

XI Series Scales

Operation Manual

North and South America:

**Denver Instrument Company
6542 Fig Street
Arvada, Colorado 80004
1-800-321-1135
Tel: 303-431-7255
Fax: 303-423-4831**

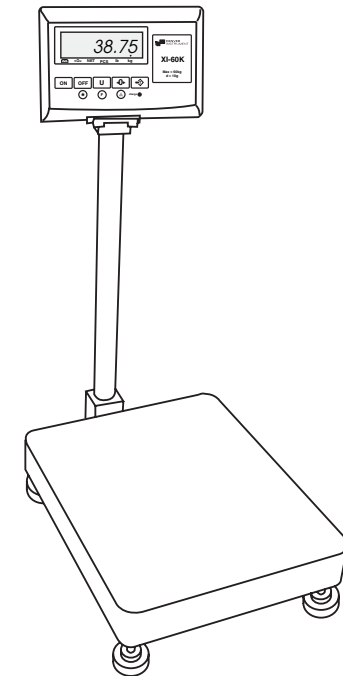
U.K. and Ireland:

**Denver Instrument Company
Denver House, Sovereign Way
Trafalgar Business Park
Downham Market
Norfolk PE38 9SW England
Tel: 44 136 63862 42
Fax: 44 136 63862 04**

Europe, Asia and Australia:

**Denver Instrument GmbH
Robert-Bosch-Briete 10
37079 Gottingen Germany
Tel: 49 551 20977 31
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www.denverinstrument.com



You have purchased a quality precision weighing instrument that requires handling with care. Read entire contents of this **Operation Manual** prior to operating your new Denver Instrument balance.

Disclaimer Notice

Calibrate your balance using reference weight of the appropriate tolerance (class). An instrument can be no more accurate than the standard to which it has been compared. For assistance in the selection of reference weights, please contact the factory or a sales representative.

Notice: This equipment has been tested and found to comply with the limits for a Class A digital device, pursuant to Part 15 of the FCC rules. These limits are designed to provide reasonable protection against harmful interference when the equipment is operated in a commercial environment. The equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instruction manual, may cause harmful interference to radio communications. Operation of this device in a residential area is likely to cause harmful interference in which the user will be required to correct the interference at his own expense.

Caution: Changes or modifications not expressly approved by the manufacturer could void the user's authority to operate his equipment.

Warranty Instructions

1. Please return the prepaid, pre-addressed Purchase Registration Card to Denver Instrument Company promptly upon your purchase of the Denver Instrument product. The return of the card is not a condition precedent to warranty coverage.
2. If you have any questions about a Denver Instrument product, please contact the nearest Denver Instrument office as listed below.
3. If it becomes necessary to return your Denver Instrument product for service, you must obtain a "Return Authorization Number". Please pack the product securely in its original approved packing carton or an other suitable container. Include your Return Authorization Number on the shipping label. Shipping charges must be fully prepaid.

Return to authorized distributor or :

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About the Battery

- A rechargeable battery is already installed in your balance.
- To fully charge the battery, attach the balance to wall power using the AC adapter for 8 to 12 hours.
- The charge typically lasts 80 hours.
- When the battery is low, an arrow will appear above the low battery indicator on the left side of the display.
- The charge light will be yellow when charging the battery and green when the battery is fully charged.

NOTE: The battery is not a user serviceable part. If the battery does not recharge with the use of the AC adapter, contact an authorized technician.

Maintenance and Troubleshooting

Display Shows:



(Blank Screen)

Cause:

ON/OFF key pressed to turn OFF Displays.

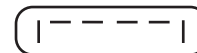
Power cord not connected.

No power to outlet or improper voltage.

Temporary fault

Pan obstructed.

Air movement around balance.



Weight exceeds balance capacity.

Remedy:

Press the ON/OFF key.

Connect cord.

Check power supply.

Disconnect and reconnect power cord. (Wait at least five seconds before reconnecting.)

Check for obstruction.

Move balance.

Reduce weight.

Cleaning Instructions

The exterior surface of the cleaned with a mild water-based detergent and a lint-free nonabrasive cloth. Alternatively, isopropyl alcohol may be used. Do not immerse the product in liquid of any kind.

Model	Max. Capacity	Permissible cal. weight
XI-30K	30 kg	10, 20, or 30 kg
XI-60K	60 kg	10, 20, 40 or 60 kg
XI-120K	120kg	20, 50, 100 or 120 kg

Programming/Auto Off

1. Press and hold any key while powering ON.
2. Display will show `CAL`.
3. Press **U** key to go to programs sequence.
4. Press **U** key for parameter selecting.
5. Press **T** key for set-up.

Program sequence as follows:

A. Auto Zero

RD 0

None

RD 1

1 digit

RD 2

2 digits

B. Auto Power Off

RoFF 0

None

RoFF 1

5 minutes after

RoFF 2

10 minutes after

RoFF 3

20 minutes after

RoFF 4

30 minutes after

C. Units

Unit 0

kg only

Unit 1

kg/lb

Introduction

Thank you for choosing one of our precision instruments. Your balance is designed and manufactured to the most rigorous standards in order to give you years of service. First, check the contents of the shipping carton. You should find the following:

- Manual
- Balance
- AC Adapter

Next, follow the instructions for installing your balance.

Now you're ready to begin using your balance. To take advantage of its many features, carefully read your operating manual. It contains step-by-step procedures, examples, and other vital information.

Finally, remember to return your completed warranty card within ten days and to record all purchase information.



Warning

Use of this product in a manner not specified by the manufacturer may impair any safety protection provided by the equipment!

