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## Important handling Cautions and Warnings

Always handle your scale with care.

Damage caused by improper handling is not covered under the scale's warranty.



Never drop or throw any articles onto the scale's pan or onto any other parts of the unit!



DO NOT let the scale fall or drop from its tabletop surface!



When moving the scale do not press or apply force onto the scales pan!



DO NOT pass or handle liquids directly over the scale to avoid spillage and liquid damage!

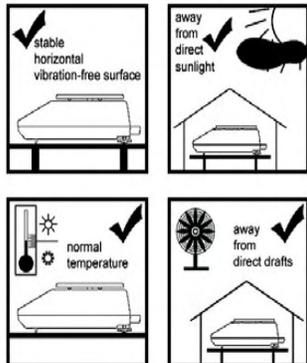
## CHAPTER 1.

# CAUTIONARY NOTES AND PRECAUTIONS

The TORBAL Precision scale is a sensitive and a delicate instrument. Always handle your scale with care.

The correct location and proper environment affect the accuracy of your TORBAL Precision Scale.

### The best location for your scale:



1. Stable, horizontal, vibration-free surface
2. Away from direct sunlight
3. Not exposed to high temperature variations
4. Away from direct drafts
5. The best location is on a stable bench away from drafts, doors, windows, radiators and air conditioner vents.

### CAUTION:



- The scale is designed for indoor use only.
- Do not operate the scale in hazardous areas or under dangerous conditions.
- Do not use the scale in locations subject to high humidity or dust levels.
- Do not connect cables in ways other than those mentioned in this manual.
- Set the scale on a firm, stable, horizontal surface.
- Never stand on or lean on this product. Equipment may fall or collapse, causing breakage and possible injury.
- Before moving the product, unplug it and unplug all cables connected to it.
- When storing, transporting or returning the scale for service, use the original packaging.

### WARNING:



- a. Never attempt to repair, disassemble or modify the scale. Tampering with the scale may result in injury and cause greater damage to the equipment.
- b. Never swap the pan, pan base, or any other parts of the scale with pans or parts from other units. Pans and all components are uniquely assigned to each unit.
- c. Be sure to use the specified power source.
- d. Do not allow foreign matter to fall into the scale.
- e. If water or other liquids spill into the scale, unplug the power cord immediately and contact technical support

TORBAL Precision scale is a sensitive and a delicate instrument. Always handle your scale with care.



## CHAPTER 2.

# SPECIFICATIONS

	Model	
	DRX200	DRX300
Capacity	200g	300g
Automatic Internal Calibration	YES	
Readability (d)	0.001	
Repeatability (Standard Deviation)	0.001g	
Linearity	+/- 0.002g	
Stabilization time (typical)	Approx. 3sec	
Tare Range	-200g	-300g
Accuracy Class	II	
NTEP Certified for Prescription use and Pill Counting	YES	
Pan Dimension	120mm	
Draft Shield	Optional	
Scale Dimension	239mm x 273mm x 91mm	
Operating Temperature	+18°C to +33°C	
RS232 Port	Bidirectional – Standard	
PS2 Keyboard Port	Standard	
Power Supply	Input: 120VAC 60Hz 15W Output: 12VDC 500mA	
Display Type	Graphical LCD	
Display Size	134mm x 40.4mm / 240 x 64 dots	
Weighing Units	Grams	
Scale's Net Weight (lb/kg)	4kg / 8.8lbs	
Application Modes	Pill Counting, Compounding	
Printing	YES	
MW (Minimum Piece Weight)	30mg (3e)	
MSS (Minimum Sample Size)	10 pieces	
Sample Size Selection	10, 30, 60	

## CHAPTER 3.

### KEYS AND DISPLAY INDICATORS

Key	Primary Function	Secondary Function
I/Ø	Power On and Power Off	-
	Tare – used to tare the weighing pan	N/A
→0←	Zero – used to zero the scale	Number “6” key
	Enter – used to accept and confirm commands	N/A
MENU	Menu – used to access the main menu	Number “9” key
CLR	Clear – used to clear and cancel operation	N/A
	Navigation Keys – used to navigate through the menus	N/A
	N/A	N/A
Σ	Sigma – used to update average piece weights / used to access saved recipe banks	Period “.”
	Dara Transfer – used to print data to a printer or transfer data to a PC via the RS232 communication port	Number “7” key
	Calibration Key – used to initialize automatic internal calibration	Number “8” key
F1	Weighing	Number “1” key
F2	Pill Counting	Number “2” key
F3	NDC Verification (independent of pill counting)	Number “3” key
F4	Compounding	Number “4” key
F5	N/A	Number “5” key
Display Indicator	Description	Explanation
OFF	Power Off	The scale is turned OFF and in standby mode.
AUT	AZSM (Automatic Zero Setting Mechanism)	AZSM (Automatic Zero Setting Mechanism) is active and the scale maintains a “center of zero” condition within +/- 5d
NET	Net Result	A tare was taken and the scale subtracted the tare weight from the gross weight to obtain the net weight.
→0←	Zero	The scale is maintaining a “center of zero” condition.
	Stability Indicator	The weighing result has stabilized and an accurate reading may be taken.
APA	Advanced Pill Counting	The APA feature is enabled and the algorithm was activated
pcs	Pieces	In pill counting this indicator shows that the result is a piece count

# CHAPTER 4.

## PARTS DESCRIPTION



Front View

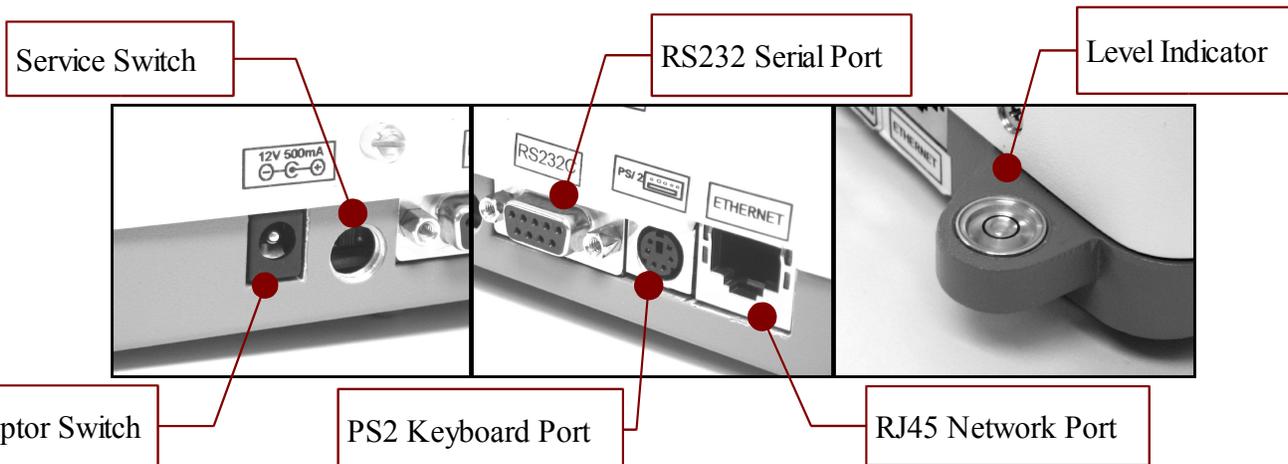
Rear View



Pan Base

Pan

AC Adaptor



## CHAPTER 5.

# UNPACKING THE BALANCE AND GETTING STARTED

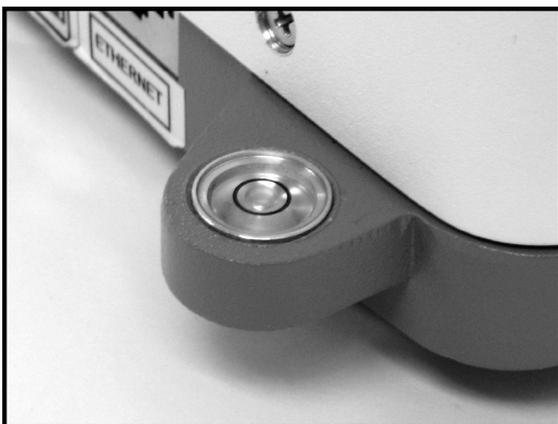
1. Carefully remove the scale and pan from the packaging and place them on a stable base where the scale will not be affected by any mechanical vibrations or air movements.



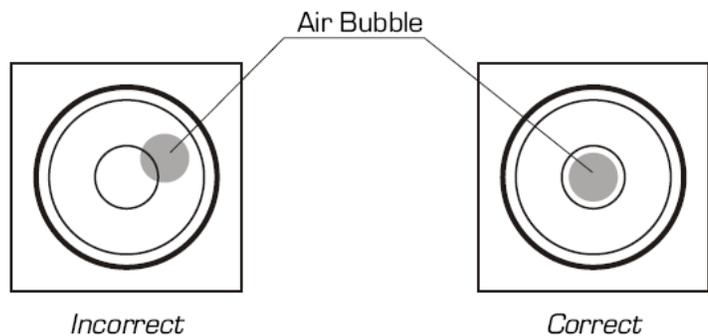
2. After removing the pan base and the pan from their packaging, carefully install the pan base onto the scale by placing it on the pan support located in the middle of the scale. Once the pan base has been installed, gently place the pan on the base as shown below.



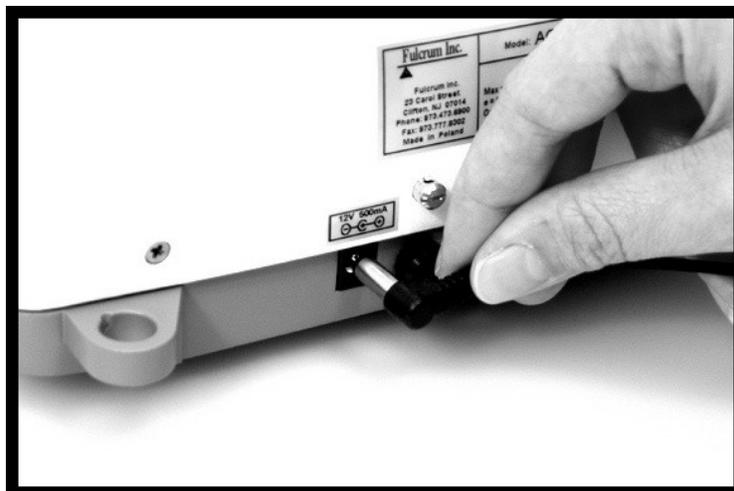
3. Once the pan has been installed, level the scale by adjusting the rear feet until the level indicator shows the “air bubble” is in the center position of the sight glass. The level indicator is located on the rear left side of the scale.



**Level Indicator Sight Glass:**



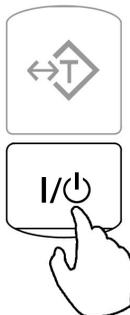
- After leveling the scale, plug the AC adaptor into the AC adaptor socket located at the rear of the scale.



