches the setpoint for ingredient 3, OP3 annunciator light goes out and output 3 deactivates.
6. Empty the scale and repeat steps 1-5 for the next batch.

Manual Batching by Percentage

Choose the first digit using the UP or DOWN keys. Use the LEFT and RIGHT keys to advance or backspace through the entry.



Following is an example of batching for a recipe set as follows:

Batch type: Percentage
Batch mode: Manual
Basis: Weight

1. With the indicator powered up and the scale empty, zero the scale by pressing the **ZERO** key. . .
0 is displayed.
2. Press the **F1** key. . .
The OP1 annunciator lights and output 1 is activated.
3. Press the **F1** key to accept the batch size
OR
Key in a new batch size, see note at left, and press the **F1** key. . .
The OP1 annunciator lights and output 1 is activated.
4. Add weight to the scale. . .
When the weight reaches the percentage of the batch size set in the recipe for ingredient 1, OP1 annunciator light goes out.
5. Wait for the delay to elapse and then press the **F1** key. . .
OP2 annunciator lights and output 2 activates.
6. Add weight to the scale. . .
When the weight reaches the percentage of the batch size set in the recipe for ingredient 2, OP2 annunciator light goes out.
7. Press the **F1** key. . .
OP3 annunciator lights and output 3 activates.
8. Add weight to the scale. . .
When the weight reaches the percentage of the batch size set in the recipe for ingredient 3, OP3 annunciator light goes out and output 3 deactivates.
9. Empty the scale and repeat steps 1-8 for the next batch.

Checkweighing

The smallest upper limit segment of the fan graph, shown in Figure 6, will be lit when in the checkweighing mode as a reminder that this application is active.

The graph is based off of net weight so if a tare is active only the net weight is considered for checkweighing. If there is no tare, gross weight is used as the basis for the graph.

This section applies if your indicator has the checkweighing application active. Applications are activated through a password protected menu. See the *Service Manual* for instructions.

Checkweighing allows a quick, visual check of the acceptability or unacceptability of an item's weight.

You set your target weight in one of two ways. It depends on how your indicator is configured. The choice is made in the password protected Supervisor menu which is explained in the *Service Manual*.

Your unit will be configured with limits mode or sample mode. Each are explained below;

Limits Mode Enter the upper and lower limits for the item and the indicator will use those values to run the display. See Figure 6.

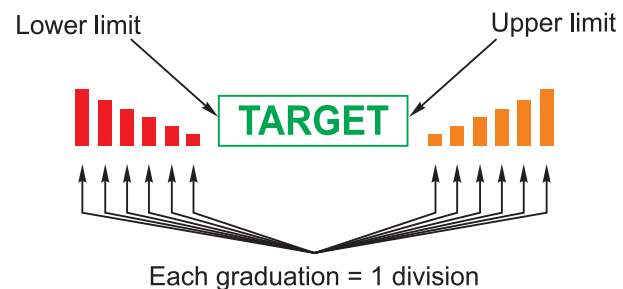


Figure 6
Limits mode

Sample Mode Place a correct weight “product” on the scale and press the **F1** key. The indicator will use this weight to run the display. Upper and lower limits will automatically be 1 division above and below the target weight respectively. Figure 7 shows how the graphic display works in Sample mode. Each graduation is equal to 1 scale division. The TARGET light stays lit if weight is ± 1 division of the target weight.

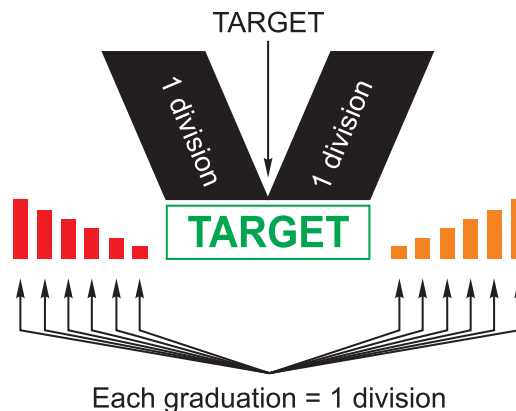
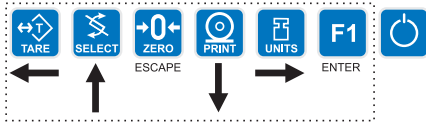


Figure 7
Sample mode

Directions for using each mode follows.

