



Serial Number: \_\_\_\_\_

# Model 350 *Digital Weight Indicator*

## USER MANUAL



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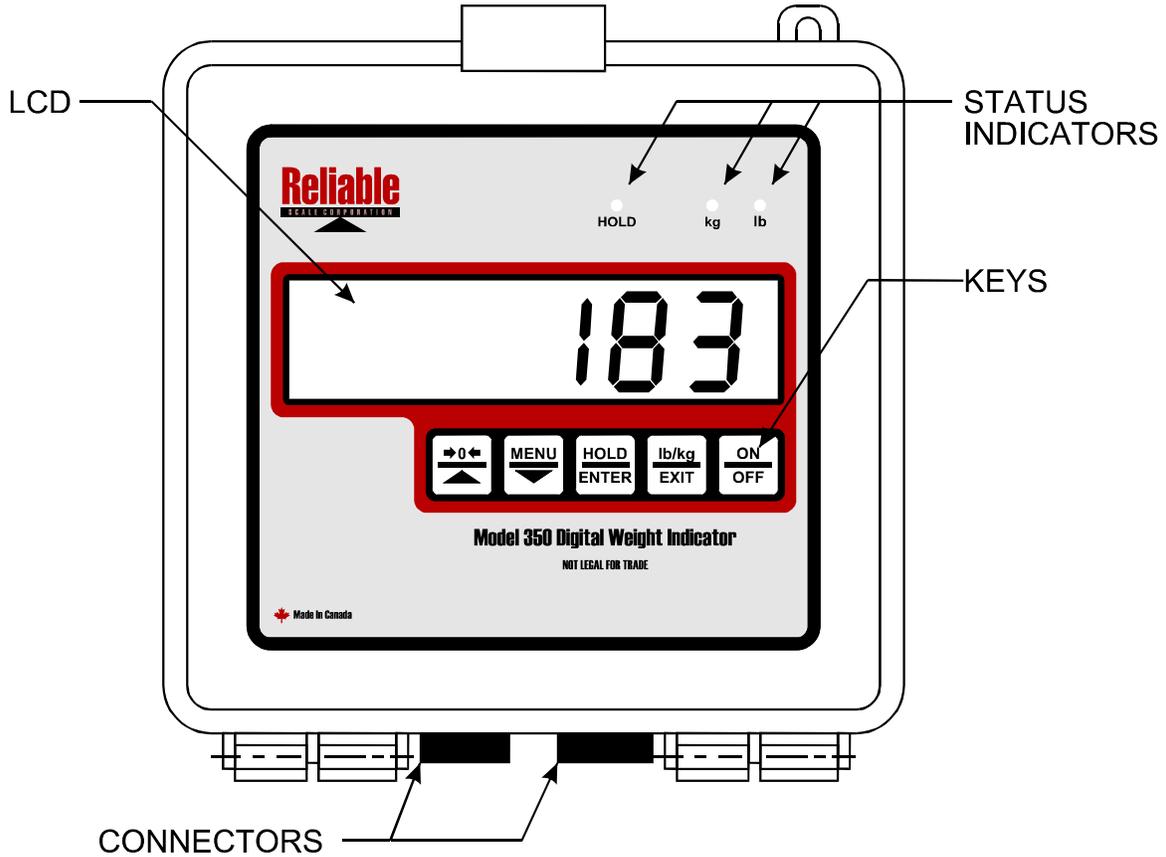
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## 2. General

### 2.1 Model 350 Face Detail



### 2.2 Connector Detail

Name	Signal	Connector	Included
Power	12 to 24 VDC	AMP# 206061-1	Standard
Serial Port 1	RS-232	9 pin male D-Sub	Optional

## 2.3 Status Indicators

In the **Normal Weighing Mode**, the status indicators show the current state of the Model 350. When waiting for user input, all status indicators will flash.

Status Indicator	Behaviour
<b>kg</b>	On when operating in kilograms
	Flashes once when a key is pressed and operating in kilograms
<b>lb</b>	On when operating in pounds
	Flashes once when a key is pressed and operating in pounds
<b>HOLD</b>	Flashes while <b>HOLD</b> weight is displayed

### 3. Basic Operation

#### 3.1 Turning the Model 350 On

When turned on, the Model 350 always starts operating in the **Normal Weighing Mode**.

1. Press the **ON** key.



Display shows the model number, then the serial number and then the firmware version. Display will also go through a digit test procedure.



2. Allow the Model 350 to warm up and the weight display to stabilize for a few moments.



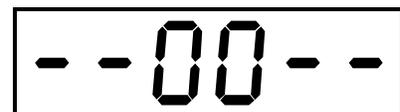
Note: At colder temperatures, more time should be allowed for warm up.

#### 3.2 Fine Zero Adjustment

1. If the scale has no weight on it and the display does not show "0".
2. From the **Normal Weighing Mode**, press the **FINE ZERO** key.



The new zero point is calculated.



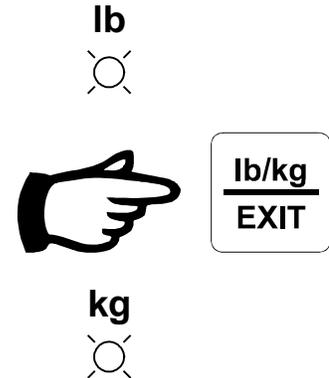
Display shows “0” and returns to the **Normal Weighing Mode**.