- When the AC adaptor is plugged into the wall outlet, the scale will automatically turn on, go through its initialization process, and calibrate itself. Calibration will initialize automatically whenever the scale is turned on. The scale will also calibrate whenever the temperature changes by 1 degree Celsius and at two-hour intervals. Calibration will initialize only if the scale has been stable and idle for 60 seconds, in order not to interrupt weighing operations.

Note: When the AC adapter is plugged into the wall outlet for the first time, the scale will automatically and frequently initialize temperature calibration as the internal parts of the scale heat up. Once the internal temperature stabilizes, the scale will initialize the time – interval calibration approximately every two hours. The scale loses internal temperature only when the unit is completely unplugged from the wall electrical outlet. When the unit is turned off with the On/Off key, the scale goes into standby mode and internal temperature is maintained.

To put the scale into standby mode, leave the AC adaptor plugged into both the scale and the wall outlet and press the Power “OFF” button (I / ⏻). The “OFF” indicator will light up in the upper left corner of the display signaling the scale is in standby mode, i.e.:

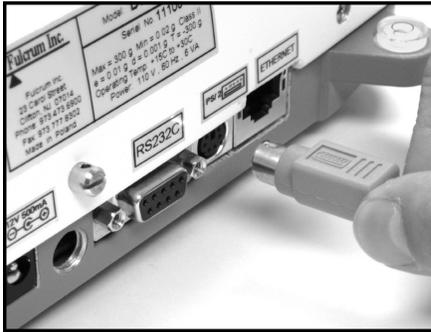


## CHAPTER 6.

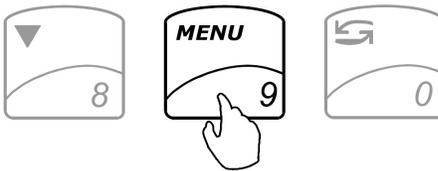
# EXTERNAL KEYBOARD CONNECTION (OPTIONAL)

Any PC external keyboard can be connected to the scale via the PS2. An external keyboard allows you to input data quickly and easily. To connect a PC keyboard to the scale, follow the steps below.

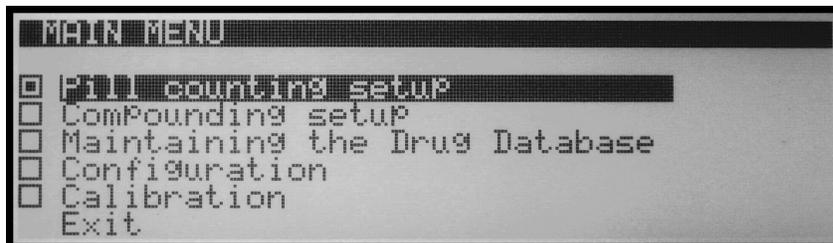
1. Clear the pan and turn the scale off.
2. Locate the keyboard connection port at the rear of the scale, marked “keyboard.”
3. Insert the keyboard connector into the scale’s port.



4. Turn the scale on.
5. Once the scale is on, enter the Main Menu by pressing the MENU key.



6. Select the function that will be used with the keyboard.

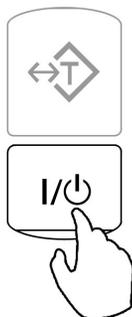


7. Locate the External Keyboard option and switch the setting to Enabled.



8. Exit the main menu.

9. Reboot the scale by turning it off and on.



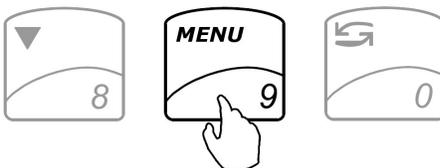
Note: Some keyboard keys remain disabled and do not work with the scale (i.e. function keys, Shift, Control etc...). Do not use the number keypad located to the right of your keys. To key in numbers always use the number keys in the upper row of the keyboard.

## CHAPTER 7.

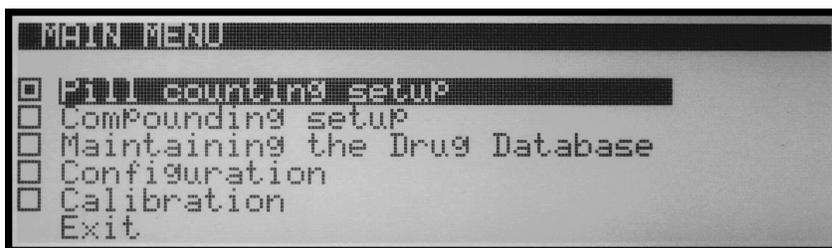
# MAIN MENU AND FUNCTION SETUP

Main Menu is used to configure the scale's functions. Configuration is done by enabling or disabling individual function features.

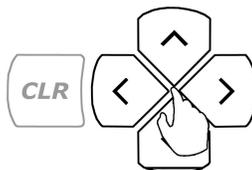
1. To enter the Main Menu function setup press the **Menu** key.



2. The scale will display a list of functions that can be configured.



3. Use the arrow navigation keys to navigate up and down the menu.



4. Once a desired function is highlighted press **Enter** to enter the configuration setup screen for the selected function. The scale will display a list of features and functions that can be reconfigured.



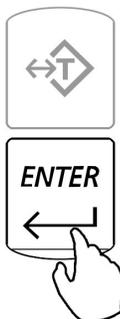
## 7.1. Pill Counting – Setup

The pill counting setup will allow you to configure the pill counting function by enabling or disabling different components of the function.

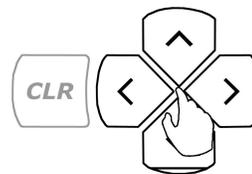
1. Access the Main Menu with the MENU key and use the up and down arrow keys to select the function to be configured.



2. Once a desired function is highlighted, press **Enter**.



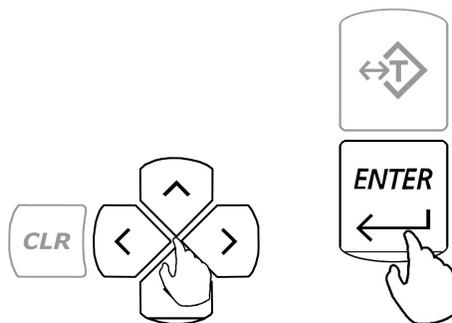
3. The scale will highlight the currently selected parameter (enabled or disabled). Use the right and left navigation arrow keys to toggle the parameters and to enable or disable the function.



4. Once a selection has been made press **Enter** to accept and confirm the setting.



Follow Steps 1 through 3 to configure the functions. In order to exit the menu use the navigation keys to select **Exit** and press **Enter**.



### 7.1.1. Pill Counting – Function Description

1. Default Sample Size – The sample size is the number of pills that have to be counted manually in order to establish an individual piece weight when counting the drug for the first time and entering it into the database. [Factory Default setting: **10**]
2. Remaining to Fill - When performing a counting transaction, the remaining to fill feature assists in achieving cut off at the proper pill count. When the feature is enabled, in addition to the displayed pill count, a remaining to fill countdown is displayed. The display indicates how many more pills must be placed in the vial to achieve the desired count, and indicates “0” at the target count. This feature helps to prevent overfilling. If too many pills are added, an overfill indicator displays the number of pills that should be removed from the vial. [Factory Default setting: **Disabled**]
3. External Keyboard – This feature must be enabled if an external PC keyboard is connected to the scale via the PS2 port. [Factory Default setting: **Disabled**]
4. Advanced Pill Counting Accuracy (APA) - APA is an advanced pill counting algorithm that can adjust for production LOT pill weight variations and provide even greater accuracy when counting large quantities. Turn to page 59 for more information on how to use the APA feature. [Factory Default setting: **Disabled**]
5. Onscreen Instructions - This feature displays instructions that lead you step-by-step through each the pill counting function. The instructions appear at the bottom of the LCD display. [Factory Default setting: **Enabled**]
6. Default Settings – Selecting this option rests the function configuration and restores factory defaults.

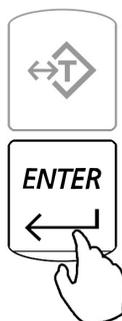
## 7.2.Compounding – Setup

The compounding setup will allow you to configure the compounding function by enabling or disabling different components of the function.

- 1.Access the Main Menu with the MENU key and use Use the up and down arrow keys to select the function to be configured.



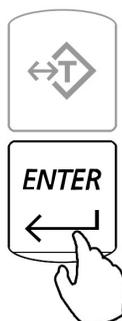
- 2.Once a desired function is highlighted, press Enter.



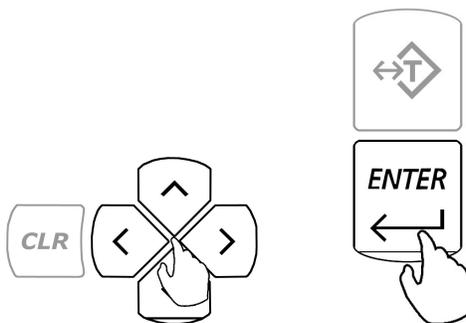
- 3.The scale will highlight the selected parameter (enabled or disabled). Use the right and left arrow keys to toggle the parameter and set the function to disabled or enabled.



- 4.Once a selection has been made, press Enter to accept and confirm the setting.



Follow Steps 1 through 3 to configure the functions. In order to exit the menu, use the navigation keys to select Exit and press Enter.



### 7.2.1. Compounding – Function Description

1. Ingredient Labeling – This feature allows you to assign unique names or labels to individual ingredients within the compound. The name of the ingredient and its weight is stored in the scale’s memory. [Factory Default setting: **Disabled**]
2. Remaining to Fill – When enabled, you will be asked to key in the desired weight of an ingredient before filling. This allows the scale to track the filled weight and display the remaining amount. If too much weight is placed, an excess indicator will be displayed, along with the amount of weight that should be removed. [Factory Default setting: **Disabled**]
3. Filling Meter – This feature should be used with the “reaming to fill feature”. The meter is a none-linear indicator that assists you in the filling process. The meter indicates a cut-off point at which the indicator becomes very sensitive, therefore it allows you to stop filling at the desired weight with greater accuracy. Turn to page XX for more information on how to use the filling meter. [Factory Default setting: **Disabled**]
4. External Keyboard – This feature must be enabled if an external PC keyboard is connected to the scale via the PS2 port. [Factory Default setting: **Disabled**]
5. Onscreen Instructions - This feature displays instructions that lead you step-by-step through the pill counting function. The instructions appear at the bottom of the LCD display. [Factory Default setting: **Enabled**]
6. Default Settings – Selecting this option rests the function configuration and restores factory defaults.

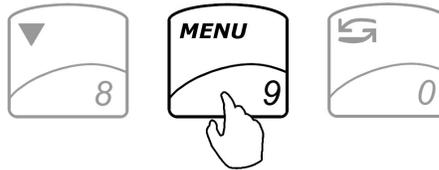
## CHAPTER 8.

