

JM Series

Digital Scale

Operation Manual

Revision 2.0
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AND
A&D WEIGHING
...Clearly a Better Value



WARNING

Use only the AC adapter which comes with the scale. Other adapters may cause damage.

Internal service to this product should be performed by a qualified person only. There are no user serviceable parts inside.



CAUTION

Avoid installing the scale in areas of direct sunlight and high humidity. Also avoid drafts, vibrations and dusty conditions.

If the scale is not to be used for a long period of time, remove the battery from the battery compartment to avoid leakage which may cause damage to the instrument.

To extend the life of your digital scale, do not drop items to be weighed onto the platform or overload the scale beyond its rated capacity. Shock-loading and overloading may damage the load cell and void the warranty.

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. This equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions manual, may cause harmful interference to radio communications. Operation of this equipment in a residential area is likely to cause harmful interference in which case the user will be required to correct the interference at his/her own expense.

Table of Contents

Introduction	1
Getting Started.....	1
Keyboard and Display Diagram.....	2
Operation	2
Specifications	3
Calibration.....	4
Warranty and Service Information	5

Introduction

The JM Series Digital Scales are compact rugged bench/floor scales with AC adapter (standard) or 9 volt battery (purchased separately) operation, LCD display and tactile operator keypad. All models have lb/kg selection. The JM powers up in lb.

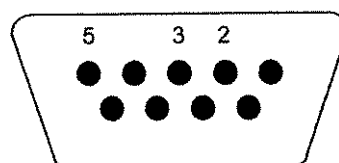
The JM Series uses full duplex RS-232C serial format for communication with personal computers, printers or remote displays. The unit can transmit data on demand in a popular data protocol.

Getting Started

1. Plug the AC Adapter into the scale first, then into an AC outlet. For portable operation, install one 9V alkaline battery (not included) in the battery compartment located underneath the scale base.
2. Place the scale on a stable and firm table or floor.
3. If you are using the scale with UPS Worldship® software:
 - a. Connect the RS-232C port between the scale and your PC as shown below.
 - b. Configure the UPS Online software for a Fairbanks 70-2453-4 scale.
 - c. Configure the UPS Online software for the following communication parameters: 9600 Baud, 7 Data Bits, Odd Parity and 1 Stop Bit.
4. Press the ON key. All segments will briefly appear, followed by the version code and finally an indication of zero weight. The scale is now ready for use.

The female 9-Pin RS-232 connector is used to interface to a PC. Shown at right are the pin assignments for the connector.

Pin No.	Pin Name
2	Receive Data
3	Transmit Data
5	Signal Ground



9-pin RS-232 connector (female)

Shown at right is the suggested cable diagram for direct connection to a PC.

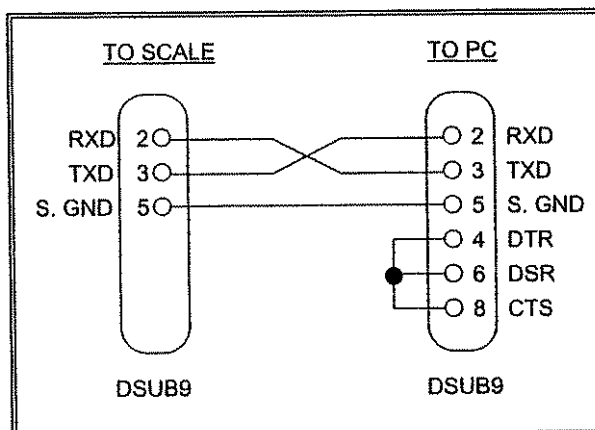
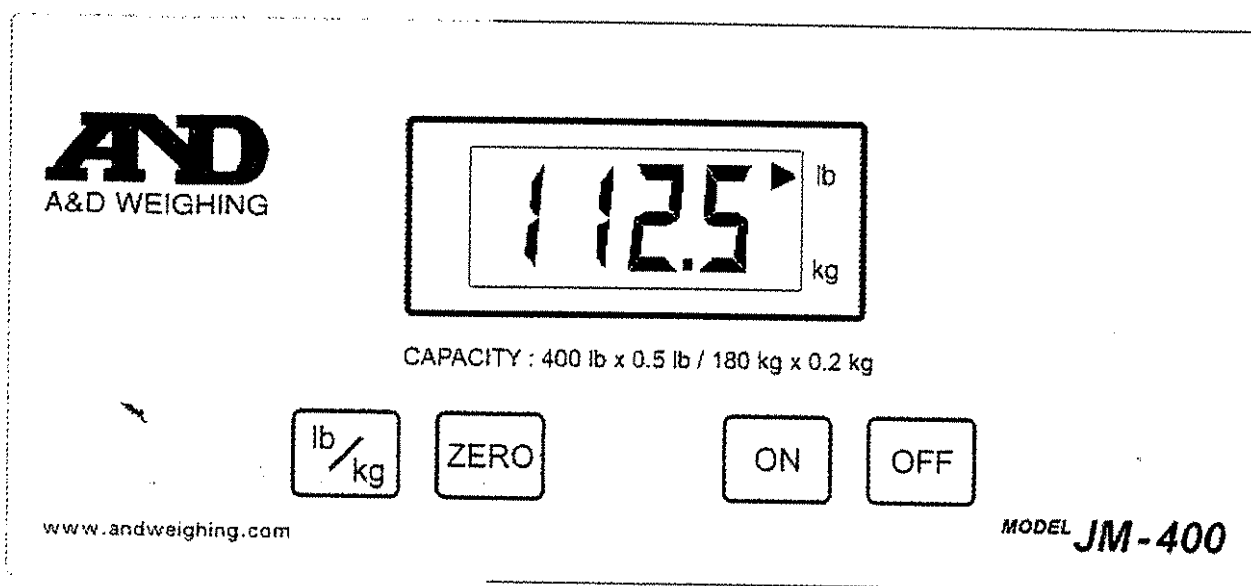


FIGURE 1 Cable Diagram for Scale to IBM PC

Keyboard and Display Diagram



JM-400 overlay shown; JM-150 overlay similar.