### 3.3 Toggle between weighing units

1. To change weighing units.
2. From the **Normal Weighing Mode** press the **lb/kg** key.

Status indicator will show the current units.

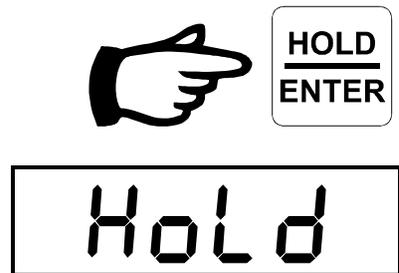


### 3.4 Hold/Print/Save Weight Records

The Model 350 can store **Weight Records**. The averaged weight used for a record is calculated over a period of time determined by the **Hold Average** parameter, see section 4.3.2 on page 31. Once calculated, the averaged weight will be shown on the display. At this point it can be discarded, saved and/or directed to the serial port for output to a computer or printer.

1. To calculate and **Hold** an average weight on the display, place the weight on the scale and press the **HOLD** key.

While in the **Hold Mode**, weight readings are continually averaged.



Once the averaging is finished, the averaged weight is displayed and the **HOLD** status indicator flashes rapidly. Any activity on the scale is ignored and the weight can be removed without affecting the display.



**HOLD**



2. To *save the weight record*, press the **HOLD** key.



3. To *discard the weight record*, press the **EXIT** key.



Display returns to the **Normal Weighing Mode**. The **HOLD** status indicator stops flashing.



### 3.5 Turning the Model 350 Off

Note: Do not disconnect the power supply to turn the Model 350 off. Use the **OFF** key. Important status information is saved in memory when the Model 350 is turned off.

1. Press the **OFF** key



The Model 350 turns off.

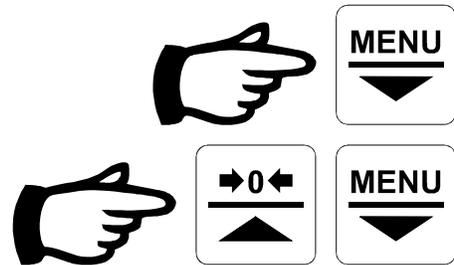


## 4. Configuration Menus

The Model 350 uses a system of menus to organize its various operating parameters. There are three main menus, each with a number of sub-menus. The menus are navigated with the keypad.

Note: Be sure to read and *fully* understand the directions before making any modifications to the Model 350 configuration. Failure to do so may render the Model 350 inoperable for your application.

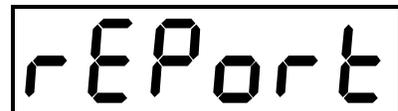
1. To access the **Configuration Menus**, press the **MENU** key. Use the **UP** and **DOWN** keys to scroll through the available menus. When you reach the end of a list, it will return to the first entry.



The **Interface** sub-menus are used to set the operator interface parameters. See section 4.1 on page 9 for details on these menus.



The **Report** sub-menus are used to report and manage **Weight Records**. See section 4.2 on page 17 for details on these menus.



The **Setup** sub-menus are used to set the scale operating parameters. See section 4.3 on page 28 for details on these menus.



2. To return to the **Normal Weighing Mode**, press the **EXIT** key to back out of each menu level.



## 4.1 Interface Menu

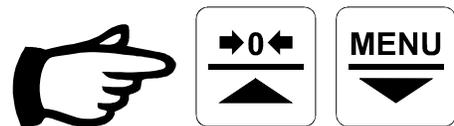
The **Interface** sub-menus are used to set the operator interface parameters. These parameters affect the way that information is presented to the operator.

1. From the main menu list, navigate to the **Interface** menu and press the **ENTER** key.

The LCD display shows the word "interf" in a seven-segment font.



2. Using the **UP** and **DOWN** keys, navigate to the desired menu.



Sub-menus to configure **Serial Port 1** operating parameters. See section 4.1.1 on page 10.

The LCD display shows the text "Port 1" in a seven-segment font.

Sub-menus to configure **Serial Port 2** operating parameters. See section 4.1.1 on page 10.

The LCD display shows the text "Port 2" in a seven-segment font.

Sets the **Display Graduation Size**. See section 4.1.2 on page 13.

The LCD display shows the text "Cnt by" in a seven-segment font.

Sets the **Decimal Point Location**. See section 4.1.3 on page 14.

The LCD display shows the text "dec pt" in a seven-segment font.

Sets the **Remote Address** used to identify the Model 350. See section 4.1.4 on page 15.

The LCD display shows the text "AddrES" in a seven-segment font.

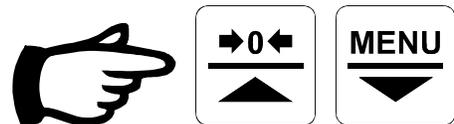
### 4.1.1 Serial Ports

The Model 350 can support an optional RS-232 serial port and a second optional RS-232, RS-422, or RS-485 serial port. While the baud rate is programmable, the data bits, parity and stop bit settings are fixed at 8, none, and 1. The settings for both ports are set in the same way. **Port 2** can be substituted for **Port 1** in all of the examples below.

1. From the **Serial Port 1** menu, press the **ENTER** key.



2. Use the **UP** and **DOWN** keys to navigate the sub-menus.



Sets the **Serial Port Output Format**.  
See section 4.1.1.1 on page 10.



