



SCLTYP5.  
Herbert



SCLTYP6.  
Dibal



SCLTYP7.  
Digi Teraoka



SCLTYP8.  
Avery FX100

## ***Scale Calibration***

The scale must be calibrated if:

- It is a first time installation
- The scale cannot be re-zeroed
- The calibration verification tests indicate errors
- There is a change in the units of measure (i.e., from pounds to kilograms)
- The scale load cell has been replaced
- The calibration seal is missing or torn

### ***Tools Required***

- Field standard 30 lb. or 15 kg weight set
- Single line or other pole display with cable (for dual cable and pole display-based installation)
- #1 Phillips head driver to remove plastic wire seal retainer cover
- Diagonal wire cutters to remove any existing wire seals
- 7mm or 9/32 hex head driver to remove metal access plate
- Thin rod (e.g., small screwdriver, hex key or paper clip) for activating the protected calibration switch
- Wire or paper seal (the type of seal depends on the guidelines specified by the local Weights and Measures authorities)

### ***Priming the Scale for Calibration***

Calibrate the scale after the unit is installed in the checkout countertop. It is important to use the correct certified (pounds or kilograms) field weight set when calibrating the scale.

1. Make sure that the unit is properly installed at the correct height and properly leveled before calibrating.
2. Ensure that the unit is solidly supported on all four corners without any rocking motion when pressing opposite corners of the scale.
3. Check the platter to ensure that nothing is interfering with its freedom to move. Assure that no debris is present from daily use of the scanner/scale if it has been in service. Make sure the platter seats normally on the scale arms.
4. Apply power to the scanner/scale.

5. Wait 5 minutes up to 30 minutes after power up before proceeding. If the unit has been subjected to cold, it may take longer to get to room temperature.
6. Place the 30.0 lb. weights or the 15 kg weights on the center of the scale platter. Allow the weight to settle.
7. Remove the weight.
8. Repeat three times to prime the scale before calibration.

## **Scale Calibration**

The following methods may be used to calibrate the scale:

[Scale Calibration with Remote Display](#) (see page 6-5) uses the scale display to sequence through the calibration steps and store critical calibration points.

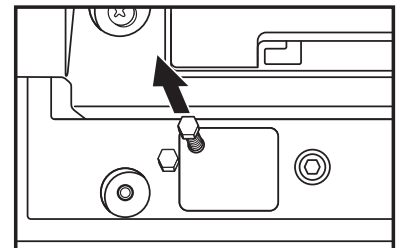
[Scale Calibration without Remote Display](#) (see page 6-7) uses the Stratos bioptic only and assumes there is no remote scale display. A bar code is used to initiate the calibration sequence and the speaker volume switch is used to store critical range values.

[Scale Calibration with Push Buttons](#) (see page 6-9) can be used with or without a remote scale display. The push buttons on the Stratos bioptic along with prompts from the LCD display are used to calibrate the scale.

## **Putting the Scale into Service Mode**

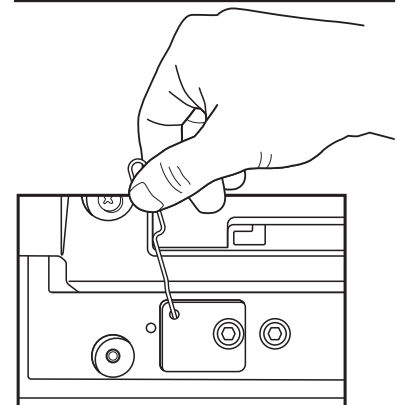
Certain scale adjustments require putting the scale into service mode. Use the following steps to put the scale into service mode.

- Step 1.** Remove the platter and set aside.
- Step 2.** If this is a currently installed scanner/scale, there will be either an adhesive label seal or wire sealed cover over the scale calibration button. Newly installed units may only have a factory-applied adhesive seal covering the scale calibration button. Remove the seal.
  - To remove the adhesive label seal, peel off the label and discard.
  - To remove the wire seal, cut the wire and discard.
- Step 3.** Remove the hex bolt and security plate to the right of the bubble level.



- Step 4.** Use a thin rod or straightened paper clip to push down through the exposed pinhole and depress the calibration switch. **Cal** then **Conf** appears on the remote display and a scale beep sounds. The scale is now in service mode.

- Step 5.** Reinstall the platter.



## **Scale Calibration with Remote Display**

Once the scale is in Service Mode, you can calibrate it using the remote display.

**Step 1.** Press the Zero key on the remote display several times until **Grp 2 Step1** is displayed.



**Step 2.** Either display will initially display **x = NO**. Press the Tare **+T+** key to change this to **YES**:



**Step 3.** Press the Zero **+0+** key to select **YES**.

**Step 4.** Press the Tare **+T+** key until **bLd 2** displays:



**Step 5.** This is the weight range selection against which the load cell is measured. Using the table below, press the Tare **+T+** key to rotate around the **bLd 2** selections. Press the Zero **+0+** key to select the bld range desired.