# CONFIGURATION

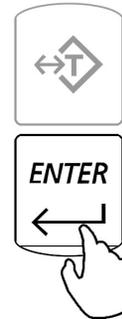
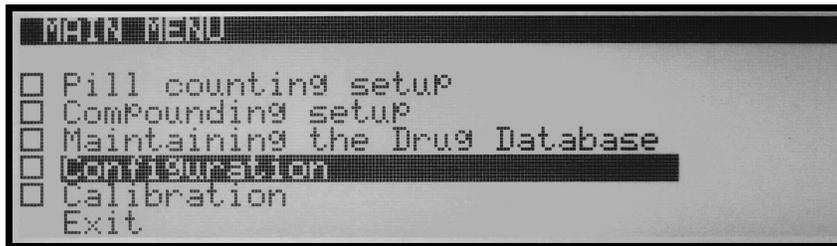
This function allows you to configure scale's LCD Contrast, RS232 Communication Port, Time and Date, and Performance configuration.

### 1.1. Power Save and LCD Contrast

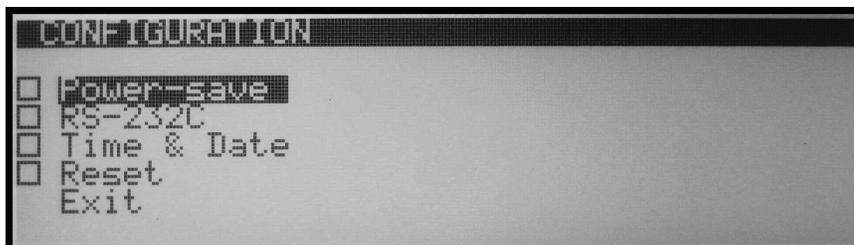
1. Enter the main menu by pressing the MENU key.



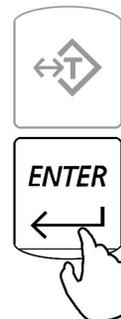
2. Use the navigation keys to select "Configuration" and press ENTER.



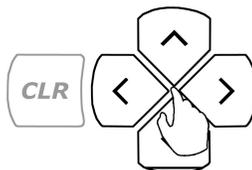
3. From the configuration menu select "Power Save" and press ENTER.



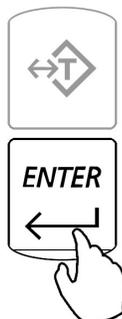
4. To change the contrast of your LCD display, select “Contrast” and press the ENTER key.



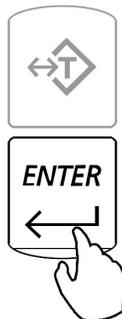
5. Using the left and right arrow navigation keys to adjust the contrast of your display.



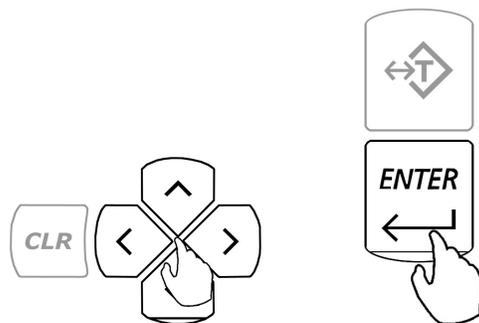
6. Once the contrast is at a desired level press the ENTER key to save the setting.



7. To completely turn off the back light of the LCD display, select “Back Light” and press ENTER.

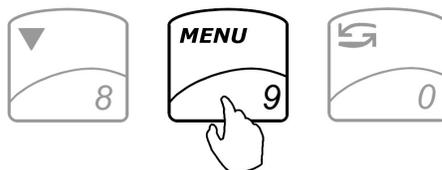


- Using the left and right arrow navigation keys select “OFF”. Once the back light is turned off press the ENTER key to save the setting.



## 1.2.RS232 Communication Port Adjustment

- Enter the main menu by pressing the MENU key.



- Use the navigation keys to select “Configuration” and press ENTER.



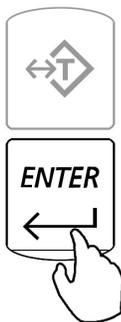
- From the configuration menu select “RS232” and press ENTER.



- To configure the “RS232 Port” use the navigation keys to select a desired parameter, press the ENTER key, and then once again use the navigation keys to make a desired selection.



- Once the selection is made press the ENTER key to save the setting.



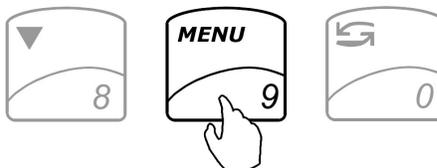
To connect the DRX Scale to a TORBAL RXP-4 printer use the following settings.

Baud Rate: 9600  
 Bits: 8 Bit  
 Parity: None  
 Protocol: Long  
 Sending Mode: Button + stab.

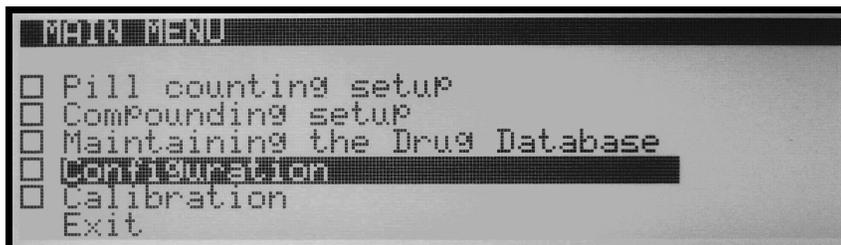
### 1.3. Time and Date Adjustment

Note: It is very important to adjust and keep a correct current time and date setting. The scale uses its clock and calendar setting for functions such as “Average Piece Reminder”, and “Delete by Date Database Maintenance”.

- Enter the main menu by pressing the MENU key.



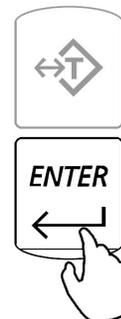
2. Use the navigation keys to select “Configuration” and press ENTER.



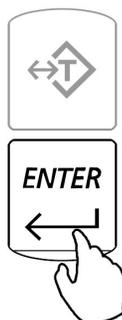
3. From the configuration menu select “Time and Date” and press ENTER.



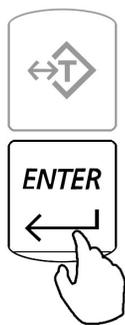
4. To adjust the time, using the navigation keys select “Time” and press ENTER.



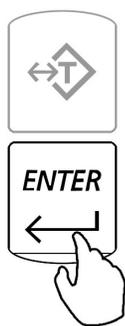
5. Using the yellow keys begin to enter the current time. The time is entered in segments: hours, minutes, and seconds. After entering a segment press the ENTER key to move to the next segment.



- To change between “AM” and “PM” use the down arrow key and press the ENTER key (after pressing the arrow key “AM” will not change to “PM” until the ENTER key is pressed).



- To change the date, select “Date” with the navigation keys and press ENTER.



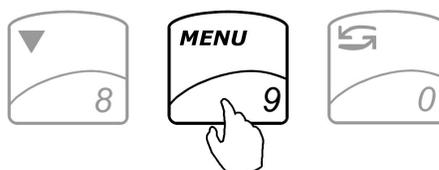
- Using the yellow number keys begin to enter the current date. The date is entered in segments: day, month, and year 00/00/0000. After entering a segment press the ENTER key to move to the next segment.



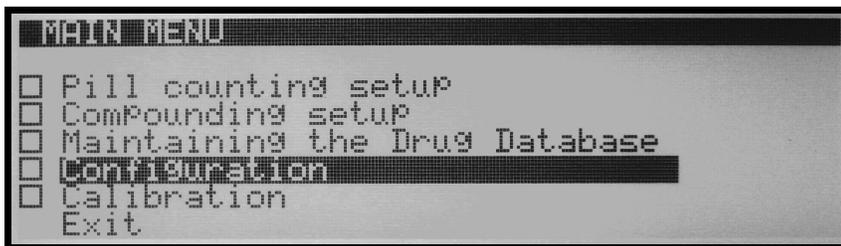
### 1.4.Reset

The reset option is used to restore default configuration settings.

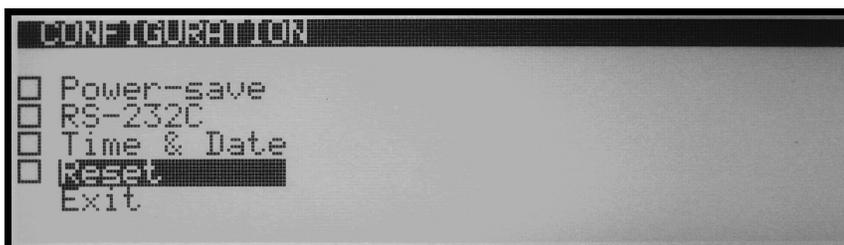
- Enter the main menu by pressing the MENU key.



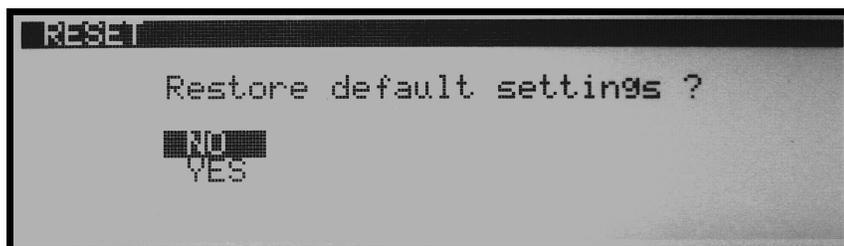
2. Use the navigation keys to select “Configuration” and press ENTER.



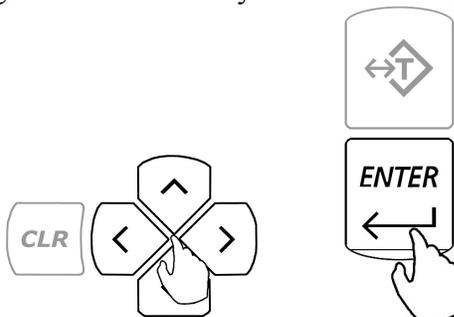
3. From the configuration menu select “Reset” and press ENTER.



4. Command “Restore Default Settings? NO/YES” will be displayed.



5. To restore default configuration settings use the arrow keys to select “YES” and press ENTER.



6. The scale will restore default configuration settings and return to the main menu.

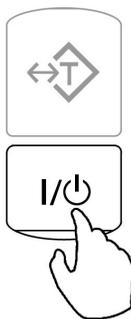


## CHAPTER 9.

# CALIBRATION

The DRX 5 Series scales are equipped with Automatic Internal Calibration. Calibration is automatically performed every time the scale is turned ON or initialized. Calibration is also performed every time the internal temperature of the scale changes by 1° C or at 2 hour time intervals (whichever comes first).

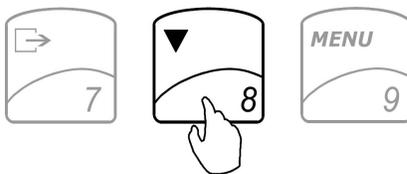
When first plugged into the electrical wall outlet, temperature calibration will be performed regularly as the internal temperature of the scale increases to its operating level. Once the temperature stabilizes temperature calibration will be performed less frequently. To maintain the internal calibration of the scale leave the unit plugged into the wall outlet and turn the scale OFF by using the ON/OFF key.



