Operator Manual

OMEGA SERIES
COUNTING SCALE

51278
Revision 5 02/2018

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AMENDMENT RECORD

Omega Series Counting Scale
Document 51278

Operator Manual

Manufactured by **Fairbanks Scales**
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Kansas City, MO 64106

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Revision 1	02/12	Released document
Revision 2	04/13	Software Update
Revision 3	12/15	Updated Troubleshooting / Battery information
Revision 4	05/16	Updated Data Output information, updated printer 2844 to GC420d
Revision 5	02/18	Updated Programming Configuration

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SECTION 1: GENERAL INFORMATION

1.1. INTRODUCTION

The Omega Counting Scale is designed for both light capacity weighing applications and with a remote scale attached, applications up to 10,000 pounds. It is also designed for quick accurate counting of large quantities of like objects.

1.2. DESCRIPTION

The self-contained, weighing platform and instrument, Omega Counting Scale is designed in a rugged ABS plastic enclosure with a stainless steel weighing platform, perfect for almost any counting scale application. The extremely large 9.64" x 13.97" weighing platform can easily accommodate most parts counting needs. The Omega Counting Scale comes with a lead-acid rechargeable battery, remote scale connection, and dual RS232C serial ports. Serial port 2 is dedicated to barcode readers. Capacities range from 6 to 100 pounds.

1.3. TECHNICAL SPECIFICATIONS

1.3.1. Basic specification

Digital Display	LCD, height 0.6 in (14.5 mm) 6/7/7(Weight / Piece Weight / Total Pieces)
Platter Size	(W x H) 9.64 x 13.97 in (245 x 355 mm)
Dimensions	(W x L x H) 15.24 x 14.37 x 4.61 in (387 x 365 x 117 mm)
Net Weight(kg)	8.16 lbs (3.7 kg)
Operating	32˚F to +104˚F (0℃ to +40℃)
Relative Humidity	Less than 85%
Power	9V / 500mA, AC adapter; Built in 6V Rechargeable Battery •15-20 hours continuous •7-10 hours continuous with an external platform •14-16 hours recharge time
Interface	RS-232C, Serial 1 and Serial 2

1.3.2. Omega Series Scale specifications

Model	Omega Counting Scales				
Max. Capacity	6 lb / 3 kg	15 lb / 6 kg	30 lb / 15 kg	60 lb / 30 kg	100 lb / 50 kg
d =	0.0002 lb / 0.1 g	0.0005 lb / 0.2 g	0.001 lb / 0.5 g	0.002 lb / 1 g	0.002 lb / 1 g
Accuracy	1/30000	1/30000	1/30000	1/30000	1/50000

1.4. ACCESSORIES

Product No.	Description
31701	Bar code scanner (Symbol) with hands-free stand
31789	Dust cover (Qty. 5)
24482	GC420d series label printer
20483	GC420d printer cable (required when a GC420d printer is ordered.)
34052	PLU Manager Database Software (CD)

SECTION 2: CUSTOMER INFORMATION

2.1. USERS RESPONSIBILITY

It is the customer/operator's responsibility to ensure the equipment provided by Fairbanks is operated within the parameters of the equipment's specifications and protected from accidental or malicious damage.

W A R N I N G !

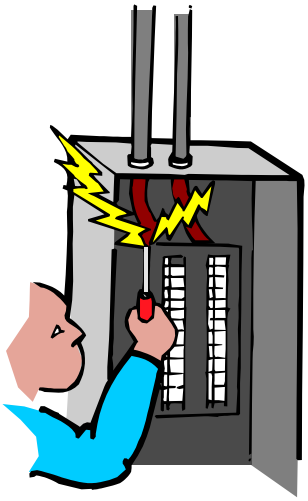
Absolutely NO physical, electrical or program modifications other than selection of standard options and accessories can be made by customers to this equipment

Repairs are performed by Fairbanks Scales Service Technicians and Authorized Distributor Personnel ONLY!

Failure to comply with this policy voids all implied and/or written warranties

★ ★ IMPORTANT NOTICE ★ ★

- All load cells, load cell cables and interconnecting cables used to connect all scale components shall be located **a minimum of thirty-six (36”) inches distance away** from all single and multiple phase high energy circuits and electric current carrying conductors.



- This includes digital weight indicators, junction boxes, and power supplies.
- This includes any peripheral devices, such as printers, remote displays, and auxiliary data entry devices.
- Also included is 120 volt AC, 240 volt AC, 480 volt AC and electric supply of higher voltage wiring runs and stations, AC power transformers, overhead or buried cables, electric distribution panels, electric motors, florescent and high intensity lighting which utilize ballast assemblies, electric heating equipment, traffic light wiring and power, and relay boxes.
- All scale components, including digital weight indicators and peripheral devices are not designed to operate on internal combustion engine driven electric generators and other similar equipment.
- Electric arc welding can severely damage scale components such as digital weight indicators, junction boxes, power supplies, and load cells.

NOTE: *For additional information, please contact a* **Fairbanks Scales Service Representative.**

SECTION 3: INSTALLATION

3.1. PRE-INSTALLATION CHECKOUT

1. Check that all components and accessories are on hand, and agree with the your order.

2. Remove all components from their packing material, checking to make certain that all parts are accounted for and no parts are damaged. Advise the shipper immediately, if damage has occurred. Order any parts necessary to replace those which have been damaged. Keep the shipping container and packing material for future use. Check the packing list.

3. Collect all necessary installation manuals or CD's for the instrument and accessories.

3.2. EQUIPMENT LOCATION

The Instrument should be positioned away from direct sunlight. Keep the scale platform away from air drafts as this will effect the accuracy of the count and weight.

3.3. SAFETY

As is the case with any material handling equipment, certain safety precautions should be observed during operation:

1. Never load the platform beyond its rated capacity. Refer to the rating on the serial number plate if in doubt.
2. Ensure that any structure which supports the platform is capable of withstanding the weight of the platform plus its rated capacity load.
3. Do not load the platform if there is any evidence of damage to the platform

W A R N I N G !

Never perform any wiring with the instrument turned on! Damage to system components can occur.

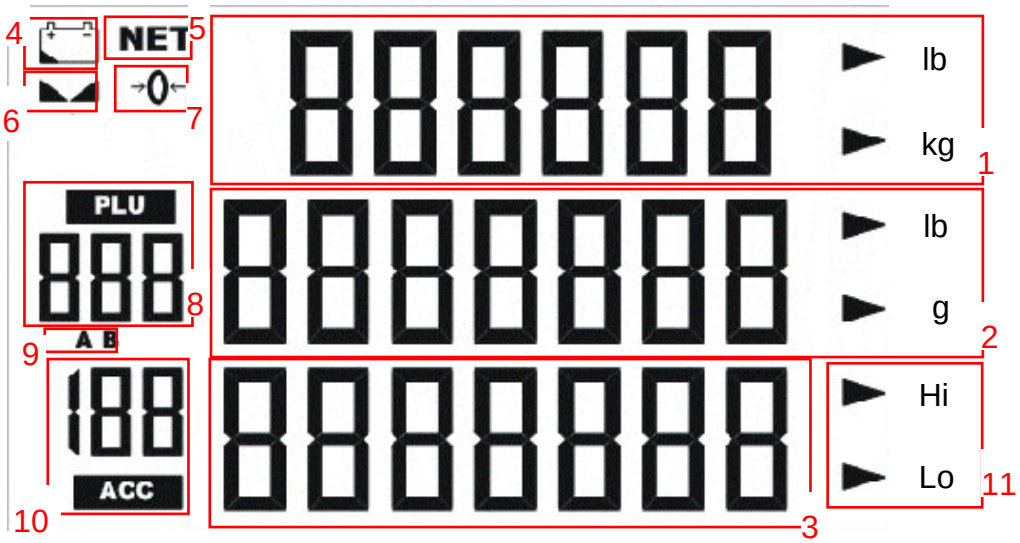
SECTION 4: USER OPERATIONS

4.1. INTRODUCTION

The Omega Series Counting Scale is a weighing device that displays the number of similar items in a group based upon the weight of a known sample. The counting feature of this scale calculates the average piece weight for the items by using the total weight of the sample and dividing it by the number of items in the sample. Using this average piece weight, the Omega Series Counting Scale will determine by calculating the number of items in a group by dividing the total weight by the average piece weight. All of these calculations are performed within the Omega Series Counting Scale internal program application which is performed automatically during the weighing process. The Omega Series Counting Scales provide a quick and accurate count of large quantities of similar objects.