Sets the **Baud Rate**. See section 4.1.1.2 on page 11.



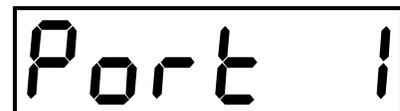
Sets the **Delay** between output lines.  
See section 4.1.1.3 on page 12.



3. Press the **EXIT** key to return to the **Serial Port 1** menu.



Display shows the **Serial Port 1** sub-menu.



#### 4.1.1.1 Serial Port Output Format

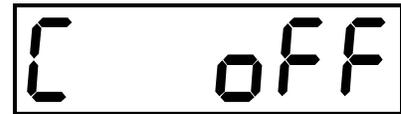
The data output from the serial ports on the Model 350 can be selected from a number of different layouts. The layout is determined by the

**Serial Port Output Format** parameter, see section 6 on page 38 for details on the available formats.

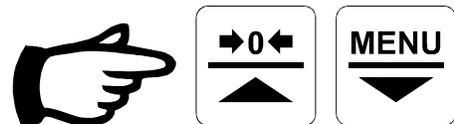
1. From the **Serial Port Output Format** menu, press the **ENTER** key.



Display shows the current setting. All status indicators flash.



2. Use the **UP** and **DOWN** keys to select the desired **Serial Port Output Format**.



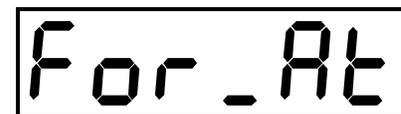
3. To accept the new setting, press the **ENTER** key.



4. To discard the new setting, press the **EXIT** key.



Display shows the **Serial Port Output Format** menu.



#### 4.1.1.2 Serial Port Baud Rate

The Model 350 serial ports can be configured to operate at one of a number of industry standard baud rates. The Model 350 baud rate must match the baud rate of the equipment connecting to it in order for the devices to communicate.

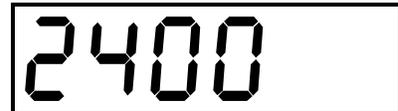
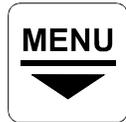
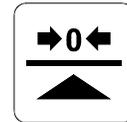
1. From the **Serial Port Baud Rate** menu, press the **ENTER** key.



Display shows the current setting. All status indicators flash.



2. Use the **UP** and **DOWN** keys to select the desired **Serial Port Baud Rate**.



3. To accept the new setting, press the **ENTER** key.



4. To discard the new setting, press the **EXIT** key.



Display shows the **Serial Port Baud Rate** menu.



#### 4.1.1.3 Serial Port Delay

When interfacing to low speed serial devices (such as tape printers), a time delay between lines can be implemented to prevent input buffer overflows on the low speed device. The **Serial Port Delay** setting controls the line delay length in milliseconds.

1. From the **Serial Port Delay** menu, press the **ENTER** key.



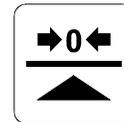
The current **Serial Port Delay** setting is displayed. All status indicators flash.



**HOLD**  
**ENTER**

0.000

- Use the **UP** and **DOWN** keys to select the desired **Serial Port Delay**.



**MENU**  
▼

0.200

- To accept the new setting, press the **ENTER** key.



**HOLD**  
**ENTER**

- To discard the new setting, press the **EXIT** key.



**lb/kg**  
**EXIT**

Display shows the **Serial Port Delay** menu.

DELAY

#### 4.1.2 Display Graduation Size

The **Display Graduation Size** (Count By) used by the Model 350 can be set to one of several options. Internally, the Model 350 works with the smallest graduation possible and the **Display Graduation Size** is used for display and output purposes only.

- From the **Display Graduation Size** menu, press the **ENTER** key.

Cnt by

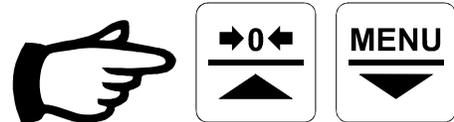


**HOLD**  
**ENTER**

The current **Display Graduation Size** setting is displayed. All status indicators flash.



- Use the **UP** and **DOWN** keys to select the desired **Display Graduation Size**.



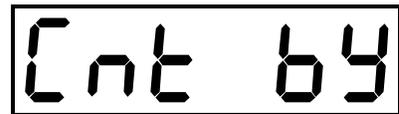
- To accept the new setting, press the **ENTER** key.



- To discard the new setting, press the **EXIT** key.



Display shows the **Display Graduation Size** menu.



### 4.1.3 Decimal Point Location

The **Decimal Point Location** provides a visible reference when weighing in fractional units. It is used for display and output purposes only. Changing the **Decimal Point Location** does not affect the number displayed for a given weight on the scale.

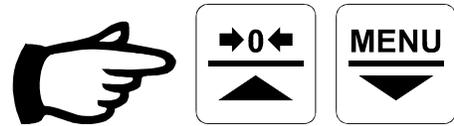
- From the **Decimal Point Location** menu, press the **ENTER** key.



The current **Decimal Point Location** is displayed. All status indicators flash.



- Use the **UP** and **DOWN** keys to select the desired **Decimal Point Location**.



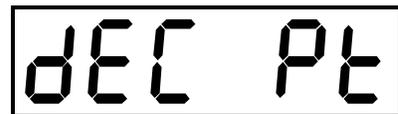
- To accept the new setting, press the **ENTER** key.