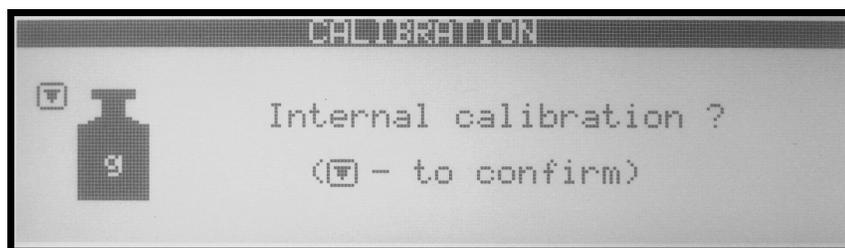
The calibration algorithm is designed not to interrupt the scale while it is in use. Therefore if calibration is required the scale will wait until the unit has been inactive for 60 seconds (pan free of any weight, keys have not been pressed, scale is stable).

The scale can be also calibrated at any time with the calibration key. To calibrate the scale follow the steps below:

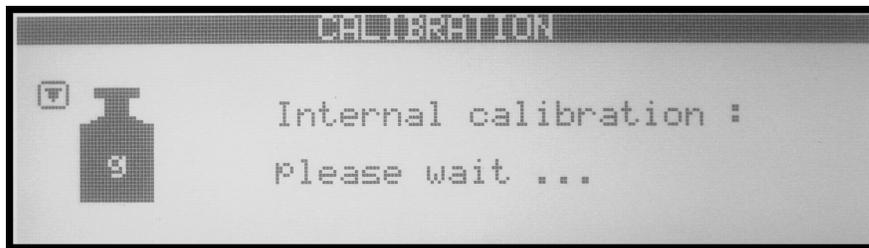
1. Make sure the pan is free of any weight and the scale is stable.
2. Press the calibration key ▽.



3. The scale will display a command asking to confirm internal calibration.



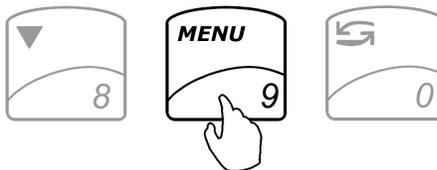
- In order to confirm internal calibration and proceed with calibration press the calibration key  $\nabla$  again.



### 1.4.1. Calibration Report

After calibration has been performed, a calibration report can be printed. The calibration report includes data of the current internal calibration weight. To print the calibration report, follow these steps:

- Press the MENU key to enter the main menu.



- Use the navigation keys to select Calibration and press ENTER



- Use the navigation keys to select Report Printout and press ENTER

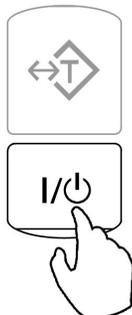


- The calibration report will be printed to a printer or transferred to a PC via the RS232 port.

## CHAPTER 10.

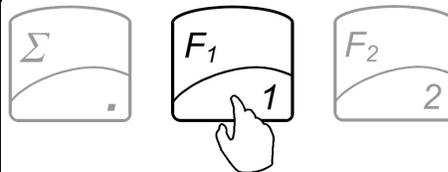
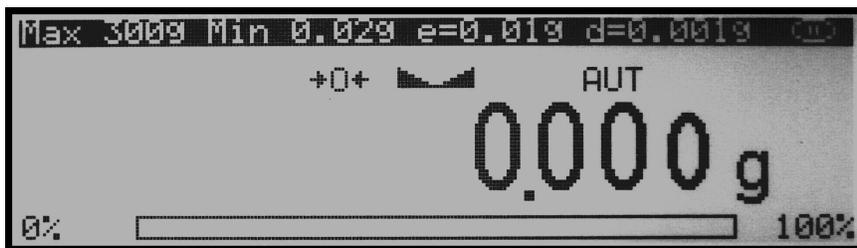
### WEIGHING (F1)

1. To begin weighing, press the power button (| /  $\text{\textcircled{I}}$ ) to turn the scale on.

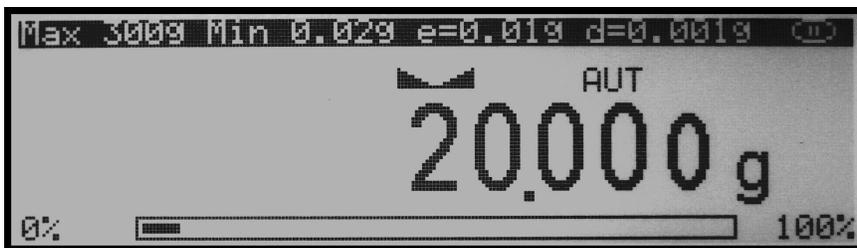


2. The scale will initialize and calibrate itself, and then automatically enter Weighing Mode. The scale is ready to begin weighing as soon as the stabilization ( $\blacktriangle$ ) and center of zero ( $\rightarrow 0 \leftarrow$ ) indicators appear on the display, i.e.:

If the scale initialized in a different mode, use the **F1** key to enter weighing.

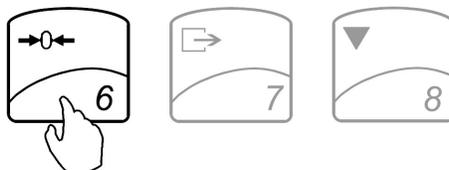


3. When weighing, always place the mass in the middle of the pan. The weighed result may be taken when the stabilization indicator appears on the display.

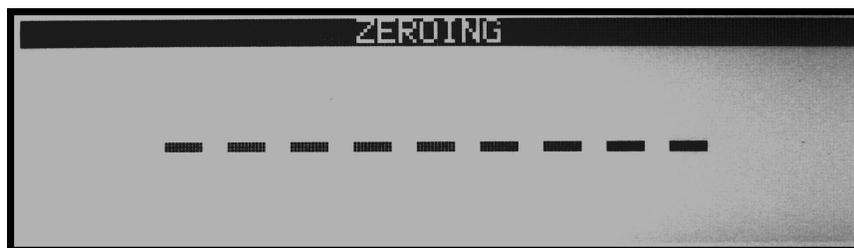


### 1.4.2. Zeroing the scale

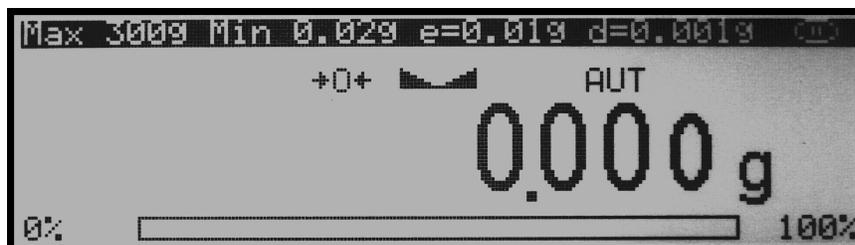
1. The DRX is armed with the Auto Zero Setting Mechanism (AZSM). AZSM automatically maintains a center of zero condition within  $\pm .5d$  or 5mg.
2. The scale may be re-zeroed manually to obtain a new center of zero. To re-zero the scale manually with a weight that is out of the AZSM range, make sure the weight and the stabilization indicator are shown on the display, i.e.:
3. Re-zero the scale by pressing the zeroing key.



4. The display will show a dotted line, which indicates that the scale has begun the re-zeroing process, i.e.:



5. When finished re-zeroing, the scale will return to Weighing Mode and the display will indicate 0. A new center of zero has been set, and the scale is ready for weighing.

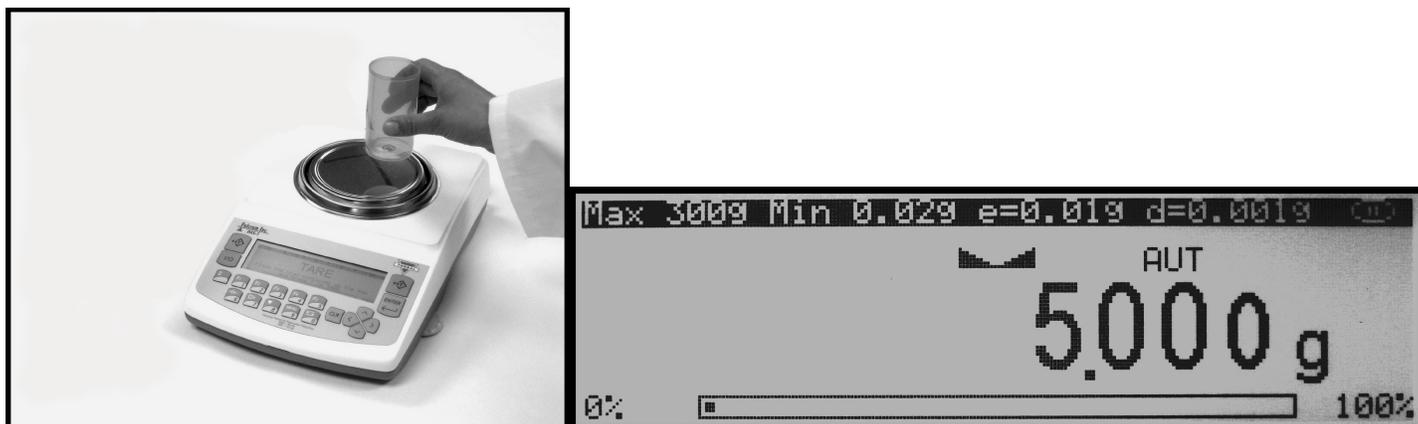


Note: Re-zeroing the scale will reduce the capacity of the scale by the re-zeroed weight. The remaining capacity is displayed as a percentage on the right side of the display.

### 1.4.3. Taring

1. If a container is used for weighing, it may be tared. In taring the container, the scale subtracts the weight of the container from the gross weight to obtain the net weight.

2. To tare the weighing container, place it in the middle of the pan. The container's weight will be shown on the display.



3. Once the stabilization indicator appears on the display, the container is ready to be tared. To tare the container, press the T button.



4. The display will show a dotted line which indicates the scale has begun the taring process.



5. When finished taring, the balance will return to Weighing Mode. The display will indicate 0, and the NET indicator will be shown on the display signaling the next weight taken is a NET result.



**Note:** Do not touch or move the scale during the taring process.

### 1.4.4. Clearing a Tare

1. To clear the tare, remove the tared object along with the NET weight from the pan. The scale will then display a negative NET tare result.