4.2. FRONT PANEL DISPLAY AND KEY FUNCTIONS

4.2.1. LCD Display

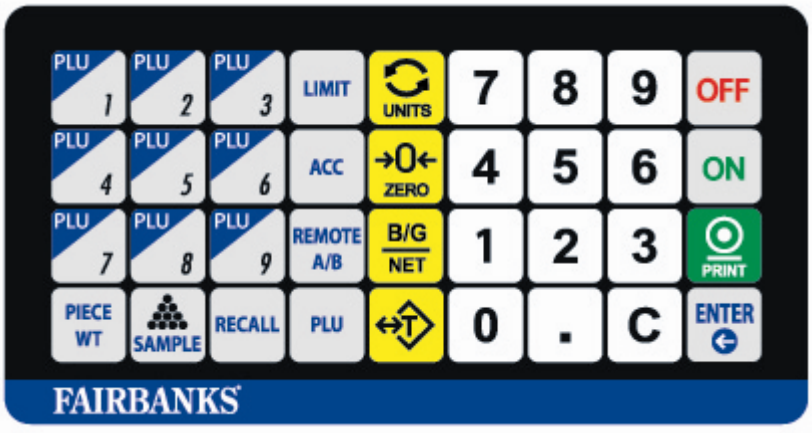


A. LCD Display Definitions

1. Actual Weight Display.
2. Second row displays Piece Weight. Also used as keypad input display.
3. The third row displays Piece Counts and abbreviated as PCS.
4. Indicates the battery power is low. A battery recharge or battery replacement is required for further operation.

5.	NET	Indicates the first row displays the Net weight after tare operation.
6.		Indicates the weight is stable.
7.	→0←	Indicates the weight is at zero.
8.	PLU 888	Displays the PLU number.
9.	AB	Indicates the selected scale.
10.	188 ACC	Displays the accumulated counting results in memory.
11.	Hi	Indicates that the upper Limit of piece counts or weight is set.
12.	Lo	Indicates that the lower Limit of piece counts or weight is set.

4.2.2. Display and Keypad



4.2.2. Keypad, continued

A. Keypad Functions

Key	Function
	Press to switch the scale OFF.
	Press to turn the scale ON.
	Initiates a print cycle. Note: Internal Programming must be activated.
	Press to confirm entry or selection.
	Press the numeric and decimal keys to input data such as piece weight, PLU no., etc.
	Press to change unit of measure. There are two units selections available. Pound (lb) or Kilogram (kg). The current unit selected is displayed on the right hand side of the actual weight display.
	Press to set the scale to zero.
	Press to display select Gross Weight, Net Weight, or Tare Weight.
	Press to enter the actual weight as the tare.
	Press to set the alarm for high and low limits for piece counts and piece weights.
	Press to add piece count and weight.
	Press to switch operation between scale A (main scale) and scale B (remote scale).
	Press to store, load, or modify a preset piece weight.
	PLU (Part Look Up) keys. Press to load preset piece weight data from the nine (9) PLU keys.

Key	Function
RECALL	Press to recall total piece count and total weight.
SAMPLE	Press to set up sample quantity. (Sample key: multiple sampling methods are available. (See ***Sampling***.)
PIECE WT	Press to set up piece weight. (See ***Piece Weight Setup***.)
C	Clears the selected data entry.

4.3. BASIC OPERATIONAL FUNCTIONS

4.3.1. General Weighing

The Omega Series Counting Scale will perform general weighing and counting functions.

1. Tare operation

Tare function is utilized when containers are used to hold the material. When this function is activated, Omega Series Counting Scale will subtract the container weight or Tare weight from the Gross weight and the end result will be the Net weight of the material.

This function is an auto tare operation only.

The Tare function may be enabled or disabled through service programming.

Note:

Tare weight is cleared by pressing the Tare key. ()

2. Alarm

The Alarm function provides a visual or audible indication of the count limit and weight limit when they are near the preset limit values.

3. Unit

There are two (2) available weight units in the Omega Series scales, pound (lb) and kilogram/ gram (kg / g). The operator uses the Units key () to switch between units.

4. External Scale

The Omega Series scales may be interfaced to one (1) external scale.

4.3.2. Counting

The Omega Counting Scale can count item piece by weight. If the weight of each item is known, the items are counted and numbered based upon the weight upon the scale. For example, if total weight on the scale is 10 pounds, the piece weight of each item is 0.10 pounds. The scale will perform an internal calculation and display 100 on the third pieces line of the display.

There are two ways to set the piece weight. One is ***setup piece weight by keypad input***. The other is ***setup piece weight by sampling***. (Reference to Sample operation)

The ACC key on keypad is used to save current data. It provides a convenient function to record the weight and piece data into memory. ***After any record is saved, the scale weighing pan must be cleared to ensure the weight is at zero for the next record.***

4.3.3. PLU

PLU (Part Look Up) is a memory lookup number comprised of the Piece Weight and Tare Weight. The scale can store up to 999 PLU's into memory. When you activate any PLU, the scale will replace the current Piece Weight and Tare Weight with the PLU selected from memory.

4.4. TARE OPERATIONS

4.4.1. Tare Entry with A Known Weight

1. In the normal weighing mode, place the item to tare on the scale pan.
2. Press the  key, and the tare weight has been stored.
3. **NET** is indicated on display.

Example：

1. Place 1 lb on the scale weighing pan.
2. Press  key. **NET** is indicated on the display and the displayed weight changes to 0.

Note:
The Tare weight cannot be set when the displayed weight is under or less than zero.

4.4.2. Manual Tare Entry Via The keypad

1. In the normal weighing mode, press the numeric keys to input the tare weight. (If the unit indicated is kg, the tare entry is in kg. If the unit indicated is lb, the tare entry is in lb.)
2. Press  , and the tare weight has been stored. (The Tare data will be cleared in 10 seconds if  is not pressed.)
3. **NET** is indicated on the display.

Example：

1. [.] [5] Enters the tare weight as 0.5 lb.
2. Press  key. **NET** is indicated on the display and the weight will display a minus (-) 0.5 lb.

Note:
A tare weight cannot be entered which is greater than the scale capacity.

4.5. SAMPLING OPERATION

4.5.1. Enter piece weight by direct keypad input

1. In the normal weighing mode, press the numeric and decimal keys ([1], [9], …) to input the piece weight.
2. Press the PIECE WT  key, and the piece weight has been stored. The piece weight data will be cleared in 10 seconds if the PIECE WT  key is not pressed.
3. The piece weight may be cleared by pressing the [C] key.

Example：

1. Press the [.] [5] keys, to enter piece weight as 0.5 lb.
2. Press [PIECE WT] and 0.5 shows on the second line.
3. The piece weight may be cleared by pressing the [C] key if an entry error was made. Repeat the process to correct.

4.5.2. Setup piece weight by sampling (quick set)

1. Put certain pieces of objects onto the scale pan.
2. In weighing mode, press the numeric and decimal keys ([1], [9], …) to enter the piece count.
3. Press [SAMPLE] to calculate the piece weight. The input data will be cleared in 10 seconds if [SAMPLE] is not pressed.
4. The piece weight may be cleared by pressing the [C] key.

Example：

1. Place 1 lb on the scale weighing pan.
2. Press [5] to set item number as 5. Its shows on the second line.
3. Press [SAMPLE] and the Omega Counting Scale will show the piece weight on the second line and the item count on the third line.
4. The piece weight may be cleared by pressing the [C] key if an entry error was made. Repeat the process to correct.

4.5.3. Setup piece weight by sampling (place item)

1. Make sure the piece weight is empty. The Omega Counting Scale will calculate the piece weight by the weight added and piece count number as listed below.
2. Press [SAMPLE], the second row of LCD shows SAMPLE and the third row of LCD shows default value as 100.
3. Press the numeric and decimal keys to enter the new sampling quantity.
4. Place objects of desired piece counts on the weighing pan. The piece weight will be calculated automatically in approximately 3 seconds or press the [ENTER] key to calculate immediately.

5. The piece weight may be cleared by pressing the C key.

Example：

1. Press SAMPLE to enter the sample mode.
2. Press 5 to set the manual entered piece count number as 5. It is displayed on the third line.
3. Place 1 lb on the scale weighing pan.
4. Wait 5 seconds after the weight is stable and the piece weight is displayed as 0.2 and the piece count is displayed as 5.

Note:

If weighing is performed on external scale, after the SAMPLE is pressed, the sampling job will be continued on main scale automatically when auto switch is configured in the scale counting parameter setting.