Operation

How to obtain the weight of an item:

1. Before weighing an item, make sure the scale shows a zero weight indication. If it does not, remove all items from the platter and press the **ZERO** key.
2. Place the item on the center of the scale's platter and allow the weight indication to stabilize.
3. Select the desired unit of measure by pressing the **lb/kg** key.

How to enable or disable the automatic turn off function:

When the automatic turn off function is enabled, the scale will automatically shut itself off to preserve battery life after two minutes of inactivity. **NOTE:** When the scale is shipped from the factory, the automatic turn off feature is enabled.

1. Turn the scale OFF.
2. Press and hold the **ZERO** key while turning the scale back ON. The scale displays the new status of the automatic turn-off function.
 - "A ON" means that the auto turn-off function is now enabled.
 - "A OF" means that the auto turn-off function is now disabled.
3. Repeat step #1 until the automatic turn off feature is enabled or disabled as required.

Message	Explanation
"O O O O"	Indicates that the weighing capacity of the scale has been exceeded.
bAtt	Indicates that the batteries need to be replaced.
Err 2	The scale's calibration information has been lost. Re-calibrate scale.
"_ "	Indicates that the negative number is beyond the display's capability (-99.9).

Scale Operation Error Messages

Specifications

MODEL	CAPACITY / GRADUATION	POWER UP/CALIBRATION
JM-150	150 x 0.2 lb (65 x 0.1 kg)	lb
JM-400	400 x 0.5 lb (180 x 0.2 kg)	lb

JM Series Product Matrix

CONSTRUCTION:

Housing: ABS

Sub-Platform: Metal

Platter: Metal

Feet: Non-skid Hard Rubber

DISPLAY:

4 digit, 7-segment LCD

KEYPAD:

4-key Tactile Keypad

OVER CAPACITY ANNUNCIATION:

103% of Full Scale Capacity

SERIAL PORT:

Full Duplex, RS-232, Female DSUB9

OPERATING TEMPERATURE RANGE:

68°F to 77°F
(20°C to 25°C)

MAIN POWER SOURCE:

AC Adapter, 9VDC, 200 mA, included

ALTERNATIVE POWER SOURCE:

9V alkaline battery, replaceable

WEIGHT:

Net Weight: 9.3 lb (4.2 kg)

Shipping Weight: 10.7 lb (4.9 kg)

Calibration

Your JM Series scale is ready to use right out of the box. There is no need to calibrate the scale unless you feel that the scale has become inaccurate. It is a good idea to check the calibration of your scale from time to time with a precision test weight. A&D Weighing recommends that you perform a new calibration on your digital scale at least once a year. The scale must be calibrated with the precision test weight specified in the table below.

To calibrate the scale:

1. Remove all items from the platter and turn the scale OFF. Press and hold the **lb/kg** key while turning the scale back ON.
2. When the scale shows "CAL0" you may release the **lb/kg** key.
3. Press the **ZERO** key, followed by the **lb/kg** key. The scale then displays "CAL1" followed by the necessary calibration test weight.
4. Place the appropriate test weight on the platter and wait three seconds.
5. Press the **lb/kg** key to save the test weight calibration value.
6. Once the test weight calibration value has been saved, the scale shows an "End" message.
7. You must now turn the scale OFF and then turn it back ON without pressing any keys. Your SPC is now calibrated and ready for use.

MODEL(S)	CALIBRATION TEST WEIGHT
JM-150	50 Pounds
JM-400	200 Pounds

Test Weight Values

Warranty and Service Information

A&D warrants that the JM Series Scales will conform to written specifications, drawings, and other descriptions made by the manufacturer, including any modifications thereof. A&D warrants the goods against faulty workmanship and defective materials. If any goods fail to conform to these warranties, A&D will, as its sole and exclusive liability hereunder, repair or replace such goods if they are returned within the following warranty period: **One (1) year from date of shipment.** This warranty is made upon the express condition that:

- 1) Buyer notifies A&D of such non-conformity with detailed explanation of alleged deficiencies.
- 2) Product should not be returned without prior notice to A&D.
- 3) Other than setup functions & calibration, such goods have not been modified, altered, or changed by any person other than the A&D or its duly authorized repair agents.
- 4) Examination of such goods by A&D discloses that the nonconformity actually exists and was not caused by accident, misuse, neglect, alteration, improper installation improper or unauthorized repair, or improper testing.
- 5) A&D will have a reasonable time to repair or replace such goods.

THESE WARRANTIES EXCLUDE ALL OTHER WARRANTIES, EXPRESS OR IMPLIED, ORAL OR WRITTEN, INCLUDING WITHOUT LIMITATION WARRANTIES OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE. SELLER WILL NOT IN ANY EVENT BE LIABLE FOR INCIDENTAL OR CONSEQUENTIAL DAMAGES. IN ACCEPTING THIS WARRANTY, THE PURCHASER OR BUYER AGREES TO WAIVE ANY AND ALL OTHER CLAIMS FOR RIGHT TO WARRANTY FROM A&D WEIGHING. SHOULD THE SELLER BE OTHER THAN A&D WEIGHING, BUYER AGREES TO LOOK ONLY TO THE SELLER FOR WARRANTY CLAIM OR CLAIMS.

No other terms, conditions, understanding, or agreements purporting to modify the terms of this warranty shall have any legal effect unless made in writing and signed by a corporate officer of A&D.