2. To clear the tare, press the T button.



3. The display will show dashed lines, indicating the tare is clearing.



4. When finished clearing the tare, the scale will return to Weighing Mode.



## CHAPTER 11.

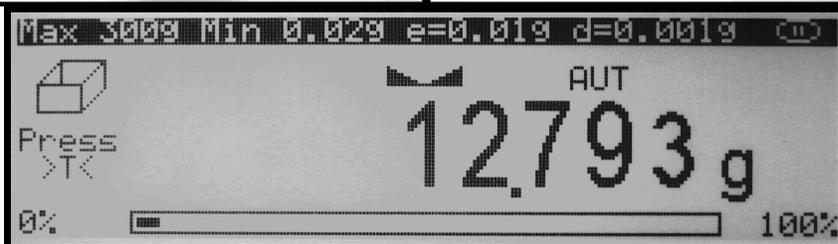
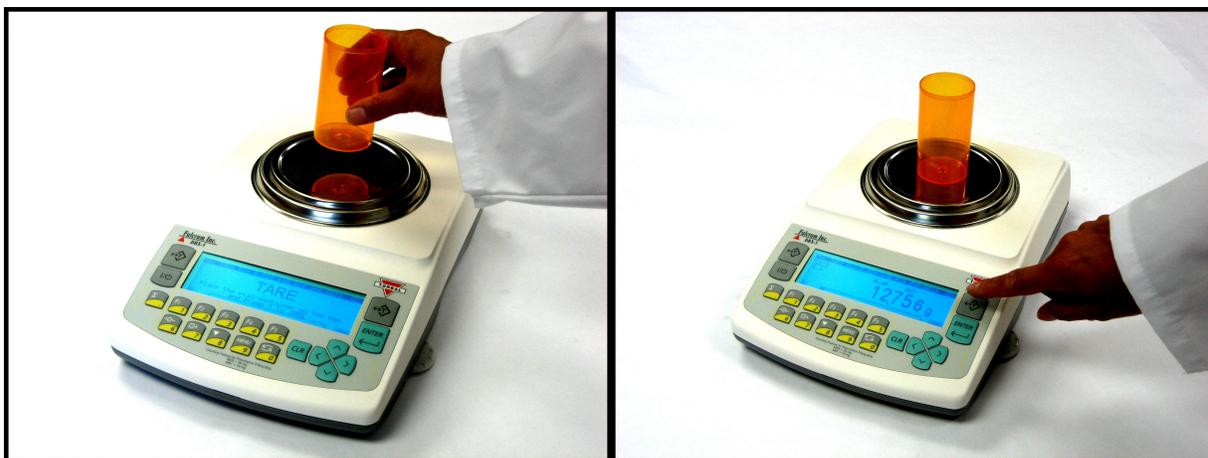
### PILL COUNTING (F2)

\*\* Steps referring to optional features that are disabled by default are italicized.

1. To enter the pill counting mode press F2. TARE will appear on the scale's display, indicating to tare a counting container.



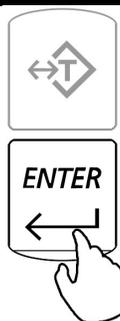
2. Place a vial or a counting container on the pan. The container weight will be displayed.



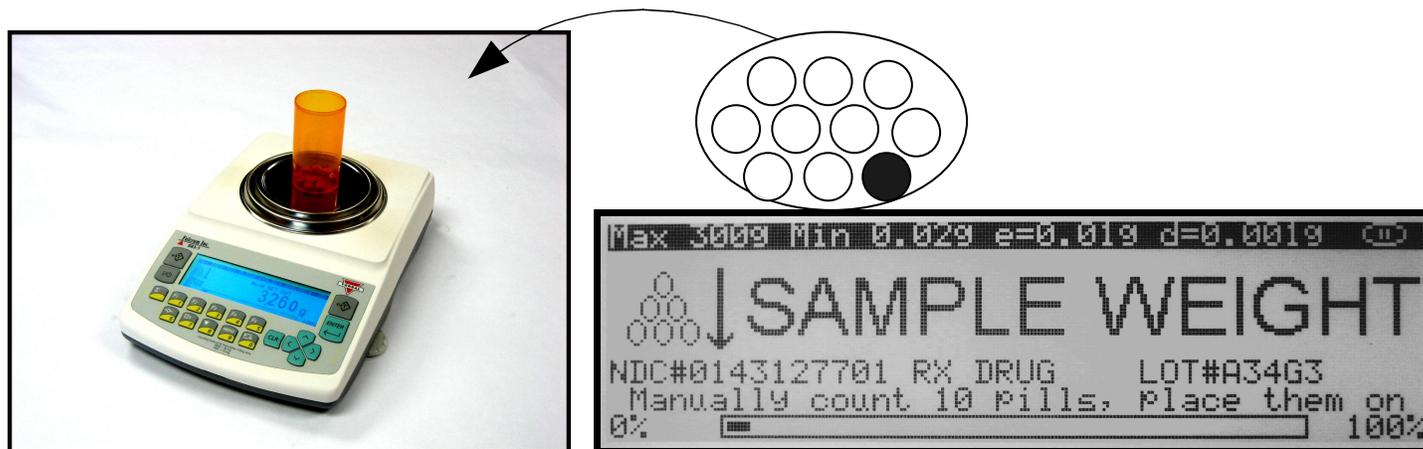
3. Wait for the weight to stabilize and press the T key to tare.



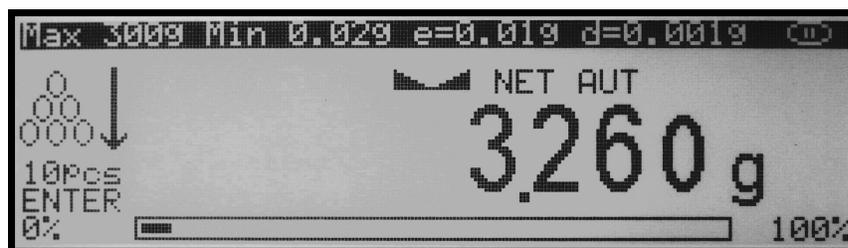
- The scale will ask to select and confirm the sample size; SAMPLE SIZE 10” will be displayed. To change the sample size use the left and right navigation keys, to accept the sample size press Enter.



- Once the sample size has been selected, the scale will display “SAMPLE WEIGHT,” indicating to weight the sample. Manually count 10 pills and place them in the container located on the pan.



- The weight of the sample will be displayed as it is placed on the pan.

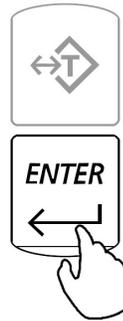


- Once the weight of the sample stabilizes and the stability indicator appears on the display, press the ENTER key to confirm and accept the sample weight.

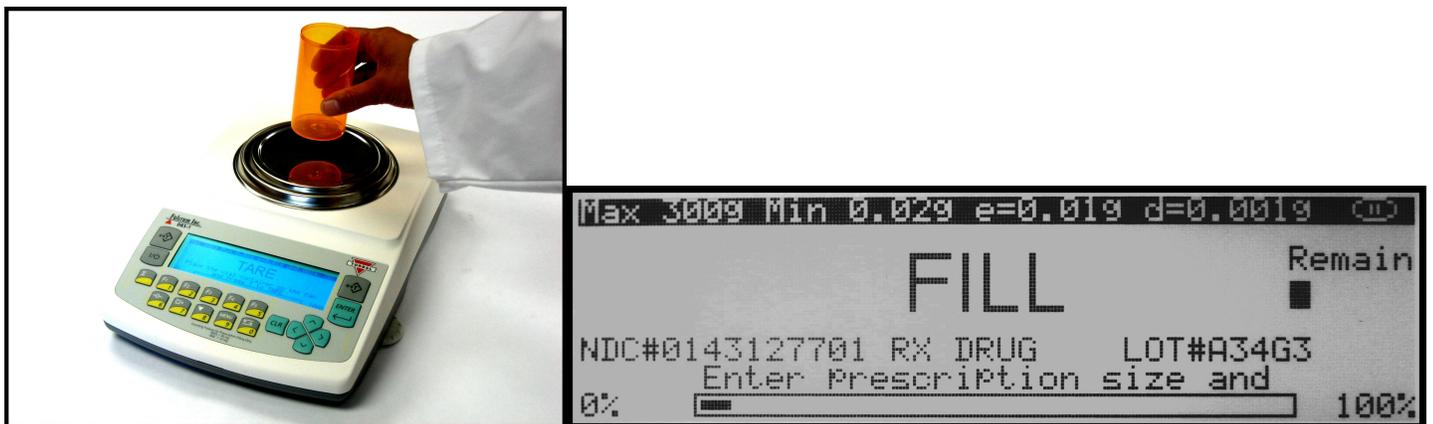


**Note:** Minimum individual piece weight allowed is 30mg (3e). With a sample size of 10 pieces, the sample weight must be equal to or greater than 300mg (30e). Attempting to set a sample size of 10 pieces with a total sample weight which is lower than 300mg (30e) will result in an error.

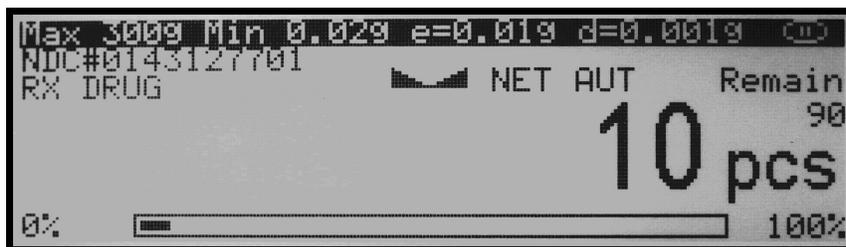
- If the Remaining to Fill feature has been enabled, the scale will ask for the number of pills to be counted in the transaction. Using the scale's keypad or an external keyboard, key in the number of pills to be counted and press Enter.



- The word "FILL" will flash on the display for approximately five seconds. At any time during the Fill command, add the remaining pieces.



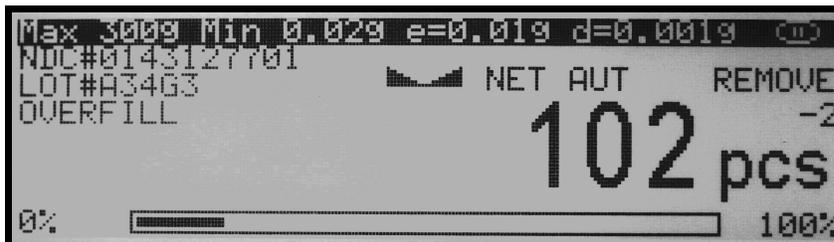
10. Note: If filling does not begin while the Fill command is displayed, after approximately five seconds the scale will display “10 pcs” and will wait for the count to begin.



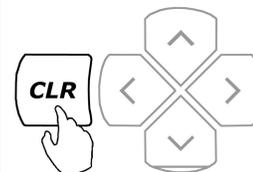
11. The display will now indicate the number of pieces in the container. Stop filling when the desired count has been reached.



12. Note: If the Remaining to Fill feature has been enabled, a count down meter will be displayed in the upper right corner of the display. If too many pills are placed into the container the OVERFILL indicator will be displayed.



13. Once an accurate piece count has been taken, the container and its contents may be removed from the scale. After the container with the counted pieces has been removed, the scale will signal that the count is finished by displaying “---- COUNT FINISHED.” To begin a new count press the Clear key (CLR).



**Important:** If too many pieces have been placed into the container, use tweezers, a pharmacy spoon, or a similar instrument to remove the excess while the container is still on the scale’s pan. If needed, place the container back on the pan to recheck the count. This may be performed while command “COUNT FINISHED” is displayed, but before pressing the C key. Once the C key has been pressed, the counting operation will reset and a new counting transaction may begin.

