



Installation / Operator / Service Manual

Series II Bench Scales



Amendment Record

Series II

50777

Manufactured by Fairbanks Scales Inc.
821 Locust
Kansas City, Missouri 64106

Issue #1	New Product	January 2005
Issue #2	Add programmable division size	October 2005
Issue #3	Revised "lb/oz" software and parts list	September 2006

Disclaimer

Every effort has been made to provide complete and accurate information in this manual. However, although this manual may include a specifically identified warranty notice for the product, Fairbanks Scales makes no representations or warranties with respect to the contents of this manual, and reserves the right to make changes to this manual without notice when and as improvements are made.

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Section 1: General Information

A. Introduction

The Fairbanks Series II bench scales are high-accuracy, portable scales suited for both commercial and non-commercial applications. These scales are designed to be used in a variety of weighing applications including parts counting, inventory, material handling, and general manufacturing.

B. Specifications

1. Instrument Specifications

Model	Series II	
<u>Product No.</u>	<u>Capacities</u>	<u>Platform size</u>
25825	60 lb x .02	12.5" x 16.5" (320 x 420 mm)
25826	100 lb x .05	12.5" x 16.5" (320 x 420 mm)
25827	150 lb x .05	12.5" x 16.5" (320 x 420 mm)
25828	200 lb x .1	12.5" x 16.5" (320 x 420 mm)
25829	250 lb x .1	12.5" x 16.5" (320 x 420 mm)
25830	300 lb x .1	12.5" x 16.5" (320 x 420 mm)
25831	200 lb x .1	15.75" x 18.9" (400 x 480 mm)
25832	250 lb x .1	15.75" x 18.9" (400 x 480 mm)
25833	300 lb x .1	15.75" x 18.9" (400 x 480 mm)
25834	400 lb x .2	15.75" x 18.9" (400 x 480 mm)
25835	500 lb x .2	15.75" x 18.9" (400 x 480 mm)
25836	600 lb x .2	15.75" x 18.9" (400 x 480 mm)
Indicator Rating	IP 54	
Display	LCD, height 1" (25 mm); 6 digit; backlit	
Units	Lbs and Kgs or lb/oz	
Zero Range	2 or 100%	
Auto Zero Tracking	None, 0.6d, 1.0d, and 2.0d	
Counting	Sample sizes of 10, 20, 50, 100, or 200	
Platform Construction	304 Stainless Steel	
Base Construction	Welded tubular and cast	
Overload	Safe = 150% Maximum = 300%	
Creep	0.02% (30min)	
Bridge Resistance	350 ohms nominal	

2. Environmental

Power Supply

AC/ DC adapter 110-120VAC - 9Vdc @ 500 mA,
Built-in 6Vdc rechargeable lead-acid battery
Up to 20hrs continuous use.
Recharge time: Minimum of 12 hours for fully
discharged battery

All Series II Bench Scales after serial number
505159000150 will have an internal rechargeable
battery.

Operating Temperature

-14 to 104 F (-10 to 40 C) 85%RH

3. Approvals

NTEP
CC# 05-009

Except when operating in the lb/oz or
counting mode.

Measurement Canada
MC# --

Pending

Section 2: Installation

A. General Service Policy

It is the customer / operator's responsibility to ensure the equipment provided by Fairbanks is operated within the parameters of the equipment's specifications and protected from accidental or malicious damage. Other than the procedures authorized in this manual, no service, repair, or adjustments may be performed by unauthorized / untrained service personnel. Any unauthorized repairs will void any verbal, implied, or written warranties.

B. Overview

1. These instructions apply to the instrument and its specific installation procedures.
2. All electronic and mechanical calibrations and/or adjustments required to make this equipment perform to accuracy and operational specifications are considered to be part of the installation, and are included in the installation charge. Only those charges which are incurred as a result of the equipment's inability to be adjusted or calibrated to performance specifications may be considered warranty.
3. Absolutely no physical, electrical or program modifications are to be made to this equipment. Electrical connections other than those specified may not be performed, and physical alterations (holes, etc.) are not allowed.
4. Before the installation is considered complete, the equipment is to be programmed to meet or exceed any applicable weights and measures requirements, if applicable. The installing technician is responsible to make certain customer's personnel are fully trained and familiar with the capabilities and limitations of the equipment. Be prepared to recommend the arrangement of components which will provide the most efficient layout, utilizing the equipment to the best possible advantage. The warranty policy must be explained and reviewed with the customer.

C. Unpacking

1. Check that all components are on hand, and agree with the equipment order.
2. Remove all components from their packing material, checking to make certain that all parts are accounted for and no parts are damaged. Advise the shipper immediately if damage has occurred. Order any parts necessary to replace those which have been damaged. **Keep the shipping container and packing material for warranty returns, if necessary.** Check the packing list.
3. The shipping carton should contain the following: Manual, Instrument, Platform, Pillar, and AC Adapter.

