SCHULER SCIENTIFIC

SSP-Series Portable Balances
Operation Manual

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Congratulations and thank you for selecting a Schuler Scientific SSP-Series Portable balance. Your balance was designed and manufactured to give you years of service.

SAFETY PRECAUTIONS

- Check the instrument for any visible signs of damage before you apply power.
- Ensure the power supply is compatible with your instrument AND the local line voltage.
- Do NOT operate in Hazardous Locations. Consult your Safety Officer with any questions or concerns.
- Make sure no liquid enters the housing. Use a damp cloth to clean the instrument.
- Avoid exceeding/overloading the weigh capacity or dropping samples onto the weigh pan. Weight overload and shock may damage the instrument and void the warranty.
- When utilizing the battery operation mode, do not mix batteries. Replace all six batteries at the same time. If the instrument will not be used for an extended period of time, remove all batteries from the instrument. Failure to do so may cause leakage and damage to the instrument.

GETTING STARTED

First, check the contents of your shipping carton for the following:

- SSP-Series Balance
- Weigh Pan and Sub Pan
- Operation Manual
- Power Adapter
- Weigh Bowl (except SSP-123MDS)

Please read your operation manual and follow the instructions for installing your balance. Please keep your packaging for future transport and remember to return your Warranty Card.

INSTALLATION & SET-UP

- Choose a location that is free from the influences of the following:
  - Drafts: fans, heat/air duct, doorways or high traffic areas.
  - Vibrations.
  - Extreme temperature fluctuations: sunlight, ovens, or environments with wide ambient temperature changes.
  - Voltage Fluctuations. Do not share current with other Instruments that draw voltage in an inconsistent manner such as fluorescent lights, centrifuges and the like.
- Place Instrument on a level, rigid surface.
- Level the instrument.
- Allow 30 minutes for warm-up.
- Calibrate. All SSP-Series are calibrated at the factory prior to shipment. Transportation of the instrument plus the differences in barometric pressure, humidity and ambient temperate conditions require calibration at the point of use. Calibrate regularly, at least once a week, to ensure accurate weighing results.

AC POWER CONNECTION & BATTERY OPERATION OPTION

- When connecting power use the original AC adapter supplied with the balance. Using an unapproved power supply may damage the instrument and void the warranty.
- Connect the plug to the instrument.
- Ensure the power supply is compatible with your instrument AND the local line voltage.
- Connect adapter to the power outlet.
- Original Power Supply:

Input:	110 -240 VAC, 50-60 Hz, 400mA
Output:	9VDC, 300 mA
Polarity:	Inside = **-**, Outside =**+**
Battery Operation:	6 AA

Do not mix batteries. Replace all six batteries at the same time. If the instrument will not be used for an extended period of time, remove all batteries from the instrument. Failure to do so may cause leakage and damage to the instrument.

LEVELING

For accurate calibration and weigh results level the balance at installation and any time the instrument is moved to a new location.

Ensure the two rear feet are fully retracted and adjust the two front feet to level the balance.

CALIBRATION

Calibration is required at installation (see Installation & Set-up) and at regular intervals thereafter. Calibrate if the balance is moved to a new location.

1. Allow a 30-minute warm-up period.
2. Remove all items from weigh pan.
3. Press Tare to zero balance – if required.
4. Press **CAL Key**
The appropriate calibration weight for your balance (see chart below) will "flash" on the display.
5. Place calibration weight on the weigh pan.
6. When calibration is complete the balance will display the selected calibration weight value, beep and return to the weigh mode. Calibrate on a regular basis, we recommend once a week, or more.

Calibration Weight Values

SP-123MDS	100g ASTM Class 3*
SSP-500	500g ASTM Class 4*
SSP-1500	1000g ASTM Class 4*
SSP-3000	2000g ASTM Class 4*
SSP-6000	5000g ASTM Class 4*

*** Or Better**

WEIGH MODE SETTINGS

THE SSP-Series offers five modes of measurement. Press the **UNIT KEY** to toggle between weigh modes.

The **>** indicator inside the display will highlight the selected weigh mode.