Specifications

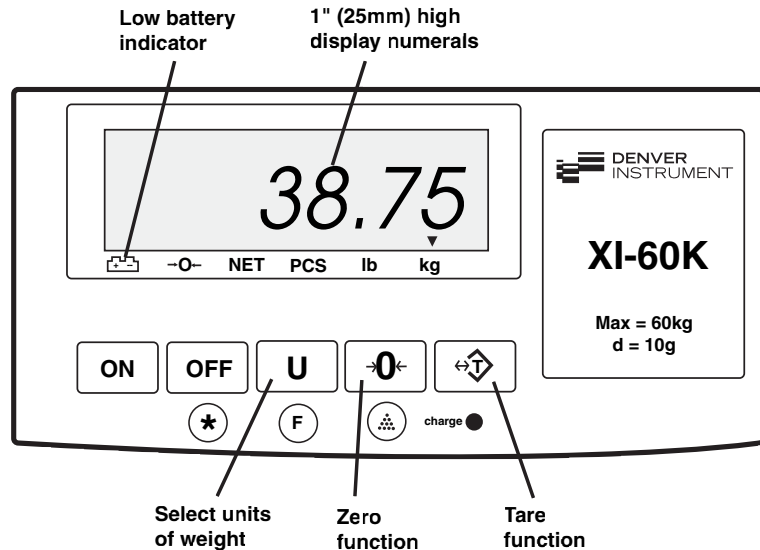
Model	XI-30K	XI-60K	XI-120K
Range	30 kg. (66 lbs.)	60 kg. (132 lbs.)	120 kg. (264.5 lbs.)
Division	5g (0.01 lbs.)	10g (0.02 lbs.)	20g (0.05 lbs.)
Platform Dimensions	14" x 18" (350 mm x 450 mm)		
Operating Temp.	15 C – 40° C (50 - 104° F)		
Power Supply	Rechargeable battery or AC Adapter (9V, 500mA)		
Overall Dimensions	25.4" x 14" x 30.8" (635mm x 350 mm x 770mm)		
Net Weight	12.5 kg (27.5 lbs.)		

Preparation

- This product is intended for indoor use only.
- Be sure to select a suitable work area.
- The work area should be relatively free from drafts and vibrations.
- Work surface should be level and rigid.
- Do not locate near magnetic materials or equipment / instruments which use magnets in their design.
- Avoid areas which have variations in room temperatures or have excessive room temperatures. Room temperatures above 105° F/ 40° C or below 59° F/ 15° C could affect balance operation and accuracy.

Installation and Setup

- Remove balance and accessories from the carton. Save packing material for transportation purposes.
- Insert display stem into the platform support hole. Using the supplied 3/32" allen wrench, tighten the two support stem screws to ensure stability of the display unit.
- Once the unit is in place, adjust the feet to center the bubble located on the support stem base. Clockwise turns will raise the foot and bring the bubble closer to that corner.
- A rechargeable battery is already installed in your balance.
- When an arrow appears on the LCD, above the battery icon, indicating a low battery, you must recharge the unit using the AC Adapter provided.
- When using the AC adapter, insert power cord into the receptacle located on the back of the display unit. Firmly push in the plug.
- When the unit is powered on it will perform a self diagnostic check and will then indicate zero.
- Before use, allow the balance to warm up a full 30 minutes.



Function Keys

On / Off buttons	Turns the unit on or off.
U	Use to toggle between kilograms and pounds.
-0-	Re-zero key, resets weighing.
T	Tare key, set balance to zero when weighing.
*	Optional key.
F	Functional key.
S	Sampling piece count.

Operation

Taring (Zeroing)

All models have taring (zeroing) 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 Zero (tare) procedure.

1. Place sample container on pan and then press **T** key.
2. Now place sample in its container.
3. When the balance is stable, the display shows the weight of the sample.

Counting Function

1. Count the desired amount sample pieces (10, 20, 50 or 100 total pieces).
2. Press the key to display total count numbers of 10, 20, 50 or 100.
3. When the desired value is displayed, press the key. The arrow at the bottom of the display will point to "PCS".
4. You are now ready to perform parts counting of those specific pieces. Press the **F** key for the total weight.
5. Repeat steps 1 through 4 for each type of piece to be counted.

Calibration

1. Remove all items from weighing platform.
2. While holding down any key (except ON), press the **ON** button. The unit will display 'CAL' for calibration mode.
3. Press the **T** key. If the display shows 'C' and a numeric value go to next step. If 'C' is not displayed move to Adjusting Offset section.
4. The number shown should be the maximum capacity for the scale (see table). If the number is incorrect, press the **U** key. The values will cycle. When the correct number is shown, press the **T** key.
5. Press **-0-** to zero the scale.
6. Place a permissible calibration weight (see table) on the weighing platform.
7. Press the **T** and the display will cycle through the permissible weight values. Cycle to the weight you are using for calibration.
8. When the desired value is displayed, press the **T** key to complete calibration.

Adjusting Offset

1. The unit is now showing the current offset value in counts. The acceptable value is 16000 +/- 2000 counts. If within the acceptable range go to next step; otherwise:
 - a. Turn the unit off.
 - b. Locate and remove the two screws on left and right bottom corners of the display unit.
 - c. Carefully lift the top half of the display from its base.
NOTE: Do not let the top half of the display unit hang from the lower half; this could damage or loosen the connections between the two.
 - d. Locate the SW2 switch on the inside of the display unit on the circuit board. It is a red box with 4 small white switches on it and is marked SW2 above the red box.
 - e. Change the switch settings until the value is between 14000 and 18000.
2. Press the **U** button and then press the **-0-** to adjust the SPAN.
3. Place a permissible calibration weight (see table) on the weighing platform.
4. Press the **T** and the display will cycle through the permissible weight values.
5. When the desired value is displayed, press the **T** key to complete calibration.