Limits Mode: Entering Upper and Lower Limits

Choose the first digit using the UP or DOWN keys. Use the LEFT and RIGHT keys to advance or backspace through the entry.



You can repeatedly press the **SELECT** key to view the items listed in the Sample and Limits modes on this page.

Performing a Checkweighment in Limits Mode

Sample Mode: Using Product to Set Target Weight

Follow these steps to setup and use the checkweigher in limits mode:

1. Empty the scale, press the **ZERO** key to zero the display, then press the **F1** key. . .
Hi is displayed.
2. Key in the upper weight limit using the numeric entry procedure. Press the **F1** key to accept the value or **ESC** to skip. . .
LO is displayed.
3. Key in the lower weight limit using the numeric entry procedure. Press the **F1** key to accept the value. . .
4. Place item(s) on the scale and the display will show if the weight is over, under or acceptable based on the limits you have set.

You can repeatedly press the **SELECT** key to view the following from the gross weight display:

- 1st press** Net annunciator lights and net weight is displayed.
- 2nd press** Tare annunciator lights and tare weight is displayed.
- 3rd press** Display toggles between **HI** and the upper weight tolerance, in the current unit of measure.
- 4th press** Display toggles between **LO** and the lower weight tolerance, in the current unit of measure.
- 5th press** Display returns to gross weighing mode.

1. With your target weight set as described above, place your item on the scale. . .
If the weight is within the upper and lower tolerances you set, the **TARGET** annunciator lights. If not, the upper or lower segments will be lit.
2. Repeat step 1 for all products of this weight.

Follow these steps to setup and use the checkweigher in sample mode:

1. Zero the empty scale then place a sample of the correct weight on the scale. . .
Weight is displayed.
2. Press the **F1** key.
The weight is captured, the display reads **0** (net weight) and your indicator is ready to use as a checkweigher. The target weight will be the same as your sample item and the target will stay lit whenever an item's weight is within ± 1 division of the target weight.

You can repeatedly press the **SELECT** key to view the following from the gross weight display:

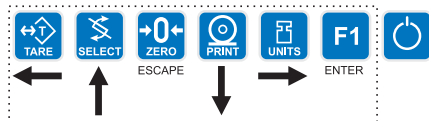
- 1st press** Net annunciator lights and net weight is displayed.
- 2nd press** Tare annunciator lights and tare weight is displayed.
- 3rd press** Display toggles between **HI** and the upper weight tolerance, in the current unit of measure. This will always be one division.
- 4th press** Display toggles between **LO** and the lower weight tolerance, in the current unit of measure. This will always be one division.
- 5th press** Display returns to gross weighing mode.

Performing a Checkweighment in Sample Mode

Using Cutoffs in Checkweigher Application

Standard Cutoffs

Choose the first digit using the UP or DOWN keys. Use the LEFT and RIGHT keys to advance or backspace through the entry.



Target Cutoffs

1. With your target weight set as described above, place your item on the scale. . .
If the weight is correct, **0** is displayed and the TARGET annunciator lights. If the weight varies from the target value, upper or lower segments may be lit and the weight will show a plus or minus weight reading for the deviation from the target weight.
2. Repeat step 1 for all products of this weight.

If enabled, you can use the cutoff (trips) function while in the checkweigher application. Cutoffs are enabled in a password protected menu. See the Service Manual for instructions. Follow these steps to set up to three outputs:

1. With the indicator powered up in normal checkweighing mode, press and hold the **F1** key until. . .
OP1 is displayed.
2. Press the **PRINT** key. . .
The current value for OP1 is displayed.
3. Press **F1** to accept this value
OR
Key in a value and press the **F1** key.
OP1 is displayed.
4. Scroll through all three outputs by using the left and right arrow keys.
5. Repeat steps 2 and 3 for each output.
6. Press **ESC** key to exit the cutoffs setup. . .
7. As you apply weight to the scale, output one will activate below its setpoint and deactivate above its setpoint. The same is true for the other two setpoints. Each output's annunciator will light on the display when the cutoff (trip) value is reached.

If cutoffs are configured for Target mode in the Supervisor menu, cutoffs will follow the limits and accept values. This means there is no additional configuration required.

Counting

This section applies if your indicator has the counting application active. Applications are activated through a password protected menu. See the *Service Manual* for instructions.

There are two types of sampling; bulk and dribble. These are selected in a password protected menu. See the *Service Manual* for instructions.