- To discard the new setting, press the **EXIT** key.



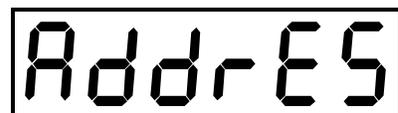
Display shows the **Decimal Point Location** menu.



#### 4.1.4 Remote Communication Address

When communicating with multiple Model 350s via computer, a **Remote Communication Address** must be used to direct commands to a specific Model 350. A setting of 0 disables the **Remote Communication Address**.

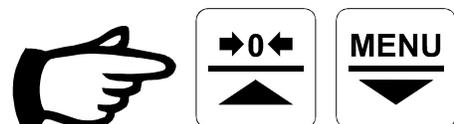
- From the **Remote Communication Address** menu, press the **ENTER** key.



The current **Remote Communication Address** setting is displayed. All status indicators flash.



- Use the **UP** and **DOWN** keys to select the desired **Remote Communication Address**.





3. To accept the new setting, press the **ENTER** key.



4. To discard the new setting, press the **EXIT** key.



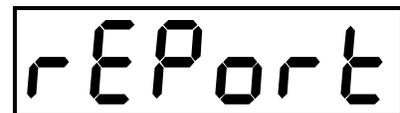
Display shows the **Remote Communication Address** menu.



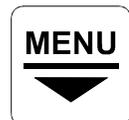
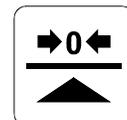
## 4.2 Report Menu

The **Report** sub-menus are used to display, output and manage **Weight Records**. The Model 350 has memory for 1618 **Weight Records**. **Weight Records** are not lost when the Model 350 is turned off or the power is disconnected. Each **Weight Record** includes the following information: **Lot Number**, averaged weight, date and time of record capture. **Weight Records** are collected and saved with the **Hold/Print/Save Weight Records** feature, see section 3.4 on page 6. The Model 350 can organize **Weight Records** in up to 20 different **Lots**. The **Lots** can be used to classify **Weight Records** in any way that is suitable for the application.

1. From the main menu list, navigate to the **Report** menu and press the **ENTER** key.



2. Using the **UP** and **DOWN** keys, navigate to the desired menu.



Displays **Weight Totals** and other statistics for a specified **Lot**. See section 4.2.1 on page 18.



Outputs **Basic Weight Record Report** on enabled **Serial Ports** for a specified **Lot**. See section 4.2.2 on page 20.



Outputs **Detailed Weight Record Report** on enabled **Serial Ports** for a specified **Lot**. See section 4.2.3 on page 21.



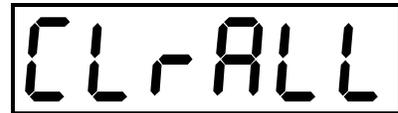
Used to **Set Current Lot** for **Weight Record** storage. See section 4.2.4 on page 23.



Used to **Clear Lot Records** for a specified **Lot**. See section 4.2.5 on page 24.



Used to **Clear All Lot Records**. See section 4.2.6 on page 25.



Used to display **Free Weight Record Capacity**. See section 4.2.7 on page 26.



### 4.2.1 Weight Totals

**Weight Totals** for each **Lot** are available in summary form on the Model 350 display. The summary includes the number of records in the **Lot** as well as the total, average, maximum and minimum weights for that **Lot**.

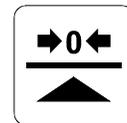
1. From the **Weigh Totals** menu, press the **ENTER** key.



If **Lots** are enabled, display prompts for the **Lot** to view starting at the current **Lot**. If **Lots** are disabled, the **Lot Summary** is displayed immediately.



2. Use the **UP** and **DOWN** keys to choose the **Lot** to view.



3. To view the specified **Lot**, press the **ENTER** key.



**HOLD**  
**ENTER**

4. To cancel without viewing the specified **Lot**, press the **EXIT** key.



**lb/kg**  
**EXIT**

Display shows the **Lot** being viewed.

Lot 1

Number of records in **Lot**.

rECrds

57

Total weight of the **Lot**.

tOTAL

41473

Average weight of the **Lot**.

AvE

727.6

Highest weight in the **Lot**.

H.

807

Lowest weight in the **Lot**.

Lo



4. To quit viewing **Lot Summary**, press the **EXIT** key.



Display shows the **Weight Totals** menu.



### 4.2.2 Basic Weight Record Report

A **Basic Weight Record Report** can be output from either of the Model 350 **Serial Ports**. The report consists of the same information as the **Weight Totals** summary. To output the report, one of the **Serial Port Output Formats** must be selected, see section 4.1.1.1 on page 10.

**Basic Weight Record Report** example:

```
Weight Record Summary Report

All Lots
  Lot Total Weight:   1589 lb
  Lot Average Weight:   795 lb
  Lot Maximum Weight:   824 lb
  Lot Minimum Weight:   765 lb

2 Record(s) Processed.

Report Finished
```

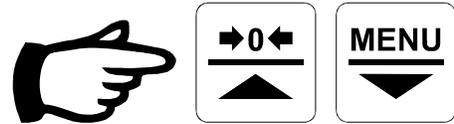
1. From the **Basic Weight Record Report** menu, press the **ENTER** key.



If **Lots** are enabled, display prompts for the **Lot** to output starting at the current lot. If **Lots** are disabled, the report is output immediately.



