



PAUL N GARDNER COMPANY
9104 GUILFORD ROAD, SUITE H
COLUMBIA, MD 21046 USA

EMAIL GARDCO@ALTANA.COM
PHONE +1-954-946-9454



INSTRUCTIONS

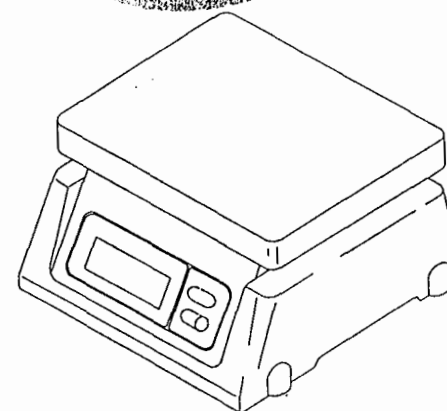
GARDCO DISTRIBUTED PRODUCTS



Digital Scale

SK-1000
SK-2000
SK-5000
SK-10K
SK-20K

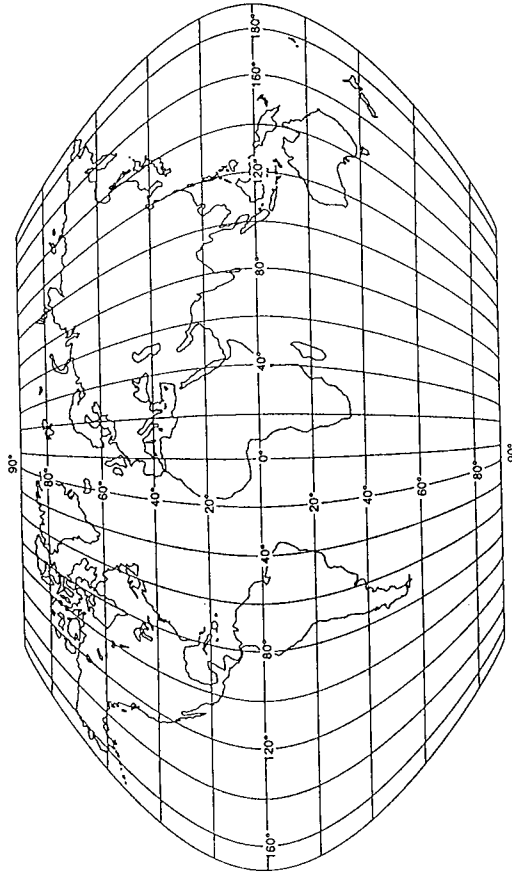
INSTRUCTION MANUAL



AD
A&D Company, Limited

895-1A-1E-1996.04.02

WORLD MAP



SAFETY PRECAUTIONS

All safety messages are identified by the following the words ***WARNING*** and ***CAUTION***. These words mean the following:

⚠ WARNING	<i>Important information to alert you to a situation that might cause serious injury and damage to your property if instructions are not followed.</i>
⚠ CAUTION	<i>Important information that tells how to prevent damage to equipment.</i>

When using the SK, the following safety precautions should always be followed.

⚠ WARNING

Use only the AC adapter which comes with the scale. Other adapter may cause damage. (AC adaptor is optional.)

Internal service or adjustment to this product should be performed by a qualified person.

⚠ CAUTION

Avoid installing the scale in direct sunlight, that may cause discoloration or malfunctions.

Do not mix the type of batteries. Replace all other batteries at the same time.

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

Avoid overloading that could cause damage to the scale.

PARTS DESCRIPTION

► REAR

Spirit level

► TOP

Weighing platform

► FRONT

Display

ON/OFF key
Turns the scale power on/off.

UNITS key
(only for (kg)-lb version)
Changes weighing units, (kg) or lb.

RE-ZERO key
Sets display to zero or subtracts weight of a container.

► BOTTOM

Battery compartment cover

Batteries.
*Batteries are not included

AC adaptor socket

► DISPLAY

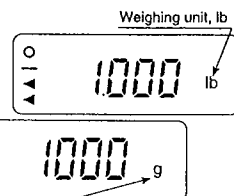
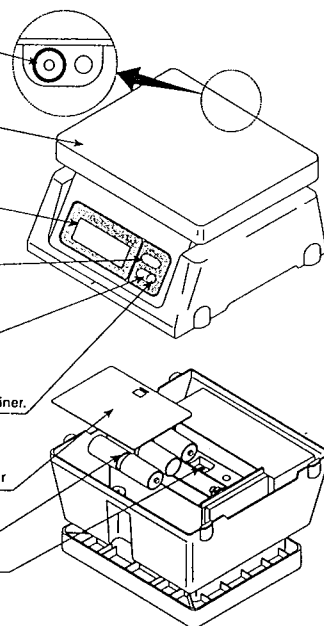
STABLE indicator
Indicates when the reading is stable.

Polarity

NET indicator
Indicates when NET weight is displayed.
(Tare function is used.)