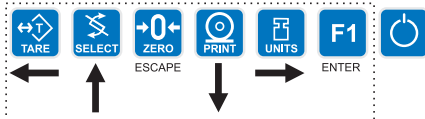
Bulk sampling In this sampling method you place the specified number of items on the scale all at once (in bulk) and the scale automatically starts to calculate piece weight and then shows the count.

Dribble sampling In this sampling method you can count out the specified number of items onto the scale and when you are ready, press the **F1** key and the scale starts to calculate piece weight and then shows the count.

Each method is described below.

Bulk Sampling

Choose the first digit using the UP or DOWN keys. Use the LEFT and RIGHT keys to advance or backspace through the entry.



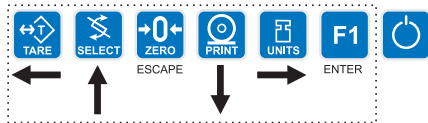
The display is showing counts when the green annunciator on the right of the display is lit.



1. In gross weight mode, press the **F1** key. . .
A numeric value is displayed. This is the current sample size.
2. Accept the current sample size by pressing **F1**
OR
Enter a new sample size (see note at left) and press **F1**. . .
Zeroin is briefly displayed. This shows the indicator is zeroing itself. **Add** is then displayed.
3. Place the correct sample size on the scale all at the same time.
If the sample meets the minimum sample requirements, **Busy** is briefly displayed, followed by one of two possible outcomes:
 - a. If the weight is stable, the display will show the correct number of parts on the scale and the green annunciator is lit.
 - b. If the sample was unstable, **Abort** is displayed and the display returns to gross weight mode. Repeat steps 1-3 using a larger sample size.
4. Place the parts on the scale to be counted.
5. You can accumulate the counts and track the number of transactions by pressing the **PRINT** key while in count mode. See *Displaying Count Information* about displaying this information.

Dribble Sampling

Choose the first digit using the UP or DOWN keys. Use the LEFT and RIGHT keys to advance or backspace through the entry.



Displaying Count Information

1. In gross weight mode, press the **F1** key. . .
A numeric value is displayed. This is the current sample size.
2. Accept the current sample size by pressing **F1**
OR
Enter a new sample size (see note at left) and press **F1**. . .
Zeroin is briefly displayed. This shows the indicator is zeroing itself. **Add** is then displayed.
3. Place the correct sample size on the scale and press the **F1** key. **Busy** is briefly displayed, followed by one of two possible outcomes:
 - a. If the sample met the minimum sample requirements and stable, the display will show the correct number of parts on the scale and the green annunciator is lit.
 - b. If the sample size was not large enough or the weight was unstable, **Abort** is displayed and the display returns to gross weight mode. Repeat steps 1-3 using a larger sample size.
4. Place the parts on the scale to be counted.
5. You can accumulate the counts and track the number of transactions by pressing the **PRINT** key while in count mode. See *Displaying Count Information* below about displaying this information.

If the piece weight of the item being counted is known, you can manually enter the piece weight by keying in the weight with the keypad and pressing and holding the **F1** key.

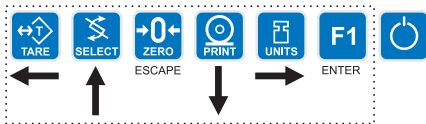
You can scroll through the following information by using the **SELECT** key:

From count display -

- press **SELECT** - The word **Piece** and the piece weight toggle on the display.
- press **SELECT** - The word **Cnttot** and count total toggle on the display.
- press **SELECT** - The word **Total** and the total number of count transactions toggle on the display.
- press **SELECT** - Gross annunciator lights and the gross weight is displayed.
- press **SELECT** - Net annunciator lights and the net weight is displayed.
- press **SELECT** - Tare annunciator lights and the tare weight is displayed.
- press **SELECT** - The counts display is shown again.

Using Cutoffs in the Counting Application

Choose the first digit using the UP or DOWN keys. Use the LEFT and RIGHT keys to advance or backspace through the entry.