Group 2 Step 1 bld	Weight Unit Ranges
Bld 0	15 kg Single Range
Bld 1	15 Kg Dual Range*
Bld 2	30 lb Single Range*
Bld 3	30 lb Dual Range

\* Common Ranges used as default for most country settings

**Step 6.** Press the Zero **+0+** key to display the **Cal** prompt.

**Step 7.** Press the Tare **+T+** key to select **YES**:




**Step 8.** Press the Zero **+0+** key to start the scale calibration.

**Step 9.** The display shows **-----**:



This indicates that the scale is ready to take a zero reading. Check the platter to ensure that it is seated properly and nothing is touching or interfering with its freedom to move.


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**Step 10.** After 3 to 5 seconds of inactivity, press the Zero  key to accept and begin taking the zero capacity calibration reading. If the scale is unable to capture a stable reading it will not store any value and will advance to the next step. If this happens, verify that nothing is touching or interfering with the scale and/or platter.

**Step 11.** Once the zero calibration reading has been successful, the display shows **FULCAP** (Full Capacity):



Place the full capacity weight, either 15kg or 30lb (whichever matches the previously selected Weight Unit Range), on the center of the scale platter. Wait at least 3 seconds for the scale to stabilize.

**Step 12.** Press the Zero  key to accept and begin taking the full capacity calibration reading. If the scale is unable to capture a stable reading it will not store any value and will advance to the next step. If this happens, verify nothing is touching or interfering with the scale and/or platter.

**Step 13.** Once the full capacity calibration reading has been successfully taken, the display shows **UNLOAD** (zero capacity):



Remove all weight from the platter. Wait at least 3 seconds for the scale to stabilize.

**Step 14.** Press the Zero  key to accept and begin taking the return zero capacity calibration reading.


**Step 15.** The display begins the initialization sequence and returns to the normal weighing mode in the calibrated weight units.



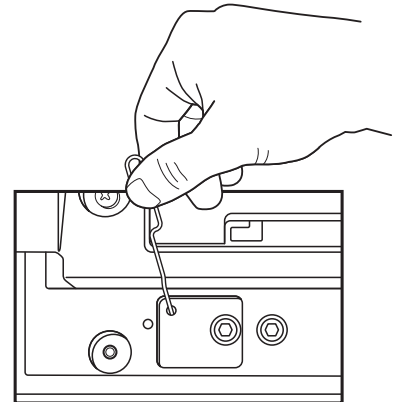
Once you have completed the scale calibration, the scale must be verified by the appropriate country or state Weights and Measures inspector. For details, contact your local government's Weights and Measures department.

### ***Scale Calibration without Remote Display***

Once the scale is in Service Mode, the following calibration procedure can be used with or without a remote scale display.

The Sound button  is used to advance through each stage of calibration. The LED display shows which calibration stage is active.

- Step 1.** Use a thin rod or straightened paper clip to push down through the exposed pinhole and depress the calibration switch. A scale beep sounds. The scale is now in service mode.



- Step 2.** Use the vertical window to scan a bar code below to calibrate the scale. The scanner beeps once as the scale enters calibration mode and the calibration utility starts. *Default = Calibrate Metric (kg), Single Range.*



SCACAL2.

**Calibrate English (lbs)  
Single Range**



SCACAL0.

**\* Calibrate Metric (kg)  
Single Range**



SCACAL3.

**Calibrate English (lbs)  
Dual Range**



SCACAL1.

**Calibrate Metric (kg)  
Dual Range**

*Note: If a razz tone sounds, an error has occurred. The diagnostic LCD displays the reason for the calibration mode error.*

- Step 3.** Make sure there is no load on the scale platter. The green LED blinks to indicate each step in the calibration process.
- Step 4.** Calibrate a zero load. The green LED blinks once periodically. Wait 8 to 10 seconds for scale stability, then press the Sound button once. There is a short delay followed by one short beep that indicates the zero load value has been stored.
- Step 5.** Place a full capacity weight on the center of the scale platter. The green LED blinks 3 times. Wait at least 3 seconds for scale stability, then press the Sound button once. There is a short delay followed by 3 short beeps that indicates that the full load value has been stored.

**Step 6.** Remove the full capacity weight from the scale platter. The green LED blinks 5 times. Wait at least 3 seconds for scale stability, then press the Sound button once. There is a short delay followed by 5 short beeps that indicates that the return zero load value has been stored.