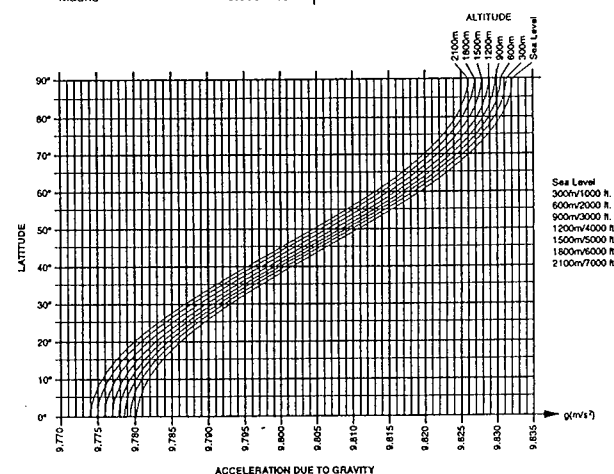
ZERO indicator
Indicates when the scale zero is correct.

Weighing unit, g



THE VALUE OF GRAVITY AT VARIOUS LOCATIONS

Amsterdam	9.813 m/s ²	Manila	9.784 m/s ²
Athens	9.800 m/s ²	Melbourne	9.800 m/s ²
Auckland NZ	9.799 m/s ²	Mexico City	9.779 m/s ²
Bangkok	9.783 m/s ²	Milan	9.806 m/s ²
Birmingham	9.813 m/s ²	New York	9.802 m/s ²
Brussels	9.811 m/s ²	Oslo	9.819 m/s ²
Buenos Aires	9.797 m/s ²	Ottawa	9.806 m/s ²
Calcutta	9.788 m/s ²	Paris	9.809 m/s ²
Cape Town	9.796 m/s ²	Rio de Janeiro	9.788 m/s ²
Chicago	9.803 m/s ²	Rome	9.803 m/s ²
Copenhagen	9.815 m/s ²	San Francisco	9.800 m/s ²
Cyprus	9.797 m/s ²	Singapore	9.781 m/s ²
Djakarta	9.781 m/s ²	Stockholm	9.818 m/s ²
Frankfurt	9.810 m/s ²	Sydney	9.797 m/s ²
Glasgow	9.816 m/s ²	Taichung	9.789 m/s ²
Havana	9.788 m/s ²	Taiwan	9.788 m/s ²
Helsinki	9.819 m/s ²	Taipei	9.790 m/s ²
Kuwait	9.793 m/s ²	Tokyo	9.798 m/s ²
Lisbon	9.801 m/s ²	Vancouver, BC	9.809 m/s ²
London (Greenwich)	9.812 m/s ²	Washington DC	9.801 m/s ²
Los Angeles	9.796 m/s ²	Wellington NZ	9.803 m/s ²
Madrid	9.800 m/s ²	Zurich	9.807 m/s ²



1. Enter the calibration mode.

Press [ON/OFF] to turn the power off. While pressing both [RE-ZERO] and *[UNITS], press [ON/OFF]. "CAL" will be displayed.

2. Select a digit to be changed.

Press *[UNITS]. "9.798" will be displayed. Press [RE-ZERO], the decimal point will move and the last digit will be selected.

Select a digit to be changed with [UNITS]. The first digit after decimal point is the selected digit.

3. Set value.

Set the value of the digit selected by pressing [RE-ZERO]. (See "The Value of Gravity at Various Locations" and "World Map" and find your location's value.)

4. Enter the value in memory.

While pressing [UNITS], press [RE-ZERO] to enter the value. "END" will be displayed.

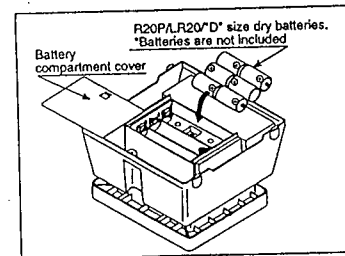
SPECIFICATIONS

MODEL	SK-1000	SK-2000	SK-5000	SK-10K	SK-20K
Capacity	1000g 2.2lb	2000g 4.4lb	5000g 11lb	10kg 22lb	20kg 44lb
Calibration weight	1000g±0.1g	2000g±0.2g	5000g±0.5g	10kg±1g	20kg±2g
Resolution	0.5g 0.001lb	1g 0.002lb	2g 0.005lb	0.005kg 0.01lb	0.01kg 0.02lb
Non-linearity	±1g	±2g	±4g	±0.01kg	±0.02kg
Repeatability	±0.5g	±1g	±2g	±0.005kg	±0.01kg
Span drift	±0.015%/°C TYP (5°C~35°C /41°F~86°F)				
Display	25mm/0.98inch, 7segment liquid crystal display				
Platform size	230mm(W)×190mm(D) / 9.05in(W)×7.48in(D)				
Dimensions	244(W)×232(D)×137(H) mm 9.61(W)×9.13(D)×5.39(H) inches				
Weight (approximately)	1.6kg/3.53lb				1.9kg/4.19lb
Power	6 × R20P/LR20/ *D* size batteries or AC adaptor				
Battery life	Approximately 600 hours with manganese type cells 1200 hours with alkaline cells at 20°C/68°F				
Operating temp.	-10°C~40°C /14°F~104°F, Less than 85%RH (Non-condensing)				
Accessories	This Manual				
Options	AC Adaptor				