If enabled, you can use the cutoff (trips) function while in the counting application. Cutoffs are enabled in a password protected menu. See the Service Manual for instructions. Follow these steps to set up to three outputs:

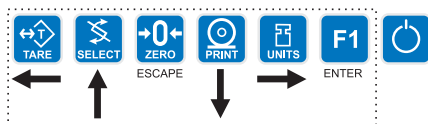
1. With the indicator powered up, press and hold the **F1** key until. . .
OP1 is displayed.
2. Press the **PRINT** key. . .
The current value for OP1 is displayed.
3. Press **F1** to accept this value (or **ZERO** to abort)
OR
Key in a value, see note at left, and press the **F1** key.
OP1 is displayed.
4. Scroll through all three outputs by using the left and right arrow keys.
5. Repeat steps 2 and 3 for each output.
6. Press **ZERO** key to exit the cutoffs setup. . .
7. As you apply weight to the scale, output one will activate below its setpoint and deactivate above its setpoint. The same is true for the other two setpoints. Each output's annunciator will light on the display when the cutoff (trip) value is reached.

Peak Weighing



Using Cutoffs

Choose the first digit using the UP or DOWN keys. Use the LEFT and RIGHT keys to advance or backspace through the entry.



This section applies if your indicator has the Peak application active.

Only the highest stable weight applied to the scale is displayed in the Peak application when the peak weight value is selected to be displayed. Peak weight is designated by the green peak LED annunciator. See illustration at left.

As a reminder that you are in peak mode, a green annunciator is lit to the right of the weight display.

1. Add weight to the scale. . .
Weight is displayed.
2. Remove weight. . .
Peak weight is displayed.
3. To clear the peak value, be sure scale is empty and press the **F1** key. . .
0 is displayed.
4. Repeat steps 1-3.
5. Press the **SELECT** key to cycle through Gross, Tare, Net and Peak.

If enabled, you can use the cutoff (trips) function while in the peak application. Cutoffs are enabled in a password protected menu. See the Service Manual for instructions. Follow these steps to set up to three outputs:

1. With the indicator powered up, press and hold the **F1** key until. . .
OP1 is displayed.
2. Press the **PRINT** key. . .
The current value for OP1 is displayed.
3. Press **F1** to accept this value (or **ZERO** to abort)
OR
Key in a value, see note at left, and press the **F1** key.
OP1 is displayed.
4. Scroll through all three outputs by using the left and right arrow keys.
5. Repeat steps 2 and 3 for each output.
6. Press **ZERO** key to exit the cutoffs setup. . .
7. Press **F1** to save the changes or **ZERO** to abort the changes. . .
The unit returns to checkweigher mode with the saved outputs active.
8. As you apply weight to the scale, output one will activate below its setpoint and deactivate above its setpoint. The same is true for the other two setpoints. Each output's annunciator will light on the display when the cutoff (trip) value is reached.
9. As weight is removed the displayed weight will remain unchanged due to being in peak mode but the OP annunciators will go out as each cutoff is reached.

Communications

The default serial port parameters are 9600 baud, 8 databits, no parity and 1 stop bit.

Stop bits for the serial communication are preset to 1 stop bit. This is not configurable.

The E1065 provides an RS-232 output for data transmission to a peripheral device. Refer to the Service Manual for RS-232 interface connections.

If your indicator has a peripheral device connected, from the gross/net weighing mode press the **PRINT** key to transmit the selected output(s).

The **PRINT** annunciator will illuminate while data is transmitted and the data configured to be printed will be output to the printer.

Print Format #1 for general weighing application

G 1234.56 lb<CR><LF>

T 34.56 lb<CR><LF>

N 1200.00 lb<CR><LF>

Print Format #1 for counting application





Count: 12230

Print Format #1 for peak application

12230 lb<CR>

Error Messages

The following are displays you may see if problems occur or if invalid operations are attempted with your indicator:

Display	Description
	Over-range weight.
	Under-range weight.
	The unit cannot perform a function.
	Displayed while a key is pressed when attempting to modify a sealed selection without edit privileges.

Indicator Diagnostics

Testing Indicator Functions

The user menu lets you test various functions of the indicator. The user menu is shown in Figure 8. Instructions for using the menu are found below.