**Note:** The steps listed in this chapter must be performed only if the drug is counted for the first time and its sample weight has not been stored in the scale’s internal memory.



## CHAPTER 12.

### PRINTING A PILL COUNTING RECEIPT

Once a counting transaction has been completed a receipt of the count can be printed if an external printer is connected to the scale. To print a counting receipt, follow the steps below:

1. Once the desired count is displayed and the stability indicator appears, press Print ( ). A print icon will be displayed, indicating that printing is in process.

The printer will print the date and time of the performed transaction, as well as the NDC code, drug name, production LOT number, average piece weight, and the actual count

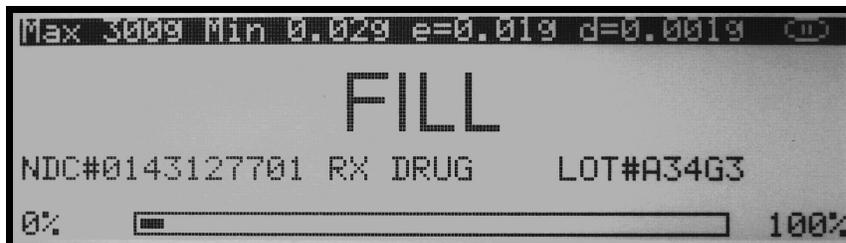
```
10-20-2007  1:33 PM  
  
AVG. PILL WT.      0.500  g  
PILL COUNT        10 PCS
```

## CHAPTER 13.

### ADVANCED PILL COUNTING ACCURACY (APA)

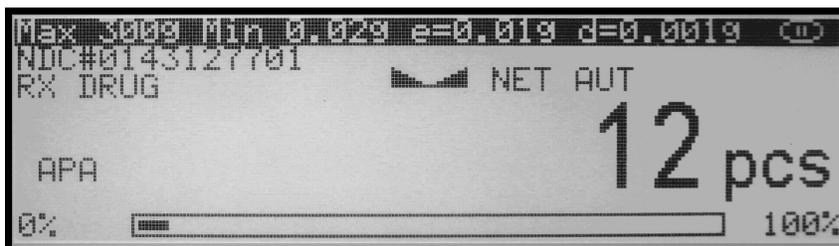
When enabled APA can adjust average piece weight variations that may exist between a currently counted drug, and the average piece weight of that drug that is stored in the scale's database. To use the APA feature follow the steps below.

1. Once command "FILL" is displayed slowly begin to count the pills. In order to activate APA stop the count between 10 and 15 pieces.

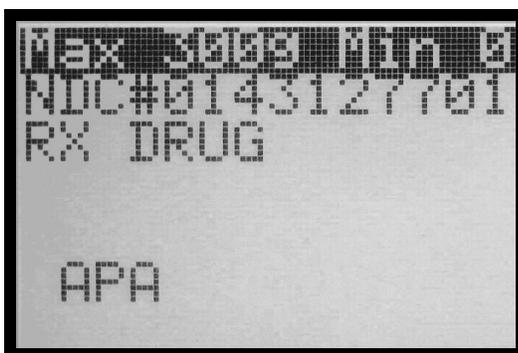


Note: When stopping outside of the 10 to 15 range the feature will not work.

2. When you reach a count of 10 to 15 pieces stop and wait for the scale to stabilize.



3. Once the scale is stable it will calculate a new average piece weight. The scale will sound a beep and the APA indicator will appear in the lower left corner of the display. At this point the scale has calculated a new average piece weight based on the pieces which are counted.



- For an even greater accuracy APA can be activated once again when stopping the count between 20 and 30 pieces. Activating APA in this range can be particularly useful when counting large quantities.



Note: If APA was not performed or activated at the 10 to 15 range it will not activate in the 20 to 30 range.

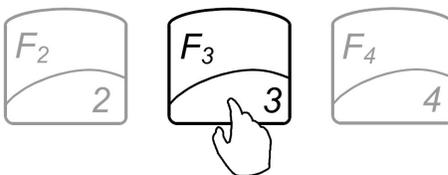
Note: The new average piece weight calculated in the counting transaction by the APA feature is not stored in the scales database. The stored average piece weight remains the same and can be changed manually only. For details on “Maintaining and Modifying the Average Piece Weight” turn to chapter 16 of this instruction manual.

## CHAPTER 14.

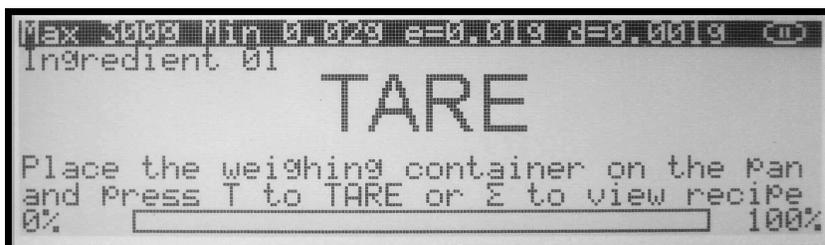
### COMPOUNDING AND RECIPE MAKING (F3)

\*\* Steps referring to optional features that are disabled by default are italicized.

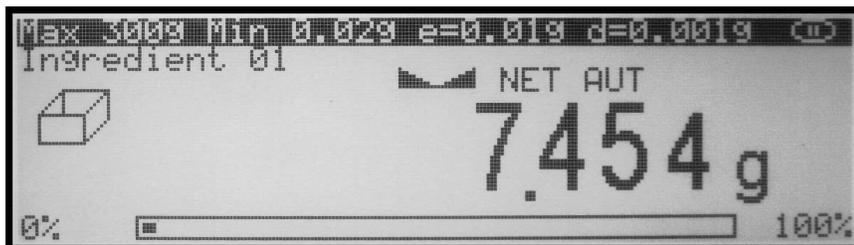
- To enter the compounding mode, press F3.



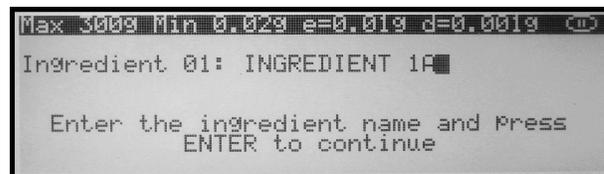
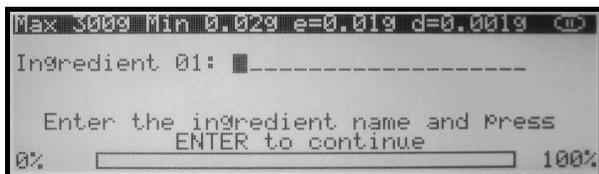
- “TARE” will appear on the scale’s display, indicating that it is ready to tare a counting container.



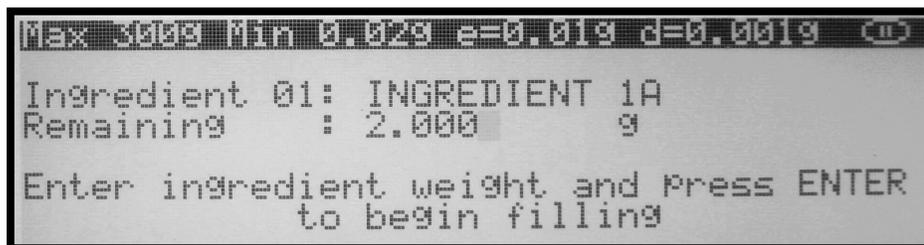
- Place a container on the pan and tare it by pressing the T key.



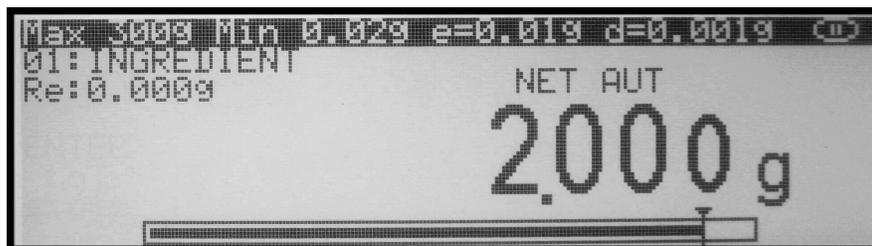
- The scale is now ready for the first ingredient.
- If Ingredient Labeling has been enabled, the scale will signal you to name the ingredient. To key in the ingredient name you may use the scale's alphabet (Chapter 24) or an external keyboard (Chapter 6).



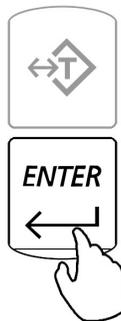
- If the Remaining to Fill feature is enabled, the scale will indicate that it is ready to key in the weight of the ingredient to be weighed. Using the scale's keypad, key in the weight of the ingredient and press Enter.



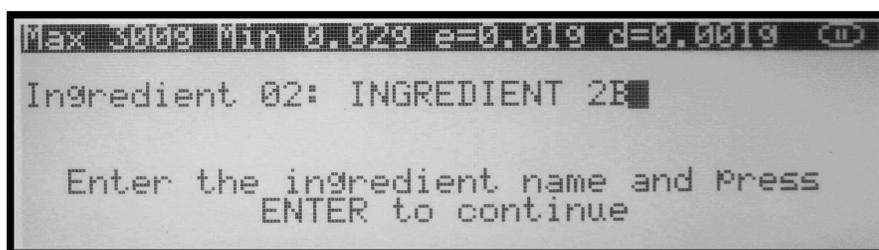
- Once the information has been entered, the scale will indicate that you can begin adding the ingredient. Add the ingredient until the desired weight is displayed and the stability indicator appears on the display.



8. Once a desired weight is displayed press Enter to store the ingredient in the scale's memory.

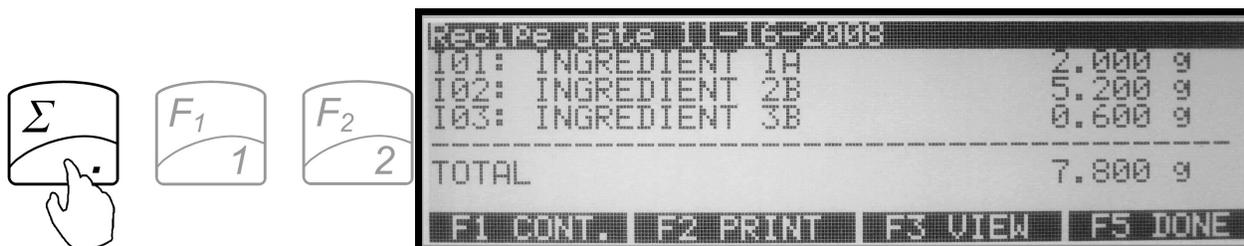


9. Once the ingredient has been entered into the scale's memory, the scale is ready for the next ingredient. Repeat Steps 1 through 7 for each ingredient.



The ingredients are retained in the scale's memory until the recipe has either been completed or cleared (CLR). An ingredient can be removed from the pan before the next ingredient is added.