4.5.4. Setup piece weight by sampling (remove item)

1. Make sure the piece weight on the display is zero.
2. Place a item on the weighing pan. The Omega Counting Scale will calculate the piece weight based upon the change in weight..
3. Press SAMPLE, the second row of LCD displays SAMPLE and the third row of LCD displays the default value as 100.
4. Press the numeric keys to enter the new sampling quantity.
5. Remove the items to obtain the desired piece counts value from the weighing pan. The piece weight will be calculated automatically.
6. The piece weight may be cleared by pressing the C key.

Example：

1. Place 5 lbs on the scale weighing pan.
2. Press SAMPLE to into sample mode.
3. Press 5 to set item number as 5. It is displayed on the third line.
4. Remove the 1 lb item on scale weighing pan.
5. Wait for 5 seconds after the weight is stable. The piece weight displays 0.2 and piece count displays 5.

Note:

If weighing is performed on external scale, after the SAMPLE is pressed, the sampling job will be continued on main scale automatically when auto switch is configured in the scale counting parameter setting.

4.5.5. Setup piece weight by sampling (re-sample)

If the piece weight and weight has not been cleared, you may add or remove weight and press SAMPLE to calculate the piece weight again.

Example：

1. Place 1 lb on the scale weighing pan.
2. Press 5 to set the item number as 5. It is displayed on the second line.
3. Press SAMPLE and to display the piece weight on the second line and the piece count on the third line.
4. Press SAMPLE again to use piece count number 5 to sample again.

4.5.6. Auto re-sample operation

After a successful sampling operation, the scale will automatically sample again on the main scale for any new small weight. Placing new weight onto the scale weighing pan will automatically sample again.

Example：

1. Press SAMPLE to into sample mode.
2. Press 5 0 to set item number as 50. It is displayed on the third line.
3. Place 5 lb item on scale weighing pan.
4. Wait for 5 seconds until the weight stable. The piece weight displays 0.1 and piece count displays 50.
5. Place 1 lb item on scale pan.
6. Upon a stable weight, the scale will re-sample.

Note:

The new small weight should be less than half of the sampling weight. The item change must be greater than 5. If the weight change is larger than half of the sampling weight, auto re-sample will stop.

Note:
Auto Re-sample function can be disabled in Setup settings menu.

4.6. PLU (PART LOOK UP) OPERATION

PLU is a preset Piece Weight and Tare value. The scale can save up to 999 PLU items.

4.6.1. Setting PLU

A. Steps in setting PLU keys 1~9

1.Set up piece weight as in ***Sampling Operation*** section 4.5.

2.Press PLU, and PLU will begin flashing.

3.Select your desired PLU number from the direct PLU keys.

4.Press PLU to save your setting. PLU will stop flashing.

5.rEPLAC and YES is displayed. Press the ENTER key to accept the change or press C key to display rEPLAC and No. Press the ENTER key to disregard the changes.

Example：

1. Press . 5 PIECE WT to enter piece weight as 0.5 gram.
2. Press PLU key, now PLU is flashing on the display.
3. Press PLU 3 key, PLU indicator shows 3, and PLU now flashing.
4. Press PLU key, after the beep, the piece weight for PLU 3 is now set as 0.5 gram.
5. rEPLAC and YES is displayed. Press the ENTER key to accept the change or press C key to display rEPLAC and No. Press the ENTER key to disregard the changes.

Note:
If there is no data input in 30 seconds, the scale will exit the PLU setting mode and returns to the normal weighing mode.

4.6.1. Setting PLU, continued

B. Steps in setting PLU no.0~999

1. Set up the piece weight as in ***Sampling Operation*** section 4.5.
2. Press PLU and PLU will begin flashing on the display.
3. Press the numeric keys to select PLU number.
4. Press PLU to save your setting, PLU will stop flashing on the display.
5. rEPLAC and YES is displayed. Press the ENTER key to accept the change or press C key to display rEPLAC and No. Press the ENTER key to disregard the changes.

Example：

1. Press . 5 PIECE WT to enter piece weight as 0.5 gram.
2. Press PLU key, now PLU is flashing on the display.
3. Press 5 5 5 key. PLU indicator shows 555, and PLU is flashing.
4. Press PLU key, after the beep, the piece weight for PLU 555 is stored as 0.5 gram.
5. rEPLAC and YES is displayed. Press the ENTER key to accept the change or press C key to display rEPLAC and No. Press the ENTER key to disregard the changes.

Note:

If there is no data input in 30 seconds, the scale exits the PLU setting mode and returns to normal weighing mode.

4.6.2. Loading PLU

A. Steps in loading PLU no.1-9

1. In weighing mode, press any key from the direct PLU keys to access the PLU memory of the key's lower-right set.

Example:
Press PLU 3 one time, the 3rd PLU is loaded. The LCD shows 3 below the PLU indicator.

B. Steps in loading PLU no.0-999

1. In weighing mode, press and hold PLU until it emits a double beep then release.
2. Use the numeric keys to input the desired PLU number and press PLU to load the reference PLU.

Example:
1. Press and hold PLU key until double beep.
2. PLU indicator shows 000. PLU indicator flashing now.
3. Press 5 5 5 key. PLU indicator shows 555. PLU indicator flashing now.
4. The Piece Weight and Tare Weight of PLU 555 will load to OCS.
5. Press PLU key to complete PLU loading process.

Note:
If there is no data input in 30 seconds, scale exits the PLU setting mode and returns to normal weighing mode.

4.6.3. Modify PLU

1. When PLU is shown on the display, press PLU and the piece weight starts flashing.
2. Set up piece weight according to the previous section and press PLU to save your settings.
3. The Tare weight starts flashing.
4. Setup the Tare weight according to the previous section, if applicable, then press PLU.

4.6.3. Modify PLU, CONTINUED

5. rEPLAC is displayed on the Piece Weight line making sure you want to overwrite the previously stored value. Press [C] key to change from Yes to No. Press the [ENTER] key to overwrite.

Example:

1. Press [PLU 3] key to access the third PLU.
2. Press [PLU] key to access the PLU modify mode. Piece Weight is flashing now.
3. Press [.] [5] key. The Piece Weight 0.5.
4. Press [PLU] key..
5. Tare weight will blink.
6. Press .01234 keys.
7. Press [PLU] key.
8. rEPLAC is displayed on the Piece Weight line and YES is displayed on the Pieces line. Press the [C] key to change from YES to no. YES saves the changes into memory and no will not save the changes and will revert back to previously store settings. Press the [ENTER] key to accept setting.

4.7. MORE OPERATIONS

4.7.1. Accumulation

1. When there is a load on the scale weighing pan and piece weight has been input.

2. Press [ACC] key. When you hear a beep, 1 ACC lights up on the LCD, indicating a data has been recorded.

3. Clear the load and put another load on the scale pan. Set up the piece weight again.

4. Press [ACC] key. After a beep sound, 2 ACC lights up, indicating second data has been recorded.

4.7.1 Accumulation, continued

Example:

1. Clear scale weighing pan. Make sure the weight is 0. If weight is not 0, use zero key to reset.
2. Press [.] [5] [PIECE WT] key to set Piece Weight as 0.5 pounds.
3. Put 1 pound item on scale weighing pan and waiting for stable.
4. Press [ACC] key. After on beep sound, 

lights up.
5. Remove item on scale weighing pan. Make sure the weight is 0 again.
6. Press [.] [1] [PIECE WT] key to set Piece Weight as 0.1 pounds.
7. Put 2 pounds item on scale weighing pan and waiting for stable.
8. Press [ACC] key. After on beep sound, 

lights up.

Note:

After each recording, if the load on the weighing pan is not cleared, pressing [ACC] will result in a long beep and the scale will not be able to record the next weighing result.

Note:

The stored memory can memorize up to 180 weighing results.

4.7.2. Recall

A. Total mode

1. In weighing mode, press [RECALL] and the Weight column will be cleared. The Piece Weight column displays tOtAL.
2. The PCS column shows the total piece count in memory. The Weight column shows the accumulated weight.
3. The number above “ACC” indicator is the record size.
4. Press [ACC] to exit without clearing the data.
5. Press [C] to clear the data and exit.

A. Total mode, continued

Example:

1. Clear scale weighing pan. Make sure the weight is 0. If weight is not 0, use zero key to reset.
2. Press [.] [5] [PIECE WT] key to set Piece Weight as 0.5 pounds.
3. Put 1 pound item on scale weighing pan and waiting for stable.
4. Press [ACC] key. After on beep sound, 

lights up.
5. Press [RECALL] key to into total mode. The Weight shows 1 pound. The Piece shows 2.
6. Press [ACC] to back to normal mode. The ACC data still in flash, and 

still lights up.
7. Press [RECALL] key to into total mode again.
8. Press [C] to clear all flash and back to normal mode. The ACC data is clear, and 

is gone.