**Step 7.** The calibration process is complete. The scanner automatically restarts, then beeps once after 12 seconds.

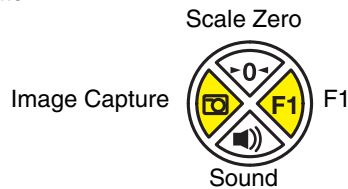
**Step 8.** Verify the calibration was successful with the calibrated weights. If the scale display does not show the calibrated load weight correctly, repeat this procedure.

If you have any issues with the calibration, check that the unit has been properly installed and verify that there is no rocking motion when pressing on opposite corners of the scale. If you feel any movement, correct by adjusting the leveling screws that support the scale on the check-stand. When they are correct, lock these down snugly.

Once you have completed the scale calibration, the scale must be verified by the appropriate country or state Weights and Measures inspector. For details, contact your local government's Weights and Measures department.

### Scale Calibration with Push Buttons

This method of calibration uses the push buttons on the scanner and the LCD display located in the horizontal window of the scanner scale, visible through the platter.



**Step 1.** Press and hold the **Image Capture** and **F1** buttons simultaneously for 5 seconds, then release them together. You will see **[MENU]** appear for a second or two on the LCD display, then **SOFTWARE UPDATE**. (Do not hold the buttons too long, or you might get a button stuck error.)



**Step 2.** With **SOFTWARE UPDATE** showing on the LCD display, press the **Sound** button repeatedly until you see **CALIBRATE SCALE** on the LCD display.



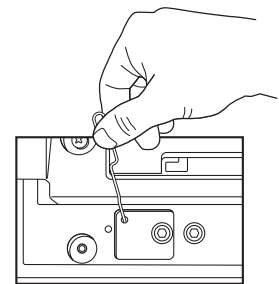
**Step 3.** Press the **F1** button. The LCD display shows **CALIBRATE SCALE – SINGLE RANGE KGS**.



**Step 4.** Press the **Sound** button repeatedly until the LCD display reads **CALIBRATE SCALE – SINGLE RANGE LBS**.



**Step 5.** **STOP** at this point. Raise the platter and remove the 7mm hex nut and scale service plate to expose the scale service switch pinhole. Use a thin rod or straightened paper clip to push down through the exposed pinhole and depress the calibration switch until a scale beep sounds. The scale is now in service mode. Replace the platter before continuing.



**Step 6.** Press the **F1** button to activate your selection. The LCD display shows **SCALE CALIBRATE – WAIT SCALE RSP** for a few seconds, then it changes to **Step 1 – Platter Empty, VOL BTN = Advance**. The top LED bar on the scanner flashes once every few seconds.



**Step 7.** Make sure platter is on correctly and is empty, then press the **Sound** button.



**Step 8.** The LCD display leads you through the next step of placing a full weight of 30 lbs. on the scale. The LEDs flash 3 times. Press the **Sound** button once the scale weight settles on full weight.



**Step 9.** Remove all the weight once the full capacity is stored. The LED's flash 5 times. Remove the weight, let the scale settle at zero lbs., then press the **Sound** button again to accept 0 lbs.



**Step 10.** The units stores the final weight, and beeps multiple times. The calibration process is complete, and the scale restarts. Begin [Calibration Verification](#), below.

If you have any issues with the calibration, check that the unit has been properly installed and verify that there is no rocking motion when pressing on opposite corners of the scale. If you feel any movement, correct by adjusting the leveling screws that support the scale on the check-stand. When they are correct, lock these down snugly and repeat all the calibration steps.

Once you have completed the scale calibration, the scale must be verified by the appropriate country or state Weights and Measures inspector. For details, contact your local government's Weights and Measures department.

## Calibration Verification

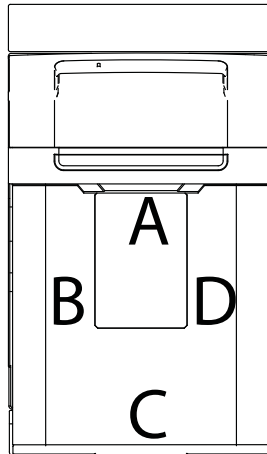
The following tests verify the scale's calibration. The following tests are based on a 2-digit accuracy setting for pounds and a 3-digit accuracy setting for kilograms.

### Increasing Load Test

1. Make sure there is no load on the scale platter and verify that the remote display reads:  
**0.00 lbs**  
or  
**0.000 kg**
2. Place a 5 lb. or a 2.5kg weight on the center of the scale platter and verify the display reads:  
**5.00 lbs**  
or  
**2.5 kg**
3. Place an additional 5 lb. or an additional 2.5kg weight on the center of the scale platter and verify the remote display reads between:  
**9.99 and 10.01 lbs**  
or  
**4.995 and 5.005kg**
4. Place an additional 10 lb. or 5kg weight on the center of the scale platter and verify the remote display reads between:  
**19.99 and 20.01 lbs**  
or  
**9.995 and 10.005kg**
5. Place an additional 10 lb. or 5kg weight on the center of the scale platter and verify the remote display reads between:  
**29.99 and 30.01 lbs**  
or  
**14.995 and 15.005kg**