To view the recipe total, or to print and save recipes press the Sigma ( $\Sigma$ ) key before taring and entering an ingredient.



## CHAPTER 15.

### SAVING AND PRINTING RECIPES

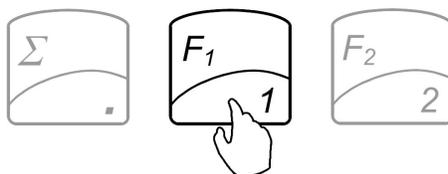
To view the recipe total, or to print and save recipes press the Sigma ( $\Sigma$ ) key before taring and entering an ingredient.



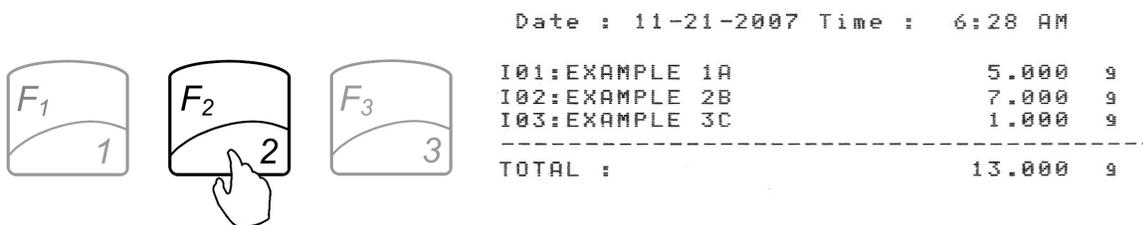
Once the sigma key has been pressed, the scale will display the current recipe. The recipe can be saved in the scales permanent and electronically erasable memory.

Select a desired command while the recipe is displayed:

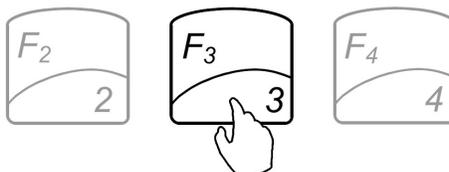
F1 Cont.: Press F1 to exit and continue adding ingredient to the recipe.



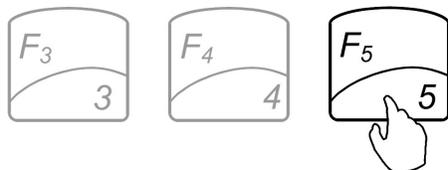
F2 Print.: Press F2 to print the recipe at its current stage.



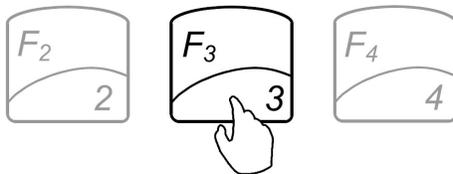
F3 View.: Press F3 to view saved recipes.



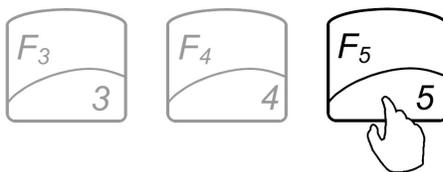
F5 Done.: Press F5 to finish and save the recipe.



To save the recipe before exiting, press F3, as indicated on the display.



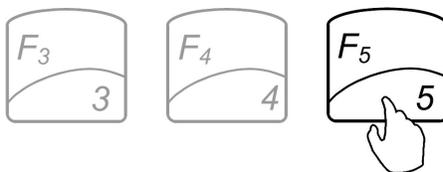
To exit without saving, press F5.



If F3 is pressed, the scale will display slots in which a recipe can be saved. By using the navigation keys select the slot into which you wish to save the recipe and press Enter. The scale will allow you to assign a name to the recipe; if a name is not necessary, leave the field blank and press Enter. To overwrite a previously saved recipe, simply select it with the navigation keys before saving a new one.



To exit the Recipe view without saving it, select F5.



## CHAPTER 16.

### USING THE FILLING METER

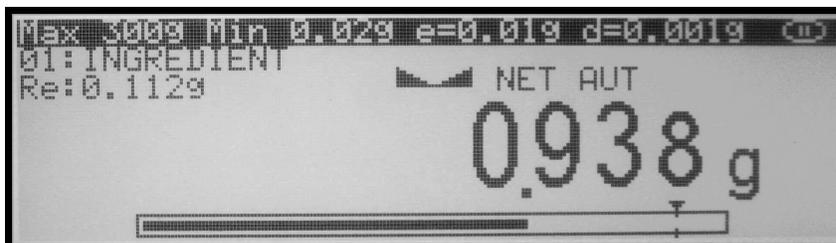
If the Remaining to Fill feature is enabled, the remaining to fill weight will be displayed in the upper left corner of the display.

The filling meter will assist you in the filling process. The filling meter helps to stop filling at the desired target weight which was entered as the remaining to fill weight.

1. Locate the arrow at the right end of the filling meter. The arrow represents the desired filling weight that had been programmed as the remaining to fill weight.
2. When an ingredient is added, the filling meter begins to move towards the arrow. The meter reaches the arrow when the desired weight has been placed on the pan.



3. The filling meter is non-linear. As the weight is placed on the pan, the meter begins to move slowly and becomes more sensitive as it approaches the desired weight. The resolution of the meter becomes greater as more weight is placed on the pan. This allows a more precise and accurate weight. Slow down the addition of weight into the pan when the meter is approximately three quarters full, since at that point you have added approximately 90% of the desired weight.



## CHAPTER 17.

### USING THE SCALE'S ALPHABET FOR DATA ENTRY

If an external PC Keyboard is not connected to the scale and you are using “Drug and LOT” labeling use the scale’s keypad to enter letters of the alphabet and other characters. Each number key has an assigned set of characters and letters. Press the key until the desired letter or a character is displayed. Once selected, the scale will move to the next character automatically. For list of character and assigned numbers see the chart below.

KEY	CHARACTERS
<b>F1/1</b>	1 . , ‘ ? ! “ - ( ) / _ : ; + * = < > [ ] { }
<b>F2/2</b>	2 A B C a b c
<b>F3/3</b>	3 D E F d e f
<b>F4/4</b>	4 G H I g h i
<b>F5/5</b>	5 J K L j k l
<b>→0←/6</b>	6 M N O m n o
<b>E→/7</b>	7 P Q R S p q r s
<b>▼/8</b>	8 T U V t u v
<b>MENU/9</b>	9 W X Y Z w x y z
<b>↻/0</b>	0 double press for space

## CHAPTER 18.

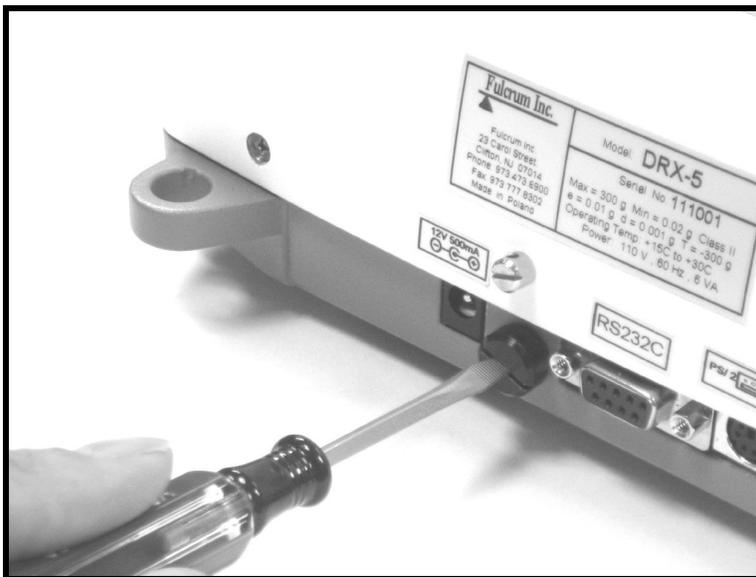
# SEALING THE SCALE

Depending on the laws of the state in which it is used, the scale may have to be sealed by an Weights and Measures official. The scale can be sealed either with paper or with wire.

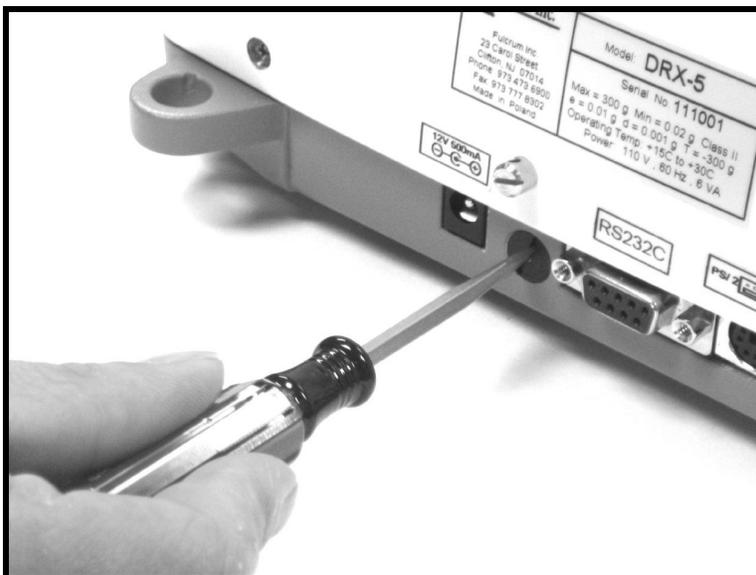
To seal the scale, follow the instructions below.

### 1.5.Paper Seal

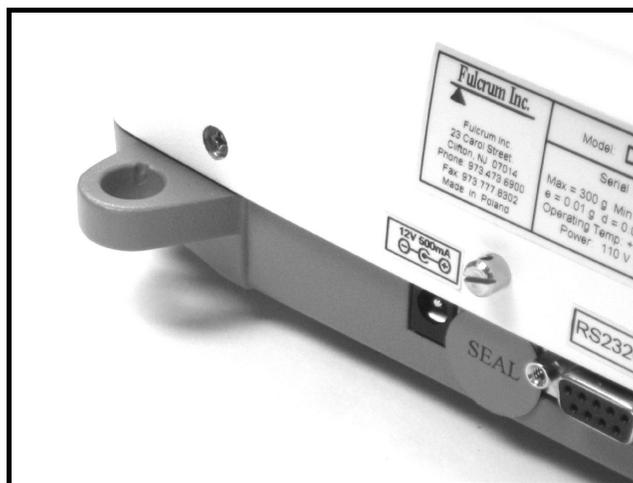
- 1.To seal the scale with a paper seal or a sticker, gently use a flathead screwdriver to remove the calibration wire seal screw located in the rear of the scale.



- 2.Once the wire seal screw has been removed and the calibration switch exposed, gently insert the flush sealing screw provided with the scale in the place of the wire seal screw.



3. Once the flush sealing screw is in place, the paper seal can be simply placed over the opening as shown in the picture below.