2. Use the **UP** and **DOWN** keys to choose the **Lot** to output.



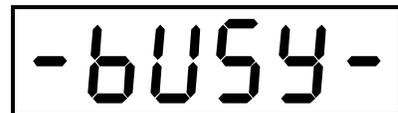
3. To output the report for the specified **Lot**, press the **ENTER** key.



4. To cancel without outputting the specified **Lot**, press the **EXIT** key.



The Model 350 is unavailable until the report output is finished.



If **Lots** are enabled, display prompts for the lot to output again, see Step 2.



Display shows the **Basic Weight Record Report** menu.



### 4.2.3 Detailed Weight Record Report

A **Detailed Weight Record Report** can be output from either of the Model 350 **Serial Ports**. The report consists of the same information as the **Weight Totals** summary as well as the individual **Weight Records** for the specified **Lot**. To output the report, one of the **Serial Port Output Formats** must be selected, see section 4.1.1.1 on page 10.

**Detailed Weight Record Report** example:

```

Weight Record Detailed Report

Lot,Weight,Units
0, 765,lb
0, 824,lb

All Lots
Lot Total Weight: 1589 lb
Lot Average Weight: 795 lb
Lot Maximum Weight: 824 lb
Lot Minimum Weight: 765 lb

2 Record(s) Processed.

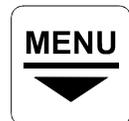
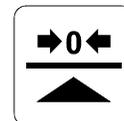
Report Finished
    
```

1. From the **Detailed Weight Record Report** menu, press the **ENTER** key.



If **Lots** are enabled, display prompts for the **Lot** to output starting at the current lot. If **Lots** are disabled, the report is output immediately.

2. Use the **UP** and **DOWN** keys to choose the **Lot** to output.



3. To output the report for the specified **Lot**, press the **ENTER** key.



4. To cancel without outputting the specified **Lot**, press the **EXIT** key.



The Model 350 is unavailable until the report output is finished.



If **Lots** are enabled, display prompts for the **Lot** to output again, see Step 2.



Display shows the **Detailed Weight Record Report** menu.



#### 4.2.4 Set Current Lot

All **Weight Records** are stored in the currently selected **Lot**. To save **Weight Records** in a different **Lot**, the **Current Lot** must be changed. A setting of 0 disables **Lots** and all records are treated as though they were in the same **Lot**.

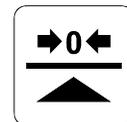
1. From the **Set Current Lot** menu, press the **ENTER** key.



Display shows the current **Lot** number. All status indicators flash.



2. Use the **UP** and **DOWN** keys to select the desired **Lot** number.



3. To accept the new setting, press the **ENTER** key. Status indicators stop flashing.



- To discard the new setting, press the **EXIT** key.



Display shows the **Set Current Lot** menu.



### 4.2.5 Clear Lot Records

The **Weight Records** stored in a single **Lot** can be deleted by using the **Clear Lot Records** menu. When **Weight Records** are deleted, they are removed *permanently* from the Model 350 memory and cannot be retrieved.

- From the **Clear Lot Records** menu, press the **ENTER** key.



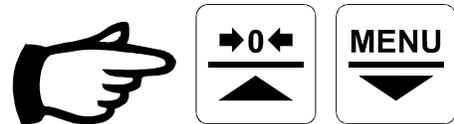
Display prompts for the **Lot** to clear starting at the current lot.



Display shows the current **Lot** number. All status indicators flash.



- Use the **UP** and **DOWN** keys to choose the **Lot** to clear.



- To cancel without clearing the specified **Lot**, press the **EXIT** key.



- To clear the specified **Lot**, press the **ENTER** key.



**HOLD**  
**ENTER**

Display prompts for confirmation to clear records.



- To cancel without clearing the specified lot, press the **EXIT** key.



**lb/kg**  
**EXIT**

- To **Clear Lot Records**, press the **ENTER** key.



**HOLD**  
**ENTER**

The Model 350 is unavailable until the records have been cleared.



Display prompts for the lot to clear again, see Step 2.



- Use the **EXIT** key to return to the **Clear Lot Records** menu.



**lb/kg**  
**EXIT**

Display shows the **Clear Current Lot** menu.



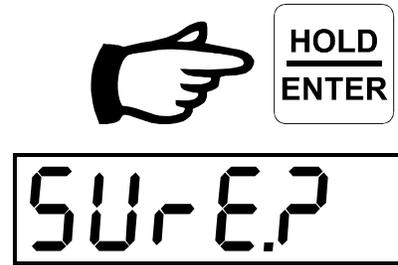
#### 4.2.6 Clear All Lot Records

The **Weight Records** stored in all of the **Lots** can be deleted at one time by using the **Clear All Lot Records** menu. When **Weight Records** are deleted, they are removed *permanently* from the Model 350 memory and cannot be retrieved.

- From the **Clear All Lot Records** menu, press the **ENTER** key.



Display prompts for confirmation to clear all records.



2. To cancel without clearing all **Lots**, press the **EXIT** key.



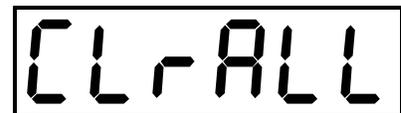
3. To **Clear All Lot Records**, press the **ENTER** key.



The Model 350 is unavailable until the records have been cleared.



Display shows the **Clear All Lot Records** menu.