D. Instrument Location

1. The Instrument should be positioned away from direct sunlight.
2. Avoid areas which have extreme variations in room temperatures. Temperatures outside the instrument's specifications will effect the weighing accuracy of this product.
3. Work areas should be relatively free from drafts and vibrations.
4. This product is intended for indoor use.
5. Do not locate near magnetic material or equipment/instruments which use magnets in their design.
6. Work surfaces should be level and rigid.

E. Safety

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

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

F. Installation

1. Using the AC adapter, insert the power cord into the receptacle located on the rear left side. Firmly push in the plug.
2. Allow the instrument to warm up for 30 minutes prior to use.

Section 3: Programming

A. Function Keys



= Select



= [AutoTare] = Enter

B. Program

Press and hold any key while powering ON. The display will show **CAL**.

Press the [ON/ F] key to go to program sequence.

Press the [ON/ F] key for parameter selecting and

Press the [AutoTare] key to enter choice and advance to the next step.

The program sequence is as follows:

	<u>Displays:</u>	<u>Definition:</u>
A. Zero Range	Or . 0 Or . 1	100% of Capacity 2% of Capacity
B. Auto power off	AoFF 0 AoFF 1 AoFF 2 AoFF 3 AoFF 4	None 5 minutes 10 minutes 20 minutes 30 minutes
C. Backlit	bL 0 bL 1 bL 2	None Active Auto lighting while loading
D. Counting mode	SAMP 0 SAMP 1	Counting mode Disable Counting mode Enable

Instrument will count down 9..8..7..6..5..4..3..2..1..0 and return to the weigh mode.

