

SOP: Denver Instrument SI 4002 Balance Operation

Approvals:

Preparer: Jason McMillan

Date: 09JAN14

Reviewer: Dr. Maggie Bryans

Date: 10JAN14

1. Purpose:

1.1. Operation of Denver Instrument SI 4002 Balance.

2. Scope:

2.1. Applies to the weight measurement of laboratory materials.

3. Responsibilities:

3.1. It is the responsibility of the course instructor /lab assistant to ensure that this SOP is performed as directed and to update the procedure when necessary.

3.2. It is the responsibility of the students/technicians to follow the SOP as described and to inform the instructor about any deviations or problems that may occur while performing the procedure.

4. References:

4.1. Denver Instrument SI 4002 Balance Instruction Manual.

5. Definitions: N/A

6. Precautions: N/A

7. Materials:

7.1. Appropriate weighing container(s) such as a weigh boat, weigh paper, beaker, flask, bottle, etc.

8. Procedure:

8.1. Simple Weighing

8.1.1. Turn the scale on using the "ON/OFF" button.

8.1.2. Place weighing container on the balance weighing pan. Press the "TARE" button to zero the weight display.

8.1.3. Remove the weighing container. Load weighing container with material to be weighed. Place loaded weighing container on the weighing pan. Read off the weight indicated on the display when **g** appears on the right side of the weight.

8.1.4. Remove the loaded weighing container.

8.1.5. To turn balance off, press and hold the "ON/OFF" button.

8.1.6. Clean off the top of the balance using the balance cleaning brush being sure to apply minimal pressure.

9. Troubleshooting

9.1. See Table 1

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10. Attachments:

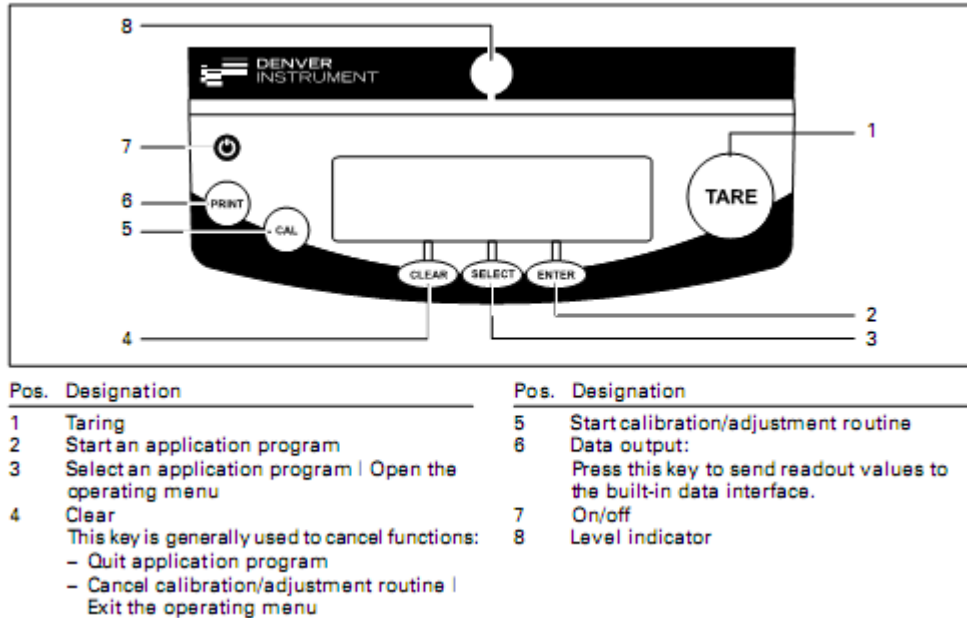
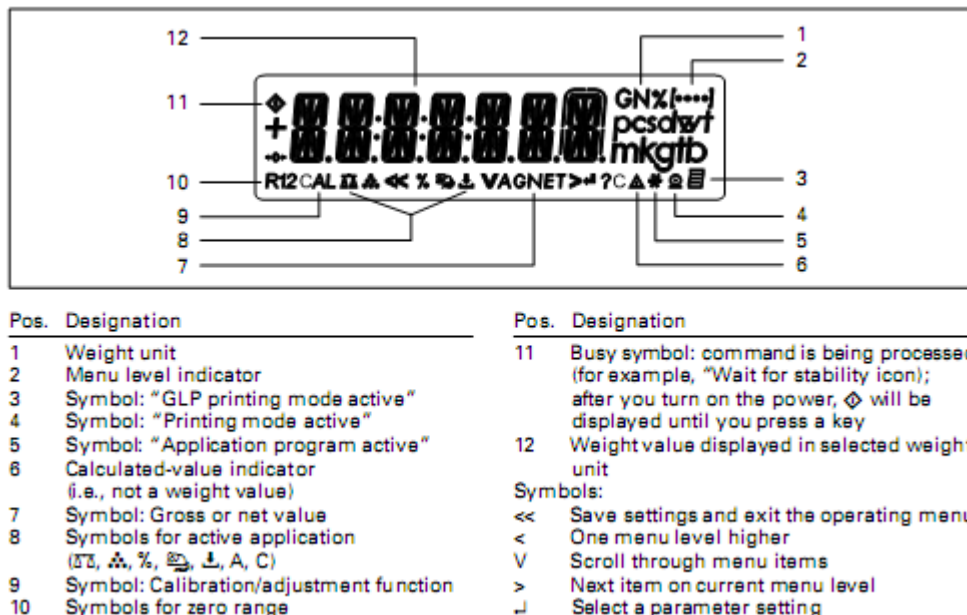


Figure 1: Denver Instrument SI 4002
 Denver Instrument SI 4002 Manual



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Figure 2: Denver Instrument SI 4002 Display

Denver Instrument SI 4002 Manual

Troubleshooting Guide

Error codes are shown on the main display for approx. 2 seconds. The program then returns automatically to the previous mode.

Display	Cause	Solution
No segments appear on the display	No AC power is available The power supply is not plugged in	Check the AC power supply Plug in the power supply
HIGH	The load exceeds the balance capacity	Unload the balance
LOW or ERR 54	Something is touching the weighing pan	Move the object that is touching the weighing pan
ERR 54, typical	Weighing system defect	Contact Denver Service Center
APPERR.	Cannot store data: Load on weighing pan too light or no sample on pan while application is active	Increase load
DISERR.	Data output not compatible with output format	Change the configuration in the operating menu
PRTERR.	Interface port for printer output is blocked	Reset the menu factory settings, or Contact your local Denver Service Center
ERR 02	Calibration parameter not met; e.g.: - balance not tared - load on weighing pan	Calibrate only when zero is displayed - Press TARE to tare the balance - Unload the balance
ERR 10	The TARE key is blocked when there is data in the second tare memory (net-total); only 1 tare function can be used at a time	Press CLEAR to clear the tare memory and release the tare key
ERR 11	Tare memory not allowed	Press TARE
The weight readout changes constantly	Unstable ambient conditions (excessive vibration or draft) at the place of installation A foreign object is caught between weighing pan and balance housing	Set up the balance in another area Remove the foreign object
The weight readout is obviously wrong	The balance was not calibrated/adjusted Balance not tared before weighing	Calibrate/adjust the balance Tare or zero the balance before weighing

Table 1: Troubleshooting Guide

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11. History:

<i>Revision Number</i>	<i>Effective Date</i>	<i>Preparer</i>	<i>Description of Change</i>
0	09JAN14	Jason McMillan	Initial release