#### 4.2.7 Free Record Capacity

The Model 350 has the capacity to store up to 16818 **Weight Records**. The number of available **Weight Records** locations is viewed with the **Free Record Capacity** menu.

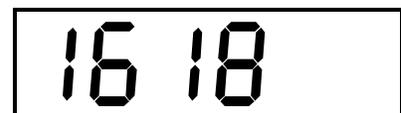
1. From the **Free Record Capacity** menu, press the **ENTER** key.



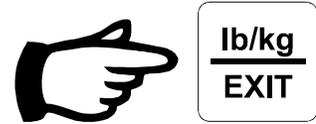
The Model 350 calculates the **Free Record Capacity**.



Display shows **Free Record Capacity**.



2. When finished viewing the **Free Record Capacity**, press the **EXIT** key.



Display shows the **Free Record Capacity** menu.



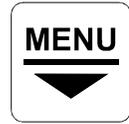
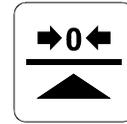
### 4.3 Setup Menu

The **Setup** sub-menus are used to set the scale operating parameters. These parameters affect the way that the load cell signal is converted and processed into weight information.

1. From the main menu list, navigate to the **Setup** menu and press the **ENTER** key.



2. Using the **UP** and **DOWN** keys, navigate to the desired menu.



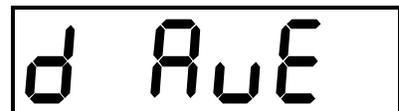
Allows scale **Calibration Factor Adjustment**. See section 4.3.1 on page 29.



Sets the **Hold Mode Average Period**. See section. See section 4.3.2 on page 31.



Sets the **Display Average Samples** for the **Normal Weighing Mode**. See section 4.3.3 on page 32.



Sets the **Factory Calibration** for the scale. See section 4.3.4 on page 33.



Note: For factory use only.

Triggers the **Amplifier Offset Adjustment** process. See section 4.3.5 on page 33.



Sets the **Amplifier Range**. See section 4.3.6 on page 34.



Sets the **Zero Tracking Range**. See section 4.3.7 on page 35.



Outputs the **System Report**. See section 4.3.8 on page 36.



Note: For factory use only.

### 4.3.1 Calibration Factor Adjustment

The Model 350 is calibrated at the factory with a known input signal. This known signal has an associated **Calibration Factor**. By adjusting this **Calibration Factor**, the calibration of the scale can be changed without having to load the scale with any weight. In some applications, it may be necessary to adjust this calibration factor in order to obtain a more accurate weight reading or to match to a different load cell configuration.

Note: Extra care should be taken when using this function. Contact the factory or your Reliable Scale Corporation dealer for help if you are unsure about this **Calibration Factor Adjustment** process.

**Calibration Factor Adjustment** example: If a scale reading is 1% lower than the actual weight on the scale, the **Calibration Factor** should be increased by 1%.

- Scale display: 10,000
- Actual weight: 10,100
- Old **Calibration Factor**: 5,000
- New **Calibration Factor**: 5,050

$$\frac{OldCalibrationFactor}{ScaleDisplay} = \frac{NewCalibrationFactor}{ActualWeight}$$

$$\frac{5,000}{10,000} = \frac{\text{NewCalibrationFactor}}{10,100}$$

$$\text{NewCalibrationFactor} = \frac{(5,000 \times 10,100)}{10,000}$$

$$\text{NewCalibrationFactor} = 5,050$$

$$\text{NewCalibrationFactor} = \frac{(\text{OldCalibrationFactor} \times \text{ActualWeight})}{\text{ScaleDisplay}}$$

1. From the **Calibration Factor Adjustment** menu, press the **ENTER** key.

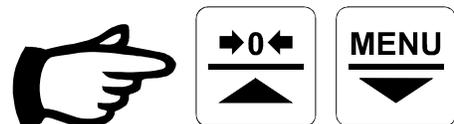


The current **Calibration Factor** is displayed. All status indicators flash.



Note: It is a good idea to make a note of the Calibration Factor before making any adjustments to it.

2. Use the **UP** and **DOWN** keys to adjust the **Calibration Factor** as desired.



3. To accept the new setting, press the **ENTER** key.



If the new **Calibration Factor** is valid, the display shows the **Calibration Slope**.

SLOPE

Display shows the **Calibration Factor Adjustment** menu.

9.88

CAL 16

If the new **Calibration Factor** is *invalid*, an error message will be displayed. See section 5 on page 37.

Err 01

4. Press the **ENTER** key.



Display shows the **Calibration Factor Adjustment** menu.

CAL 16

5. To discard the new setting, press the **EXIT** key.



Display shows the **Calibration Factor Adjustment** menu.

CAL 16

### 4.3.2 Hold Mode Average Period

When the **HOLD** key is pressed, the Model 350 calculates an average weight over a specified length of time called the **Hold Average Period**. This parameter is set in seconds.

1. From the **Hold Average Period** menu, press the **ENTER** key.

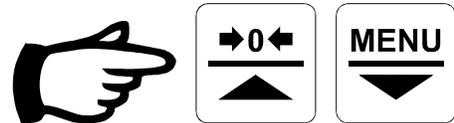
HLD AVE



The current **Hold Average Period** setting is displayed. All status indicators flash.



- Use the **UP** and **DOWN** keys to adjust the desired **Hold Average Period**.



- To accept the new setting, press the **ENTER** key.