B. Record view mode

1. Enter total mode in ***Total mode*** of ***Recall*** section 4.7.2.
2. Press [RECALL] to enter record view mode. You can review each record in memory by pressing the [RECALL] to toggle through each of the stored accumulations. If current record is the last record, it will return to total mode.
3. The number shown above the “ACC” indicates the number of current record. Weight, Piece Weight and Piece is the data of current record.
4. Press [ACC] to leave and back to normal mode.
5. Press [C] to clear current record.

B. Record view mode, continued

Example:

1. Clear scale weighing pan. Make sure the weight is 0. If weight is not 0, use zero key to reset.
2. Press [.] [5] [PIECE WT] key to set Piece Weight as 0.5 pounds.
3. Put 1 pound item on the scale weighing pan and wait for a stable weight.
4. Press [ACC] key. A beep soundwill occur and 

is illuminated.
5. Remove item on scale weighing pan. Make sure the weight is 0 again.
6. Press [.] [1] [PIECE WT] key to set Piece Weight as 0.1 pounds.
7. Put 2 pounds item on scale weighing pan and wait for a stable weight.
8. Press [ACC] key. A beep sound will occur and 

is illuminated.
9. Press [RECALL] key to into total mode again.
10. Press [RECALL] key again to access the record view mode.
11. Press [RECALL] key to switch to the second record.
12. Because the second is the last record. Press [RECALL] key to return to the total mode.
13. Press [RECALL] key to into record view mode again.
14. Press [ACC] to return to normal weigh mode. The ACC data is still in memory, and 

is illuminated.
15. Press [RECALL] key twice to access the record view again.
16. Press [C] key to clear the first record. The display will show the next record. (The first is removed. The second replaces first one. The number above ACC remains at 1.)
17. Press [C] key to clear again. The record is not stored. The scale returns to the normal weighing mode.

4.7.3. Alarm function

A. Piece alarm

1. Press LIMIT key. The PCS column displays PCS. H1.
2. The piece weight column shows the PCS Upper Limit setting. Configure the PCS Upper Limit with the numeric keys.
3. Press LIMIT key again. The PCS column displays PCS. Lo. Configure the PCS Lower Limit with the numeric keys.
4. Press LIMIT will save the piece lower limit value and enter the weight alarm mode.

Example:

1. Press LIMIT key to enter the Piece Upper Limit setting. The PCS column displays PCS. H1.
2. Input 20 to set the Piece Upper Limit as 20.
3. Press LIMIT key to enter the Piece Lower Limit setting. The PCS column displays PCS. Lo.
4. Input 10 to set the Piece Lower Limit as 10.
5. Press LIMIT three times to complete Piece alarm setting.
6. Press . 5 PIECE WT key to set Piece Weight as 0.5 pounds.
7. Place 1 pound on scale weighing pan. The Piece Weight shows 2, and Lower Limit alarm is indicated. The Lower Limit indicator will be flashing. If the Low Beep sound is enabled, it will sound an audible alarm also.
8. Place 11 pounds on scale weighing pan. The Piece Weight shows 22, and Upper Limit alarm is indicated. The Upper Limit indicator will be flashing. If the High Beep sound is enabled, it will sound an audible alarm also.

B. Weight alarm

1. After the ***Piece alarm*** is configured, the scale will enter the Weight alarm setting.
2. The PCS column displays LoAd H 1. Set up the Weight Lower Limit with the numeric keys. (If the unit is kg, this unit is in grams. If the unit is lb, this unit is in lb)
3. Press LIMIT key again, the PCS column displays LoAd Lo. Set up the Weight Lower Limit with the numeric keys. (If the unit is kg, this unit is in grams. If the unit is lb, this unit is in lb)
4. Press LIMIT key to save your settings and return to weighing mode.

Example:

1. Press LIMIT key three times to enter Weight Upper Limit setting. The PCS column displays LoAd H 1
2. Input 10 to set Weight Upper Limit as 10.
3. Press LIMIT key to enter Weight Lower Limit setting. The PCS column displays LoAd Lo
4. Input 1 to set Weight Upper Limit as 2.
5. Press LIMIT to complete Weight alarm setting.
6. Put 1 pound on scale weighing pan. The Lower Limit alarm is indicated. (Lower Limit indicator begins flashing. If the Low Beep sound is enabled, it will sound an audile alarm.)
7. Put 11 pounds on scale weighing pan. Upper Limit alarm is indicated. (Upper Limit indicator begins flashing. If the High Beep sound is enabled, it will sound an audible alarm.)

Note:

1. If the piece count exceeds the upper limit of PCS Upper Limit, or lower than the PCS Lower Limit and it is not zero, the scale will continue to beep for a warning.

2. If the weight exceeds the upper limit of Weight Upper Limit, or lower than the Weight Lower Limit and is not zero, the scale will continue to beep for a warning.

3. The beep settings are configured in he SEtUP menu.

4.8. B SCALE SELECTION

1. Press 

to switch between main scale and the external scale.
2. The initial zero is the zero setup configured in the calibration procedure. It means any loads on the weighing pan will exactly display after the scale start.

Note:
If the Omega Counting Scale is connected to any new external scale, calibration must be performed. This procedure is located in the Remote Scale Settings.

SECTION 5: PROGRAMMING CONFIGURATION

5.1. INTRODUCTION

The Omega series scales are configured through internal programming parameters and settings. Although accessible, the calibration parameters are restricted to qualified service personnel. Changes to the calibration parameters will affect the scales weighing and counting accuracy.

5.2. PROGRAMMING PARAMETERS

1. To access the programming parameters, press and hold **any key** while turning the scale ON, **SEtUP** is shown on the display.
2. Press C key to toggle among the **SEtUP**, **Prt**, **Con-F**, **rE.CAL,** and **CAL** menus. Use the ENTER to enter selected menu.

Menu	Function
SEtUP	General Settings menu.
Prt	Printing Settings menu.
Con-F	Configuration Settings menu.
rE.CAL	External Scale Settings menu.
CAL	Calibration menu

5.3. GENERAL SETTINGS (SET.UP)

In the General Settings menu, press C to toggle among the options and ENTER to confirm or save the selection.

1. SLEEP– Auto Off Setting

Display		Descriptions
SLEEP	**no**	Disable auto shutdown function.
SLEEP	**5**	If there is no operation, the scale will shut down in 5 minutes.
SLEEP	**10**	If there is no operation, the scale will shut down in 10 minutes.
SLEEP	**20**	If there is no operation, the scale will shut down in 20 minutes.
SLEEP	**30**	If there is no operation, the scale will shut down in 30 minutes. (Default)
SLEEP	**60**	If there is no operation, the scale will shut down in 60 minutes.

Note:
SLEEP will not start count down until the weight is at zero.

Example:
1. Set **SLEEP** to 5.
2. Power up and verify weight is stable.
3. Use →0← ZERO to reset the scale to zero.
4. Wait for 5 minutes. The Omega Counting Scale will shutdown automatically.

2. b. L - Backlight Setting

Display		Descriptions
b.L	**no**	Disable the backlight function.
b.L	**YES**	Enable the backlight function.
b.L	**AUto**	Automatic backlight when there is load on the weighing pan. (Default)

Example:

1. Set Backlight as YES.
2. Power up and reset the weight.
3. Backlight is enabled..

3. A.tArE - Tare Setting

Display		Descriptions
A.tArE	**no**	Disable Tare operation
A.tArE	**YES**	Enable Tare operation. (Default)

Example:

1. Set **A.tArE** = YES.
2. Power up and place a 0.1 pound item on scale weighing pan.
3. Press  key to perform a Tare Operation. The weight will change to zero, and **NET** is displayed.
4. Cycle power to the scale and enter the setting again. Set **A.tArE** = no.
5. Press  key to perform a Tare Operation. The scale will make a long beep and no tare will be performed.

4. Hi.bP - High Beep Setting

Display		Explanation
Hi.bP	**no**	Disable Hi alarm sound.
Hi.bP	**Short**	Set Hi alarm to sound as continual short beeps.
Hi.bP	**LonG**	Set Hi alarm to sound as continual long beeps. (Default)

Example:

1. Set **Hi.bP** = SHort.
2. Do the example in ***More Operations*** of ***Alarm function***. The scale will emit short beeps.
3. Cycle power to the scale and change the **Hi.bP** setting. Change the **Hi.bP** = no.
4. Do the example in ***More Operations*** of ***Alarm function***. The alarm indicator will flash without any alarm sound.