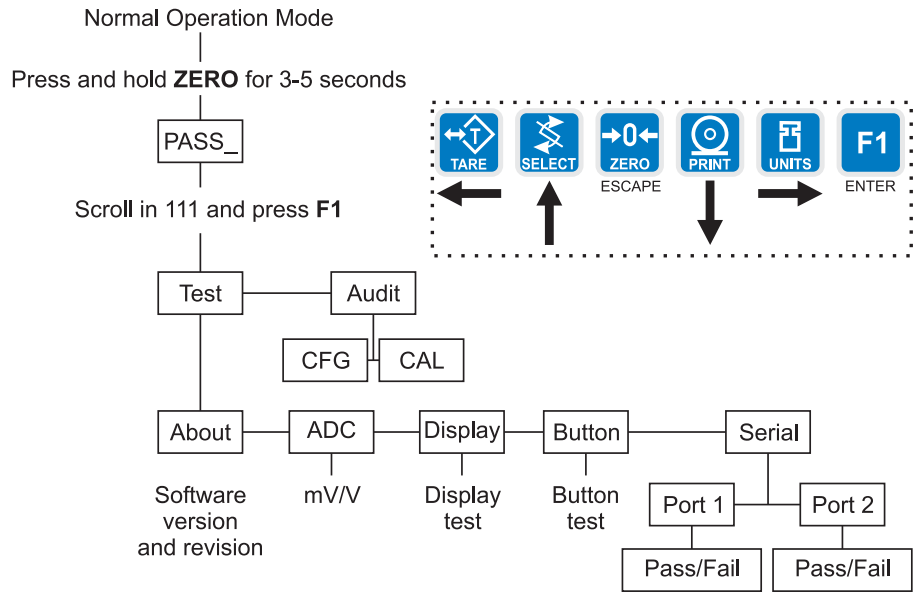
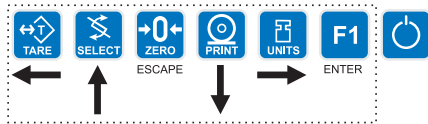


Figure 8
User Menu



Choose the first digit using the **UP** or **DOWN** keys. Use the **LEFT** and **RIGHT** keys to advance or backspace through the entry.

1. Access the User menu by pressing and holding the **ZERO** key for 3-5 seconds.
PASS_ is displayed.
2. Key in the User menu password (111) and press **F1**.
TEST is displayed.
3. Press the **PRINT** key.
ABOUT is displayed. Press the **PRINT** key then the **UNITS** key to view the part number and revision level for the software found in your indicator.
Press **SELECT** key to return to **ABOUT**.
4. Press the **UNITS** key. . .
ADC is displayed. This is the mV/V output of the connected analog scale.
5. Press the **PRINT** key. . .
The mV/V value is displayed. This value should increase as weight is applied to the scale

6. Press the **SELECT** key. . .
ADC is displayed.
7. Press the **UNITS** key. . .
DISP is displayed. This is the display test item.
8. Press the **PRINT** key to perform a dynamic test of the display. . .
All parts of the display flash.
9. Press the **ZERO** key to stop the test. . .
The display flashes a couple more times and then **DISP** is shown.
10. Press the **UNITS** key. . .
BUTTON is displayed. This is the button test item.
11. Press the **PRINT** key to perform a button test. Each key you press will be reflected on the display screen to confirm the button is functioning correctly. The **ZERO** key is excluded from this test. It is used to stop the testing and return to the menu item
12. Press **ZERO** key to stop the button test.
BUTTON is displayed.
13. Press the **UNITS** key. . .
SERIAL is displayed. This is the serial test item.
14. Press the **PRINT** key to access the serial test.
PORT1 is displayed. If you jumper the transmit and receive lines on the serial port and press the **PRINT** key, the display should show **PASS**. If there is a problem the display will show **FAIL**.
15. Press the **SELECT** key after checking the port function. . .
PORT1 is displayed.
16. Press the **UNITS** key. . .
PORT 2 is displayed. Repeat the test from step 14 to check the port.
17. Press the **SELECT** key twice to exit the serial test.
SERIAL is displayed.
18. Press the **SELECT** key. . .
TEST is displayed.
19. Press the **UNITS** key. . .
AUDIT is displayed.

20. Press the **PRINT** key. . .
CFG is displayed. This stands for the configuration audit counter.
 21. Press the **PRINT** key to see the number of times the configuration has been altered on this indicator.
 22. Press the **SELECT** key. . .
CFG is displayed.
 23. Press the **UNITS** key. . .
CAL is displayed. This stands for the calibration audit counter.
 24. Press the **PRINT** key. . .
The number of times the indicator has been calibrated is displayed.
 25. Press the **ZERO** key twice. . .
 26. The display returns to normal operation mode.
- This completes the User menu.

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