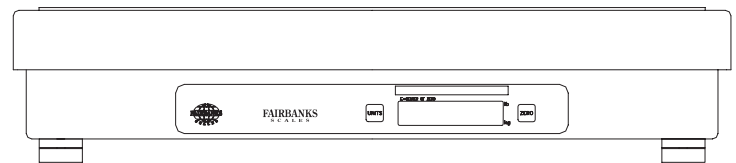




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# Heavy Capacity Ship-It Scale

**Model: 2455 Series**



50636-2

# Amendment Record

Heavy Capacity Ship-It Scale  
Model: 2455 Series  
50636

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

Created	11/00
Issue #1	11/00 New Product
Issue #2	
Issue #3	Name and dimension correction
Issue #4	Added product new part numbers

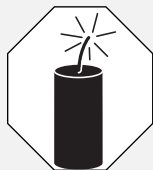
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### Disclaimer

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.

## Section 1: Introduction



***This product is shipped from the factory set for 110/120 VAC operation. For 220/240 operation, settings must be changed before powering up. See Section 2: Setup, B: Connections, for 220/240 settings.***

The Heavy Capacity Ship-It Scale is an AC powered unit with a capacity of 250 lbs. The special low power circuitry eliminates warm up time; weight readings will be accurate as soon as the scale is turned on and set to zero. A single RS232 signal output enables the scale to be used in applications where an output is required for a computer interface. The scale has a main display with 2 panel switches.

- Pressing the ZERO key will 'zero' the weight display
- Pressing the UNITS key will change weight units to lbs or kgs

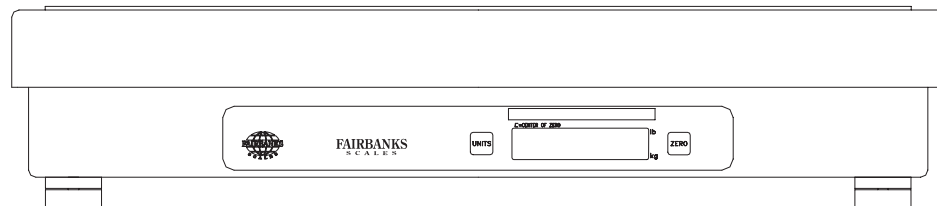
### **Product No. Descriptions:**

- 98725 - 2455 Series Ship-It Package Scale includes the remote display
- 98726 - 2455 Series Ship-It Package Scale with roller top includes the remote display

## Section 2: Setup

### A. Installing:

1. Remove the scale from the packing box.
2. Place it on a clean, firm, and flat bench top where it will be used.
3. Locate and observe the bubble level located on the top of the platform.
4. Adjust the 4 feet to level the scale, then tighten the locking nuts on the feet.



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### B. Connections:

1. Check the AC selector switch on the underside of the platform for a 120 VAC or 240 VAC setting. It must be in the 120 VAC setting for US operation. For 240 VAC operation, move the switch to that setting (240V), have a proper type power plug installed by a competent electrician, and make the change on the equipment label.
2. Plug the power cord into a proper outlet.

### 3. If you use a computer:

The RS232 cable is 8 feet long and has a 9 pin connector used to connect the scale to a computer. Connect the RS232 serial cable connector to an *unused* serial port on the computer (Com 2 is often used for a modem, try Com 1 to start). Set up the Com port using a weight-displaying program such as UPS software, obtainable from <http://www.UPS.com>.

If there appears to be a problem (*usually a DEVICE CONFLICT or PORT CONFLICT*):

Right click on "MY COMPUTER", go to "PROPERTIES", then "DEVICE MANAGER" then to "PORTS; COM and LPT".

Look at the Com port you've chosen (*Com 1 or Com 2 or called Serial 1 or Serial 2*) to see if there is a 'conflict'. Use 'HELP' to get conflict resolution.

## Section 3: Using the Scale

### A. Power-on:

When the scale is powered up, the display will become active and perform a display test by flashing "8's" several times. Press the ZERO key to set the display to 0.00 and start weighing.

### B. Keys:

The keys for operating the scale are located on the main display.