SSP-SERIES Weigh Modes:

SSP-123MDS: g, mg, dwt, ozT, GN
All Other Models: g, dwt, oz, lb, ozT

BACKLIGHT SETTINGS

All SSP-Series balances come with an adjustable backlight display (on or off). The factory default setting is on. However, should you wish to deactivate the backlight feature:

Press ON/OFF Key to turn the power off, press again to turn power on. When instrument displays ---------

Press TARE KEY until **A. OFF** appears on the display.

Press UNIT KEY once **L. ON** will appear on the display.

To toggle between Backlight On **(L_ON)** and Backlight Off **L_OFF)** Press **TARE KEY**.

Press ON/OFF to turn the power off, **Press ON/OFF** again to turn on the power and the scale return to the weighing mode

AUTO SHUTOFF SETTINGS

All SSP-Series balances come with an AUTO OFF feature, typically used in the battery operation mode. The AUTO OFF feature is deactivated at the factory. However, should you wish to activate the Auto Off feature:

Press ON/OFF Key to turn the power off, press again to turn power on. When instrument displays ---------.

Press TARE KEY until **A. OFF** appears on the display**.**

To toggle between AUTO ON (**A. ON)** and AUTO OFF **(A. OFF) Press TARE KEY.** AUTO O**N (A. ON)** indicates auto shut off function is active.

Press [ON/OFF] to turn the power off, **Press ON/OFF** again to turn on the power and return to the weighing mode.

TARE FUNCTION

TARE is defined as net weight. Should you wish to use a beaker, flask or some other container for your sample simply place the container on the weigh pan and press the **TARE KEY**. Please note that any container that is "tared" will decrease the remaining capacity available on the balance by the weight of the container.

If you do not use a container for weighing verify the reading is "0" before placing a sample on the weigh pan. If not, press **TARE KEY** to display "0".

CARE & MAINTENANCE

- Unplug the instrument from the power source and remove all batteries from the battery compartment.
- Wear appropriate safety protection.
- Clean inside hood when appropriate.
- A damp cloth is recommended for basic cleaning. Do not use solvents on the instrument housing, sub-pan, keypad, power cord and power jack.
- Make sure no liquid enters the instrument housing.
- Handle with care to avoid damage to the weigh cell.
- Consult your safety officer with any questions or concerns.

ERRROR MESSAGES & TROUBLESHOOTING GUIDE

ERROR CODE	ISSUE	SOLUTION
Blank Display	Power	Check Adapter & Outlet
ERR-0	Overload	Capacity Exceeded Or Damaged Weigh Cell
ERR-2	Zero Tracking (weight on weigh pan during power on sequence)	Remove All Weight From Weigh Pan and Cycle Power
	Stainless Steel Weigh Pan Not Assembled at Calibration	Reassemble with Weigh Pan, Sub Pan and Calibrate
ERR-5	Internal Signal Unstable	Weigh Pan Alignment Ensure Weigh Pan & Draft Ring Placement is Correct Unstable Power – Check Power Supply / Transformer
ERR-C	Calibration Error Incorrect Weight	Repeat Calibration Process Ensure Correct Calibration Weight Is Used – See Page 3
ERR-L	Calibration Error No Weight Placed On Weigh Pan	Repeat Calibration Process
ERR-E	Memory Error	Cycle Power (On/Off Switch)
:	Low Battery Indicator	Replace Batteries 6 AA. Replace all Batteries at Same Time

SERVICE & TECHNICAL SUPPORT

If you have ANY questions or require technical, application or service support please contact Schuler Scientific at 800-539-1886 or support@schulersci.com .

Please note that the manufacturer and its affiliates cannot take back any instrument that has been exposed to biological or hazardous material contamination for replacement, credit, repair or disposal.

DISPOSAL

Please consider the environment when disposing of your instrument and the packing material. Please recycle all environmentally friendly waste. Please contact your local government agency, facilities manager or a commercial disposal operator on the proper disposal of the instrument, power supply and batteries.

CE COMPLIANCE & MARKING

CE

This instrument complies with European Standards and EC Directives:

Electromagnetic Compatibility (EMC) Council Directive 89/336/EEC
Applicable European Standards:

Limitation of Emissions in accordance with standard EN 61326-1 Class B for residential areas.