5. Lo.bP – Low Beep Setting

Display		Descriptions
Lo.bP	**oFF**	Disable Lo alarm sound.
Lo.bP	**SHort**	Sets Lo alarm to sound as continual short beeps. (Default)
Lo.bP	**LonG**	Sets Lo alarm to sound as continual long beeps.

Example:

1. Set **Lo.bP** = SHort.
2. Do the example in ***More Operations*** of ***Alarm function***. The scale will emit short beeps.
3. Cycle power to the scale and change the **Lo.bP** setting. Set the **Lo.bP** = no.
5. Do the example in ***More Operations*** of ***Alarm function*****.** The alarm indicator will flash without any alarm sound.

6. bEEP – Audible Keystroke Setting

Display	Descriptions
bEEP no	Turns the keystroke audible beep off
bEEP YES	Turns the keystroke audible beep on. (Default)

Example:

1. Set **bEEP** = no.
2. Press the enter key, The scale will confirm without any sound.
3. Power cycle OCS and enter setting again. Set **bEEP** = YES.
4. Press the ENTER key, The scale will emit a short beep.

7. A.SLUtC – Auto Switching Setting (Scale A/B)

Display	Descriptions
A.SLUtC no	While sampling, **do not** switch from external scale to main scale.
A.SLUtC YES	While sampling, switch from external scale to main scale. (Default)

Example:

1. Set **A.SLUtC** =YES. External scale must be calibrated before this is performed.
2. Press REMOTE A/B to switch to external scale. The scale indicator will switch to the B scale.
3. Press SAMPLE key to do sample process. The scale will switch to the Main Scale and wait for a stable weight. **Do not** put the sampling item on the scale right now.
4. After Main Scale has a stable weight and the '**SANPLE**' is blinking on the second row of the display, input on the desired sample count and place the sample items on Main Scale pan. Wait for a stable weight again, and the sampling operation is done.
5. After the ***Sampling operation*** complete, the scale will switch back to the external scale.
6. Cycle power to the scale and enter to the **A.SLUtC** setting. Set **A.SLUtC** = no.
7. When the scale is ready, press REMOTE A/B to switch to the external scale.
8. Press SAMPLE key to perform a sample process. The scale will perform a ***Sampling operation*** with the external scale.

8. rE.SAnP - Auto Re-sample Setting.

Display		Descriptions
rE.SAnP	**no**	Disable auto re-sample operation.
rE.SAnP	**YES**	Enable auto re-sample operation. (Default)

Example:

1. Set **rE.SAnP** = YES.
2. Press SAMPLE to into sample mode.
3. Press 5 0 to set the item number as 50. It is shown on the third line.
4. Place 5 lb item on scale weighing pan.
5. Wait for 5 seconds until the weight is stable. The piece weight shows 0.1 and piece count shows 50.
6. Place 1 lb item on scale weighing pan.
7. At a stable weight, the scale will emit a short beep sound. Perform a re-sample once. The Piece Weight will update.
8. Cycle power to the scale and enter the **rE.SAnP** setting again, change the **rE.SAnP** = no.
9. Repeat steps 2 to 6.
10. At a stable weight, the scale will continue normal operation without a resample process occurring.

10. tiNE - Time Setting.

Display		Descriptions
tiNe	**no**	Do not change time setting.
tiNe	**YES**	Change time setting.

Note:

The time setting parameter always reverts back to "no". When "YES" is selected, the following parameters are available YEAr, NontH, dAY, hour, Nin, and SEC.

Display		Descriptions
YEAr	**0-99**	Year setting

Use numeric keys to enter the appropriate 2-digit number, then press the “Enter” key to accept.

Display		Descriptions
NOntH	**1-12**	Month setting.

Use numeric keys to enter the appropriate 2-digit number, then press the “Enter” key to accept.

Display		Descriptions
dAY	**1-31**	Day setting.

Use numeric keys to enter the appropriate 2-digit number, then press the “Enter” key to accept.

Display		Descriptions
Hour	**0-23**	Hour setting.

Use numeric keys to enter the appropriate 2-digit number, then press the “Enter” key to accept.

Display		Descriptions
Nin	**0-59**	Minute Setting.

Use numeric keys to enter the appropriate 2-digit number, then press the “Enter” key to accept.

Display		Descriptions
SEC	**0-59**	Second setting.

Use numeric keys to enter the appropriate 2-digit number, then press the “Enter” key to accept.

Example:

1. Set **tiNE** = no and press enter.
2. The scale time setting is skipped.
3. Cycle power and set **tinE** = YES.
4. Enter the Year, Month, Day, Hour, Minute and Second values.

This completes the General Settings (SEtUP**). SAvE is displayed briefly before the scale cycles power and returns to the weigh mode. **

5.4. PRINT SETTINGS (PRT)

Press C to toggle among the options, and press ENTER to confirm.

1. **Serial 1 - Output Method** Changes the method to initiate data information output.

Display	Descriptions
SEr.1 **PrESS**	Initiates data transmission when the PRINT key is pressed. (Default)
SEr.1 **Auto**	Initiates data transmission when scale weight is stable. Scale weight must return to zero before the next print will occur.
SEr.1 **rEn.dS**	Remote display Output. This programs the serial 1 output as fixed remote display output which is configured using 19200 as baud rate, 8 characters, No parity, and 1 stop bit. These settings cannot be changed.
SEr.1 **Poll**	Initiates data transmission when a <CR> is received

2. **Serial 1 - Weight Output** Change the weight output data of serial 1. Print net only or print Gross, Tare, and Net.

Display	Descriptions
SEr.1 **Pr.nEt** **nEt**	Outputs only the Net weight.
SEr.1 **Pr.nEt** **G.t.nEt**	Outputs Gross, Tare, and Net weights. (Default)

3. **Serial 1 - Baud Rate** Changes the baud rate of serial 1.

Display	Descriptions
SEr.1 **bAUd** **2400**	Sets the baud rate to 2400
SEr.1 **bAUd** **4800**	Sets the baud rate to 4800
SEr.1 **bAUd** **9600**	Sets the baud rate to 9600. (Default)
SEr.1 **bAUd** **19200**	Sets the baud rate to 19200

4. **Serial 1 - Parity** Changes the data transfer protocol of serial 1.

Display	Descriptions
SEr.1 **PArit** **7-E-1**	Sets the parity to 7-E-1
SEr.1 **PArit** **7-o-1**	Sets the parity to 7-o-1
SEr.1 **PArit** **7-n-2**	Sets the parity to 7-n-2
SEr.1 **PArit** **8-n-1**	Sets the parity to 8-n-1. (Default)

4. Serial 1 - Parity continued,

Display	Descriptions
SEr.1 **PArit** **8-E-1**	Sets the parity to 8-E-1
SEr.1 **PArit** **8-o-1**	Sets the parity to 8-o-1
SEr.1 **PArit** **7-o-2**	Sets the parity to 7-o-2

Example:

To print net weight only:

1. Open a hyper terminal session and set connection as 9600 8-n-1.
2. Set Serial 1 as **PrESS**, weight output as print net, baud rate as 9600 and parity as 8-n-1, and others parameters are set to No.
3. After the scale boot, press the  key. Data on Hyper terminal will show:
   0.0000 lb NT
4. Cycle power to the scale and change serial 1 settings to **Auto**. Change the weight output to print Gross, Tare and Net. Change the baud rate to 19200 and parity as 7-n-2 , and all others parameters are set to No.
5. Close hyper terminal and modify its connection as 19200 7-n-2.
6. After the scale reboot, put 1 pound item on scale pan.
7. The scale will output data when the weight is stable. The Data output will be as show below:

   1.0000 lb GR
   0.0000 lb TA
   1.0000 lb NT

5. Serial 1 – Weight Print

Display	Descriptions
SEr.1 **LUGT** **no**	Data prints **without** weight information.
SEr.1 **LUGT** **YES**	Data prints **with** weight information. (Default)

6. Serial 1 – PLU Print

Display	Descriptions
SEr.1 **PLU** **no**	Data prints **without** PLU information. (Default)
SEr.1 **PLU** **YES**	Data prints **with** PLU information.

7. Serial 1 - Description Print

Display	Descriptions
SEr.1 **dESC** **YES**	Data prints **with** PLU description.
SEr.1 **dESC** **NO**	Data prints **without** PLU description (Default).

8. Serial 1 - Time and Date Print

Display	Descriptions
SEr.1 **tidt** **no**	Data prints **without** time and data. (Default)
SEr.1 **tidt** **YES**	Data prints time and date.