PREPARATION

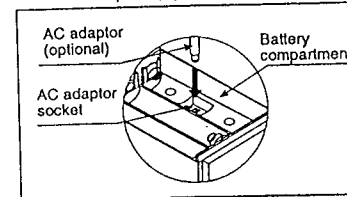
1. Installing batteries / Connecting the AC adaptor

Batteries



Remove the battery compartment cover and insert six batteries (R20P/LR20/D size) into the battery compartment, taking extreme care that the polarities plus and minus are observed.

AC adaptor (optional)



Plug the AC adaptor to the AC adaptor socket inside the battery compartment. The AC input requirement could be 100, 120, 220, 230, or 240Volts (50/60Hz) depending on the area where used, so please verify that the adaptor is correct.

2. Setting up the SK

⚠ CAUTION

Avoid installing the scale in direct sunlight, that may cause discoloration or malfunctions. Place your SK on a firm weighing table so that the scale is level. (The scale will not perform accurately when it is not level.)

Place the SK on the firm surface so that the spirit level shows that the scale is level for an accurate weighing.

WEIGHING

Before weighing

Be aware of the Automatic power-off function.

If this unit is left ON and the stable indicator is displayed, an automatic power-off function turns power off after approximately 5 minutes. To disable this function, press [ON/OFF] while pressing [RE-ZERO]. "P-XX" will be displayed and the scale returns to the weighing mode.

Error messages

$\overline{E}$	Overload
$\overline{\text{---}}$	The scale zero is out of range.
$\overline{Lb}$	Low battery

Calibration may be required before weighing.

Read "CALIBRATION" first and if necessary, calibrate your scale for accurate weighing.

Weighing procedures

1. Press [ON/OFF] to turn on the scale.

When power is turned ON, all display segments appear for a few seconds and "0" will appear on the display.

Only for the "(k)g-lb" version

2. Select the weighing unit with [UNITS].

Press [UNITS] to select a weighing unit either "(k)g" or "lb". Once the unit has been selected, the selected unit will be displayed to the right of the weight value.

3. Start weighing

If you do not use a container for weighing,

Verify the reading is "0". If not, press [RE-ZERO] to display "0". Place objects on the weighing platform to weigh. When the reading becomes stable, the stable indicator is displayed.

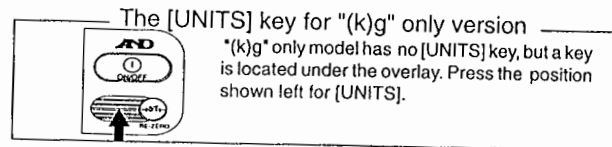
If you use a container for weighing,

Place an empty container on the platform. Wait for the stability indicator to be displayed and press [RE-ZERO]. Place the objects to be weighed in the container. When the reading becomes stable, the stable indicator is displayed.

CALIBRATION

When to calibrate

Calibration may be required when it is initially installed, if the scale is moved a substantial distance, or in accordance with local regulations. This is necessary because the weight of a mass in one location is not necessarily the same in another location. Also, with time and use, mechanical deviations can occur.



Calibration using a calibration weight

Calibrate a scale with calibration weights at capacity.

1000g $\pm$ 0.1g for the SK-1000.	2000g $\pm$ 0.2g for the SK-2000.
5000g $\pm$ 0.5g for the SK-5000.	10kg $\pm$ 1g for the SK-10K.
20kg $\pm$ 2g for the SK-20K.	

1. Enter calibration mode.

Press [ON/OFF] to turn the power off. While pressing both [RE-ZERO] and "[UNITS]", press [ON/OFF]. "CAL" will be displayed.

2. Zero calibration

Press [RE-ZERO] to calibrate zero. "CAL 0" will be displayed. Wait for the stable indicator to be displayed and press [RE-ZERO]. "CAL F" will be displayed in a few seconds.

3. Span calibration

Place the weight at the center of the platform for an accurate calibration. Wait for the stable indicator to be displayed, then press [RE-ZERO]. The display will show "END" and automatically the scale return to the weighing mode.

Calibration by gravity compensation

If you have calibration weights at the capacity of the scale, you can calibrate the scale with the weights instead of compensating for acceleration due to gravity.

The SK is calibrated at 9.798 m/sec². If the acceleration of gravity at your location is not the same, calibrate the scale by compensating the acceleration of gravity. (See page 7 "The Value of Gravity at Various Locations" and page 8 "World Map" and find your location' value.)