Section 4: Calibration

A. Function Keys



= [AutoTare] = Enter



= Select

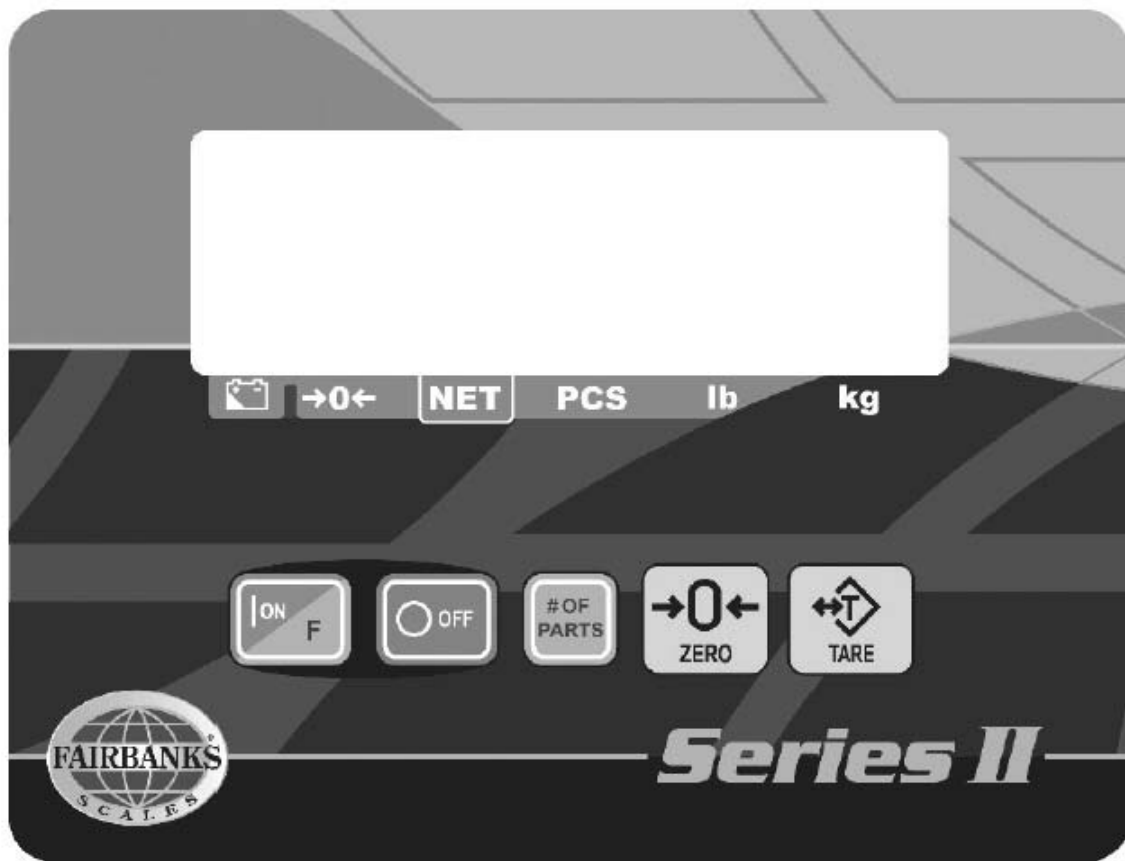
B. Calibration Procedure

	<u>Displays:</u>	<u>Definition</u>
1. Remove the jumper JP3 to calibrate the scale.		
2. Press and hold any key while powering ON. The system goes to CALIBRATION mode.	CAL	CAL mode
3. Press the [AutoTare] key to select the AUTO ZERO mode Press the [ON/ F] key to select the desired choice.	AO 0 AO 1 AZT AO 2AZT AO 3AZT	None 0.6d 1d 2d
4. Press the [AutoTare] key to select the POUND/OUNCE mode.	LB.OZ LB.OZ	0 = Disabled 1 = Active
Note: lb/oz mode is NOT approved for commercial applications. Instrument automatically saves parameter changes after the [AutoTare] key is pressed. If you only want to enable the lb/oz mode without recalibrating, then once [AutoTare] is pressed and display shows "Unit mode," simply turn unit off. Step 4 is available only in scales with serial number S06268000001 and above.		
5. Press the [AutoTare] key to step to WEIGHING UNITS mode Press the [ON/ F] key to select weighing units in lb or kg.	Unit.LB Unit.kG	lbs mode kg mode
6. Press the [AutoTare] key to step to the CAPACITY mode. Press the [ON/ F] key to select the appropriate Capacity.	C xxxxx	Capacity mode
7. Press the [AutoTare] key to go to the DIVISION SIZE mode. Press the [ON/F] key to select the appropriate division size	d=0.01 d=0.02 d=0.05 d=0.1 d=0.2 d=0.5	

B. Calibration Procedure, *continued*

	<u>Displays:</u>	<u>Definition</u>
8. Press the [AutoTare] key to go to SPAN mode. (Offset value to be displayed around 5000 ~ 50000)	12222	Raw counts
9. Press the [ZERO] key to set the display to zero.	0	
10. Put on the calibrating weight in lb or kg. (Span value to be 100000 ~ 250000 at full capacity)	122225	Calibration counts
11. Press the [AutoTare] key and the indicator will cycle through a list of permissible weights. When the weight on the scale is displayed, press the [AutoTare] key.	600	
12. The calibration is now complete, install the JP3 jumper to secure the calibration.		

Section 5: Operation



A. Function keys



- a. Turns instrument On.
- b. Function key.
Used for toggle switch between display weight, check-weigh or total accumulation.



- Turns instrument Off.



- Used for parts counting.



- Captures a new center of zero.




- Auto Tare. Captures the gross weight on scale as a tare weight.


B. Operation

1. Taring


All models have taring capabilities up to their total weight capacity. To weigh a sample in its container with the display showing the weight of the sample use the following tare procedure.

- a. Place sample container on pan and then press the  key.
- b. Now place sample in its container.
- c. When the balance is stable, the display shows the weight of the sample.

2. Counting Function


- a. Counting feature must be enabled; it comes from the factory disabled.
- b. Count the desired number of sample pieces (10, 20, 50, 100 or 200 total pieces)
- c. Press  key to display total count numbers of 10, 20, 50 or 100, or 200.

This number will cycle.

Press  key again to select sample size.

Once it is displayed, the arrow at the bottom of the display will point to PCS.

- d. You are now ready to perform parts counting of those specific pieces.

Press  key for the total weight.

Repeat steps **b** through **d** for each type of piece to be counted.





3. Weighing Units Selection

Press and hold  key then press  key for lb or kg selection.

When in the lb/oz mode, no other weight units will be available.

Section 6: Service and Maintenance

A. Error message(s)

Symptom	Cause	Solution
	Over load : * Weighing range exceed	> Unload scale or reduce preload
	Under load : * Weighing pan not in place	> Ensure the weighing pan is correctly installed and surrounding parts are not touching
	* Weighing range below zero	> Set scale to zero
	Zeroing not possible :	> Ensure that zeroing is performed in the admissible range
	Low Battery Condition * Below 5.5Vdc	> Plug AC/DC adapter to scale to allow the battery to recharge.

Section 7: Parts

A. Replacement Parts List

Item	P/N	Description
1	24157	AC adapter, 120VAC, 60 Hz, 7.5W, Output 9VDC 500mA
2	27391	Series II battery, 6V, 4.0 AmpHour Lead Acid Rechargeable Battery
2	24921	Series III battery, 6V, 3.0 AmpHour Lead Acid Rechargeable Battery
3	27213	Rubber foot, $\frac{3}{8}$ " x $1\frac{1}{2}$ " threaded stem (small platform size)
3	27214	Plastic foot, $\frac{1}{2}$ " x $2\frac{1}{2}$ " threaded stem (large platform size)
4	26205	Alum single point load cell, 50kg Cap, 2 mV/V (Scale P/N 25825)
5	26206	Alum single point load cell, 75kg Cap, 2 mV/V (Scale P/N 25826)
5	26207	Alum single point load cell, 100kg Cap, 2 mV/V (Scale P/N 25827, 25828)
5	26208	Alum single point load cell, 200kg Cap, 2 mV/V (Scale P/N 25829, 25830)
5	26209	Alum single point load cell, 150kg Cap, 2 mV/V (Scale P/N 25831, 25832)
5	26210	Alum single point load cell, 200kg Cap, 2 mV/V (Scale P/N 25833)
5	26211	Alum single point load cell, 250kg Cap, 2 mV/V (Scale P/N 25834)
5	26212	Alum single point load cell, 300kg Cap, 2 mV/V (Scale P/N 25835, 25836)

There are no other serviceable parts available.