9. Serial 1 - Pieces Information Print

Display	Descriptions
SEr.1 **PCS** **no**	Data prints **without** PCS information. (Default)
SEr.1 **PCS** **YES**	Data prints **with** PCS information.

10. Serial 1 - Piece Weight Print

Display	Descriptions
SEr.1 **PC.LUGt** **no**	Data prints **without** the Piece weight. (Default)
SEr.1 **PC.LUGt** **YES**	Data prints **with** the Piece weight.

11. Serial 1 - Accumulation Information Print

Display	Descriptions
SEr.1 **ACC** **no**	Data prints **without** the total number of accumulations. (Default)
SEr.1 **ACC** **YES**	Data prints **with** the total number of accumulations.

12. Serial 1 – Pieces Accumulation

Display	Descriptions
SEr.1 **PCS ACC** **no**	Data prints **without** the total number of pieces accumulated. (Default)

SEr.1 **PCS ACC** **YES**	Data prints **with** the total number of pieces accumulated.

13. Serial 1 - Accumulation Weight Information Print

Display	Descriptions
SEr.1 **ACC.LUGt** **no**	Data prints **without** the total accumulated weight. (Default)
SEr.1 **ACC.LUGt** **YES**	Data prints **with** the total accumulated weight.

Example 1:

1. Open a hyper terminal session and connect at 9600 8-n-1.
2. Set Serial 1 to **PrESS**, weight output using print net. Set the baud rate to 9600, 8 characters, No parity, and 1 stop bit.
3. Set **PLU** = YES, **Time and date** = no, **Piece information** = YES, Piece **Weight** = no, **Accumulation information** = YES, and **Accumulation Weight** = no.
4. Press [.] [0] [0] [1] [PIECE WT] to set Piece Weight as 0.001 lb.
5. Press [PLU] [1] [PLU] to store current data in PLU 1.
6. Put 1 pound item on scale weighing pan.
7. Press [ACC] to record 1 Accumulation data.
8. Press the [PRINT] key. The data output is shown below:

1.0000 lb NT
PLU 1
1000 PCS
1 ACC#

Example 2:

1. Open a hyper terminal session and connect at 9600 8-n-1.
2. Set Serial 1 to **PrESS**, weight output using print net. Set the baud rate to 9600, 8 characters, No parity, and 1 stop bit.
3. Set **PLU** = no, **Time and date** = YES, **Piece information** = no, **Piece Weight** = YES, **Accumulation information** = YES, and **Accumulation Weight** = YES.
4. Press [.] [0] [0] [1] [PIECE WT] to set Piece Weight as 0.001 lb.
5. Press [PLU] [1] [PLU] to store the current data in PLU 1.
6. Place a 1 pound item on scale weighing pan.
7. Press [ACC] to record 1 Accumulation data.
8. Press the [PRINT] key. The data output is shown below:

1.0000 lb NT
0.001 lb PW
1.0000 lb NT ACC
05:40 PM
01/01/2010

Example 3:

1. Open a hyper terminal session and connect at 9600 8-n-1.
2. Set Serial 1 to **PrESS**, weight output using print net. Set the baud rate to 9600, 8 characters, No parity, and 1 stop bit.
3. Set **PLU** = Yes, **Time and date** = YES, **Piece information** = no, **Piece Weight** = YES, **Accumulation information** = no, and **Accumulation Weight** = no.
4. Press [.] [0] [0] [1] [PIECE WT] to set Piece Weight as 0.001 lb.
5. Press [PLU] [1] [PLU] to store current data in PLU 1.
6. Place a 1 pound item on scale weighing pan.
7. Press [ACC] to record 1 Accumulation data.
8. Press the [PRINT] key. The data output is shown below:

PLU 1
1000 PCS
0.001 lb PW
05:43 PM
01/01/2010

14. Serial 2 – Setting

Display	Descriptions
SEr.2 no	Serial 2 setting is disabled. (Default)
SEr.2 rEAdEr	Enable serial port 2 for a barcode reader.

15. Serial 2 – Baud Rate

Display	Descriptions
SEr.2 **bAUd** **2400**	Sets the baud rate to 2400.
SEr.2 **bAUd** **4800**	Sets the baud rate to 4800.
SEr.2 **bAUd** **9600**	Sets the baud rate to 9600. (Default)
SEr.2 **bAUd** **19200**	Sets the baud rate to 19200.

16. Serial 2 – Parity

Display	Descriptions
SEr.2 **PArit** **7-E-1**	Sets the parity to 7-E-1
SEr.2 **PArit** **7-o-1**	Sets the parity to 7-o-1
SEr.2 **PArit** **7-n-2**	Sets the parity to 7-n-2
SEr.2 **PArit** **8-n-1**	Sets the parity to 8-n-1. (Default)
SEr.2 **PArit** **8-E-1**	Sets the parity to 8-E-1.
SEr.2 **PArit** **8-o-1**	Sets the parity to 8-o-1.
SEr.2 **PArit** **7-o-2**	Sets the parity to 7o-1.

16. Serial 2 – Parity, continued

Example:

1. Connect to barcode reader.
2. Scan barcode below:

3. The unit will be set as lb, and Piece Weight will be set as 0.000271.

This completes the Print Settings (Prt).** SAvE is displayed briefly before the scale cycles power and returns to the weigh mode.**

5.5. CONFIGURATION (CON-F)

Press C to browse the menu options. Use the numeric keys to input data and press ENTER to save your settings.

1. Basic Unit

Set the basic unit of scale. User can change the output unit by UNITS key, but scale will be calibrated by basic unit.

Display	Descriptions
P.Unit	Set basic unit to lb. (Default) *Annunciators on the right side of the display indicate the current setting*.
P.Unit	Set basic unit to kg. *Annunciators on the right side of the display indicate the current setting*.

Note:
If this setting is changed, the scale will advance to the calibration procedure.

2. Zero tracking

Sets the zero tracking by number of divisions.

Display		Descriptions
trAcE	**no**	Zero tracking disabled.
trAcE	**0.5d**	Zero tracking enabled, tracking set to 0.5d
trAcE	**1d**	Zero tracking enabled, tracking set to 1d. (Default)
trAcE	**2d**	Zero tracking enabled, tracking set to 2d
trAcE	**3d**	Zero tracking enabled, tracking set to 3d

3. Display Tolerance

Sets the display tolerance or motion detection value.

Display		Descriptions
no.dEt	**no**	Display tolerance is disabled.
no.dEt	**0.5d**	Display tolerance is 0.5d. If the weight changes are under 0.5d, the display will not update and motion is not indicated.
no.dEt	**1d**	Display tolerance is 1d. If the weight changes are under 1d, the display will not update and motion is not indicated.
no.dEt	**2d**	Display tolerance is 2d. If the weight changes are under 2d, the display will not update and motion is not indicated.
no.dEt	**3d**	Display tolerance is 3d. If the weight changes are under 3d, the display will not update and motion is not indicated.

4. Zero range

Display	Descriptions
rAnGE 2	Scale zero range. If the weight is higher than 2% of the scale's capacity, the scale cannot be zeroed.
rAnGE 100	Scale zero range. If the weight is higher than 100% of the scale's capacity, the scale cannot be zeroed.

Note:
*The Zero **rAnGE** setting cannot make the scale exceed its rated capacity. For example, if a 6 lb scale zeroes off a 3 lb weight, the amount of weight applied to the scale cannot exceed 3 lb before the scale reaches its maximum rated capacity.*

Example:

1. Set Zero range as 2.
2. Place a 1 pounds item on scale weighing pan.
3. Press  key to set current weight to zero. The scale will emit an error beep (long beep) and show Error on the display.
4. Cycle power to the scale and enter the **rAnGE** setting menu.
5. Set Zero range to 100.
6. Press  key to set current weight to zero. Scale will set the current weight to zero. The weight display should indicate 0.

5. Filter

The digital filter will assist in minimizing undesirable effects of elements such as vibration and air movement upon the scale weighing pan.

Display	Descriptions
FLtr 2	Filter set to 2 A/D updates a second. Light filtering
FLtr 4	Filter set to 4 A/D updates a second. (Default) Light – Medium filtering
FLtr 8	Filter set to 8 A/D updates a second. Medium filtering
FLtr 16	Filter set to 16 A/D updates a second. Medium-Heavy filtering
FLtr 32	Filter set to 32 A/D updates a second. Heavy filtering

6. Sample Piece Default

This setting allows the default sample size to be changed.