- To discard the new setting, press the **EXIT** key.



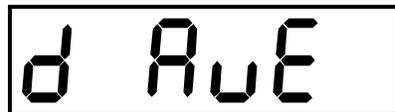
Display shows the **Hold Average Period** menu.



### 4.3.3 Display Average Samples

When operating in the **Normal Weighing Mode**, the load cell signal is constantly sampled and averaged for display. The number of samples averaged for each display update is set by the **Display Average Samples** parameter.

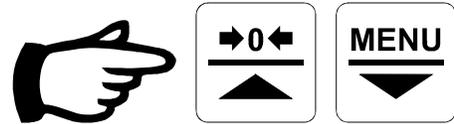
- From the **Display Average Samples** menu, press the **ENTER** key.



The current **Display Average Samples** setting is displayed. All status indicators flash.



2. Use the **UP** and **DOWN** keys to select the desired **Display Average Samples**.



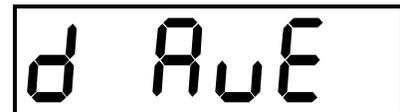
3. To accept the new setting, press the **ENTER** key.



4. To discard the new setting, press the **EXIT** key.



Display shows the **Display Average Samples** menu.



#### 4.3.4 Factory Calibration

The Model 350 is calibrated at the factory to a known input signal. The **Factory Calibration** menu is for factory use only.

Note: A password required to use this function. If this menu is selected in error, the display will return to the **Factory Calibration** menu after 15 seconds of waiting for the password.

#### 4.3.5 Amplifier Offset Adjustment

The **Amplifier Offset Adjustment** is an electronic coarse zero adjustment to compensate for certain load cell properties and for static loads such as scale platforms.

Note: This operation should not be performed without prior factory authorization as improper use can render the unit non-responsive.

1. From the **Amplifier Offset Adjustment** menu, press the **ENTER** key.



**HOLD**  
**ENTER**

A number will appear on the display. This number will alternate with an **Offset Code**.

The **Offset Code** will count upwards until a suitable value is found for the current scale configuration.

If a suitable **Offset Code** cannot be found, an error message will be displayed. See section 5 on page 37.

Display shows the **Amplifier Offset Adjustment** menu.

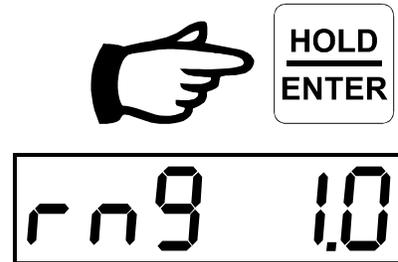
### 4.3.6 Amplifier Range

The **Amplifier Range** sets the upper limit for the load cell input signal. The **Amplifier Range** should be set as close as possible to the maximum load cell signal level. Load cell signals are normally rated in mV/V at full load. When selecting the **Amplifier Range** value, be sure that the value is equal to or larger than the maximum load cell signal.

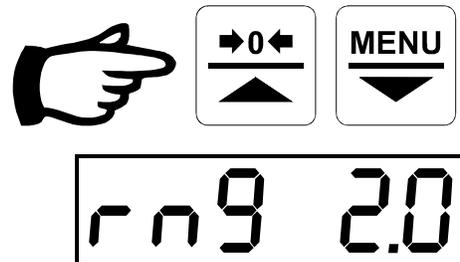
**Amplifier Range** examples: for a load cell with a 0.6 mV/V output use the 1.0 mV/V setting; for a load cell with a 2.5 mV/V output, use the 4.0 mV/V setting.

1. From the **Amplifier Range** menu, press the **ENTER** key.

The current **Amplifier Range** setting is displayed. All status indicators flash.



- Use the **UP** and **DOWN** keys to adjust the **Amplifier Range** as desired.



- To accept the new setting, press the **ENTER** key.



- To discard the new setting, press the **EXIT** key.



Display shows the **Amplifier Range** menu.



### 4.3.7 Zero Tracking

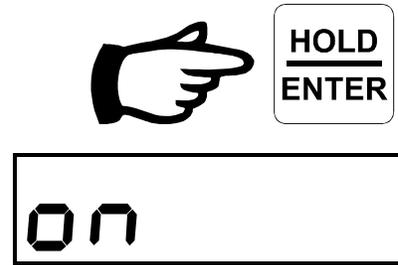
In some applications, the scale may be subject to external material build-up due to such things as weather or mud. In these instances, the Model 350 can be set to ignore these small changes and automatically zero itself.

Note: As the name implies, **Zero Tracking** only functions when the display is at or near a zero (0) reading.

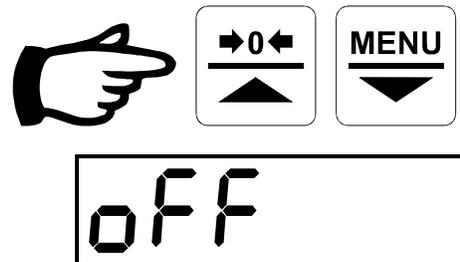
- From the **Zero Tracking** menu, press the **ENTER** key.



The current **Zero Tracking** setting is displayed. All status indicators flash.



2. Use the **UP** and **DOWN** keys to change the **Zero Tracking** setting.



3. To accept the new setting, press the **ENTER** key.



4. To discard the new setting, press the **EXIT** key.



Display shows the **Zero Tracking** menu.