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- Remove all the weight from the scale platter and verify the display reads:  
**0.00 lbs**  
or  
**0.00kg**

### ***Shift Test***



**Shift Test Zones**

- Ensure there is no load on the scale platter and verify the remote display reads:  
**0.00 lbs**  
or  
**0.00kg**
- Place a 15 lb. or 7.5kg weight on the scale platter in the center of Shift Test Zone A (see diagram) and verify the remote display reads between:  
**14.99 and 15.01 lbs**  
or  
**7.495 and 7.505kg**
- Remove the 15 lb. or 7.5kg weight and verify the display reads:  
**0.00 lbs**  
or  
**0.00kg**
- Repeat steps 2 and 3 for each of the remaining Shift Test Zones (B, C, and D).
- When all weight has been removed, verify that the remote display reads:  
**0.00 lbs**  
or  
**0.00kg**

### ***Decreasing Load Test***

- Ensure there is no load on the scale platter and verify the remote display reads:  
**0.00 lbs**  
or  
**0.00kg**
- Place a 30 lb. or 15kg load on the center of the scale platter. Verify the remote display reads between:  
**29.99 and 30.01 lbs**  
or  
**14.995 and 15.005kg**
- Remove 10 lbs. or 7.5kg from the platter and center the remaining weight. Verify the remote display reads between:  
**19.99 and 20.01 lbs**



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or  
**7.495 and 7.505kg**

4. Remove another 15 lbs. or 5kg from the platter and center the remaining weight. Verify the remote display reads:  
**5.0 lbs**  
or  
**2.5kg**
5. Remove all the weight from the platter and verify the display reads:  
**0.00 lbs**  
or  
**0.00kg**

### ***Return to Zero Test***

Ensure there is no load on the scale platter and verify the remote display reads:  
**0.00 lbs**  
or  
**0.00kg**

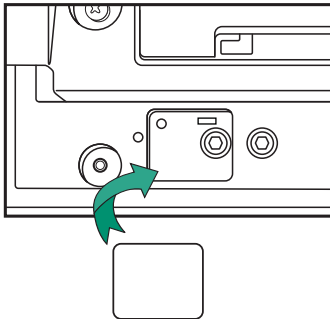
### ***Security Seal Installation***

The security seal may be installed only if there were no errors during the scale calibration verification tests.

*Note: The certification of the weighing mechanism of the scale is subject to federal, state and local Weights and Measures statutes and regulations and can only be performed by authorized government agencies and/or their duly registered agents. Every time the scale or weighing mechanism is calibrated, it should be properly sealed with a paper seal or a wire seal prior to being placed into service in commerce. It is the responsibility of the owner of the scale to confirm compliance with the relevant Weights and Measures statutes and regulations applicable in your area by checking with the appropriate government agency before placing a newly calibrated unit into service or removing any official seals. The type of seal to be used depends on the guidelines specified by the local Weights and Measures authorities.*

#### ***Pressure Sensitive Security Seal***

1. Temporarily remove the platter and set aside.
2. Apply the adhesive calibration security seal from your local Weights and Measures department over the calibration button access hole.



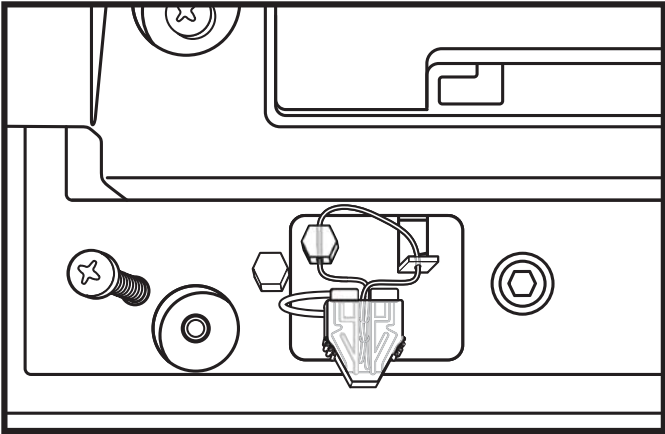
3. With very light pressure, push down on the seal label to adhere it to the opening.
4. Replace the security plate and hex bolt.
5. Reinstall the platter.

#### ***Wire Security Seal***

1. Temporarily remove the platter and set aside.
2. Replace the wire seal security plate and bolt.

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3. Thread the wires through the mandrel, the security plate tab, and the bolt head.



- 4. Plug the mandrel into the mandrel cover to secure the wire.
- 5. Reinstall the platter.

*Note: Recheck the scale zero setting after installing the seals to ensure scale is at zero. If the scale is calibrated without the cover and wire seal, that weight could affect the calibration.*