Display	Descriptions
SAndEF 10	Sets the default sample size to 10 pieces.
SAndEF 25	Sets the default sample size to 50 pieces.
SAndEF 50	Sets the default sample size to 50 pieces.
SAndEF 100	Sets the default sample size to 100 pieces. (Default)

SECTION 6: CALIBRATION

Contact your authorized Fairbanks service representative for calibration and service adjustments.

SECTION 7: SERIAL INPUT / OUTPUT

7.1. INTRODUCTION

The Omega Series Scale has two RS232C ports, Serial 1 and Serial 2. Serial 1 is dedicated for use with printers and Serial 2 is strictly for scanner/readers to input data into the Omega Scale. Serial 1 is located on the rear panel and Serial 2 is located on the right side panel.

7.2. GC420d PRINTER SETUP AND PROGRAMMING

The Omega Series scale in conjunction with the GC420d label printer provide templates as a solution to our customers' label printing needs and label printing requirements. Please consult with your authorized Fairbanks representative for setup and programming.

7.3. SETTINGS FOR THE OMEGA COUNTING SCALE

7.3.1. Cable Requirement

Use cable part number 20483 M-F Null modem cable for the printer interface cable.

7.3.2. Omega Series Label Selection Programming

A. OMEGA SETTINGS FOR ALL PRINTERS

PRT
Ser.1 = PrESS
bAUd = 9600
PArit = 8-n-1

7.3.3. Omega Programming to Produce Specific Label Formats

A. Label 1

Pr.nEt = nEt
LUGt = no
PLU = YES
dESC = no
tidt = no
PCS = no
PCLUGt = no
ACC = YES
PCS.ACC = YES
ACC.LUGt = YES

Label 1

7.3.4. 7.3.3 Omega Programming to Produce Specific Label Formats, CONTINUED

7.3.5.

B. Label 2

Pr.nEt = G.t.nEt
LUGt = YES
PLU = YES
dESC = no
tidt = no
PCS = YES
PCLUGt = YES
ACC = no
PCS.ACC = no
ACC.LUGt = no

Label 2

7.3.6.

C. Label 3

Pr.nEt = nEt
LUGt = YES
PLU = YES
dESC = no
tidt = no
PCS = YES
PCLUGt = YES
ACC = no
PCS.ACC = no
ACC.LUGt = no

Label 3

7.3.7. 7.3.3 Omega Programming to Produce Specific Label Formats, CONTINUED

D.Label 4

Pr.nEt = nEt
LUGt = no
PLU = YES
dESC = YES
tidt = no
PCS = no
PCLUGt = no
ACC = YES
PCS.ACC = YES
ACC.LUGt = YES

Label 4

E.Label 5

Pr.nEt = nEt
LUGt = YES
PLU = YES
dESC = YES
tidt = no
PCS = YES
PCLUGt = YES
ACC = no
PCS.ACC = no
ACC.LUGt = no

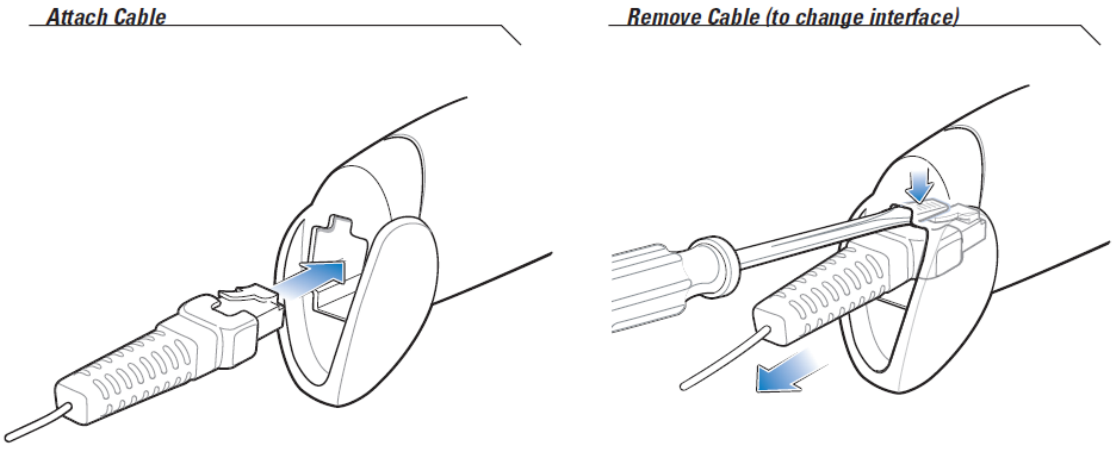
Label 5

7.4. SCANNER/READER SETUP

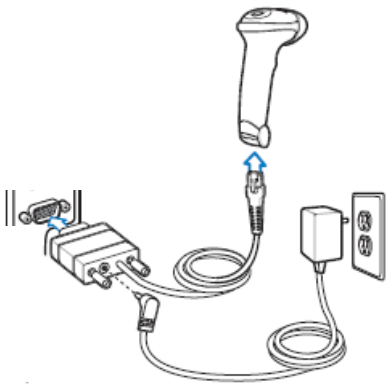
1. Attach the interface cable to the hand held scanner/reader. See below.
2. Connect the interface cable to Serial 2 on the right hand side panel of the OCS.
3. Connect the AC adapter to the bar code scanner.
4. Enable Serial 2 in the OCS for scanner/readers by selecting YES.
5. Use the color **Quick Start Guide** that accompanies the scanner and perform the following steps:

   a. Scan the “Return to Factory Defaults” bar code on the Quick Start Guide.
   b. Scan the “Standard RS-232” bar code in Step 3 of the bar code scanner instructions.
   c. Scan bar codes 1, 2 and 3 in the Add An Enter Key of the bar code scanner instructions.
   d. Scanner programming is complete. If you do not successfully complete each of these steps, start the entire scanning process from the beginning.

DO NOT discard this sheet. It **must** be used to setup and configure the scanner/reader.



RS-232



LED Indications

Off	Green	Red
Scanner is on and ready to scan, or no power to scanner	Bar code is successfully decoded	Transmission error

Beeper Indications

Standard Use

Low/medium/high beep	Short medium beep	4 long low beeps
Power up	Bar code decoded	Transmission error detected, data is ignored

Parameter Menu Scanning

High/low/high/low beep	High/low beep	Low/High beep
Successful parameter setting	Correct programming sequence performed	Incorrect programming sequence or 'Cancel' bar code scanned

Troubleshooting

Scanner not working

No power to scanner	Incorrect interface cable used	Interface/power cables are loose
Check system power; ensure power supply, if required, is connected	Ensure that correct interface cable is used	Ensure all cable connections are secure

Scanned data incorrectly displayed on host

Scanner not programmed for correct host interface
Scan appropriate host parameter bar codes

Scanner decoding bar code, but data not transmitting to host

Scanner not programmed for correct host interface	Interface cable is loose
Scan appropriate host parameter bar codes	Ensure all cable connections are secure

Scanner not decoding bar code

Scanner not programmed for bar code type	Bar code unreadable	Distance between scanner and bar code incorrect
Ensure scanner is programmed to read type of bar code being scanned	Ensure bar code not defaced; try scanning test bar code of same bar code type	Move scanner closer to or further from bar code

SECTION 8: SERVICE & MAINTENANCE

8.1. BASIC CLEANING

The Omega Series scales may be cleaned with a damp cloth and mild detergent. Do not use chemical cleaners or abrasive type scouring pads.

8.2. TROUBLESHOOTING

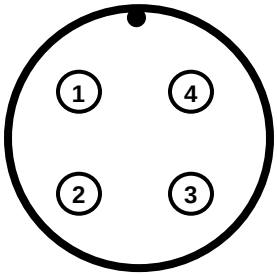
8.2.1. Error Code list

Error	Description
OL1	Weight on the main scale is larger than the maximum scale capacity.
OL2	Weight on the external scale is larger than the maximum scale capacity range.
UL1	Weight on the main scale is out of range below the zero reference.
UL2	Weight on the external scale is out of range below the zero reference.
Error1	Key input error.
Error2	Zero range exceeds the permissible range.
Error3	The scale weight is unstable within the system time limit constraint.
Error203	Unrecognized barcode. Data not stored in Omega database.
LobAtt	Battery voltage is $\leq$ 4.59Vdc. Recharge the battery, See **WARNING**! (below)
rEPLAC	Prompt asking user to override existing information.

W A R N I N G !

If battery has been recharged, a minimum of 16 hours, and the display still reads "LobAtt", check to make sure the AC power source used to reacharge the battery is working. Also, check to make sure the battery connections are clean and well-fitted (both at the battery and on the PC board). If all this is in good, working order, then the rechargeable battery needs replacing.