72/23/EEC "Electrical Equipment Design within Certain Voltage Limits"
Applicable European Standards:

EN 60950

Safety Requirements for electrical equipment for measurement, control and laboratory use Part1: General requirements.

Note:
Modification of this instrument in any manner is the sole responsibility of the owner/operator. In addition to voiding the warranty, the owner/operator is responsible to check and if necessary correct any modifications required in accordance to the standards listed above for immunity to interference. Operating standards for this instrument are available upon request.

SPECIFICATIONS

Model	Capacity	Readability	Repeatability (s)	Linearity	Tare Range
SSP-123MDS	120g	0.001g	0.001g	0.003g	0 to 120g
SSP-500	500g	0.01g	0.01g	0.02g	0 to 500g
SSP-1500	1500g	0.05g	0.05g	0.1g	0 to 1500g
SSP-3000	3000g	0.1g	0.1g	0.2g	0 to 3000g
SSP-6000	6000g	1.0g	1.0g	2.0g	0 to 6000g

Common Specifications:

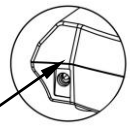
Pan Size:
SSP-123MDS: 70mm (7.76in) Dia.
All Other Models: 145 x 145mm (5.7 x 5.7in) L x W
Stabilization Time: 3 Seconds
Operating Temperature: 0C to 40C (32-104F)
Power Requirements:
Input: 100 - 240VAC, 50-60Hz, 0.4A
Output 9VDC, 300mA
Battery Operation: 6 AA Batteries (not included)

Unit Dimensions:
B-1852-120: 225 x 177 x 124mm (8.9 x 6.7 x 6.2in)
All Other Models: 225 x 177 x 70mm (8.9 x 6.7 x 2.8in)
Weigh Bowl: 200 x 200 x 55mm (7.9 x 7.9 x 2.2in)
Net Weight: 2 kg (4.4lb)

FEATURES

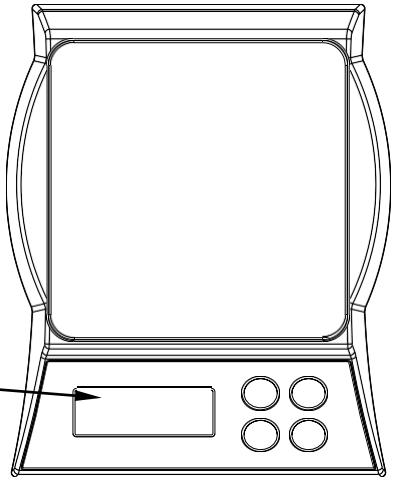
- Large, Backlit Display
- Automatic Calibration
- Five Weigh Modes
- Stainless Steel Weigh Pans
- Weigh Bowl Included
- Auto Shut Off Mode
- Low Battery Indicator
- Overload Protection
- Five-Year Warranty

INSTRUMENT DIAGRAM



LEFT SIDE

AC ADAPTER INSERT

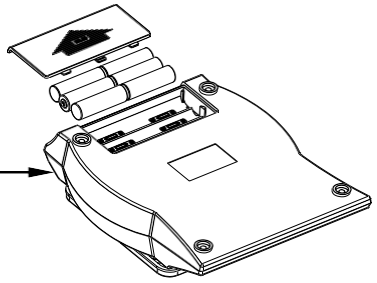


WEIGHT DISPLAY

ON/OFF UNIT

CAL TARE

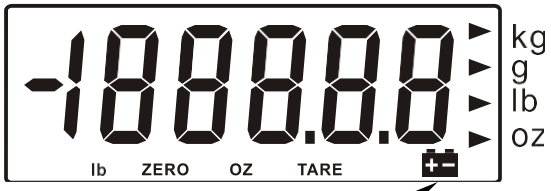
BOTTOM



BATTERY COMPARTMENT

Batteries are not included

DISPLAY



LOW BATTERY INDICATOR

The status of the information and specifications in this manual is indicated by the date given below. Schuler Scientific reserves the right to make changes to any or all of the specifications, features or design of the instruments at any time and without notice.

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SCHULER SCIENTIFIC
2860 South Vallejo St
Unit B
Englewood, CO 80110
1-800-539-1886
www.schulersci.com