### 4.3.8 System Report

The **System Report** is a technical status report for use by factory technicians. The **System Report** menu is for factory use only.

Note: A password required to use this function. If this menu is selected in error, the display will return to the **System Report** menu after 15 seconds of waiting for the password.

## 5. Error Messages

If the Model 350 determines that it is unable to perform an operation properly or that an internal error has occurred, an error message will be displayed. Each of the possible error messages is listed below along with a brief description of the failure encountered.

Note: Contact the factory or your Reliable Scale Corporation dealer for help if you are unsure about any error message you receive.

<b>Error Type</b>	<b>Description</b>
Err 01	Factory Calibration: High weight below zero (0)
Err 02	Factory Calibration: Negative slope
Err 03	Calibration Adjustment: Slope too steep
Err 04	Calibration Adjustment - Slope too shallow
Err 08	Amplifier Offset Adjustment: Out of range (negative input)
Err 09	Amplifier Offset Adjustment: Out of range (positive input)
Err 13	Calibration Adjustment: Slope less than 4.00. Applies to Legal For Trade applications only.
Err 22	Automatic Count By Adjustment: Out of range

## 6. Connector Details

Power connector P/N: AMP 206061-1

Mating connector P/N: AMP 206060-1

<b>Pin #</b>	<b>Wire Colour</b>	<b>Signal</b>
1	Red	+12 to 24 VDC
2	Black	Ground
3	n/c	
4	n/c	

RS-232 connector: Standard 9 position D-Sub male

Mating connector: Standard 9 position D-Sub female

<b>Pin #</b>	<b>Wire Colour</b>	<b>Signal</b>
2	White	Receive Data
3	Green	Transmit Data
5	Black	Signal Ground

## 7. Serial Port Output Formats

The **Serial Port Output Format** determines what is output from the **Serial Port** and what triggers the output.

<b>Port Format</b>	<b>Output Type and Trigger</b>
C OFF	<b>Serial Port</b> disabled, no output from <b>Serial Port</b> .
C 1	<b>Serial Port</b> enabled, reports will be output from <b>Serial Port</b> .
C 11	Averaged weight only on a <b>HOLD</b> key <b>HOLD</b> key pressed, output: 4001
C 12	Averaged weight with units on a <b>HOLD</b> key <b>HOLD</b> key pressed, output: 4001 lb
C 16	Current weight only on a <b>Display Update</b> <b>Display Update</b> , output: 4001
C 17	Current weight with units on <b>Display Update</b> <b>Display Update</b> , output: 4001 lb

## 8. Specifications

<b>Operating Temperature:</b>	-30 C to +60 C
<b>Supply Voltage Requirement:</b>	12 to 24 VDC
<b>Display:</b>	1", 6 digit LCD w/optional backlight
<b>Load Cell Excitation:</b>	7.5 VDC
<b>Computer Interface:</b>	Optional RS-232 w/2 <sup>nd</sup> optional RS-232, RS-422, RS-485
<b>Increments:</b>	1, 2, 5, 10, w/decimal point & Dummy "0"s
<b>Counts:</b>	230,000 internal
<b>Current Requirements:</b>	200 mA typical (1 load cell, 12 VDC supply)
<b>Load Cell Options:</b>	Up to six (6) 350 ohm cells or twelve (12) 700 ohm cells
<b>Display Update Rate:</b>	Programmable
<b>A/D Conversion:</b>	Sigma-Delta, 50Hz sample rate
<b>Zero Tracking:</b>	Available
<b>Calibration:</b>	Field programmable
<b>Zero Range:</b>	Up to full scale
<b>Shipping Weight:</b>	350 4 lb (w/o battery) PR350 18 lb (w/battery & load cell assembly)

## 9. Limited Warranty

This warranty applies to all new equipment manufactured by RELIABLE SCALE CORPORATION except when otherwise specified in the Terms of Sale. Warranty is subject to the following terms and conditions:

- All new products are warranted for a period of twelve (12) months from the date of final sale to the end user (maximum 24 months from date of manufacture).
- RELIABLE SCALE CORPORATION shall at its option, repair or replace or refund the purchase price, within a reasonable period of time, after being notified of the alleged defect and after acknowledging that a defect does in fact exist.
- Warranty claims must be submitted in writing by mail, fax or email to RELIABLE SCALE CORPORATION within the warranty period.
- This warranty does not extend to any consequential damage of other equipment, loss of use, commercial or economic loss or inconvenience prior to or during the repair period.
- RELIABLE SCALE CORPORATION is not responsible for any damage or defects caused by misuse, negligence, neglect, modification, improper operation, improper maintenance, or repairs by any unauthorized persons.
- This is the sole warranty applicable to RELIABLE SCALE CORPORATION'S products, and no RELIABLE SCALE CORPORATION employee, agent or dealer has any authority to add to this warranty whatsoever.
- Products for warranty repair must be returned to the factory freight prepaid by the customer. RELIABLE SCALE CORPORATION is not liable for any cost related to removal, replacement, or shipping of the products or any other associated equipment.
- Except as expressly set forth herein, RELIABLE SCALE CORPORATION makes no representations or warranties of any kind, either expressed or implied, as to the product, its merchantability or fitness for any intended purpose. This clause does not apply where prohibited by law.
- Batteries supplied in or with RELIABLE SCALE CORPORATION products are NOT covered by this warranty.