APPENDIX I: EXTERNAL SCALE CONNECTION (MALE)



Instrument Connector

PIN	DESCRIPTION
1	EXC+
2	EXC-
3	SIG+
4	SIG-

APPENDIX II: RS232C CONNECTION:DB9 (MALE)

PIN	DESCRIPTION
1	DCD
2	Rx
3	Tx
4	DTR
5	Gnd
6	DSR
7	RTS
8	CTS
9	RI

APPENDIX III: DATA OUTPUT

BI-DIRECTIONAL RS232C SETTING

This section is applicable only for models with RS-232C module.

8.2.2. A. OUTPUT FORMAT

18.143 kg GR (See ***Serial 1 weight output*** of ***Print Settings***)

0.000 kg TA (See ***Serial 1 weight output*** of ***Print Settings***)

18.143 kg NT

PLU 1 (Reference to ***PLU print*** of ***Print Settings***)

80 PCS (Reference to ***Piece Information print*** of ***Print Settings***)

0.226796 kg PW (Reference to ***Piece Weight print*** of ***Print Settings***)

2 ACC# (Reference to ***Accumulation Information print*** of ***Print Settings***)

27.216 kg NT ACC (Reference to ***Accumulation Weight Information print*** of ***Print***

Settings)

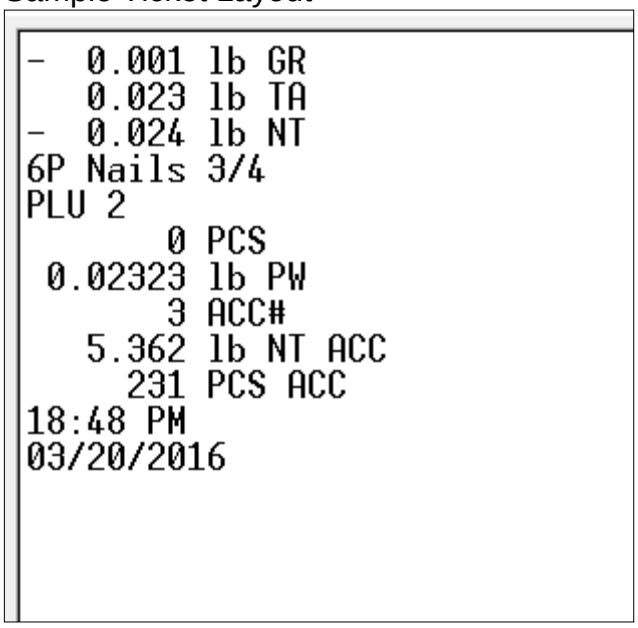
17:33 PM (Reference to ***Time and data print*** of ***Print Settings***)

01/01/2016 (Reference to ***Time and data print*** of ***Print Settings***)

Data Output Character Legend (Desc.)

-		Negative, weight polarity (empty if positive)
W		Weight
SP		Space
U		Unit of measure (could be lb, kg or g)
G	**R**	Gross Weight
T	**A**	Tare Weight
N	**T**	NET Weight
X		Text
PW		Part Piece Weight
#		Number (Piece Count, PLU, Accumulations, time & date)
CR		Carriage Return
LF		Line Feed

Sample Ticket Layout



*** Omega Data Output** – This is assuming ALL data outputs are enabled. This will change based on the user's specific needs, adjust accordingly.

GTN, Data String

Gross Weight

Byte	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Char	-			0	.	0	0	1		l	b		G	R	013	010
Hex	2D	20	20	30	2E	30	30	31	20	6C	62	20	47	52	0D	0A
Desc	-	W	W	W	W	W	W	W	SP	U	U	SP	G	R	CR	LF

Tare Weight

Byte	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32
Char				0	.	0	2	3		l	b		T	A	013	010
Hex	20	20	20	30	2E	30	32	33	20	6C	62	20	54	41	0D	0A
Desc	W	W	W	W	W	W	W	W	SP	U	U	SP	T	A	CR	LF

NET Weight

Byte	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48
Char	-			0	.	0	2	4		l	b		N	T	013	010
Hex	2D	20	20	30	2E	30	32	34	20	6C	62	20	4E	54	0D	0A
Desc	-	W	W	W	W	W	W	W	SP	U	U	SP	N	T	CR	LF

Description, Data String

Description

Byte	49	50	51	52	53	54	55	56	57	58	59	60	61	62
Char	6	P		N	a	i	l	s		3	/	4	013	010
Hex	36	50	20	4E	61	69	6C	73	20	33	2F	34	0D	0A
Desc	X	X	X	X	X	X	X	X	X	X	X	X	CR	LF

PLU, Data String

PLU

Byte	63	64	65	66	67	68	69	70
Char	P	L	U		2		013	010
Hex	50	4C	55	20	32	20	0D	0A
Desc	X	X	X	#	#	#	CR	LF

Piece Count, Data String

Number of pieces counted

Byte	71	72	73	74	75	76	77	78	79	80	81	82	83	84
Char								0		P	C	S	013	010
Hex	20	20	20	20	20	20	20	30	20	50	43	53	0D	0A
Desc	#	#	#	#	#	#	#	#	SP	X	X	X	CR	LF

Piece Weight, Data String

Individual piece weight

Byte	85	86	87	88	89	90	91	92	93	94	95	96	97	98	99	100
Char		0	.	0	2	3	2	3		l	b		P	W	013	010
Hex	20	30	2E	30	32	33	32	33	20	6C	62	20	50	57	0D	0A
Desc	W	W	W	W	W	W	W	W	SP	U	U	SP	PW	PW	CR	LF

Accumulations, Data String

Number of stored accumulations

Byte	101	102	103	104	105	106	107	108	109	110	111	112	113	114	115
Char								3		A	C	C	#	013	010
Hex	20	20	20	20	20	20	20	33	20	41	43	43	23	0D	0A
Desc	#	#	#	#	#	#	#	#	SP	X	X	X	X	CR	LF

NET Accumulations, Data String

Total NET accumulated weight

Byte	116	117	118	119	120	121	122	123	124	125	126	127	128	129	130	131	132	133	134	135
Char				5	.	3	6	2		l	b		N	T		A	C	C	013	010
Hex	20	20	20	35	2E	33	36	32	20	6C	62	20	4E	54	20	41	43	43	0D	0A
Desc	W	W	W	W	W	W	W	W	SP	U	U	SP	N	T	SP	X	X	X	CR	LF

Accumulated Pieces, Data String

Total number of pieces accumulated

Byte	136	137	138	139	140	141	142	143	144	145	146	147	148	149	150	151	152	153
Char						2	3	1		P	C	S		A	C	C	013	010
Hex	20	20	20	30	20	32	33	31	20	50	43	53	20	41	43	43	0D	0A
Desc	#	#	#	#	#	#	#	#	SP	X	X	X	SP	X	X	X	CR	LF

Time, Data String

Time in 24 hour clock

Byte	154	155	156	157	158	159	160	161	162	163
Char	1	8	:	4	8		P	M	013	010
Hex	31	38	3A	34	38	20	50	4D	0D	0A
Desc	#	#	X	#	#	SP	X	X	CR	LF

Date, Data String

Date in month/day/year format

Byte	164	165	166	167	168	169	170	171	172	173	174	175
Char	0	3	/	2	0	/	2	0	1	6	013	010
Hex	30	33	2F	32	30	2F	32	30	31	36	0D	0A
Desc	#	#	X	#	#	X	#	#	#	#	CR	LF

8.2.3. B. INPUT COMMANDS FORMAT

The scale can be controlled with the following commands.

Input Commands:

- All commands are terminated by a carriage return (Enter button on PC keyboard) with line feed (if necessary).
- If an illegal command is received or a command cannot be carried out , repeat the command with an addition of the word Error in front of the command request. For example if the command is ***Test<CR><LF>*** then send back ***Error Test<CR><LF>***.

Basic Commands:

CW	Print the current net weight.
M+	Store current results into accumulation memory.
MC	Clear the accumulation memory.
MR	Recall the accumulation memory values to scale display, same as RECALL key.
PLUxx	Select PLU from scale memory to be used

S123	Enter sample size of 123 parts. Same as pressing  key.
T	Tare current weight value
T123.456	Preset tare value is 123.456 For pound mode, it's 123.456lb. For kg mode, it's 123.456kg.
U123.456	Store unit weight of 123.456 For pound mode, it's 123.456lb. For kg mode, it's 123.456kg.
Z	Zero operation.

Omega Series Counting Scale

Operator Manual

Document 51278

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