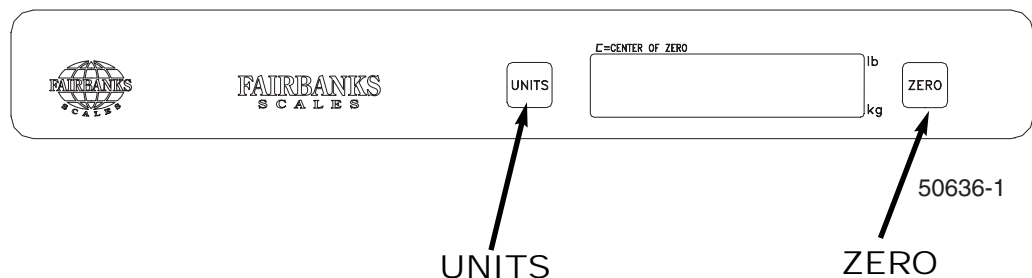
1. Pressing the ZERO key resets the display to indicate zero (0.0) and the Center-of-Zero indicator will turn ON.

- The zero range is set at 2% of capacity for Canadian use (5.00 lbs)
- The zero range is set at 100% of capacity for USA use (250.00 lbs)

The ZERO key function will be inhibited if the instrument detects any of the following conditions:

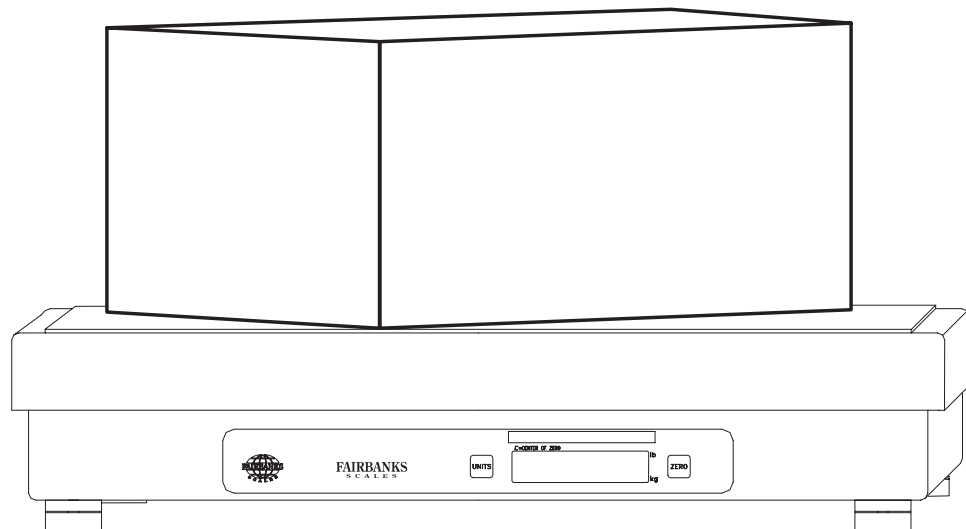
- Motion on the platform
- An underload
- An overload
- Outside zero range (5.00 lbs Canadian Setting, 250.00 lbs USA Setting)

2. Pressing the UNITS key will toggle the weighing units and the display 'indicators' from "lb" to "kg". Set to the units you will use by noting the arrow 'indicator' in the display.



### C. Weighing:

1. With the platform empty, press the ZERO key. The display will indicate zero (0.00) and the Center-of-Zero 'indicator' will appear at the left of the display.
2. Check that the correct units are indicated, press the UNITS key to change to "lb" or "kg".
3. Place the item to be weighed centered on the platform.
4. Read the Gross weight from the display.



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## Section 4: Customer Service

**NOTE:**

*No adjustments or repairs are to be attempted by anyone other than properly trained personnel.*

**A. Cleaning:**

Clean by wiping off the scale with a damp cloth only. Do not use running water, harsh chemicals, or allow liquids to drip onto the display.

**B. Operator Instrument Prompts:**

<u>Prompt</u>	<u>Description</u>
"HIL0Ad"	Scale over 250 lb capacity or above maximum counts
"LoLOAd"	Scale is under load, reading below zero