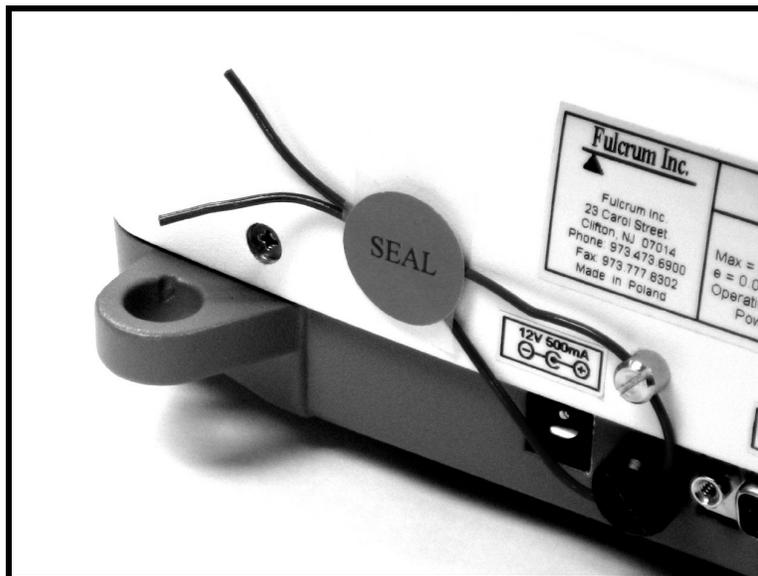
**WARNING:** Do not attempt to screw the flush sealing screw all the way in. Stop when the screw is flush with the casing of the scale.

### 1.6. Wire Seal

1. To seal the scale with a wire seal, insert the wire into the opening of the calibration screws located at the rear of the scale.

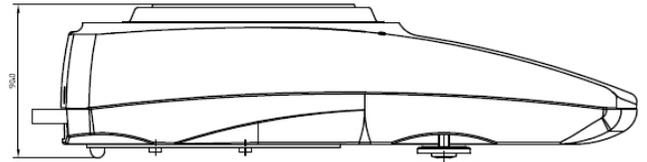
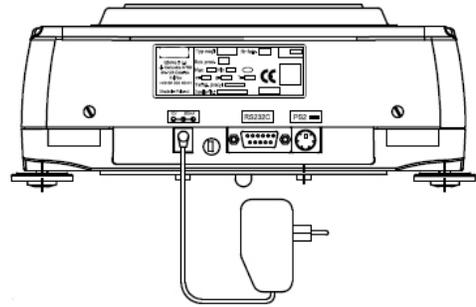
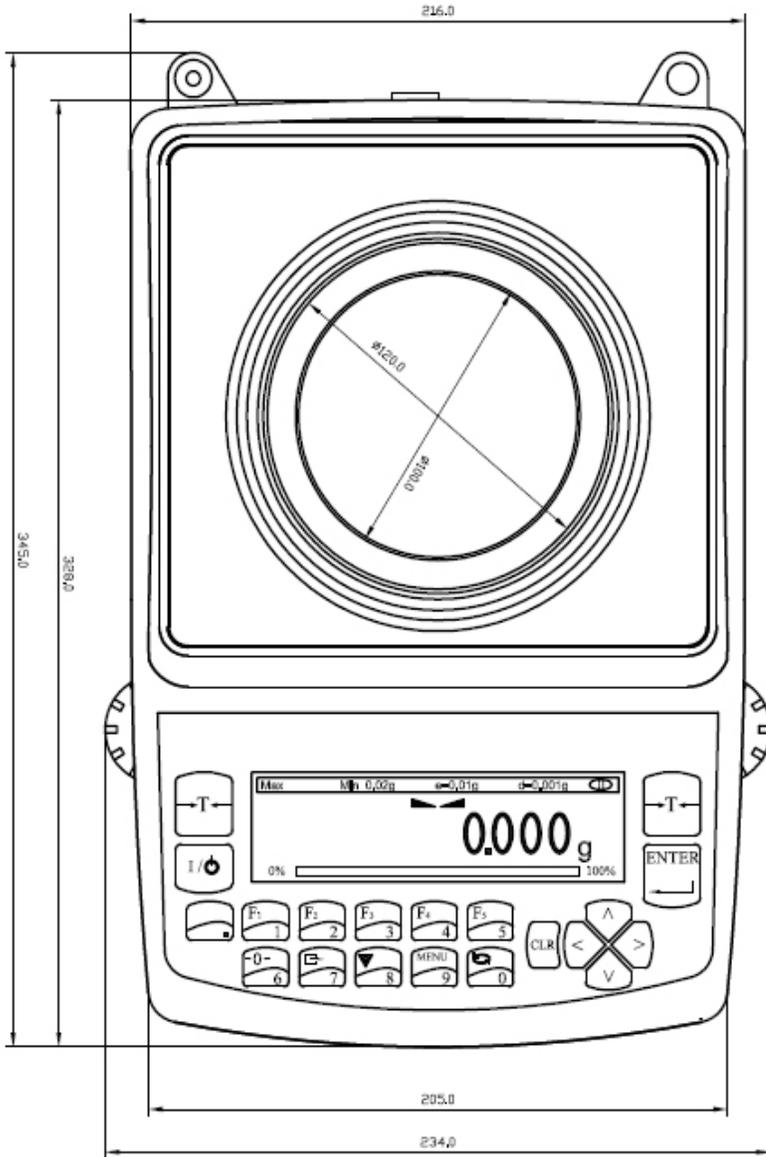


2. The seal may then be placed over the wire. Do not attempt to remove the calibration screw as it will rip the wire and break the seal.



# CHAPTER 19.

## TECHNICAL INFORMATION



## CHAPTER 20.

# COMMON ERRORS AND TROUBLESHOOTING

Error	Cause	Explanation / Solution
<i>Load error!</i>	Scale load at start up exceeds 10% of the scale MAX capacity	The pan was not empty while the scale was initiating at startup. Clear the pan and restart the scale.
<i>Capacity exceeded!</i>	Scale range exceeded	The scale has exceeded its weighing capacity. Reduce the weight.
<i>Zero range exceeded!</i>	Attempt to zero the scale that is beyond the scale's Zero range	Reduce the weight to be zeroed and try again.
<i>Tare range exceeded!</i>	Attempt to tare the scale that is beyond the Tare range	Place a weight on a pan before taking a tare.
<i>Tare value not cleared!</i>	Attempt to zero the scale without clearing a prior tare	Remove weight from pan and clear store tare values.
<i>Unit weight too low!</i>	In Pill Counting Individual sample weight is less than 3e	Be sure that the individual piece weight is greater than 3e

<i>Load error! (C01)</i>	Load error while initializing. The pan mass is below 10% of the stored value.	Do not touch or move the scale while calibration is in progress. The pan MUST be empty and properly installed.
<i>Load error! (C02)</i>	Load error while initializing. The pan mass is over 10% of the stored value.	Do not touch or move the scale while calibration is in progress. The pan MUST be empty and properly installed.
<i>Load error! (C03)</i>	Load error while calibrating. The internal calibration mass is below 10% of the original stored mass.	Do not touch or move the scale while calibration is in progress. The pan MUST be empty and properly installed.
<i>Load error! (C04)</i>	Load error while calibrating. The internal calibration mass is over 10% of the original stored mass.	Do not touch or move the scale while calibration is in progress. The pan MUST be empty and properly installed.
<i>Load error! (C05)</i>	Load error while performing second tare during calibration. Mass of the pan is less by more than 1e from the first stored value.	Do not touch or move the scale while calibration is in progress. The pan MUST be empty and properly installed.
<i>Load error! (C06)</i>	Load error while performing second tare during calibration. Mass of the pan is over by more than 1e from the first stored value.	Do not touch or move the scale while calibration is in progress. The pan MUST be empty and properly installed.
<i>Load error! (C07)</i>	Load error during second calibration. The difference on the internal calibration mass from the first to the second calibration is more than 1e.	Do not touch or move the scale while calibration is in progress. The pan MUST be empty and properly installed.
<i>No external calibration! (C08)</i>	Initial internal calibration test not permitted without prior external calibration	Contact Technical Support
<i>Calibration failure! (C09)</i>	Internal calibration failed because of timeout in final calibration stage (timeout in 30 seconds without stabilization)	Contact Technical Support



If any of the following errors are displayed, please contact technical support at (973)-473-6900

<i>EEPROM1 Error</i>	EEPROM1 memory error (shortage of memory, memory is damaged, or check sum error)
<i>EEPROM2 Error</i>	EEPROM2 memory error (shortage of memory, memory is damaged, or check sum error)
<i>EEPROM Error!</i>	EEPROM1 or EEPROM2 memory error
<i>CRC Error xx</i>	Check sum error number xx in EEPROM memory
<i>Service switch OFF!</i>	Attempt to access the Service mode with the Service Switch in the OFF position
<i>A/D range exceeded!</i>	A/D converter range exceeded
<i>A/D converter read error!</i>	No response from A/D converter
<i>Temperature sensor error!</i>	No response from the temperature sensor
<i>Service switch ON!</i>	Attempt to access the Service Mode without a service command

## CHAPTER 21.

### MAINTENANCE

#### Cleaning and maintaining your Prescription Scale:

- Before cleaning the scale always unplug the A/C adapter from the electrical outlet.
- Use a soft, slightly damp cloth to clean the exterior housing of your scale,.
- Wipe the scale gently. Do not allow any liquid to enter into the scale.
- Do not apply extensive pressure to the LCD display.
- Do not use chemicals or benzene when cleaning the surface. Corrosive chemicals may damage the finish.
- Alcohol may be used only to clean the scale's stainless steel pan or the draft ring.

**CHAPTER 22.****ACCESSORIES**

Description	Part No.
Draft Shield Cover	DRX9120
RXP-4 Thermal Printer	DRX9130
RS232 PC Cable	DRX9140

**CHAPTER 23.****REPLACEMENT PARTS**

Description	Part No.
A/C Adaptor	DRX9150
Pan Assembly	DRX9160
RS232 Printer Cable	DRX9170
Scanner w/ Cable	DRX9780



## CHAPTER 24.

# LIMITED WARRANTY

### PURCHASER'S 12-MONTH WARRANTY

Warranty is valid only if the attached warranty registration card is completed and returned within 30 days.

This product is a precision device made to exacting standards of scientific accuracy. It is guaranteed to have been adjusted and inspected for proper workmanship and performance, and certified for its currently advertised specifications before shipment.

Fulcrum Products are warranted against defects in material and workmanship under normal use and service. This warranty is extended only to the first purchaser. This limited warranty will not apply if, upon inspection, it is found that the product was tampered with, misused, overloaded, or abused. mishandled, placed in an improper environment, improperly installed or adjusted, used for a purpose other than that for which it was designed, or repaired by unauthorized personnel.

Fulcrum's liability under this warranty is limited to furnishing labor and parts necessary to remedy the defect covered by this warranty and restore the product to normal operating condition. Purchasers may be charged a minimum repair fee for in-warranty products returned for repair if those products are determined to be problemfree. To make a claim under this limited warranty, obtain an RMA number from Fulcrum and return the product, carefully packed in its original packaging, shipping prepaid, with the RMA number written on the return package.