C. **Troubleshooting:** In the event the scale does not function properly, check the following:

<b><u>Problem</u></b>	<b><u>Possible Source / Remedy</u></b>
No Display	Power OFF to receptacle, Plug disconnected, Power cord damaged. Check for Power, First unplug, then plug in the power cord to reset the program
Incorrect Weight	Check platform for binding or rubbing, reposition scale so all sides are clear. Check under the scale for debris, scale must set on a clean, firm surface. Ensure correct UNITS are displayed (lb or kg)
ZERO key will NOT reset zero	Motion on the platform, ensure that the platform is empty Check platform for binding or rubbing, reposition scale so all sides are clear. Check under the scale for debris, scale must set on a clean, firm surface. First unplug, then plug in the power cord to reset the program
Pushbuttons Will Not Operate	First unplug, then plug in the power cord to reset the program. Display or keypad inoperative
Display Locked or Inoperative	First unplug, then plug in the power cord to reset the program. Display or keypad inoperative
Display Indicates "HiLOAD"	Weight on the platform exceeds 250 lbs, remove load Check under the scale for debris, scale must set on a clean, firm surface. This can result from high output from load cell
Display Indicates "LoLOAD"	Check platform for binding or rubbing, reposition scale so all sides are clear. Check under the scale for debris, scale must set on a clean, firm surface. This can result from no output from load cell. An item (roller section, etc) removed from a calibrated scale, replace roller.
No RS-232 Output	Check that the connector is securely fastened to the PC port Check the signal cable for damage Test the computer port for conflicts/operation



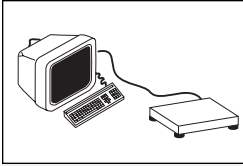
***Note: If the above remedies do NOT effect satisfactory operation, please call for service!***

## Section 5: Specifications/Design Features

- **Capacities:** 250 lb, factory set
- **Resolution:** 5000 divisions (.05 lb)
- **Rounding:** Nearest division per NIST H-44
- **Weight Display:** Light Emitting Diodes (LED) active digits
- **Power-On Lockout:** Displays "8.8.8.8.8.8." when power is turned on.
- **Display Update Rate:** 0.4 seconds, factory set
- **Overcapacity Warning:** Displays "HiLOAD" for overcapacity.
- **Underload Warning:** Display of "LoLOAD" indicates an underload condition.
- **Over Capacity Warning:** "- -" indicates the weight on the platform exceeds the capacity of the display.
- **Motion Detection:** Satisfies H-44 requirements
- **Power Failure Protection:** Zero reference, programming and service calibrations are retained if the instrument AC power is lost.
- **Load Cell Excitation:** 10 VDC, pulsed
- **RS232 Cable Length:** 8 feet
- **Indicators:**
  - a. Center of Zero
  - b. lb, kg
- **Dimensions:** 20.75" x 20.75" x 4.5" ( 5.5 w/top ball transfer top)
- **Auto Zero Tracking (AZT):** Compensates for gradual buildup of material on the load receiver. Factory set @ .5 division(s).
- **Remote Display:** LCD with zero and units remote keys.
- **Power Requirements:** 120 VAC 50-60 Hz or 240 VAC 50-60 Hz Selectable

- **Environment:**
  - a. All equipment should be protected from direct sunlight.
  - b. Temperature: Operating: -10°C to 40°C
  - c. Maximum change rate 10°C (20°F)/hour
  - d. Storage: 20°C (4°F) to 60°C (140°F) at 100% relative humidity protected from condensation
  - e. Relative Humidity: 0% to 90% non-condensing; NOT suitable for water washdown
  
- **NTEP CoC No.:** 97-115
  
- **CWM No.:** AM-4971

# Appendix I : Data Output Specifications



A GROSS weight Transmission from the scale will occur when a CR (HEX 0D) is received by the scale, from a properly configured computer (PC).

<b>Character #</b>	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18
<b>String 1</b>	X	X	X	X	.	X	X	SP	l/k	b/g	SP	G/g	R/r	SP	SP	CR	LF	EOT

(Gross Wt)

Legends:

**X** = Numeric Weight Characters 0-9, leading zeroes are replaced by spaces (SP) Char 5 is a decimal point [.] (HEX 2E)

**l,b,k,g**= Lower case letters for weight units, "lb" or "kg"

**/** = Means that one of the two characters will be transmitted

**GR** = UPPERCASE transmitted for stable weight

**gr** = lowercase transmitted for weight in motion

**EOT** (HEX 04), character 18, is transmitted for a "HILOAd" condition

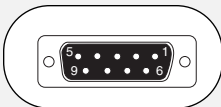
Serial Data Output Format:

9600 Baud

7 Bits

Odd Parity

2 Stop Bits



The RS232 cable from the scale has a DB9 **Female** Connector .

The Wiring is as follows:

<u>Scale Cable Pin No.</u>	<u>Description</u>
2	Transmit (TX)
3	Receive (RX)
5	Ground